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## THE BURDEN OF WOUNDS TO THE UK'S NATIONAL HEALTH SERVICE IN 2017/18: UPDATE FROM THE 2012/13 STUDY

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**ORIGINAL ARTICLE****THE BURDEN OF WOUNDS TO THE UK'S NATIONAL HEALTH SERVICE  
IN 2017/18: UPDATE FROM THE 2012/13 STUDY****Julian F Guest<sup>1</sup>, Graham W Fuller<sup>1</sup>, Peter Vowden<sup>2</sup>****<sup>1</sup>Catalyst Consultants, Poole, UK; <sup>2</sup>Bradford Teaching Hospitals NHS  
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E-mail: [julian.guest@catalyst-health.com](mailto:julian.guest@catalyst-health.com)**Running title:** Health economic impact of wounds in the UK**Word count:** 5,713 excluding Abstract and References**Number of tables and figures:** 10 tables and 0 figures

## ABSTRACT

**Objective:** To evaluate the prevalence of wounds managed by the UK's National Health Service (NHS) in 2017/18 and associated health outcomes, resource use and corresponding costs.

**Methods:** This was a retrospective cohort analysis of the electronic records of a randomly selected cohort of patients from the THIN database who had a wound in 2017/18.

**Results:** There were an estimated 3.8 million patients with a wound managed by the NHS in 2017/18, of which 70% healed in the study year; 89% and 49% of acute and chronic wounds healed, respectively. An estimated 59% of chronic wounds healed if there was no evidence of infection compared to 45% if there was a definite or suspected infection. Healing rate of acute wounds was unaffected by the presence of infection. Smoking status appeared to only affect the healing rate of chronic wounds. Annual levels of resource use attributable to wound management included 54.4 million district/community nurse visits, 53.6 million healthcare assistant visits, 28.1 million practice nurse visits, 20.1 million general practitioner (GP) office visits and 6.8 million hospital outpatient visits. The annual NHS cost of wound management was £8.3 billion, of which £2.7 billion and £5.6 billion was associated with managing healed and unhealed wounds, respectively. Eighty one per cent of the total annual NHS cost was incurred in the community and the remainder in secondary care, although this varied according to wound type.

**Conclusion:** The annual prevalence of wounds increased by 71% between 2012/13 and 2017/18. There was a substantial increase in resource use over this period and patient management cost increased by 48% in real terms. There needs to be a structural change within the NHS in order to manage the increasing demand for wound care and improve patient outcomes.

**Keywords:** Burden; cost; ulcers; wounds; UK.

## STRENGTHS AND LIMITATIONS OF THIS STUDY

- This study provides an update to the 2012/13 study to benchmark how the annual prevalence of wounds, health outcomes, resource use and corresponding costs of wound care across both the community and secondary care has changed in the last five years.
- This study was undertaken using real world evidence derived from the anonymised records of a randomised sample of 3,000 patients in The Health Improvement Network (THIN) database (a nationally representative database of clinical practice among >11 million patients registered with general practitioners in the UK).
- The estimates were derived following a systematic analysis of patients' characteristics, wound-related health outcomes and community-based and secondary care resource use pertaining to wound care contained in the patients' electronic records.
- The annual number of 3.8 million wounds in 2017/18 may be an underestimate since some of the patients in our data set may have had multiple wounds, but this is not transparent in the patients' records and it is very difficult to retrospectively extricate resource use for different wounds from the records of a patient with multiple wounds of the same aetiology.
- The analysis does not consider the potential impact of those wounds that remained unhealed beyond the study period, nor the potential impact of managing patients with wounds being cared for in nursing homes.

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2  
3 **FUNDING**  
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13 **COMPETING INTERESTS**  
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16 None declared.  
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For peer review only

## CONTRIBUTORS

J.F.G. designed the study, obtained the THIN data set, managed the analyses, performed some analyses, checked all the other analyses, and wrote the manuscript.

G.W.F. conducted much of the analyses.

P.V. scrutinised the analyses, suggested further analyses and helped interpret some of the findings.

All the authors were involved in revising the manuscript and gave final approval. J.F.G. is the guarantor of this work and, as such, had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

## ACKNOWLEDGEMENTS

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## **ETHICS APPROVAL**

Ethics approval to use anonymised patients' records from the THIN database for this study was obtained from the Research Ethics Committee that appraises studies using the THIN database (Reference number 18THIN093).

## **DATA SHARING STATEMENT**

The THIN data set cannot be shared as this restriction was a condition of the ethics approval obtained from the Research Ethics Committee (Reference number 18THIN093). Questions concerning the data underlying the results can be sent to the Corresponding Author.

## INTRODUCTION

Our 2012/13 burden of wounds study estimated that the UK's National Health Service (NHS) managed 2.2 million patients with a wound at a cost of £5.3 billion [1-3]. An estimated 61% of all wounds in that burden of wounds study healed in the study year (79% of acute wounds and 43% of chronic wounds). Patients were predominantly managed in the community with 18.6 million practice nurse visits, 10.9 million community nurse visits, 7.7 million general practitioner (GP) visits, 3.4 million hospital outpatient visits. Five years ago, patients also received 97.1 million drug prescriptions and 262.2 million dressings. Additionally, only 16% of all cases with an ulcer of the lower limb had a Doppler ankle brachial pressure index recorded in their records [1].

This study led to such concern among politicians that the UK Parliament (House of Lords) debated developing a national strategy for improving the standards of wound care in the NHS [4]. As a consequence, NHS England and NHS Improvement established the National Wound Care Strategy Programme in the last quarter of 2018 [5]. The aim of the Programme is to scope the development of a national strategy for wound care in England that focuses on improving care relating to pressure ulcers, lower limb ulcers and surgical wounds [5].

Between 2012 and 2017 there was an estimated 4% decline in the number of practice nurses and a 30% decline in the number of district nurses involved in front-line patient care [6-9]. During this period we reported on unwarranted variation in wound care arising in part from inconsistencies in staff involvement and dressing choice and in many instances a lack of a coherent treatment plan [10-16]. Hence, it is reasonable to assume that not all patients with equal need have always had access to, or received, the same continuous levels of healthcare. However, patients should be afforded the best care available (within the context of limited resources) in order to obtain maximum health gains [17].

The aim of this new study was to assess the extent of change in the burden of wounds over five years (i.e. between 2012/13 and 2017/18) in terms of annual prevalence, health outcomes, healthcare resource use and NHS costs.

## METHODS

### Study Design

This was a retrospective cohort analysis of the anonymised case records of patients with a wound randomly extracted from The Health Improvement Network (THIN) database. The perspective of the analysis was the UK's NHS.

### The THIN Database

The THIN database contains electronic records on >11 million anonymised patients entered by GPs from >560 practices across the UK. The patient composition within the THIN database has been shown to be representative of the UK population in terms of demographics and disease distribution [18] and the database theoretically contains patients' entire medical history. In particular, the database collects data on the dates that patients registered or left their practice as well as demographic data such as date of birth and gender. Patients who reside at the same address or are members of the same family can be linked using a household identifier, provided they are registered with the same general practice.

All medical conditions and symptoms recorded electronically during a patient's consultation in the general practice are recorded in the THIN database, thereby building up long computerised medical histories using Read Codes [19]. GP prescribing is computerised and entered directly into the database. Prescriptions not issued electronically (e.g. during home visits) are also entered, however, there is a possibility of under-recording of such items. Information is also recorded on referrals to secondary care, including the specialty. Secondary care information and other medically related information received by the practice are entered into the database. This includes details on hospital admissions, discharge medication, diagnosis, outpatient consultations, investigations and treatment outcomes. Details from other healthcare interventions, such as information on lifestyle and preventative healthcare, as well as a range of variables such as height, weight, body mass index, blood pressure, smoking and alcohol status, immunisation and laboratory test results are also recorded. Hence, the information contained in the THIN database reflects actual clinical practice.

(THIN is a registered trademark of Cegedim SA in the United Kingdom and other countries. Reference made to the THIN database is intended to be descriptive of the data asset licensed by IQVIA, who interrogated the database and performed the randomisation independently of the Authors. The Authors had no direct access to the THIN database.)

## Study Population

The study population comprised the anonymised case records of a randomly selected cohort of 3,000 patients from the THIN database (provided to the Authors by IQVIA) who had a wound between 1 March 2017 and 28 February 2018.

Patients were included in the data set if they:

- Were 18 years of age or over.
- Had one of 2,095 wound-related Read codes (Table S1).
- Had continuous medical history in their case record from the first mention of a wound in the study year up to the time the data were extracted from the database, unless they died, in order to exclude patients who had moved or changed their general practice.

Patients were excluded from the data set if they had a surgical wound that healed within four weeks of the surgical procedure (since any resource use incurred would be due to the surgical procedure and not the wound) or if they had a dermatological tumour. These inclusion/exclusion criteria are identical to those used in our earlier 2012/13 study [1].

Every patient in the THIN database who fulfilled the study's inclusion and exclusion criteria was assigned a random number by IQVIA. A representative sample was then generated by random selection of the random numbers of the whole cohort using a uniform distribution. As such, IQVIA advised that the random sample was representative of the whole population from which it was derived. The complete electronic records of the 3,000 patients in the sample were then supplied to the Authors, which enabled analysis of data both within and outside of the study period.

## Patient and Public Involvement

Patients and members of the public were not directly involved in this study. The study population was limited to the anonymised records of patients in the THIN database.

## Study Variables and Statistical Analyses

Wound type was documented in the patients' records and the authors categorised them as being either acute (i.e. abscess, burn, open wound, unhealed surgical wound, trauma) or chronic (i.e. diabetic foot ulcer, arterial leg ulcer, mixed leg ulcer, venous leg ulcer, pressure ulcer). The following information was systematically extracted from the patients' electronic records over the 12 months from 1 March 2017 to 28 February 2018 according to the protocol approved by the ethics committee.

- Patients' characteristics.
- Patients' comorbidities (defined as a non-acute condition that patients were suffering from in the year before the start of their wound and not necessarily the year before the start of the study period).
- Wound-related healthcare resource use (i.e. dressings, bandages, topical treatments, negative pressure wound therapy, district nurse and healthcare assistants visits (both of whom provide care within a patient's home), practice nurse visits (who provide care within a GP's surgery), GP visits, hospital outpatient visits, laboratory tests), prescribed medication (i.e. analgesics, non-steroidal anti-inflammatory drugs (NSAIDs) and systemic anti-infectives (principally antibiotics)).
- Clinical outcomes (i.e. healing and putative infection).

If a patient received a bandage or dressing on a specific date, but a clinician visit was not documented in their record, it was assumed the patient had been seen outside of the general practice by a district nurse or healthcare assistant. No other assumptions were made regarding missing data and there were no other interpolations.

The use of individual healthcare resources was quantified for all the patients, individually. These quantities were then used to estimate the total utilisation of each healthcare resource attributable to wound management during the study period, stratified by wound type.

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3 Clinical outcomes and wound-related healthcare resource use associated with the sample of  
4 3,000 patients were used to model the healing rates and annual amounts of healthcare resource  
5 use associated with wound care provided by the NHS in 2017/18.  
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10 Differences between subgroups were tested for statistical significance using a  $\chi^2$  test. Logistic  
11 regression was used to investigate relationships between baseline variables and clinical  
12 outcomes. The p values  $<0.05$  were considered statistically significant and have been reported.  
13 All p values  $\geq 0.05$  were not considered to be statistically significant and these numerical values  
14 have not been reported. All statistical analyses were performed using IBM SPSS Statistics  
15 (IBM UK, Portsmouth, Hampshire, UK).  
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### 22 **Cost of Patient Management**

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25 The NHS cost of wound care for each patient was estimated by assigning unit costs at 2017/18  
26 prices [20-22] to the quantity of healthcare resources used by individual patients from the time  
27 a patient entered the data set (i.e. from 1 March 2017 or the start time of their wound if it  
28 occurred later) up to the time their wound healed or the end of the study period, whichever  
29 came first. The total cost of utilisation of each healthcare resource for the sample of 3,000  
30 patients was then combined in order to estimate their total NHS cost of wound management  
31 over the study period. The NHS cost of wound management for this cohort was then used to  
32 model the total cost of wound care provided by the NHS in 2017/18. The cost of wound care  
33 was also estimated by stratifying patients according to their category of wound. Accordingly,  
34 the study only considers the cost of patient management attributable to wounds in primary and  
35 secondary care settings, and does not estimate patients' overall healthcare costs.  
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### 46 **Sensitivity Analyses**

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49 Deterministic sensitivity analyses were performed on all of the model's inputs to identify how  
50 the NHS cost of wound management would change by varying the different parameters in the  
51 model.  
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## RESULTS

### Prevalence of Wounds in the UK

The base population of the THIN database in 2017/18 was 2.4 million active adult patients who were  $\geq 18$  years of age. The database was interrogated, independently of the Authors, to identify patients with at least one of the 2,095 wound-related Read codes. The search identified 174,569 adult patients with a wound in 2017/18 who matched the study protocol's inclusion and exclusion criteria. The UK's population comprised 52.1 million adults who were  $\geq 18$  years of age in mid-2017 [23]. Using these variables, the outputs of the modelling were extrapolated to the whole adult population in the UK. Accordingly, the model estimated that there were 3.8 million adult patients with a wound in the UK in 2017/18 who matched the study protocol's inclusion and exclusion criteria, equivalent to 7% of the adult population (Table 1).

Sixteen per cent of all wounds had no diagnosis and it was not possible to infer a wound type from the patients' records. Additionally, 9% of all wounds were a leg ulcer without any further characterisation (i.e. venous, arterial or mixed). Hence, the records of 25% of all wounds lacked a recorded differential diagnoses. In total, there were 1 million ulcers of the lower limb, which equates to 2.0% of the adult population having a lower limb ulcer in the study year. Of these, the number of diagnosed venous leg ulcers (560,000) indicates that 1.1% of all adults  $\geq 18$  years of age had such an ulcer in the study year. In addition, there were an estimated 326,000 diabetic foot ulcers, which equates to 9% of all adult diabetic patients (i.e. 3.46 million individuals [24]) having a foot ulcer in the study year. There were an estimated 202,000 recorded pressure ulcers in the study year, equivalent to 0.4% of the total adult population (Table 1).

### Patients' Characteristics

A representative sample of 3,000 patients was randomly selected from the cohort of 174,569 patients with a wound-related Read code by IQVIA. Patients' age in the randomly selected study population was a mean of 57.9 years and 67% were  $< 65$  years of age. A total of 56% of patients were female. Mean blood pressure was 130/77 and patients' body mass index was a mean 29.1 kg/m<sup>2</sup>. An estimated 17% of patients were smokers, 30% were ex-smokers and 52% were non-smokers. A total of 73% of patients presented with a new wound in the study year

(patients' records predated the onset of the study period, enabling both pre-existing and new wounds to be identified). Table 2 summarises patients' characteristics according to wound type.

A total of 95% of patients had at least one comorbidity in the year before the start of their wound. It is also noteworthy that 13% of patients with a pressure ulcer were recorded as suffering from malnutrition, whereas it was  $\leq 5\%$  of patients with other wound types. Moreover, patients had a mean of 4.1 comorbid conditions and 57% of all patients had diabetes. The percentage of patients with different comorbidities in the year before the start of their wound (and not necessarily the year before the start of the study) is summarised in Table 3.

### Clinical Outcomes

The THIN database does not define wound healing. Wound healing was a clinical observation documented in the patient's record by their managing clinician, but not necessarily confirmed by a specialist, and it is unknown if the clinicians who managed these patients used any consistent definition. Nevertheless, an episode of care was not a proxy for time to healing. Furthermore, if a wound was not recorded as being healed it was considered to be unhealed. This assumption was supported by continued clinician visits for wound care and the continued prescribing of wound care products. On this basis, Table 4 summarises the recorded healing rates stratified by wound type and various sub-groups between 1 March 2017 and 28 February 2018. A total of 70% of all wounds ( $n = 2.7$  million) healed in the study year; 89% of acute wounds healed and 49% of chronic wounds. An estimated 30% of all wounds ( $n = 1.1$  million) remained unhealed. Patients' age did not appear to affect the overall healing rate. However, 59% of chronic wounds healed if there was no evidence of infection compared to 45% if there was a definite or suspected infection. The healing rate among acute wounds was unaffected by the presence of infection (86% versus 91% among acute wounds with no evidence of infection). An estimated 38% of chronic wounds healed if patients were smokers compared to 55% and 58% if patients were non-smokers or ex-smokers, respectively. Smoking status did not appear to affect the healing rate of acute wounds (Table 4).

For the whole cohort of patients with a wound, binary logistic regression suggested that cardiovascular disease (Odds ratio (OR) 0.57 (95% CI 0.46 to 0.71);  $p < 0.001$ ), immunological disorders (OR 0.62 (95% CI 0.45 to 0.86);  $p = 0.003$ ) and renal disorders (OR 0.56 (95% CI 0.43 to 0.73);  $p < 0.001$ ) were independent risk factors for non-healing during the study period.



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3 Additionally, the presence of renal disease was an independent risk factor for non-healing of  
4 diabetic foot ulcers (OR 0.28 (95% CI: 0.13 to 0.62);  $p = 0.002$ ), and diabetes was an  
5 independent risk factor for non-healing of venous leg ulcers (OR 0.10 (95% CI: 0.01 to 0.96);  
6  $p < 0.02$ ).  
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### 10 11 12 **Healthcare Resource Use Associated with Patient Management** 13

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15 Patients were predominantly managed in the community by GPs, practice nurses,  
16 district/community nurses and healthcare assistants. Table 5 summarises the percentage of  
17 patients who utilised different resources during the study year and Table 6 shows the annualised  
18 resources associated with each wound type. All the hospital admissions attributable to venous  
19 leg ulcers and mixed leg ulcers appeared to be linked to a suspected infection. So too were 80%  
20 of admissions attributable to diabetic foot ulcers and 95% of admissions attributable to open  
21 wounds. Less than 50% of admissions attributable to the other wound types appeared to be  
22 linked to a suspected infection. Only one-third of admissions attributable to surgical wounds  
23 and trauma appeared to be linked to a suspected infection.  
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32 Patients' treatment varied according to wound type and wound duration. Patients were  
33 prescribed a mix of dressings up to the time their wound healed or the end of the study period,  
34 whichever came first. Overall, patients' dressings were changed every 3-4 days. However, this  
35 varied according to wound type. On average:  
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- 39 • Those patients with a burn or a venous leg ulcer had one nursing visit/dressing change  
40 every 2-3 days.
- 41 • Those patients with a diabetic foot ulcer, arterial leg ulcer, mixed leg ulcer, pressure ulcer  
42 or surgical wound had one nursing visit/dressing change every 3-4 days.
- 43 • Those patients with an unspecified leg ulcer, open wound, trauma or unspecified wound  
44 had one nursing visit/dressing change every 4-5 days.
- 45 • Those patients with an abscess had one nursing visit/dressing change every 5-6 days  
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53 Less than 1% of patients were prescribed the same dressing for the duration of their wound or  
54 study period. On average, patients were prescribed a mean of 8 different dressing types over  
55 the study period, ranging from a mean of 4 different dressing types for patients with a burn to  
56 a mean of 9 different dressing types for patients with an unclassified wound. In addition to  
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3 dressings and bandages, varying percentages of patients were prescribed analgesics, NSAIDs  
4 and antibiotics as shown in Table 5.  
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8 Assessment of peripheral perfusion is a recognised requirement for leg ulcer and diabetic foot  
9 management. However, only 15% of all those with a leg or foot ulcer had a Doppler ankle  
10 brachial pressure index (ABPI) recorded in their records, of which 75% were prescribed some  
11 form of compression. Of the 85% who did not have their ABPI recorded, 29% were prescribed  
12 compression bandages/hosiery (Table 7). Over 90% of the patients with a recorded venous leg  
13 ulcer were prescribed compression bandages/hosiery, irrespective of whether they had their  
14 ABPI recorded; so too did >50% of patients with a recorded diabetic foot ulcer (Table 7).  
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### 22 **NHS Cost of Patient Management**

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26 The total annual NHS cost of managing 3.8 million patients with a wound was estimated to be  
27 £8.3 billion (Table 8). District/community nurse visits were the primary cost driver accounting  
28 for 29% of all costs and GP office visits were the secondary cost driver accounting for a further  
29 18% of the total cost. Healthcare assistant visits accounted for 17% of the total cost, practice  
30 nurse visits for 7% and wound care products for a further 6% (Table 8).  
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36 Resource use associated with managing the unhealed wounds was substantially greater than  
37 that of managing the healed wounds (Table 9). Consequently, the annual cost of managing the  
38 70% of wounds that healed was estimated to be £2.7 billion compared with £5.6 billion for the  
39 30% of wounds that did not heal within the study year. In addition, within the study period, the  
40 cost per healed wound ranged from £358 to £4,684 per patient and that of an unhealed wound  
41 ranged from £831 to £7,886 per patient (Table 10).  
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48 Eighty one per cent of the total annual NHS cost was incurred in the community and the  
49 remainder in secondary care. However, the distribution of costs varied according to wound  
50 type, with 68% and 85% of the total annual NHS cost of managing acute and chronic wounds,  
51 respectively, being incurred in the community and the remainder in secondary care.  
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## Sensitivity Analyses

When the healing rate of each wound type was simultaneously varied by  $\pm 25\%$ , the total annual NHS cost of wound management changed by  $\pm 16\%$ . When the estimated annual number of each wound type was individually changed by  $\pm 25\%$ , the total annual NHS cost of wound management changed by 10% or less. When the estimated amounts of resource use were individually varied by  $\pm 25\%$ , the total annual NHS cost of managing 3.8 million wounds changed by 7% or less. When the unit costs of wound care products were simultaneously varied by  $\pm 25\%$ , the total annual NHS cost of managing 3.8 million patients with a wound changed by  $<3\%$ .

## DISCUSSION

The 2012/13 burden of wounds study [1, 2] incorporated a predictive model [3] which forecast that the prevalence of wounds would increase by 11% per annum. Thus, the model predicted there would be 3.8 million patients with a wound in 2017/18. Our current analysis suggests that this predictive model is relatively accurate, with the overall annual number of patients with a wound having increased by 71% over the five years to 3.8 million. However, the rate of increase varied according to wound type. The annual number of patients with a wound increased by  $\geq 100\%$  for many wound types, but some acute wounds increased by 60% and pressure ulcers by only 32%, perhaps due in part to the ongoing pressure ulcer prevention campaign [25]. The model also predicted that costs would increase in parallel with prevalence. However, when the £5.3 billion [1] is uprated to 2017/18 prices (i.e. £5.6 billion), it would appear that the annual cost of wound care has increased at an approximate rate of 8-9% per annum. Hence, the overall annual NHS cost of wound care has increased by 48% in real terms over the five years.

The aim of this study was to assess the annual health economic burden of wounds by quantifying the amount of resource use and corresponding costs incurred by patients in 2017/18. From the NHS' perspective, resource use and corresponding cost of managing a patient with multiple wounds does not end until all the wounds heal. Some of the patients in our data set may have had multiple wounds, but this was not specifically listed within the database and was not transparent in the patients' records. Furthermore, it would be very difficult to retrospectively extricate resource use for different wounds from the records of a patient with multiple wounds of the same aetiology. Notwithstanding this, it would be unusual for an individual to have two wounds of different aetiologies at the same time. However, it may be that in 2017/18 some of the patients with an ulcer of the lower limb had a second ulcer, although it would be unlikely that patients with other wounds would have multiple wounds. If 10% of patients with an ulcer of the lower limb had a second ulcer, the total number of wounds would increase by 5% from 3.8 million to 4.0 million. The implication of this is that the NHS may have managed more than 3.8 million wounds in 2017/18. Nevertheless, the estimated amount of resource use and corresponding costs as presented would remain unchanged since all the resources and wound care products utilised in managing each patient were documented in their record (despite the lack of granularity surrounding the number of wounds they may have had).

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3 In the 2012/13 data set, 65% of all the patients with a wound were 65 years of age or older [1,  
4 2]. However, in the 2017/18 data set, only 33% of patients were 65 years of age or older. This  
5 was a significant difference ( $p < 0.001$ ), suggesting that wounds are no longer predominantly  
6 the preserve of the elderly. In 2012/13, 39% of all patients were non-smokers. However, by  
7 2017/18 this percentage had increased significantly to 52% ( $p < 0.001$ ). In parallel with these  
8 changes in the patient demographics there was a change in the distribution of comorbidities. In  
9 particular, in 2012/13, 73% and 37% of patients had cardiovascular and musculoskeletal  
10 disorders, but in 2017/18 an estimated 53% ( $p < 0.001$ ) and 56% ( $p < 0.02$ ) had cardiovascular  
11 and musculoskeletal disorders, respectively. Most striking, however, was that 29% of the  
12 2012/13 cohort had diabetes compared with 57% in 2017/18 ( $p < 0.05$ ).  
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22 Over the five year period, the healing rate of acute wounds increased by a mean of 13% and  
23 that of chronic wounds by a mean of 15%. However, within this estimate, the healing rate of  
24 diabetic foot ulcers and pressure ulcers increased by 27% and 43%, respectively, but the  
25 healing rate of venous and mixed leg ulcers decreased by 21% and 28%, respectively. The  
26 percentage of patients accessing different resources increased over the five years and so too  
27 did the absolute amount of resource use. For example, between 2012/13 and 2017/18 there was  
28 >11,000% increase in the number of healthcare assistant visits (from 0.5 million to 53.6  
29 million), a 401% increase in the number of district nurse visits (from 10.9 million to 54.4  
30 million), a 164% increase in the number of GP visits (from 7.7 million to 20.3 million), 96%  
31 increase in the number of hospital outpatient visits (from 3.4 million to 6.8 million) and 51%  
32 increase in the number of practice nurse visits (from 18.6 million to 28.1 million). In addition,  
33 there was a 2% decrease in the number of specialist nurse visits and a 104% increase in the  
34 amount of wound care products used. The changes in the annual cost of these resources mirror  
35 the changes in utilisation of these resources. Accordingly, the NHS cost of wound care in  
36 2017/18 was an estimated £8.3 billion, which is approaching the combined annual NHS cost  
37 of managing osteo and rheumatoid arthritis, which was reported to be £10.2 billion in 2017  
38 [26].  
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53 The shift towards greater utilisation of community-based resources is reflected in the  
54 distribution of care between secondary care and the community. In 2012/13, 48% of the costs  
55 of managing acute wounds and 78% of the costs of managing chronic wounds were incurred  
56 in the community and the remainder in secondary care [1, 2]. In 2017/18, 68% and 85% of the  
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3 costs of managing acute and chronic wounds, respectively, were incurred in the community  
4 and the remainder in secondary care.  
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9 This present study has also highlighted that resource use associated with managing the 30% of  
10 wounds that did not heal in the study year was substantially greater than that of managing the  
11 70% of wounds that did heal within the study year (e.g. 325% more hospital outpatient visits,  
12 178% more practice nurse visits, 171% more GP visits, 118% more accident & emergency  
13 attendances, 97% more district/community nurse visits and 85% more healthcare assistant  
14 visits). Consequently, the annual cost of managing wounds that healed within the study year  
15 was estimated to be £2.7 billion compared with £5.6 billion for the 30% of wounds that did not  
16 heal within the study year. In addition, the mean cost of an unhealed wound (£3,700) was  
17 approximately 2.5 times more than that of a wound that healed during the study period  
18 (£1,500). Sensitivity analysis showed the healing rate to have a large effect on the cost of  
19 wound care and regression analysis indicated that the presence of cardiovascular disease or  
20 immunological disorders or renal disorders were all independent risk factors for non-healing  
21 during the study period. In the 2012/13 study both nutritional deficiency and diabetes were  
22 independent risk factors for non-healing during the study period [1]. In this study, only a mean  
23 of 3% of patients had malnutrition, possible reflecting the significantly lower age of the study  
24 population. However, 13% of patients with a pressure ulcer had malnutrition and their BMI  
25 was a mean of 24.5 kg/m<sup>2</sup> which was lower than that of patients with other wound types.  
26 Diabetes did not exert an independent effect on healing possibly because 59% of the patients  
27 with diabetes also had cardiovascular disease, 19% had renal disease, and 11% had  
28 immunological disorders. In addition, 61% of the patients with diabetes had musculoskeletal  
29 disorders and 38% had a mental health condition (principally depression and anxiety). The age  
30 of the patients with diabetes was a mean of 59.2 years per patient and 44% were male.  
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48 This and many other studies [10-12, 27, 28] have shown that wound management is  
49 predominantly a nurse-led discipline. Nevertheless, there still seems to be minimal clinical  
50 involvement of tissue viability nurses and other specialist nurses in direct patient management.  
51 In addition, dressing and bandage types were continually switched at successive wound  
52 dressing changes for the majority of patients, suggesting confusion and conflict within the  
53 treatment plan. Moreover, an estimated 25% of all wounds being managed within the NHS in  
54 2017/18 lacked a recorded differential diagnosis in the patient's record. Furthermore, only 15%  
55 of patients with an ulcer on the lower limb had a vascular assessment with Doppler ABPI  
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3 recorded in their records, contrary to national guidance [29, 30]. Nevertheless, we observed a  
4 14% decrease in the proportion of patients with unspecified leg ulcers since 2015 which may  
5 be due to an increase in measuring ABPI even if it was not documented in the patients' records.  
6 It remains unclear and disappointing to find that records still lacked documentation of this  
7 essential investigation. Moreover, five years later, patients' records still appear to lack any  
8 evidence of consistent reporting of wound management processes. This may be indicative of  
9 the difficulties experienced by non-specialist health care professionals in the community with  
10 establishing a working diagnosis.  
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19 It seems unclear how the NHS can best respond to the ever increasing demand for wound care.  
20 The NHS Long Term Plan [31] has described how the NHS will move to a new service model  
21 in which patients will have properly joined-up care at the right time in the optimal care setting.  
22 This will involve having online 'digital' GP consultations, and redesigned hospital support in  
23 order to free-up about one-third of outpatient appointments [31]. Additionally, GP practices  
24 will be funded to create integrated teams of GPs, community health and social care staff [31].  
25 These expanded community health teams will provide fast support to people in their own  
26 homes [31]. Ultimately, the NHS will aim to create Integrated Care Systems everywhere by  
27 April 2021, which bring together local organisations to deliver a 'triple integration' of primary  
28 and specialist care, physical and mental health services and health with social care [31].  
29 Additionally, commissioners will be tasked to share decisions with providers on population  
30 health, service redesign and Long Term Plan implementation [31]. Such a change in the system  
31 may facilitate getting the optimum care to patients at the right time in the right setting in order  
32 to improve the patient experience and health outcomes, thereby freeing-up healthcare resources  
33 and reducing costs. However, will this method of care delivery improve wound care and patient  
34 outcomes? The introduction of truly seamless care with integrated electronic patient records  
35 would improve overall patient management, However, patients with wounds need face-to-face  
36 interaction with clinicians on a regular basis to monitor progress and have their dressings  
37 changed. The Authors are therefore of the opinion that this model would require the NHS to  
38 establish dedicated wound care clinics in the community at which patients receive consistent  
39 and integrated care from clinicians with qualified experience in wound care, with the clinics  
40 linking directly to electronic patient records which are integrated across all healthcare sectors.  
41 These clinics could provide both direct care and holistic assessments of patients allowing co-  
42 ordinated management of any comorbidities which may impact on wound healing  
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3 The advantages and disadvantages of using the THIN database for this study have been  
4 previously discussed [1]. In summary, the advantage of using the THIN database is that the  
5 patient pathways and associated resource use are based on real-world evidence derived from  
6 clinical practice. However, the possibility of resource use associated with managing a  
7 comorbidity being conflated with that of wound management cannot be excluded. While the  
8 study results are compelling, the analyses were based on clinicians' entries into their patients'  
9 records and inevitably subject to a certain amount of imprecision and lack of detail. Moreover,  
10 the computerised information in the THIN database is collected by GPs for clinical care  
11 purposes and not for research. Prescriptions issued by GPs and practice nurses are recorded in  
12 the database, but it does not specify whether the prescriptions were dispensed or detail patient  
13 compliance with the product. Despite these limitations, it is the authors' opinion that the THIN  
14 database affords one of the best sources of real-world evidence for clinical practice in the UK.  
15 Moreover, the changes between 2012/13 and 2017/18 are clinically relevant, since the sample  
16 size in this study is 3,000 patients versus 1,000 patients in the earlier study. Furthermore a  
17 review of Medline in August 2020 identified 283 articles in peer-reviewed journals in which  
18 the THIN database had been used to characterise clinical practice in a wide range of therapeutic  
19 areas in the UK, of which 28 had been published in BMJ Open since 2014.

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34 The analysis does not consider the potential impact of those wounds that remained unhealed  
35 beyond the study period. The THIN database may have under-recorded use of some health care  
36 resources outside the GP's surgery if not documented in the GP records, and the impact of this  
37 was addressed in sensitivity analyses. In particular, not all community records may have been  
38 linked to the GP records. The analysis excludes hospital-based prescribing, but this should have  
39 minimal impact on the results as most prescribing is undertaken by GPs and nurses in the  
40 community. Also excluded is the potential impact of managing patients with wounds being  
41 cared for in nursing/residential homes.

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50 The analysis only considered the annual cost of NHS resource use for the 'average adult  
51 patient', and no attempt was made to stratify resource use and costs according to gender,  
52 comorbidities, wound size, wound severity and other disease-related factors. Also excluded  
53 were the costs incurred by patients and indirect societal costs as a result of patients taking time  
54 off work. In 2012/13, only 35% of patients with a wound were of working age. However, in  
55 2017/18 nearly 70% of the cohort was less than 65 years of age and 6% of patients in this age  
56 group were admitted into hospital. In April 2018 the gross median salary for full-time  
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3 employees was £569 per week [32]. Hence, the indirect societal cost in lost GDP arising from  
4 hospitalisation (assuming 96% of these patients were in full-time employment [33]) amounted  
5 to £87 million. This is likely to be an underestimate, since a proportion of patients are likely to  
6 be absent from work due to their wound, but residing in their home. Nevertheless, this is a  
7 relatively negligible indirect cost considering that nocturia (which predominantly affects the  
8 elderly population) accounts for over £4 billion in lost GDP [34].  
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15 Notwithstanding the study's limitations, the real-world evidence highlights the substantial  
16 burden that wounds continue to impose on the NHS in an average year. Clinical and economic  
17 benefits to both patients and the NHS could accrue from strategies that focus on (a) accurate  
18 diagnosis, (b) preventing infection and (c) improving wound-healing rates. However, these  
19 benefits are unlikely to be realised unless there is a structural change within the NHS in order  
20 to manage the increasing demand for wound care.  
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**Table 1: Annual number of adult patients with a wound and prevalence of different wound types in the UK. Percentage of total number in parentheses.**

	Annual number of patients with a wound in 2017/18 (thousands)	Annual prevalence among the adult UK population in 2017/18	Annual number of patients with a wound in 2012/13 (thousands) [1]	Percentage change in the annual number of patients with a wound between 2012/13 and 2017/18
Abscess	293,000 (8%)	0.0056	160,000 (7%)	83%
Burn	222,000 (6%)	0.0043	87,000 (4%)	155%
Diabetic foot ulcer	326,000 (9%)	0.0063	169,000 (8%)	93%
Leg ulcer (arterial)	31,000 (1%)	0.0022	9,000 (<1%)	244%
Leg ulcer (mixed)	102,000 (3%)	0.0003	24,000 (1%)	325%
Leg ulcer (unspecified)	361,000 (9%)	0.0069	420,000 (19%)	-14%
Leg ulcer (venous)	560,000 (15%)	0.0108	278,000 (13%)	101%
Open wound	337,000 (9%)	0.0065	240,000 (11%)	40%
Pressure ulcer	202,000 (5%)	0.0039	153,000 (7%)	32%
Surgical wound	519,000 (14%)	0.0100	253,000 (11%)	105%
Trauma	249,000 (7%)	0.0048	158,000 (7%)	58%
Unspecified	600,000 (16%)	0.0115	271,000 (12%)	121%
<b>TOTAL</b>	<b>3,802,000 (100%)</b>	<b>0.0730</b>	<b>2,222,000 (100%)</b>	<b>71%</b>

**Table 2: Patients' baseline characteristics.**

	Abscess	Burn	Diabetic foot ulcer	Leg ulcer (arterial)	Leg ulcer (mixed)	Leg ulcer (unspecified)	Leg ulcer (venous)	Open wound	Pressure ulcer	Surgical wound	Trauma	Unspecified	All wounds
Mean age per patient (years)	46.0	47.1	62.3	57.4	67.0	52.6	70.9	53.4	76.1	55.4	52.4	55.9	57.9
Percentage male	42%	35%	51%	22%	57%	39%	48%	40%	40%	42%	41%	49%	44%
Percentage smoker	29%	24%	11%	13%	10%	21%	7%	18%	7%	19%	16%	22%	17%
Percentage ex-smoker	19%	19%	37%	32%	30%	21%	44%	29%	40%	29%	23%	28%	30%
Percentage non- smoker	51%	56%	52%	55%	60%	58%	48%	51%	40%	52%	59%	49%	52%
Percentage with unknown smoking status	2%	0%	0%	0%	0%	0%	0%	2%	13%	1%	1%	1%	1%
Mean body mass index per patient (kg/m <sup>2</sup> )	29.7	27.9	30.9	28.8	32.3	27.6	31.5	29.6	24.5	28.3	27.8	28.9	29.1
Percentage with new wounds in the study period	79%	79%	61%	33%	50%	68%	59%	87%	80%	77%	84%	80%	73%
Percentage of all wounds with a recorded infection	27%	13%	78%	52%	47%	68%	41%	94%	13%	35%	29%	1%	40%

**Table 3: Percentage of patients with a comorbidity in the year before the start of their wound.** Those with diabetes are a subset of those with endocrinological comorbidities.

	Abscess	Burn	Diabetic foot ulcer	Leg ulcer (arterial)	Leg ulcer (mixed)	Leg ulcer (unspecified)	Leg ulcer (venous)	Open wound	Pressure ulcer	Surgical wound	Trauma	Unspecified	All wounds
Cardiovascular	36%	35%	70%	67%	83%	45%	78%	44%	53%	47%	38%	51%	53%
Dermatological	48%	52%	60%	44%	63%	50%	41%	51%	40%	51%	54%	45%	49%
Endocrinological	52%	56%	99%	78%	97%	18%	52%	69%	60%	63%	55%	57%	60%
Diabetes	50%	52%	100%	78%	97%	13%	37%	67%	60%	59%	51%	52%	57%
Gastroenterological	29%	32%	42%	67%	33%	29%	19%	34%	47%	37%	31%	35%	33%
Genito-urinary	21%	24%	28%	44%	33%	18%	19%	25%	27%	28%	24%	24%	24%
Immunological	7%	11%	13%	11%	17%	3%	11%	10%	7%	9%	8%	9%	9%
Malnutrition	0%	2%	2%	0%	0%	5%	4%	1%	13%	1%	2%	3%	3%
Musculoskeletal	41%	56%	62%	67%	63%	61%	59%	49%	73%	57%	49%	56%	56%
Neurological	16%	21%	24%	11%	27%	24%	33%	18%	67%	22%	17%	17%	24%
Oncological	14%	16%	25%	11%	20%	16%	7%	14%	27%	18%	15%	19%	16%
Ophthalmological	8%	15%	20%	0%	27%	13%	4%	11%	33%	13%	11%	10%	12%
Psychiatric	44%	40%	39%	33%	53%	47%	15%	35%	33%	35%	32%	35%	35%
Renal	8%	5%	30%	22%	33%	13%	30%	12%	40%	14%	9%	16%	18%
Respiratory	38%	44%	45%	56%	43%	42%	33%	36%	33%	38%	36%	37%	38%

**Table 4: Healing rates in the study period.**

	Abscess	Burn	Diabetic foot ulcer	Leg ulcer (arterial)	Leg ulcer (mixed)	Leg ulcer (unspecified)	Leg ulcer (venous)	Open wound	Pressure ulcer	Surgical wound	Trauma	Unspecified	All wounds
Wounds that healed in the study period	86%	84%	52%	47%	30%	55%	37%	90%	60%	85%	94%	85%	70%
New wounds that healed in the study period	85%	80%	60%	40%	27%	38%	56%	90%	75%	86%	94%	88%	76%
Existing wounds that healed in the study period	89%	96%	40%	50%	33%	92%	9%	90%	0%	80%	96%	73%	56%
Wounds that healed with no evidence of infection	92%	85%	57%	50%	34%	60%	50%	93%	62%	87%	95%	86%	77%
Wounds that healed with recorded evidence of infection	69%	75%	50%	45%	25%	52%	18%	89%	50%	81%	91%	38%	60%
Wounds that healed among smokers	84%	87%	33%	37%	28%	48%	25%	88%	33%	82%	96%	85%	64%
Wounds that healed among ex-smokers	90%	75%	53%	47%	32%	53%	39%	88%	67%	83%	95%	88%	70%
Wounds that healed among non-smokers	87%	87%	56%	50%	30%	58%	38%	93%	75%	88%	96%	84%	74%



**Table 5: Percentage of patients who utilised resources in the study year. \*Includes tissue viability nurses and diabetic nurse specialists.**

	Abscess	Burn	Diabetic foot ulcer	Leg ulcer (arterial)	Leg ulcer (mixed)	Leg ulcer (unspecified)	Leg ulcer (venous)	Open wound	Pressure ulcer	Surgical wound	Trauma	Unspecified	All wounds
District/community nurse visits	37%	52%	96%	89%	93%	82%	85%	24%	60%	46%	15%	44%	38%
Healthcare assistant visits	32%	27%	93%	89%	99%	84%	81%	21%	40%	46%	15%	44%	36%
Practice nurse visits	96%	94%	94%	100%	100%	79%	96%	97%	93%	97%	98%	98%	97%
GP office visits	94%	79%	97%	100%	100%	100%	100%	90%	93%	82%	93%	62%	84%
Dressings	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Compression bandaging/hosiery	2%	5%	15%	0%	100%	26%	93%	5%	0%	3%	0%	6%	6%
Prescribed analgesics/non-steroidal anti-inflammatories	22%	19%	57%	67%	87%	32%	81%	12%	53%	24%	10%	20%	21%
Prescribed antibiotics	82%	42%	92%	97%	90%	84%	81%	81%	67%	43%	37%	26%	50%
Hospital outpatient visits with a nurse	11%	32%	35%	22%	33%	16%	37%	8%	0%	18%	5%	31%	17%
Accident & emergency attendances	16%	18%	23%	22%	27%	5%	30%	8%	7%	8%	5%	4%	8%
Hospital admissions without surgery	7%	8%	4%	0%	3%	5%	7%	7%	13%	8%	5%	8%	7%
Hospital outpatient visits with a physician/surgeon	4%	0%	15%	22%	7%	8%	7%	4%	20%	8%	7%	1%	5%
GP home visits	2%	3%	2%	0%	10%	0%	11%	1%	13%	2%	1%	1%	2%
Diagnostic tests	1%	2%	3%	0%	10%	3%	0%	1%	0%	2%	1%	3%	2%
Ambulance services	1%	0%	3%	0%	3%	0%	4%	0%	0%	1%	0%	1%	1%
Hospital admissions with surgery	2%	2%	2%	0%	0%	0%	0%	0%	0%	6%	1%	0%	2%
Specialist nurse visits*	0%	0%	3%	0%	10%	0%	0%	0%	7%	1%	0%	1%	1%
Podiatrist visits	1%	0%	3%	33%	17%	0%	0%	1%	7%	1%	<1%	0%	1%
Day Cases	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	<1%	<1%

**Table 6: Annual amount of NHS resource use attributable to managing 3.8 million patients with a wound (thousands).** \*Includes tissue viability nurses and diabetic nurse specialists.

	Abscess	Burn	Diabetic foot ulcer	Leg ulcer (arterial)	Leg ulcer (mixed)	Leg ulcer (unspecified)	Leg ulcer (venous)	Open wound	Pressure ulcer	Surgical wound	Trauma	Unspecified	All wounds
District/community nurse visits	1069.31	2124.01	10443.18	895.38	4411.41	6093.17	17459.02	797.34	5789.24	2791.44	234.97	2305.39	54413.86
Healthcare assistant visits	1111.38	1283.91	10641.73	1020.07	4671.18	6946.81	17619.78	804.15	3839.82	3047.33	238.16	2423.08	53647.40
Practice nurse visits	745.32	484.97	3428.04	187.60	1938.34	1278.84	14461.10	545.16	1128.81	1217.10	290.62	2356.74	28062.63
GP office visits	632.13	382.27	2436.59	115.97	1173.09	1102.64	9855.13	497.20	1196.00	983.00	292.53	1424.03	20090.58
Dressings	7383.46	5580.89	51475.28	4007.17	19817.92	26030.08	79863.80	6759.11	9467.04	27172.85	4028.25	22913.59	264499.43
Compression bandaging/hosiery	160.32	62.52	588.14	0.00	1691.43	258.85	27259.29	239.70	0.00	260.19	0.00	407.91	30928.35
Prescribed medication	827.59	235.79	2948.13	242.17	1473.18	1787.04	5498.12	641.18	1760.41	922.26	177.91	1359.55	17873.33
Hospital outpatient visits with a nurse	171.46	171.49	583.20	20.47	709.31	190.11	3672.33	43.82	0.00	286.86	18.26	600.07	6467.37
Accident & emergency attendances	57.15	46.44	150.74	10.23	47.74	19.01	248.97	30.40	40.32	57.93	13.23	35.83	758.00
Hospital admissions without surgery	24.01	17.86	19.77	0.00	3.41	19.01	62.24	33.98	26.88	60.74	23.30	78.81	370.01
Hospital outpatient visits with a physician/surgeon	18.29	0.00	61.78	6.82	10.23	28.52	41.50	14.31	40.32	40.18	18.26	5.37	285.57
GP home visits	5.72	7.15	14.83	0.00	17.05	0.00	62.24	5.37	40.32	11.21	1.89	24.18	189.95
Diagnostic tests	1.14	3.57	17.30	0.00	30.69	47.53	0.00	3.58	0.00	14.02	2.83	23.29	143.95
Ambulance services	2.29	0.00	9.89	0.00	3.41	0.00	41.50	0.00	0.00	4.67	0.00	5.37	67.12
Hospital admissions with surgery	4.57	3.57	4.94	0.00	0.00	0.00	0.00	0.00	0.00	34.57	3.46	0.00	51.12
Specialist nurse visits*	0.00	0.00	17.30	0.00	10.23	0.00	0.00	0.00	13.44	0.93	0.00	3.74	45.64
Podiatrist visits	2.29	0.00	9.89	13.64	17.05	0.00	0.00	0.89	13.44	1.87	0.32	0.00	59.38
Day Cases	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87	0.00	0.90	3.91

**Table 7: Use of Doppler in patients with an ulcer of the lower limb to measure ankle brachial pressure index (ABPI).**

Ulcer type	Percentage who had a Doppler	Percentage who did not have a Doppler	Percentage of these who were prescribed a compression bandage/hosiery
Venous leg ulcer	59%	41%	88%
Arterial leg ulcer	22%	78%	0%
Mixed Leg ulcer	27%	73%	100%
Unspecified leg ulcer	0%	100%	0%
Diabetic foot ulcer	8%	92%	50%
All lower limb ulcers	15%	85%	75%

**Table 8: Annual cost of NHS resource use attributable to managing 3.8 million patients with a wound (£ million at 2017/18 prices).**

Percentage of total cost in parentheses. \*Includes tissue viability nurses and diabetic nurse specialists.

	Abscess	Burn	Diabetic foot ulcer	Leg ulcer (arterial)	Leg ulcer (mixed)	Leg ulcer (unspecified)	Leg ulcer (venous)	Open wound	Pressure ulcer	Surgical wound	Trauma	Unspecified	Total
District/community nurse visits	£48.12	£95.58	£469.94	£40.29	£198.51	£274.19	£785.66	£35.88	£260.52	£125.61	£10.57	£103.74	£2,448.61 (29%)
GP office visits	£46.78	£28.29	£180.31	£8.58	£86.81	£81.60	£729.28	£36.79	£88.50	£72.74	£21.65	£105.38	£1,486.71 (18%)
Healthcare assistant visits	£28.90	£33.38	£276.69	£26.52	£121.45	£180.62	£458.11	£20.91	£99.84	£79.23	£6.19	£63.00	£1,394.84 (17%)
Hospital admissions without surgery	£30.25	£22.51	£24.91	£0.00	£11.06	£61.67	£201.92	£42.82	£33.86	£76.53	£29.36	£99.31	£634.20 (8%)
Hospital outpatient visits with a nurse	£16.65	£16.66	£56.65	£1.99	£68.90	£18.47	£356.69	£4.26	£0.00	£27.86	£1.77	£58.28	£628.18 (8%)
Practice nurse visits	£15.65	£10.18	£71.99	£3.94	£40.71	£26.86	£303.68	£11.45	£23.71	£25.56	£6.10	£49.49	£589.32 (7%)
Wound care products	£10.81	£12.65	£92.48	£5.80	£38.14	£39.24	£225.10	£10.68	£19.05	£33.57	£5.50	£38.36	£531.38 (6%)
Prescribed medication	£12.90	£3.68	£45.55	£3.74	£22.67	£27.76	£84.36	£10.00	£27.09	£14.30	£2.79	£20.90	£275.74 (3%)
Hospital admissions with surgery	£9.67	£13.38	£20.69	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£73.12	£7.33	£0.00	£124.19 (1%)
Accident & emergency attendances	£9.16	£7.44	£24.15	£1.64	£7.65	£3.05	£39.89	£4.87	£6.46	£9.28	£2.12	£5.74	£121.45 (1%)
Hospital outpatient visits with a physician/surgeon	£2.44	£0.00	£8.23	£0.91	£1.36	£3.80	£5.53	£1.91	£5.37	£5.35	£2.43	£0.72	£38.05 (<1%)
GP home visits	£0.69	£0.87	£1.80	£0.00	£2.07	£0.00	£7.56	£0.65	£4.90	£1.36	£0.23	£2.94	£23.07 (<1%)
Ambulance services	£0.35	£0.00	£1.49	£0.00	£0.52	£0.00	£6.27	£0.00	£0.00	£0.71	£0.00	£0.81	£10.15 (<1%)
Podiatrist visits	£0.31	£0.00	£1.34	£1.85	£2.31	£0.00	£0.00	£0.12	£1.82	£0.25	£0.04	£0.00	£8.04 (<1%)
Day Cases	£0.84	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£1.37	£0.00	£0.66	£2.87 (<1%)
Specialist nurse visits*	£0.00	£0.00	£1.11	£0.00	£0.66	£0.00	£0.00	£0.00	£0.86	£0.06	£0.00	£0.24	£2.93 (<1%)
Diagnostic tests	£0.00	£0.01	£0.03	£0.00	£0.06	£0.09	£0.00	£0.01	£0.00	£0.03	£0.01	£0.04	£0.28 (<1%)
<b>TOTAL COST</b>	<b>£233.52</b>	<b>£244.63</b>	<b>£1,277.36</b>	<b>£95.26</b>	<b>£602.88</b>	<b>£717.35</b>	<b>£3,204.05</b>	<b>£180.35</b>	<b>£571.98</b>	<b>£546.93</b>	<b>£96.09</b>	<b>£549.61</b>	<b>£8320.01 (100%)</b>

**Table 9: Annual amount and corresponding cost (at 2017/18 prices) of NHS resource use attributable to managing 3.8 million patients with a wound, stratified by healing.** \*Includes tissue viability nurses and diabetic nurse specialists.

	Annual number (thousand)			Annual cost of wounds (£ million)		
	Healed	Unhealed	Percentage difference in resource use (%)	Healed	Unhealed	Percentage difference in resource cost (%)
Number of patients with a wound	2,677.00	1,125.00				
Ambulance services	4.51	62.61	1288%	£0.68	£9.47	1293%
Hospital outpatient visits	1,286.86	5,466.09	325%	£130.85	£535.38	309%
Practice nurse visits	7,430.80	20,631.83	178%	£156.05	£433.27	178%
GP visits	5,460.16	14,820.36	171%	£407.22	£1,102.56	171%
Podiatrist visits	16.11	43.27	169%	£2.18	£5.86	169%
Prescribed medication	5,593.33	12,280.00	120%	£86.72	£189.02	118%
Accident & Emergency attendances	238.34	519.66	118%	£38.19	£83.26	118%
District/community nurse visits	18,342.87	36,070.99	97%	£825.59	£1,623.02	97%
Wound care products (dressings/bandages/hosiery/creams/ointments/tapes etc)				£181.06	£350.32	93%
Healthcare assistant visits	18,816.65	34,830.75	85%	£489.23	£905.61	85%
Specialist nurse visits*	21.12	24.52	16%	£1.35	£1.58	17%
Hospital admissions & day cases	286.73	138.31	-52%	£427.89	£333.37	-22%
Diagnostic tests	86.89	57.06	-34%	£0.19	£0.09	-53%
TOTAL				£2,747.20	£5,572.81	103%

**Table 10: Total annual NHS cost (at 2017/18 prices) of wound care attributable to managing 3.8 million patients with a wound and cost per patient, stratified by healing.**

	Total NHS Cost for all patients (£ million)		Mean annual NHS cost per patient	
	Healed wounds	Unhealed wounds	Healed wounds	Unhealed wound
Abscess	152.12	81.40	£604.88	£1,977.94
Burn	140.23	104.40	£754.81	£2,922.16
Diabetic foot ulcer	490.11	787.25	£2,874.36	£5,056.71
Leg ulcer (arterial)	53.70	41.56	£2,623.83	£4,061.31
Leg ulcer (mixed)	143.77	459.11	£4,684.15	£6,411.01
Leg ulcer (unspecified)	379.58	337.77	£1,901.79	£2,089.98
Leg ulcer (venous)	422.56	2781.49	£2,036.67	£7,886.05
Open wound	127.51	52.84	£421.83	£1,515.03
Pressure ulcer	90.44	481.54	£747.75	£5,972.28
Surgical wound	389.92	157.01	£884.11	£2,024.49
Trauma	83.78	12.31	£358.09	£831.63
Unspecified	273.48	276.13	£533.82	£3,146.03

Read Code	Description
2924	O/E - trophic skin ulceration
2924.00	O/E - trophic skin ulceration
3511	Surgical biopsy taken
3511.00	Surgical biopsy taken
8343.00	Immobilisation of wound
14F3.00	H/O: chronic skin ulcer
14F4.00	H/O: Admission in last year for diabetes foot problem
14F5.00	H/O: venous leg ulcer
14F6.00	H/O: foot ulcer
14F7.00	H/O: arterial lower limb ulcer
22L..00	O/E - wound healing
22L1.00	O/E - Wound healed
22L2.00	O/E - Wound healing well
22L3.00	O/E - Wound healing badly
22L3.11	O/E wound healing delayed
22L4.00	O/E - Wound infected
22L5.00	O/E - protruding suture
22L6.00	O/E - wound necrotic
22Q..00	Wound observation
22Q0.00	Length of wound
22Q1.00	Width of wound
22Q3.00	Wound dirty
22Q4.00	Depth of wound
22Q6.00	Wound discharge
22Q8.00	Critical colonisation of wound
22Q9.00	Traumatic wound
22QA.00	Surgical wound
22QB.00	Fungating wound
26B8.00	O/E - ulcerated breast lesion
26B8.11	O/E - ulcer on breast
2Fb..00	Granulation of tissue
2FF..00	O/E - skin ulcer
2FF1.00	O/E - no skin ulcer
2FF2.00	O/E - skin ulcer present
2FF3.00	O/E - depth of ulcer
2FFZ.00	O/E - skin ulcer NOS
2FG7.00	O/E - healed burn scar
2FI..00	O/E - sinus in skin
2FI2.00	O/E -skin sinus-post operation
2FI3.00	O/E - skin sinus -after injury
2FI4.00	O/E - suppuration skin sinus
2FIZ.00	O/E - skin sinus NOS
2G48.00	O/E - ankle ulcer
2G4E.00	Healed leg ulcer
2G54.00	O/E - Right foot ulcer
2G55.00	O/E - Left foot ulcer
2G5H.00	O/E - Right diabetic foot - ulcerated
2G5L.00	O/E - Left diabetic foot - ulcerated
2G5Q.00	O/E - No left foot ulcer

1		
2	2G5R.00	O/E - No right foot ulcer
3	2G5S.00	O/E - right healed foot ulcer
4	2G5T.00	O/E - left healed foot ulcer
5	2G5V.00	O/E - right chronic diabetic foot ulcer
6	2G5W.00	O/E - left chronic diabetic foot ulcer
7		
8	2G63.00	Ischaemic toe
9	2G64.00	O/E - infected toe
10	2I16.00	O/E - gangrene
11	38C4.00	Leg ulcer assessment
12	38N..00	Wound assessment
13	38Qi.00	SINBAD (site,isch,neuro,bact inf,depth) wound classification
14	39C0.00	Pressure sore
15	39C1.00	Superficial pressure sore
16	39C2.00	Deep pressure sore
17	39C3.00	Pressure sore -deep + superfic
18	39C4.00	Waterlow pressure sore risk score
19	39C4200	Waterlow major surgery/trauma score
20	39C5.00	Medley pressure sore risk score
21	39C6.00	Maelor pressure ulcer risk assessment score
22	39C6.11	Maelor score
23	39C7.00	EPUAP (European pressure ulcer advisory panel) grade 1 ulcer
24	39C8.00	EPUAP (European pressure ulcer advisory panel) grade 2 ulcer
25	39C9.00	EPUAP (European pressure ulcer advisory panel) grade 3 ulcer
26	39CA.00	EPUAP (European pressure ulcer advisory panel) grade 4 ulcer
27	4I1F.00	Wound microscopy, culture and sensitivities
28	4I2D.00	Wound exudate sample
29	4I2D.11	Wound swab
30	4I2D000	Wound swab culture positive
31	4I2D100	Wound swab culture negative
32	4JG3.00	Skin ulcer swab taken
33	4JG4.00	Skin wound swab taken
34	58C4.00	Photography of wound
35	6AD1.00	Wound repair review
36	7F23400	Repair of episiotomy
37	7F23y00	Other specified immediate repair of obstetric laceration
38	7F24.00	Other obstetric operations
39	7F24y00	Other specified other obstetric operation
40	7F24z00	Other obstetric operation NOS
41	7G06.00	Curettage of lesion of skin
42	7G06.11	Curettage of lesion of skin or subcutaneous tissue
43	7G06.12	Curettage of lesion of skin including head and neck
44	7G06000	Curettage and cauterisation of lesion of skin head or neck
45	7G06100	Curettage and cauterisation of lesion of skin NEC
46	7G06111	Curettage and cauterisation of skin wart NEC
47	7G06200	Curettage of lesion of skin of head or neck NEC
48	7G06300	Curettage of sinus NEC
49	7G06400	Curettage of wound NEC
50	7G06y00	Other specified curettage of lesion of skin
51	7G06z00	Curettage of lesion of skin NOS
52	7G2C000	Toilet or clean burnt skin of head or neck
53		
54		
55		
56		
57		
58		
59		
60		



1		
2	7G2C100	Toilet or clean burnt skin NEC
3	7G2C200	Debridement of burnt skin of head and neck
4	7G2C300	Debridement of burnt skin NEC
5	7G2C400	Toilet to burnt skin of head or neck NEC
6	7G2C500	Tangent excision of burnt skin of head or neck
7	7G2C600	Tangent excision of burnt skin NEC
8	7G2CE00	Removal of slough from burnt skin NEC
9	7G2CE11	Escharotomy of burnt skin NEC
10	7G2CF00	Cleansing and sterilisation of burnt skin of head or neck
11	7G2CG00	Dress burnt skin head or neck us vacuum assisted clos device
12	7G2CH00	Cleansing and sterilisation of burnt skin NEC
13	7G2CJ00	Dressing burnt skin using vacuum assisted closure device NEC
14	7G2Cy00	Other specified toilet to burnt skin
15	7G2Cz00	Toilet to burnt skin NOS
16	7G2D.00	Other skin toilet
17	7G2D000	Debridement of skin NEC
18	7G2D011	Debridement of wound of skin NEC
19	7G2D100	Debridement of skin of head or neck NEC
20	7G2D200	Removal of slough from skin NEC
21	7G2D300	Removal of slough from skin of head or neck NEC
22	7G2D400	Toilet to skin of head or neck NEC
23	7G2D500	Cleaning of skin wound NEC
24	7G2D600	Cleaning of skin wound of head or neck
25	7G2D700	Cleansing and sterilisation of skin of head or neck NEC
26	7G2D800	Cleansing and sterilisation of skin NEC
27	7G2D900	Dres skin head or neck us vacuum assisted closure device NEC
28	7G2DA00	Dressing of skin using vacuum assisted closure device NEC
29	7G2DB00	Removal of slough from skin using pressurised fluid jet
30	7G2Dy00	Other specified toilet to skin
31	7G2Dz00	Other toilet to skin NOS
32	7G2E.00	Dressing of skin or wound
33	7G2E.11	Dressing of skin
34	7G2E000	Dressing of burnt skin of head or neck
35	7G2E100	Dressing of burnt skin NEC
36	7G2E200	Dressing of skin of head or neck NEC
37	7G2E300	Dressing of skin NEC
38	7G2E400	Dressing of skin of head or neck NEC
39	7G2E500	Dressing of skin ulcer NEC
40	7G2E600	Attention to dressing of burn of head or neck
41	7G2E700	Attention to dressing of burnt skin NEC
42	7G2E800	Attention to dressing of skin of head or neck NEC
43	7G2E900	Attention to dressing of skin NEC
44	7G2EA00	Two layer compression bandage for skin ulcer
45	7G2EB00	Four layer compression bandaging for skin ulcer
46	7G2EC00	Three layer compression bandage for skin ulcer
47	7G2Ey00	Other specified dressing of skin
48	7G2Ez00	Dressing of skin NOS
49	7G2G000	Dermabrasion of skin of head or neck
50	7G2G100	Dermabrasion of skin NEC
51	7G2G400	Refashioning of scar
52		
53		
54		
55		
56		
57		
58		
59		
60		

1		
2	7P23200	Delivery of rehabilitation for burns
3	81H..00	Dressing of wound
4	81H1.00	Dressing of ulcer
5	81H2.00	Dressing of burn
6	81H3.00	Attention to dressing of skin
7	81H4.00	Checking dressing of skin
8	81H5.00	Change of dressing
9	81Hy.00	Other wound dressing
10	81HZ.00	Wound dressing NOS
11	8BC7.00	Glueing of wound
12	8BN..00	Treatment of wound with maggots
13	8C1L.00	Wound care
14	8C1M.00	Post-operative wound care
15	8C1M.11	Post-surgical wound care
16	8C1Q.00	Compression hosiery procedure
17	8C22.00	Oxygenation of slough
18	8C6..00	Wound dressing requested by accident and emergency service
19	8C7..00	Suture removal requested by accident and emergency service
20	8CA4T00	Dietary education for wound healing
21	8CA4T11	Dietary advice for wound healing
22	8Cd9.00	Advice given about wound care
23	8CK..00	Skin care
24	8CMT.00	Leg ulcer care pathway
25	8CS3.00	Agreeing on leg ulcer treatment plan
26	8CT1.00	Leg ulcer compression therapy finished
27	8CV2.00	Leg ulcer compression therapy started
28	8H15.00	Admit to burns unit
29	8H5E.00	Burns referral
30	8HIV.00	Referral for complex wound care
31	8HTh.00	Referral to leg ulcer clinic
32	9kd..00	Complex wound care - enhanced services administration
33	9ks..00	Complex skin ulcer care enhanced services administration
34	9kY..00	Review of wound repair - enhanced services administration
35	9kY..11	Review of wound repair
36	9N0t.00	Seen in primary care leg ulcer clinic
37	9N0z.00	Seen in burns clinic
38	9N2m.00	Seen by tissue viability nurse specialist
39	9N7L.00	Postop wound management gen secondary care done by practice
40	9NM5.00	Attending leg ulcer clinic
41	A056.00	Amoebic skin ulceration
42	A170.00	Tuberculosis of skin and subcutaneous tissue
43	A170z00	Tuberculosis of skin and subcutaneous tissue NOS
44	A3A0500	Gas gangrene
45	A3A0600	Gas gangrene-neck
46	A3A0700	Gas gangrene-back
47	A3A0800	Gas gangrene-shoulder
48	A3A0900	Gas gangrene-arm
49	A3A0A00	Gas gangrene-forearm
50	A3A0B00	Gas gangrene-hand
51	A3A0C00	Gas gangrene-pelvis
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2	A3A0D00	Gas gangrene-thigh
3	A3A0E00	Gas gangrene-leg
4	A3A0F00	Gas gangrene-foot
5	A3A0z00	Gas gangrene caused by organism NOS
6	A851000	Aleppo boil
7	A851100	Baghdad boil
8	A851200	Delhi boil
9		
10	A851z00	Urban cutaneous leishmaniasis NOS
11	A852.00	Asian desert cutaneous leishmaniasis
12	A853.00	Ethiopian cutaneous leishmaniasis
13	A854.00	American cutaneous leishmaniasis
14	A854.11	Chiclero ulcer
15	A855.00	American mucocutaneous leishmaniasis
16	A85z.00	Leishmaniasis NOS
17	A86..00	Trypanosomiasis
18		
19	AD40000	Cutaneous myiasis
20	AD40100	Wound myiasis
21		
22	C107.11	Diabetes mellitus with gangrene
23	C107.12	Diabetes with gangrene
24	C107200	Diabetes mellitus, adult with gangrene
25	C108500	Insulin dependent diabetes mellitus with ulcer
26	C108511	Type I diabetes mellitus with ulcer
27	C108512	Type 1 diabetes mellitus with ulcer
28		
29	C108600	Insulin dependent diabetes mellitus with gangrene
30	C108611	Type I diabetes mellitus with gangrene
31	C108612	Type 1 diabetes mellitus with gangrene
32	C109400	Non-insulin dependent diabetes mellitus with ulcer
33	C109411	Type II diabetes mellitus with ulcer
34	C109412	Type 2 diabetes mellitus with ulcer
35	C109500	Non-insulin dependent diabetes mellitus with gangrene
36	C109511	Type II diabetes mellitus with gangrene
37	C109512	Type 2 diabetes mellitus with gangrene
38		
39	C10E500	Type 1 diabetes mellitus with ulcer
40	C10E511	Type I diabetes mellitus with ulcer
41	C10E512	Insulin dependent diabetes mellitus with ulcer
42	C10E600	Type 1 diabetes mellitus with gangrene
43	C10E611	Type I diabetes mellitus with gangrene
44	C10E612	Insulin dependent diabetes mellitus with gangrene
45	C10F400	Type 2 diabetes mellitus with ulcer
46	C10F411	Type II diabetes mellitus with ulcer
47	C10F500	Type 2 diabetes mellitus with gangrene
48	C10F511	Type II diabetes mellitus with gangrene
49		
50	F506.00	Abscess of external ear
51	G732.00	Peripheral gangrene
52	G732000	Gangrene of toe
53	G732100	Gangrene of foot
54	G732200	Gangrene of finger
55	G732300	Gangrene of thumb
56	G732400	Gangrene of hand
57		
58	G830.00	Varicose veins of the leg with ulcer
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2	G832.00	Varicose veins of the leg with ulcer and eczema
3	G835.00	Infected varicose ulcer
4	G837.00	Venous ulcer of leg
5	J085000	Abscess of lip
6	J085800	Lip ulcer
7	J54..00	Abscess of anal and rectal regions
8	J54..12	Rectal abscess
9	J540.00	Perianal abscess
10	J540.11	Perianal cellulitis
11	J541.00	Ischiorectal abscess
12	J542.00	Submucous ano-rectal abscess
13	J543.00	Pelvi-rectal abscess
14	J544.00	Ano-rectal fissure abscess
15	J545.00	Intrasphincteric abscess
16	J546.00	Rectal abscess
17	J54z.00	Ano-rectal abscess NOS
18	K272000	Penile abscess
19	K272100	Penile boil
20	K272200	Penile carbuncle
21	K272300	Cellulitis of penis
22	K27y500	Chronic ulcer of penis
23	K284600	Fournier's gangrene of scrotum
24	K424000	Abscess of vulva
25	K424011	Abscess of labia
26	K424100	Carbuncle of vulva
27	K424111	Boil of vulva
28	K424200	Furuncle of vulva
29	K424z00	Other abscess of vulva NOS
30	K425.00	Ulceration of vulva
31	K425000	Ulceration of vulva unspecified
32	K425100	Ulceration of vulva in diseases EC
33	K425200	Ulceration of vulva in Behcet's disease
34	K425z00	Ulceration of vulva NOS
35	L394500	Infection of obstetric surgical wound
36	L441.00	Caesarean wound disruption
37	L441000	Caesarean wound disruption unspecified
38	L441100	Caesarean wound disruption - delivered with p/n complication
39	L441200	Caesarean wound disruption with postnatal complication
40	L441z00	Caesarean wound disruption NOS
41	L442.00	Obstetric perineal wound disruption
42	L442.11	Breakdown of perineum
43	L442.12	Episiotomy breakdown
44	L442000	Obstetric perineal wound disruption unspecified
45	L442100	Obstetric perineal wound disruption - deliv + p/n comp
46	L442200	Obstetric perineal wound disruption with p/n complication
47	L442z00	Obstetric perineal wound disruption NOS
48	L443.00	Other complication of obstetric surgical wound
49	L443.11	Haematoma - perineal wound
50	L443.12	Infection - perineal wound
51	L443000	Other complication of obstetric surgical wound unspecified
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2	L443100	Other complication obstetric surg wound -delivered +p/n comp
3	L443200	Other complication obstetric surgical wound with p/n comp
4	L443z00	Other complication of obstetric surgical wound NOS
5	L45..00	Obstetric breast infections
6	L450.00	Obstetric nipple infection
7	L450.11	Abscess of nipple - obstetric
8	L450.12	Nipple infection - obstetric
9	L450000	Obstetric nipple infection unspecified
10	L450100	Obstetric nipple infection - delivered
11	L450200	Obstetric nipple infection - delivered with p/n complication
12	L450300	Obstetric nipple infection with antenatal complication
13	L450400	Obstetric nipple infection with postnatal complication
14	L450z00	Obstetric nipple infection NOS
15	L451.00	Obstetric breast abscess
16	L451.11	Purulent mastitis - obstetric
17	L451000	Obstetric breast abscess unspecified
18	L451100	Obstetric breast abscess - delivered
19	L451200	Obstetric breast abscess - deliv with postnatal complication
20	L451300	Obstetric breast abscess with antenatal complication
21	L451400	Obstetric breast abscess with postnatal complication
22	L451z00	Obstetric breast abscess NOS
23	Lyu6A00	[X]Infection of caesarean section wound following delivery
24	M....00	Skin and subcutaneous tissue diseases
25	M0...00	Skin and subcutaneous tissue infections
26	M00..00	Carbuncle
27	M000.00	Carbuncle of face
28	M000000	Carbuncle of ear
29	M000100	Carbuncle of face (excluding eye)
30	M000200	Carbuncle of nasal septum
31	M000300	Carbuncle of temple region
32	M000z00	Carbuncle of face NOS
33	M001.00	Carbuncle of neck
34	M002.00	Carbuncle of trunk
35	M002000	Carbuncle of chest wall
36	M002100	Carbuncle of breast
37	M002200	Carbuncle of back
38	M002300	Carbuncle of abdominal wall
39	M002400	Carbuncle of umbilicus
40	M002500	Carbuncle of flank
41	M002600	Carbuncle of groin
42	M002700	Carbuncle of perineum
43	M002z00	Carbuncle of trunk NOS
44	M003.00	Carbuncle of upper arm and forearm
45	M003000	Carbuncle of shoulder
46	M003100	Carbuncle of axilla
47	M003200	Carbuncle of upper arm
48	M003300	Carbuncle of elbow
49	M003400	Carbuncle of forearm
50	M003z00	Carbuncle of upper arm and forearm NOS
51	M004.00	Carbuncle of hand
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2	M004000	Carbuncle of wrist
3	M004100	Carbuncle of thumb
4	M004200	Carbuncle of finger
5	M004z00	Carbuncle of hand NOS
6	M005.00	Carbuncle of buttock
7	M005000	Carbuncle of anus
8	M005100	Carbuncle of gluteal region
9	M005z00	Carbuncle of buttock NOS
10	M006.00	Carbuncle of leg (excluding foot)
11	M006000	Carbuncle of hip
12	M006100	Carbuncle of thigh
13	M006200	Carbuncle of knee
14	M006300	Carbuncle of lower leg
15	M006400	Carbuncle of ankle
16	M006z00	Carbuncle of leg (excluding foot) NOS
17	M007.00	Carbuncle of foot
18	M007000	Carbuncle of foot unspecified
19	M007100	Carbuncle of heel
20	M007200	Carbuncle of toe
21	M007z00	Carbuncle of foot NOS
22	M00y.00	Carbuncle of other specified site
23	M00y000	Carbuncle of head (excluding face)
24	M00yz00	Carbuncle of other specified site NOS
25	M00z.00	Carbuncle NOS
26	M01..00	Furuncle - boil
27	M010.00	Boil of face
28	M010000	Boil of ear
29	M010100	Boil of face (excluding eye)
30	M010200	Boil of nasal septum
31	M010300	Boil of temple region
32	M010400	Boil of external nose
33	M010z00	Boil of face NOS
34	M011.00	Boil of neck
35	M012.00	Boil of trunk
36	M012000	Boil of chest wall
37	M012100	Boil of breast
38	M012200	Boil of back
39	M012300	Boil of abdominal wall
40	M012400	Boil of umbilicus
41	M012500	Boil of flank
42	M012600	Boil of groin
43	M012700	Boil of perineum
44	M012z00	Boil of trunk NOS
45	M013.00	Boil of upper arm and forearm
46	M013000	Boil of shoulder
47	M013100	Boil of axilla
48	M013200	Boil of upper arm
49	M013300	Boil of elbow
50	M013400	Boil of forearm
51	M013z00	Boil of upper arm and forearm NOS
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2	M014.00	Boil of hand
3	M014000	Boil of wrist
4	M014100	Boil of thumb
5	M014200	Boil of finger
6	M014z00	Boil of hand NOS
7	M015.00	Boil of buttock
8	M015000	Boil of anus
9	M015100	Boil of gluteal region
10	M015z00	Boil of buttock NOS
11	M016.00	Boil of leg (excluding foot)
12	M016000	Boil of hip
13	M016100	Boil of thigh
14	M016200	Boil of knee
15	M016300	Boil of lower leg
16	M016400	Boil of ankle
17	M016z00	Boil of leg (excluding foot) NOS
18	M017.00	Boil of foot
19	M017000	Boil of foot unspecified
20	M017100	Boil of heel
21	M017200	Boil of toe
22	M017z00	Boil of foot NOS
23	M01y.00	Boil of other specified site
24	M01y000	Boil of head (excluding face)
25	M01yz00	Boil of other specified site NOS
26	M01z.00	Boil NOS
27	M01z.11	Recurrent boils
28	M01z.12	Boils of multiple sites
29	M01z000	Multiple boils
30	M02.00	Cellulitis and abscess of finger and toe
31	M020.00	Cellulitis and abscess of finger
32	M020000	Cellulitis and abscess of finger unspecified
33	M020100	Finger pulp abscess
34	M020111	Felon
35	M020112	Whitlow
36	M020200	Onychia of finger
37	M020300	Paronychia of finger
38	M020311	Perionychia of finger
39	M020400	Finger web space infection
40	M020500	Pulp space infection of finger/thumb
41	M020z00	Cellulitis and abscess of finger NOS
42	M021.00	Cellulitis and abscess of toe
43	M021000	Cellulitis and abscess of toe unspecified
44	M021100	Onychia of toe
45	M021200	Paronychia of toe
46	M021300	Pulp space infection of toe
47	M021z00	Cellulitis and abscess of toe NOS
48	M021z11	Perionychia of toe
49	M02z.00	Cellulitis and abscess of digit NOS
50	M02z.11	Nail infection NOS
51	M02z.12	Paronychia
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2	M02z.13	Infected nailfold
3	M02z.14	Nailfold infected
4	M03..00	Other cellulitis and abscess
5	M03..11	Abscess of skin area excluding digits of hand or foot
6	M03..12	Acute lymphangitis of skin excluding digits of hand or foot
7	M03..13	Cellulitis of skin area excluding digits of hand or foot
8	M030.00	Cellulitis and abscess of face
9	M030000	Cellulitis and abscess of cheek (external)
10	M030011	Cellulitis and abscess of cheek
11	M030100	Cellulitis and abscess of nose (external)
12	M030111	Cellulitis and abscess of nose
13	M030200	Cellulitis and abscess of chin
14	M030300	Cellulitis and abscess of submandibular region
15	M030400	Cellulitis and abscess of forehead
16	M030500	Cellulitis and abscess of temple region
17	M030600	Cellulitis of face
18	M030z00	Cellulitis and abscess of face NOS
19	M031.00	Cellulitis and abscess of neck
20	M031.11	Cervical abscess
21	M032.00	Cellulitis and abscess of trunk
22	M032000	Cellulitis and abscess of chest wall
23	M032100	Cellulitis and abscess of breast
24	M032200	Cellulitis and abscess of back
25	M032300	Cellulitis and abscess of abdominal wall
26	M032400	Cellulitis and abscess of umbilicus
27	M032500	Cellulitis and abscess of flank
28	M032600	Cellulitis and abscess of groin
29	M032700	Cellulitis and abscess of perineum
30	M032800	Cellulitis of trunk
31	M032z00	Cellulitis and abscess of trunk NOS
32	M033.00	Cellulitis and abscess of arm
33	M033000	Cellulitis and abscess of shoulder
34	M033100	Cellulitis and abscess of axilla
35	M033200	Cellulitis and abscess of upper arm
36	M033300	Cellulitis and abscess of elbow
37	M033400	Cellulitis and abscess of forearm
38	M033z00	Cellulitis and abscess of arm NOS
39	M034.00	Cellulitis and abscess of hand excluding digits
40	M034.11	Cellulitis and abscess of hand
41	M034000	Cellulitis and abscess of hand unspecified
42	M034011	Abscess of dorsum of hand
43	M034012	Abscess of palm of hand
44	M034013	Cellulitis of dorsum of hand
45	M034014	Cellulitis of palm of hand
46	M034100	Cellulitis and abscess of wrist
47	M034z00	Cellulitis and abscess of hand NOS
48	M035.00	Cellulitis and abscess of buttock
49	M036.00	Cellulitis and abscess of leg excluding foot
50	M036.11	Cellulitis and abscess of leg
51	M036000	Cellulitis and abscess of hip
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2	M036100	Cellulitis and abscess of thigh
3	M036200	Cellulitis and abscess of knee
4	M036300	Cellulitis and abscess of lower leg
5	M036400	Cellulitis and abscess of ankle
6	M036z00	Cellulitis and abscess of leg NOS
7		
8	M037.00	Cellulitis and abscess of foot excluding toe
9	M037.11	Cellulitis and abscess of foot
10		
11	M037000	Cellulitis and abscess of foot unspecified
12	M037100	Cellulitis and abscess of heel
13	M037200	Cellulitis in diabetic foot
14	M037z00	Cellulitis and abscess of foot NOS
15	M038.00	Cellulitis of external ear
16	M03y.00	Other specified cellulitis and abscess
17	M03y000	Cellulitis and abscess of head unspecified
18	M03y011	Abscess of scalp
19		
20	M03z.00	Cellulitis and abscess NOS
21	M03z000	Cellulitis NOS
22	M03z100	Abscess NOS
23		
24	M03zz00	Cellulitis and abscess NOS
25	M060.00	Pilonidal cyst with abscess
26	M061.00	Pilonidal cyst with no abscess
27	M061.11	Dermal sinus
28		
29	M062.00	Pilonidal sinus with abscess
30	M063.00	Pilonidal sinus without abscess
31	M06z.00	Pilonidal sinus/cyst NOS
32	M07..00	Other local infections of skin and subcutaneous tissue
33	M070200	Pyoderma gangrenosum
34	M070300	Pyoderma ulcerosum tropicalum
35	M07y.00	Local infection of skin or subcutaneous tissue OS
36	M07yz00	Other spec local skin/subc infection NOS
37		
38	M07yz11	Infection toe
39	M07yz12	Infection foot
40	M07yz13	Infection finger
41		
42	M07z.00	Local infection skin/subcut tissue NOS
43	M07z.11	Infected wound from insect bite
44	M07z.12	Infected skin ulcer
45	M07z.13	Septic spots
46	M07z.14	Infected dermatitis
47		
48	M07z000	Infection foot
49	M07z100	Infection toe
50	M07z200	Infection finger
51	M09..00	Cutaneous abscess
52	M090.00	[X]Abscess of face
53	M091.00	[X]Abscess of neck
54	M092.00	[X]Abscess of trunk
55		
56	M092000	[X]Abscess of buttock
57	M092100	[X]Abdominal wall abscess
58	M092200	[X]Perineal abscess
59	M093.00	[X]Abscess of buttock
60	M094.00	[X]Abscess of limb

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2	M094000	[X]Abscess of axilla
3	M095.00	Skin abscess
4	M09y.00	[X]Abscess of other site
5	M0y..00	Other specified infections of skin or subcutaneous tissue
6	M0z..00	Skin and subcut tissue infection NOS
7	M0z..11	Infected sebaceous cyst
8	M1...00	Other skin and subcutaneous tissue inflammatory conditions
9	M2...00	Other skin and subcutaneous tissue disorders
10		
11	M27..00	Chronic skin ulcer
12	M270.00	Decubitus (pressure) ulcer
13		
14	M270.11	Bed sore
15	M270.12	Plaster ulcer
16	M270.13	Pressure sore
17	M270.14	Decubitus ulcer and pressure area
18	M270000	Hospital acquired pressure ulcer
19		
20	M270100	Nursing home acquired pressure ulcer
21	M270200	Community hospital acquired pressure ulcer
22	M270300	Hospice acquired pressure ulcer
23		
24	M270400	Stage I decubitus ulcer and pressure area
25	M270500	Stage II decubitus ulcer
26	M270600	Stage III decubitus ulcer
27	M270700	Stage IV decubitus ulcer
28		
29	M270z00	Decubitus ulcer and pressure area NOS
30	M271.00	Non-pressure ulcer lower limb
31	M271.11	Foot ulcer
32	M271.12	Ischaemic leg ulcer
33	M271.13	Leg ulcer NOS
34		
35	M271.14	Neurogenic leg ulcer
36	M271.15	Trophic leg ulcer
37	M271000	Ischaemic ulcer diabetic foot
38	M271100	Neuropathic diabetic ulcer - foot
39	M271200	Mixed diabetic ulcer - foot
40		
41	M271300	Arterial leg ulcer
42	M271400	Mixed venous and arterial leg ulcer
43	M271500	Venous ulcer of leg
44	M271600	Traumatic leg ulcer
45	M271700	Neuropathic foot ulcer
46		
47	M272.00	Ulcer of skin
48	M273.00	Non-healing leg ulcer
49	M274.00	Recurrent leg ulcer
50	M27y.00	Chronic ulcer of skin, other specified sites
51	M27z.00	Chronic skin ulcer NOS
52		
53	M2y4D00	Macerated perianal skin
54	M2yA.00	Skin sinus
55	M2yB.00	Fistula of skin
56	M2yz.11	Skin lesion
57		
58	M2z0.00	Skin lesion
59	Myu0.00	[X]Infections of the skin and subcutaneous tissue
60	Myu0100	[X]Other specified local infections/skin+subcutaneous tissue
	R153300	[D]Positive culture findings in wound

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2	S002.00	Open fracture vault of skull without intracranial injury
3	S002000	Open #skull vlt no intracranial injury, unspec state consc
4	S002100	Open #skull vlt no intracranial injury, no loss of consc
5	S002200	Open #skull vlt no intracranial injury, <1hr loss of consc
6	S002300	Open #skull vlt no intracranial injury, 1-24hr loss of consc
7	S002400	Open #skull vlt no intracranial injury, >24hr LOC+recovery
8	S002500	Open #skull vlt no intracranial inj, >24hr LOC not restored
9	S002600	Open #skull vlt no intracranial injury, LOC unspec duration
10	S002z00	Open #skull vlt no intracranial injury + concussion unspec
11	S003.00	Open fracture vault of skull with intracranial injury
12	S003000	Open #skull vlt + intracranial injury, unspec state of consc
13	S003100	Open #skull vlt + intracranial injury, no loss of consc
14	S003200	Open #skull vlt + intracranial injury, <1hr loss of consc
15	S003300	Open #skull vlt + intracranial injury, 1-24hr loss of consc
16	S003400	Open #skull vlt + intracranial injury, >24hr LOC + recovery
17	S003500	Open #skull vlt + intracranial inj, >24hr LOC not restored
18	S003600	Open #skull vlt + intracranial injury, LOC unspec duration
19	S003z00	Open #skull vlt with intracranial injury + concussion unspec
20	S012.00	Open fracture base skull without mention intracranial injury
21	S012000	Open #skull bse no intracranial inj, unspec state of consc
22	S012100	Open #skull bse no intracranial injury, no loss of consc
23	S012200	Open #skull bse no intracranial injury, <1hr loss of consc
24	S012300	Open #skull bse no intracranial injury, 1-24hr loss of consc
25	S012400	Open #skull bse no intracranial injury, >24hr LOC+recovery
26	S012500	Open #skull bse no intracranial inj, >24hr LOC not restored
27	S012600	Open #skull bse no intracranial injury, LOC unspec duration
28	S012z00	Open #skull bse no intracranial injury + concussion unspec
29	S013.00	Open fracture base of skull with intracranial injury
30	S013000	Open #skull bse + intracranial injury, unspec state of consc
31	S013100	Open #skull bse + intracranial injury, no loss of consc
32	S013200	Open #skull bse + intracranial injury, <1hr loss of consc
33	S013300	Open #skull bse + intracranial injury, 1-24hr loss of consc
34	S013400	Open #skull bse + intracranial injury, >24hr LOC + recovery
35	S013500	Open #skull bse + intracranial inj, >24hr LOC not restored
36	S013600	Open #skull bse + intracranial injury, LOC unspec duration
37	S013z00	Open #skull bse + intracranial injury + concussion unspec
38	S032.00	Open #skull NOS without mention of intracranial injury
39	S032000	Open #skull NOS no intracranial inj, unspec state of consc
40	S032100	Open #skull NOS no intracranial inj, no loss of consc
41	S032200	Open #skull NOS no intracranial inj, <1hr loss of consc
42	S032300	Open #skull NOS no intracranial inj, 1-24hrs loss of consc
43	S032400	Open #skull NOS no intracranial inj, >24hrs LOC + recovery
44	S032500	Open #skull NOS no intracranial inj, >24hrs LOC not restored
45	S032600	Open #skull NOS no intracranial inj, LOC unspec duration
46	S032z00	Open #skull NOS no intracranial inj + concussion unspec
47	S033.00	Open fracture of skull NOS with intracranial injury
48	S033000	Open #skull NOS + intracranial inj, unspec state of consc
49	S033100	Open #skull NOS + intracranial inj, no loss of consc
50	S033200	Open #skull NOS + intracranial inj, <1hr loss of consc
51	S033300	Open #skull NOS + intracranial inj, 1-24hrs loss of consc
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2	S033400	Open #skull NOS + intracranial inj, >24hrs LOC + recovery
3	S033500	Open #skull NOS + intracranial inj, >24hrs LOC not restored
4	S033600	Open #skull NOS + intracranial inj, LOC unspec duration
5	S033z00	Open #skull NOS + intracranial inj + concussion unspec
6	S042000	Open #skull/face, mult, no intracranial inj, unspec consc
7	S042100	Open #skull/face, mult, no intracranial inj, no loss consc
8	S042200	Open #skull/face, mult, no intracranial inj, <1hr LOC
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10	S042300	Open #skull/face, mult, no intracranial inj, 1-24hrs LOC
11	S042400	Open #skull/face, mult, no intracran inj, >24hr LOC+recovery
12	S042500	Open #skull/face,mult,no intracran inj,>24hr LOC no restored
13		
14	S042600	Open #skull/face,mult,no intracran inj, LOC unspec duration
15	S042z00	Open #skull/face,mult,no intracran inj, concussion unspec
16	S043.00	Mult #skull/face + other bones, open + intracranial injury
17	S043000	Open #skull/face, mult + intracranial inj, unspec consc
18	S043100	Open #skull/face, mult + intracranial inj, no loss consc
19		
20	S043200	Open #skull/face, mult + intracranial inj, <1hr LOC
21	S043300	Open #skull/face, mult + intracranial inj, 1-24hrs LOC
22	S043400	Open #skull/face, mult + intracran inj, >24hr LOC + recovery
23	S043500	Open #skull/face,mult + intracran inj, >24hr LOC no restored
24		
25	S043600	Open #skull/face, mult + intracran inj, LOC unspec duration
26	S043z00	Open #skull/face, mult + intracran inj + concussion, unspec
27	S611000	Cortex cont + open intracranial wound + unspec state consc
28	S611100	Cortex cont + open intracranial wound + no loss of consc
29	S611200	Cortex cont + open intracranial wound + <1hr loss of consc
30	S611300	Cortex cont + open intracranial wound + 1-24hr loss of consc
31	S611400	Cortex cont + open intracranial wnd + >24hr LOC + recovery
32	S611500	Cortex cont + open intracranial wnd + >24hr LOC not restored
33		
34	S611600	Cortex cont + open intracranial wnd + LOC unspec duration
35	S611z00	Cortex cont + open intracranial wound + concussion unspec
36	S613.00	Cortex laceration with open intracranial wound
37	S613000	Cortex lacn + open intracranial wound + unspec state consc
38	S613100	Cortex lacn + open intracranial wound + no loss of consc
39	S613200	Cortex lacn + open intracranial wound + <1hr loss of consc
40	S613300	Cortex lacn + open intracranial wound + 1-24hr loss of consc
41	S613400	Cortex lacn + open intracranial wound + >24hr LOC + recovery
42	S613500	Cortex lacn + open intracranial wnd + >24hr LOC not restored
43		
44	S613600	Cortex lacn + open intracranial wnd + LOC unspec duration
45	S613z00	Cortex lacn + open intracranial wound + concussion unspec
46	S615000	Hind brain cont + open intracranial wnd + unspec state consc
47	S615100	Hind brain cont + open intracranial wound + no loss consc
48	S615200	Hind brain cont + open intracranial wound + <1hr loss consc
49	S615300	Hind brain cont + open intracranial wnd + 1-24hr loss consc
50	S615400	Hind brain cont + open intracranial wnd +>24hr LOC +recovery
51	S615500	Hind brain cont + open intracran wnd +>24hr LOC not restored
52		
53	S615600	Hind brain cont + open intracranial wnd +LOC unspec duration
54	S615z00	Hind brain cont + open intracranial wnd + concussion unspec
55	S617.00	Hind brain laceration with open intracranial wound
56	S617000	Hind brain lacn + open intracranial wnd + unspec state consc
57	S617100	Hind brain lacn + open intracranial wnd + no loss consc
58	S617200	Hind brain lacn + open intracranial wnd + <1hr loss consc
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S617300	Hind brain lacn + open intracranial wnd + 1-24hr loss consc
S617400	Hind brain lacn + open intracranial wnd+>24hr LOC + recovery
S617500	Hind brain lacn open intracranial wnd+>24hr LOC not restored
S617600	Hind brain lacn + open intracran wnd + LOC unspec duration
S617z00	Hind brain lacn + open intracranial wnd + concussion unspec
S61y000	Brain cont + open intracranial wound + unspec state consc
S61y100	Brain cont + open intracranial wound + no loss of consc
S61y200	Brain cont + open intracranial wound + <1hr loss of consc
S61y300	Brain cont + open intracranial wound + 1-24hr loss of consc
S61y400	Brain cont + open intracranial wound + >24hr LOC + recovery
S61y500	Brain contusion + open intracr wound+>24hr LOC not ful reco
S61y600	Brain cont + open intracranial wound + LOC unspec duration
S61yz00	Brain cont + open intracranial wound + concussion unspec
S621000	Subarachnoid h'ge inj + open intracran wound + unspec consc
S621100	Subarachnoid h'ge inj + open intracranial wound + no LOC
S621200	Subarachnoid h'ge inj + open intracran wound+<1hr loss consc
S621300	Subarachnoid h'ge inj + open intracran wnd+1-24hr loss consc
S621400	Subarach h'ge inj + open intracran wnd +>24hr LOC + recovery
S621500	Subarach h'ge inj + open intracran wnd+>24hr LOC -restored
S621600	Subarach h'ge inj + open intracran wnd+LOC unspec duration
S621z00	Subarachnoid h'ge inj + open intracran wnd+concussion unspec
S623000	Subdural h'ge inj + open intracranial wound + unspec consc
S623100	Subdural h'ge inj + open intracranial wound+no loss consc
S623200	Subdural h'ge inj + open intracranial wound+<1hr loss consc
S623300	Subdural h'ge inj + open intracranial wnd+1-24hr loss consc
S623400	Subdural h'ge inj + open intracran wound+>24hr LOC +recovery
S623500	Subdural h'ge inj + open intracran wnd+>24hr LOC -restored
S623600	Subdural h'ge inj + open intracran wnd+LOC unspec duration
S623z00	Subdural h'ge inj + open intracranial wnd+concussion unspec
S625000	Extradural h'ge inj + open intracranial wnd + unspec consc
S625100	Extradural h'ge inj + open intracranial wound+no loss consc
S625200	Extradural h'ge inj + open intracranial wnd+<1hr loss consc
S625300	Extradural h'ge inj + open intracran wnd+1-24hr loss consc
S625400	Extradural h'ge inj + open intracran wnd+>24hr LOC+recovery
S625500	Extradural h'ge inj + open intracran wnd+>24hr LOC -restored
S625600	Extradural h'ge inj + open intracran wnd+LOC unspec duration
S625z00	Extradural h'ge inj + open intracran wnd+concussion unspec
S62A100	Traumatic extradural haematoma with open intracranial wound
S631.00	Other cerebral h'ge after injury + open intracranial wound
S631000	Oth cerebral h'ge inj + open intracran wnd + unspec consc
S631100	Oth cerebral h'ge inj + open intracranial wnd+no loss consc
S631200	Oth cerebral h'ge inj + open intracran wnd+<1hr loss consc
S631300	Oth cerebral h'ge inj + open intracran wnd+1-24hr loss consc
S631400	Oth cereb h'ge inj + open intracran wnd+>24hr LOC + recovery
S631500	Oth cereb h'ge inj + open intracran wnd+>24hr LOC -restored
S631600	Oth cereb h'ge inj + open intracran wnd+LOC unspec duration
S631z00	Oth cereb h'ge inj + open intracran wnd+concussion unspec
S641.00	Intracranial injury NOS + open intracranial wound
S641000	Intracranial inj NOS + open intracranial wnd + unspec consc
S641100	Intracranial inj NOS + open intracranial wound+no loss consc

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2	S641200 Intracranial inj NOS + open intracranial wnd+<1hr loss consc
3	S641300 Intracranial inj NOS + open intracranial wnd + 1-24hr LOC
4	S641400 Intracranial inj NOS + open intracran wnd+>24hr LOC+recovery
5	S641500 Intracran inj NOS + open intracran wnd+>24hr LOC -restored
6	S641600 Intracran inj NOS + open intracran wnd+LOC unspec duration
7	S641z00 Intracranial inj NOS + open intracran wnd+concussion unspec
8	S642100 Traumatic cerebral oedema with open intracranial wound
9	S645100 Intracranial injury with prolonged coma with open wound
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11	S701.00 Open traumatic pneumothorax
12	S703.00 Open traumatic haemothorax
13	S705.00 Open traumatic haemopneumothorax
14	S711.00 Heart injury, open
15	S711000 Heart injury with open wound into thorax, unspecified
16	S711100 Heart contusion, with open wound into thorax
17	S711200 Heart laceration open, without penetration of heart chambers
18	S711300 Heart laceration open, with penetration of heart chambers
19	S711z00 Heart injury with open wound into thorax NOS
20	S713000 Lung injury with open wound into thorax, unspecified
21	S713100 Lung contusion with open wound into thorax
22	S713200 Lung laceration with open wound into thorax
23	S713z00 Lung injury with open wound into thorax, NOS
24	S73yz00 Gastrointestinal tract injury with open wound to cavity NOS
25	S8...00 Open wound of head, neck and trunk
26	S8...12 Open wound of head
27	S8...13 Open wound of trunk
28	S80..00 Open wound of ocular adnexa
29	S80..11 Open wound of eyelid
30	S80..12 Periocular open wound
31	S800.00 Eyelid skin and periocular area laceration
32	S803.00 Penetrating wound of orbit without mention of foreign body
33	S804.00 Penetrating wound of orbit with foreign body
34	S80y.00 Other open ocular adnexa wound
35	S80z.00 Open wound of ocular adnexa NOS
36	S81..00 Open wound of eyeball
37	S81..12 Open wound of eye
38	S810.00 Ocular laceration without intraocular prolapse
39	S81z.00 Open wound of eyeball NOS
40	S82..00 Open wound of ear
41	S820.00 Open wound of external ear
42	S820000 Open wound of external ear, unspecified
43	S820100 Open wound of ear auricle
44	S820w00 Other open wound of external ear
45	S820z00 Open wound of external ear not otherwise specified
46	S821.00 Open wound of external ear with complication
47	S821000 Open wound of external ear with complication, unspecified
48	S821100 Open wound of ear auricle with complication
49	S821z00 Open wound of external ear with complication, NOS
50	S82v.00 Other open wound of ear
51	S82v011 Open wound of drumhead without complication
52	S82v012 Open wound of tympanic membrane without complication
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1	S82v100	Open wound of ear ossicle
2	S82v300	Open wound of cochlea
3	S82vz00	Other open wound of ear NOS
4	S82w.00	Other open wound of ear with complication
5	S82w000	Open wound of ear drum with complication
6	S82w100	Open wound of ear ossicle with complication
7	S82w300	Open wound of cochlea with complication
8	S82wz00	Other open wound of ear with complication NOS
9	S82x.00	Open wound of ear, uncomplicated not otherwise specified
10	S82y.00	Open wound of ear with complication, NOS
11	S82z.00	Open wound of ear NOS
12	S83..00	Other open wound of head
13	S830.00	Open wound of scalp
14	S830100	Avulsion of scalp
15	S831.00	Open wound of scalp with complication
16	S832.00	Open wound of nose
17	S832000	Open wound of nose, unspecified
18	S832100	Open wound of nasal septum
19	S832200	Open wound of nasal cavity
20	S832300	Open wound of nasal sinus
21	S832x00	Multiple wounds of nose
22	S832z00	Open wound of nose NOS
23	S833.00	Open wound of nose with complication
24	S833000	Open wound of nose with complication, unspecified
25	S833100	Open wound of nasal septum with complication
26	S833200	Open wound of nasal cavity with complication
27	S833300	Open wound of nasal sinus with complication
28	S833x00	Multiple open wounds of nose with complication
29	S833z00	Open wound of nose with complication, NOS
30	S834.00	Open wound of face
31	S834000	Open wound of face, unspecified
32	S834100	Open wound of cheek
33	S834200	Open wound of forehead
34	S834300	Open wound of eyebrow
35	S834400	Open wound of lip
36	S834500	Open wound of jaw
37	S834600	Open wound of chin
38	S834x00	Multiple open wounds of face
39	S834z00	Open wound of face, NOS
40	S835.00	Open wound of face with complication
41	S835000	Open wound of face with complication, unspecified
42	S835100	Open wound of cheek with complication
43	S835200	Open wound of forehead with complication
44	S835300	Open wound of eyebrow with complication
45	S835400	Open wound of lip with complication
46	S835500	Open wound of jaw with complication
47	S835x00	Multiple open wounds of face with complication
48	S835z00	Open wound of face with complication, NOS
49	S836.00	Open wound in mouth
50	S836000	Open wound in mouth, unspecified

1	S836100	Open wound of buccal mucosa
2	S836200	Open wound of gum
3	S836400	Open wound of tongue
4	S836500	Open wound of mouth floor
5	S836600	Open wound of palate
6	S837100	Open wound of buccal mucosa with complication
7	S837200	Open wound of gum with complication
8	S837400	Open wound of tongue with complication
9	S837500	Open wound of mouth floor with complication
10	S837600	Open wound of palate with complication
11	S83x.00	Other open wound of head
12	S83y.00	Other open wound of head with complication
13	S83z.00	Open wound of head NOS
14	S84..00	Open wound of neck
15	S840.00	Open wound of larynx and trachea
16	S840.11	Open wound of larynx without complication
17	S840.12	Open wound of trachea without complication
18	S840000	Open wound of larynx and trachea, unspecified
19	S840100	Open wound of larynx
20	S840200	Open wound of trachea
21	S840z00	Open wound of larynx and trachea not otherwise specified
22	S841.00	Open wound of larynx and trachea with complication
23	S841.11	Open wound of larynx with complication
24	S841.12	Open wound of trachea with complication
25	S841000	Open wound of larynx and trachea with complication, unspec
26	S841100	Open wound of larynx with complication
27	S841200	Open wound of trachea with complication
28	S841z00	Open wound of larynx and trachea with complication, NOS
29	S842.00	Open wound of thyroid
30	S843.00	Open wound of thyroid with complication
31	S844.00	Open wound of pharynx
32	S845.00	Open wound of pharynx with complication
33	S84x.00	Other open wound of neck
34	S84x000	Open wound of neck nape
35	S84x100	Open wound of supraclavicular region
36	S84xz00	Open wound of neck, NOS
37	S84xz11	Open wound of throat NOS
38	S84y.00	Other open wound of neck with complication
39	S84y000	Open wound of neck nape with complication
40	S84y100	Open wound of supraclavicular region with complication
41	S84yz00	Open wound of neck with complication, NOS
42	S84z.00	Open wound of neck NOS
43	S85..00	Open wound of chest wall
44	S850.00	Open wound of chest wall, uncomplicated
45	S850000	Degloving injury chest wall
46	S851.00	Open wound of chest wall with complication
47	S852.00	Open wound of front wall of thorax
48	S853.00	Multiple open wounds of thoracic wall
49	S855.00	Open wound of back wall of thorax
50	S85X.00	Open wound of thorax, part unspecified



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2	S85z.00	Open wound of chest wall NOS
3	S86..00	Open wound of back
4	S86..11	Open wound of loin
5	S86..12	Open wound of lumbar region
6	S860.00	Open wound of back, uncomplicated
7	S860000	Degloving injury back
8	S861.00	Open wound of back with complication
9	S86z.00	Open wound of back NOS
10	S87..00	Open wound of buttock
11	S87..11	Open wound of sacroiliac region
12	S870.00	Open wound of buttock, uncomplicated
13	S870000	Degloving injury buttock
14	S871.00	Open wound of buttock with complication
15	S87z.00	Open wound of buttock NOS
16	S88..00	Open wound of external genital organs
17	S880.00	Open wound of penis
18	S880000	Degloving injury penis
19	S881.00	Open wound of penis with complication
20	S882.00	Open wound of scrotum and testes
21	S882000	Open wound of scrotum
22	S882100	Open wound of testes
23	S882200	Degloving injury scrotum
24	S882z00	Open wound of scrotum and testes not otherwise specified
25	S883.00	Open wound of scrotum and testes with complication
26	S883000	Open wound of scrotum with complication
27	S883100	Open wound of testes with complication
28	S883z00	Open wound of scrotum and testes with complication, NOS
29	S884.00	Open wound of vulva
30	S884000	Open wound of vulva, unspecified
31	S884100	Open wound of labium majus
32	S884200	Open wound of labium minus
33	S884z00	Open wound of vulva, NOS
34	S885.00	Open wound of vulva with complication
35	S885000	Open wound of vulva with complication, unspecified
36	S885100	Open wound of labium majus with complication
37	S885200	Open wound of labium minus with complication
38	S885z00	Open wound of vulva with complication, NOS
39	S886.00	Open wound of vagina
40	S887.00	Open wound of vagina with complication
41	S88x.00	Other open wound of external genital organ
42	S88y.00	Other open wound of external genital organ with complication
43	S88z.00	Open wound of external genital organ NOS
44	S89..00	Other open wounds of other sites, excluding limbs
45	S890.00	Open wound of breast
46	S891.00	Open wound of breast with complication
47	S892.00	Open wound of anterior abdominal wall
48	S892000	Open wound of epigastric region
49	S892100	Open wound umbilical region
50	S892200	Open wound of hypogastric region
51	S892300	Open wound of pubic region without complication
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2	S892z00	Open wound anterior abdominal wall without complication NOS
3	S893.00	Open wound of anterior abdominal wall with complication
4	S893000	Open wound of epigastrium with complication
5	S893100	Open wound of umbilical region with complication
6	S893200	Open wound of hypogastrium with complication
7	S893300	Open wound of pubic region with complication
8	S893z00	Open wound of anterior abdominal wall with complication NOS
9	S894.00	Open wound of lateral abdominal wall
10	S894000	Open wound of hypochondrium
11	S894100	Open wound of lumbar region
12	S894111	Open wound of flank without complication
13	S894200	Open wound of iliac region
14	S894300	Open wound of inguinal region
15	S894311	Open wound of groin without complication
16	S894400	Open wound of flank without complication
17	S894500	Open wound of loin
18	S894z00	Open wound of lateral abdominal wall NOS
19	S895.00	Open wound of lateral abdominal wall with complication
20	S895000	Open wound of hypochondrium with complication
21	S895100	Open wound of lumbar region with complication
22	S895111	Open wound of flank with complication
23	S895200	Open wound of iliac region with complication
24	S895300	Open wound of inguinal region with complication
25	S895311	Open wound of groin with complication
26	S895400	Open wound of flank with complication
27	S895z00	Open wound of lateral abdominal wall with complication, NOS
28	S89v.00	Other and unspecified open wound of trunk
29	S89v000	Open wound of pelvic region
30	S89v100	Open wound of perineum
31	S89vz00	Other and unspecified open wound of trunk, NOS
32	S89w.00	Other and unspecified open wound of trunk with complication
33	S89w000	Open wound of pelvic region with complication
34	S89w100	Open wound of perineum with complication
35	S89wz00	Other and unspecified open wound trunk with complication NOS
36	S89x.00	Multiple open wounds, of unspecified site
37	S89y.00	Multiple open wounds with complication, of unspecified site
38	S89z.00	Other open wounds NOS
39	S8A..00	Open wounds involving head with neck
40	S8z..00	Open wound of head, neck and trunk NOS
41	S8z..11	Laceration NOS
42	S8z..12	Traumatic ulcer NOS
43	S8z..13	Laceration
44	S9...00	Open wound of upper limb
45	S9...11	Laceration of arm
46	S9...12	Open wound of arm
47	S90..00	Open wound of shoulder region and upper limb
48	S900.00	Open wound of shoulder/upper limb without complication
49	S900000	Open wound of shoulder region
50	S900100	Open wound of scapular region
51	S900200	Open wound of axillary region

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2	S900300	Open wound of upper arm
3	S900400	Multiple open wounds of shoulder and upper arm
4	S900x00	Multiple open wounds of upper arm
5	S900z00	Open wound of shoulder and upper limb NOS
6	S901.00	Open wound of shoulder and upper limb with complication
7	S901000	Open wound of shoulder region with complication
8	S901100	Open wound of scapular region with complication
9	S901200	Open wound of axillary region with complication
10	S901300	Open wound of upper arm with complication
11	S901x00	Multiple open wounds of upper arm with complication
12	S901z00	Open wound of shoulder and upper arm with complication, NOS
13	S902.00	Open wound of shoulder/upper limb with tendon involvement
14	S902.11	Open wound of arm with tendon injury
15	S902000	Open wound of shoulder region with tendon involvement
16	S902100	Open wound of scapular region with tendon involvement
17	S902200	Open wound of axillary region with tendon involvement
18	S902300	Open wound of upper arm with tendon involvement
19	S902x00	Multiple open wounds of upper arm with tendon involvement
20	S902z00	Open wound shoulder/upper arm with tendon involvement, NOS
21	S903.00	Degloving injury, shoulder or upper arm
22	S903000	Degloving injury, shoulder area
23	S903100	Degloving injury, scapular area
24	S903200	Degloving injury, axilla
25	S903300	Degloving injury, upper arm
26	S90z.00	Open wound of shoulder region and upper arm NOS
27	S91..00	Open wound of elbow, forearm and wrist
28	S910.00	Open wound of lower arm without mention of complication
29	S910000	Open wound of forearm
30	S910100	Open wound of elbow
31	S910200	Open wound of wrist, unspecified
32	S910300	Open wound of wrist, volar
33	S910400	Open wound of wrist, dorsal
34	S910z00	Open wound of lower arm, NOS
35	S911.00	Open wound of lower arm with complication
36	S911000	Open wound of forearm with complication
37	S911100	Open wound of elbow with complication
38	S911200	Open wound of wrist with complication
39	S911z00	Open wound of lower arm with complication, NOS
40	S912.00	Open wound of lower arm with tendon involvement
41	S912.11	Open wound of lower arm with tendon injury
42	S912000	Open wound of forearm with tendon involvement
43	S912100	Open wound of elbow with tendon involvement
44	S912200	Open wound of wrist with tendon involvement
45	S912300	Complete division extensor tendon wrist
46	S912400	Complete division flexor tendon wrist
47	S912z00	Open wound of lower arm with tendon involvement, NOS
48	S913.00	Degloving injury lower arm
49	S913000	Degloving injury, forearm
50	S913100	Degloving injury, elbow area
51	S913200	Degloving injury wrist, volar
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1	S913300	Degloving injury wrist, dorsum
2	S91z.00	Open wound of elbow, forearm and wrist NOS
3	S92..00	Open wound of hand, excluding finger(s)
4	S920.00	Open wound of hand without mention of complication
5	S920000	Open wound of hand, palm
6	S920100	Open wound of hand, dorsum
7	S920200	Multiple open wounds of wrist and hand
8	S921.00	Open wound of hand with complication
9	S922.00	Open wound of hand with tendon involvement
10	S923.00	Degloving injury hand
11	S923000	Degloving injury hand, palmar
12	S923100	Degloving injury hand, dorsum
13	S924.00	Severe multi tissue damage hand
14	S925.00	Massive multi tissue damage hand
15	S92z.00	Open wound of hand, excluding fingers, NOS
16	S93..00	Open wound of finger(s) or thumb
17	S93..11	Open wound of fingernail
18	S93..12	Open wound of nail
19	S93..13	Open wound of thumb
20	S93..14	Open wound of thumbnail
21	S930.00	Open wound of finger or thumb without mention of complicatn
22	S930000	Open wound, finger
23	S930100	Open wound, finger, multiple
24	S930200	Open wound, thumb
25	S931.00	Open wound of finger or thumb with complication
26	S932.00	Open wound of finger or thumb with tendon involvement
27	S932.11	Open wound of finger with tendon injury
28	S932000	Complete division, flexor digitorum superficialis tendon
29	S932100	Complete division, flexor digitorum profundus tendon
30	S932200	Complete division, both flexor tendons
31	S932300	Complete division, extensor digitorum tendon
32	S932400	Mallet finger with open tendon injury
33	S932500	Complete division, flexor pollicis longus tendon
34	S932600	Complete division, extensor pollicis longus tendon
35	S932700	Mallet thumb with open tendon injury
36	S933.00	Degloving injury, finger
37	S933000	Degloving injury, finger unspecified
38	S933100	Degloving injury, finger, multiple
39	S933200	Ring avulsion injury, class 1
40	S933300	Ring avulsion injury, class 2
41	S933400	Ring avulsion injury, class 3
42	S933500	Ring avulsion injury, class 4
43	S934.00	Degloving injury, thumb
44	S935.00	Open wound fingernail
45	S936.00	Open wound thumbnail
46	S937.00	Open wound of finger with damage to nail
47	S938.00	Open wound of thumb with damage to nail
48	S93z.00	Open wound of finger(s) NOS
49	S94..00	Multiple and unspecified open wound of upper limb
50	S940.00	Multiple/unspec open wound upper limb without complication

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2	S941.00	Multiple/unspec open wound of upper limb with complication
3	S942.00	Multiple/unspec open wound upper limb with tendon involved
4	S942.11	Multiple/unspec open wound of upper limb with tendon injury
5	S94z.00	Multiple and unspecified open wound of upper limb NOS
6	S96X.00	Comb traum amp of (part of) fing(s) + oth part wrist/hand
7	S9z..00	Open wound of upper limb NOS
8	SA...00	Open wound of lower limb
9	SA...11	Open wound of leg
10	SA...12	Laceration - leg
11	SA0..00	Open wound of hip and thigh
12	SA00.00	Open wound of hip and thigh without mention of complication
13	SA00000	Open wound of hip
14	SA00100	Open wound of thigh
15	SA00z00	Open wound hip and thigh, NOS
16	SA01.00	Open wound of hip and thigh with complication
17	SA01000	Open wound of hip with complication
18	SA01100	Open wound of thigh with complication
19	SA01z00	Open wound of hip and thigh with complication, NOS
20	SA02.00	Open wound of hip and thigh with tendon involvement
21	SA02.11	Open wound of hip and thigh with tendon injury
22	SA02000	Open wound of hip with tendon involvement
23	SA02100	Open wound of thigh with tendon involvement
24	SA02200	Complete division, quadriceps tendon
25	SA02300	Complete division, hamstring tendon
26	SA02z00	Open wound of hip and thigh with tendon involvement, NOS
27	SA03.00	Degloving injury, hip or thigh
28	SA03000	Degloving injury, hip
29	SA03100	Degloving injury, thigh
30	SA04.00	Severe multi tissue damage hip or thigh
31	SA05.00	Massive multi tissue damage hip or thigh
32	SA0z.00	Open wound of hip and thigh NOS
33	SA1..00	Open wound of knee, leg and ankle
34	SA10.00	Open wound of knee, leg and ankle without complication
35	SA10000	Open wound of knee
36	SA10100	Open wound of leg
37	SA10200	Open wound of ankle
38	SA10z00	Open wound of knee, leg and ankle NOS
39	SA11.00	Open wound of knee, leg and ankle with complication
40	SA11000	Open wound of knee with complication
41	SA11100	Open wound of lower leg with complication
42	SA11200	Open wound of ankle with complication
43	SA11z00	Open wound of knee/leg/ankle with complication, NOS
44	SA12.00	Open wound of knee, leg and ankle with tendon involvement
45	SA12.11	Open wound of leg with tendon injury
46	SA12000	Open wound of knee with tendon involvement
47	SA12100	Open wound of lower leg with tendon involvement
48	SA12200	Open wound of ankle with tendon involvement
49	SA12300	Complete division, patellar tendon
50	SA12400	Complete division, tendocalcaneus (Achilles tendon)
51	SA12z00	Open wound of knee/leg/ankle with tendon involvement, NOS
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2	SA13.00	Degloving injury, knee or leg or ankle
3	SA13000	Degloving injury, knee
4	SA13100	Degloving injury, lower leg
5	SA13200	Degloving injury, ankle
6	SA14.00	Severe multi tissue damage lower leg
7	SA15.00	Massive multi tissue damage lower leg
8	SA16.00	Multiple injuries of ankle and foot
9	SA1z.00	Open wound of knee, leg and ankle NOS
10	SA2..00	Open wound of foot, excluding toe(s)
11	SA2..11	Open wound of heel
12	SA20.00	Open wound of foot without mention of complication
13	SA20100	Open wound foot, plantar
14	SA20200	Open wound foot, dorsum
15	SA20300	Open wound, heel
16	SA21.00	Open wound of foot with complication
17	SA22.00	Open wound of foot with tendon involvement
18	SA22.11	Open wound of foot with tendon injury
19	SA22000	Complete division, flexor tendon, foot
20	SA22100	Complete division, extensor tendon, foot
21	SA23.00	Degloving injury, foot
22	SA23000	Degloving injury foot, plantar
23	SA23100	Degloving injury foot, dorsum
24	SA23200	Degloving injury heel
25	SA24.00	Severe multi tissue damage foot
26	SA25.00	Massive multi tissue damage foot
27	SA2z.00	Open wound of foot NOS
28	SA3..00	Open wound of toe(s)
29	SA3..11	Open wound of toenail
30	SA30.00	Open wound of toe(s) without mention of complication
31	SA31.00	Open wound of toe(s) with complication
32	SA32.00	Open wound of toe(s) with tendon involvement
33	SA32.11	Open wound of toe(s) with tendon injury
34	SA33.00	Degloving injury toe(s)
35	SA33000	Degloving injury toe
36	SA33100	Degloving injury, multiple toes
37	SA34.00	Open wound of toe(s) with damage to nail
38	SA3z.00	Open wound of toe(s) NOS
39	SA4..00	Multiple and unspecified open wound of lower limb
40	SA40.00	Multiple and unspec open wound leg, without complication
41	SA41.00	Multiple and unspec open wound of leg with complication
42	SA42.00	Multiple and unspec open wound leg with tendon involvement
43	SA4z.00	Multiple and unspecified open wound of lower limb NOS
44	SA9..00	Multiple open wounds of hip and thigh
45	SAA..00	Open wounds involving multiple regions of lower limb(s)
46	SAz..00	Open wound of lower limb NOS
47	SC10.00	Late effect of open wound of head, neck and trunk
48	SC11.00	Late effect of open wound arm or leg without tendon injury
49	SC15.00	Late effect of burn of eye, head and neck
50	SC15.11	Late effect of burn of head or neck
51	SC16.00	Late effect of burn of wrist and hand
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2	SC17.00	Late effect of burn of arm, leg and foot
3	SC17.11	Late effect of burn of arm or leg
4	SC18.00	Late effect of other burns
5	SC19.00	Late effect of burn NOS
6	SC1A.00	Late effect of burn of upper limb
7	SC38.00	Sequelae of open wound of head
8	SC3A.00	Sequelae of superficial injury + open wound of neck + trunk
9	SC3C.00	Sequelae of open wound of upper limb
10	SC3D000	Sequelae of open wound of lower limb
11	SC44.00	Sequelae of burns, corrosions and frostbite
12	SC44000	Sequelae of burn, corrosion and frostbite of trunk
13	SC44100	Sequelae of burn, corrosion and frostbite of lower limb
14	SC44200	Seq/burn+corros classfbl only accord extent/body surf involv
15	SD01.00	Abrasion or friction burn of head, infected
16	SD01.11	Abrasion or friction burn of head, infected
17	SD01000	Abrasion of face, infected
18	SD01100	Abrasion of neck, infected
19	SD01200	Abrasion of scalp, infected
20	SD01z00	Abrasion or friction burn of head, infected, NOS
21	SD03.00	Blister of head, infected
22	SD03000	Blister of face, infected
23	SD03100	Blister of neck, infected
24	SD03200	Blister of scalp, infected
25	SD03z00	Blister of head, infected, NOS
26	SD05.00	Insect bite, nonvenomous, of head, infected
27	SD05.11	Insect bite, nonvenomous, of head, infected
28	SD05000	Insect bite, nonvenomous, of face, infected
29	SD05100	Insect bite, nonvenomous, of neck, infected
30	SD05200	Insect bite, nonvenomous, of scalp, infected
31	SD05z00	Insect bite, nonvenomous, of head, infected, NOS
32	SD11.00	Abrasion or friction burn of trunk, infected
33	SD11000	Abrasion of interscapular region, infected
34	SD11100	Abrasion of chest wall, infected
35	SD11200	Abrasion of breast, infected
36	SD11300	Abrasion of abdominal wall, infected
37	SD11400	Abrasion of back, infected
38	SD11500	Abrasion of buttock, infected
39	SD11600	Abrasion of anus, infected
40	SD11700	Abrasion of flank, infected
41	SD11800	Abrasion of groin, infected
42	SD11900	Abrasion of perineum, infected
43	SD11A00	Abrasion of penis, infected
44	SD11B00	Abrasion of scrotum and testis, infected
45	SD11B11	Abrasion or friction burn of scrotum, infected
46	SD11B12	Abrasion or friction burn of testis, infected
47	SD11C00	Abrasion of vulva, infected
48	SD11z00	Abrasion or friction burn of trunk, infected, NOS
49	SD13.00	Blister of trunk, infected
50	SD13000	Blister of interscapular region, infected
51	SD13100	Blister of chest wall, infected
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2	SD13200	Blister of breast, infected
3	SD13300	Blister of abdominal wall, infected
4	SD13400	Blister of back, infected
5	SD13500	Blister of buttock, infected
6	SD13600	Blister of anus, infected
7	SD13700	Blister of flank, infected
8	SD13800	Blister of groin, infected
9	SD13900	Blister of perineum, infected
10	SD13A00	Blister of penis, infected
11	SD13B00	Blister of scrotum and testis, infected
12	SD13B11	Blister of scrotum, infected
13	SD13B12	Blister of testis, infected
14	SD13C00	Blister of vulva, infected
15	SD13D00	Blister of vagina, infected
16	SD13z00	Blister of trunk, infected, NOS
17	SD15.00	Insect bite, nonvenomous, of trunk, infected
18	SD15000	Insect bite, nonvenomous, of interscapular region, infected
19	SD15100	Insect bite, nonvenomous, of chest wall, infected
20	SD15200	Insect bite, nonvenomous, of breast, infected
21	SD15300	Insect bite, nonvenomous, of abdominal wall, infected
22	SD15400	Insect bite, nonvenomous, of back, infected
23	SD15500	Insect bite, nonvenomous, of buttock, infected
24	SD15600	Insect bite, nonvenomous, of anus, infected
25	SD15700	Insect bite, nonvenomous, of flank, infected
26	SD15800	Insect bite, nonvenomous, of groin, infected
27	SD15900	Insect bite, nonvenomous, of perineum, infected
28	SD15A00	Insect bite, nonvenomous, of penis, infected
29	SD15B00	Insect bite, nonvenomous, of scrotum and testis, infected
30	SD15B11	Insect bite, nonvenomous, of scrotum, infected
31	SD15B12	Insect bite, nonvenomous, of testis, infected
32	SD15C00	Insect bite, nonvenomous, of vulva, infected
33	SD15D00	Insect bite, nonvenomous, of vagina, infected
34	SD15z00	Insect bite, nonvenomous, of trunk, infected, NOS
35	SD1z.00	Superficial injury of trunk NOS, infected
36	SD1z000	Superficial injury of interscapular region NOS, infected
37	SD1z100	Superficial injury of chest wall NOS, infected
38	SD1z200	Superficial injury of breast NOS, infected
39	SD1z300	Superficial injury of abdominal wall NOS, infected
40	SD1z400	Superficial injury of back NOS, infected
41	SD1z500	Superficial injury of buttock NOS, infected
42	SD1z600	Superficial injury of anus NOS, infected
43	SD1z700	Superficial injury of flank NOS, infected
44	SD1z800	Superficial injury of groin NOS, infected
45	SD1z900	Superficial injury of perineum NOS, infected
46	SD1zA00	Superficial injury of penis NOS, infected
47	SD1zB00	Superficial injury of scrotum and testis NOS, infected
48	SD1zC00	Superficial injury of vulva NOS, infected
49	SD1z000	Superficial injury of trunk NOS, infection NOS
50	SD21.00	Abrasion or friction burn of shoulder/upper arm, infected
51	SD21000	Abrasion of shoulder, infected
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2	SD21100	Abrasion of scapular region, infected
3	SD21200	Abrasion of axilla, infected
4	SD21300	Abrasion of upper arm, infected
5	SD21z00	Abrasion or friction burn shoulder/upper arm, infected, NOS
6	SD23.00	Blister of shoulder and upper arm, infected
7	SD23000	Blister of shoulder, infected
8	SD23100	Blister of scapular region, infected
9	SD23200	Blister of axilla, infected
10	SD23300	Blister of upper arm, infected
11	SD23z00	Blister of shoulder and upper arm, infected, NOS
12	SD25.00	Insect bite, nonvenomous, of shoulder/upper arm, infected
13	SD25000	Insect bite, nonvenomous, of shoulder, infected
14	SD25100	Insect bite, nonvenomous, of interscapular region, infected
15	SD25200	Insect bite, nonvenomous, of axilla, infected
16	SD25300	Insect bite, nonvenomous, of upper arm, infected
17	SD25z00	Insect bite, nonvenomous, shoulder/upper arm, infected, NOS
18	SD2z.00	Superficial injury of shoulder and upper arm NOS, infected
19	SD2z000	Superficial injury of shoulder NOS, infected
20	SD2z100	Superficial injury of scapular region NOS, infected
21	SD2z200	Superficial injury of axilla NOS, infected
22	SD2z300	Superficial injury of upper arm NOS, infected
23	SD2zz00	Superficial injury shoulder/upper arm, infection NOS
24	SD31.00	Abrasion or friction burn of lower arm, infected
25	SD31000	Abrasion of elbow, infected
26	SD31100	Abrasion of forearm, infected
27	SD31200	Abrasion of wrist, infected
28	SD31z00	Abrasion or friction burn of lower arm, infected, NOS
29	SD33.00	Blister of lower arm, infected
30	SD33000	Blister of elbow, infected
31	SD33100	Blister of forearm, infected
32	SD33200	Blister of wrist, infected
33	SD33z00	Blister of lower arm, infected, NOS
34	SD35.00	Insect bite, nonvenomous, of lower arm, infected
35	SD35000	Insect bite, nonvenomous, of elbow, infected
36	SD35100	Insect bite, nonvenomous, of forearm, infected
37	SD35200	Insect bite, nonvenomous, of wrist, infected
38	SD35z00	Insect bite, nonvenomous, of lower arm, infected, NOS
39	SD3z.00	Superficial injury of lower arm NOS, infected
40	SD3z000	Superficial injury of elbow NOS, infected
41	SD3z100	Superficial injury of forearm NOS, infected
42	SD3z200	Superficial injury of wrist NOS, infected
43	SD3zz00	Superficial injury of lower arm, infected NOS
44	SD41.00	Abrasion or friction burn of hand, infected
45	SD43.00	Blister of hand, infected
46	SD45.00	Insect bite, nonvenomous, of hand, infected
47	SD4z.00	Superficial injury of hand NOS, infected
48	SD51.00	Abrasion or friction burn of finger, infected
49	SD53.00	Blister of finger, infected
50	SD55.00	Insect bite, nonvenomous, of finger, infected
51	SD5z.00	Superficial injury of finger NOS, infected
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2	SD61.00	Abrasion or friction burn of lower limb, infected
3	SD61.11	Abrasion or friction burn of leg, infected
4	SD61000	Abrasion of hip, infected
5	SD61100	Abrasion of thigh, infected
6	SD61200	Abrasion of knee, infected
7	SD61300	Abrasion of lower leg, infected
8	SD61400	Abrasion of ankle, infected
9		
10	SD61z00	Abrasion or friction burn of lower limb, infected, NOS
11	SD63.00	Blister of lower limb, infected
12	SD63.11	Blister of leg, infected
13		
14	SD63000	Blister of hip, infected
15	SD63100	Blister of thigh, infected
16	SD63200	Blister of knee, infected
17	SD63300	Blister of lower leg, infected
18	SD63400	Blister of ankle, infected
19		
20	SD63z00	Blister of lower limb, infected, NOS
21	SD65.00	Insect bite, nonvenomous, of lower limb, infected
22	SD65.11	Insect bite, nonvenomous, of leg, infected
23		
24	SD65000	Insect bite, nonvenomous, of hip, infected
25	SD65100	Insect bite, nonvenomous, of thigh, infected
26	SD65200	Insect bite, nonvenomous, of knee, infected
27	SD65300	Insect bite, nonvenomous, of lower leg, infected
28	SD65400	Insect bite, nonvenomous, of ankle, infected
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30	SD65z00	Insect bite, nonvenomous, of lower limb, infected, NOS
31	SD6z.00	Superficial injury of lower limb, infected
32	SD6z000	Superficial injury of hip NOS, infected
33	SD6z100	Superficial injury of thigh NOS, infected
34	SD6z200	Superficial injury of knee NOS, infected
35	SD6z300	Superficial injury of lower leg NOS, infected
36	SD6z400	Superficial injury of ankle NOS, infected
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38	SD6zz00	Superficial injury of lower limb, infected, NOS
39	SD71.00	Abrasion or friction burn of foot and toe, infected
40	SD71.11	Abrasion or friction burn of heel, infected
41	SD71.12	Abrasion or friction burn of toenail, infected
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43	SD71000	Abrasion of foot, infected
44	SD71100	Abrasion of toe, infected
45	SD71z00	Abrasion or friction burn of foot and toe, infected, NOS
46	SD73.00	Blister of foot and toe, infected
47	SD73.11	Blister of heel, infected
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49	SD73000	Blister of foot, infected
50	SD73100	Blister of toe, infected
51	SD73z00	Blister of foot and toe, infected, NOS
52	SD75.00	Insect bite, nonvenomous, of foot and toe, infected
53	SD75.11	Insect bite, nonvenomous, of heel, infected
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55	SD75000	Insect bite, nonvenomous, of foot, infected
56	SD75100	Insect bite, nonvenomous, of toe, infected
57	SD75z00	Insect bite, nonvenomous, of foot and toe, infected, NOS
58	SD7z.00	Superficial injury of foot and toe NOS, infected
59	SD7z000	Superficial injury of foot NOS, infected
60	SD7z100	Superficial injury of toe NOS, infected

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2	SD7zz00	Superficial injury of foot and toe, infected, NOS
3	SD91.00	Abrasion or friction burn, infected, NOS
4	SD95.00	Insect bite, nonvenomous, infected, NOS
5	SD96000	Foreign body in skin wound
6	SD99.00	Tick bite, infected
7	SD9z.00	Other superficial injury, infected, NOS
8	SH...00	Burns
9	SH1..00	Burn of the face, head or neck
10	SH1..11	Face burns
11	SH1..12	Head burns
12	SH10.00	Unspecified thickness burn of the face, head or neck
13	SH10000	Unspecified thickness burn of unspecified part of face/head
14	SH10100	Unspecified thickness burn of the ear
15	SH10200	Unspecified thickness burn of the eye
16	SH10300	Unspecified thickness burn of the lip(s)
17	SH10400	Unspecified thickness burn of the chin
18	SH10500	Unspecified thickness burn of the nose
19	SH10600	Unspecified thickness burn of the scalp
20	SH10700	Unspecified thickness burn of the forehead
21	SH10800	Unspecified thickness burn of the cheek
22	SH10900	Unspecified thickness burn of the neck
23	SH10x00	Unspecified thickness burn multiple sites face, head or neck
24	SH10z00	Unspecified thickness burn of the face, head or neck NOS
25	SH11.00	Superficial burn of the face, head or neck
26	SH11.11	Erythema of head or neck, first degree burn
27	SH11000	Superficial burn of unspecified part of the face or head
28	SH11100	Superficial burn of the ear
29	SH11200	Superficial burn of the eye
30	SH11300	Superficial burn of the lip(s)
31	SH11400	Superficial burn of the chin
32	SH11500	Superficial burn of the nose
33	SH11600	Superficial burn of the scalp
34	SH11700	Superficial burn of the forehead
35	SH11800	Superficial burn of the cheek
36	SH11900	Superficial burn of the neck
37	SH11x00	Superficial burn of multiple sites of the face, head or neck
38	SH11z00	Superficial burn of the face, head or neck NOS
39	SH12.00	Partial thickness burn of the face, head or neck
40	SH12.11	Blister of face, head and neck, second degree burn
41	SH12000	Superficial part. thickness burn unspecified part face/head
42	SH12100	Superficial partial thickness burn of the ear
43	SH12111	Ear - 2nd degree burn
44	SH12200	Superficial partial thickness burn of the eye
45	SH12211	Eye - 2nd degree burn
46	SH12300	Superficial partial thickness burn of the lip(s)
47	SH12311	Lip - 2nd degree burn
48	SH12400	Superficial partial thickness burn of the chin
49	SH12411	Chin - 2nd degree burn
50	SH12500	Superficial partial thickness burn of the nose
51	SH12511	Nose - 2nd degree burn
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2	SH12600	Superficial partial thickness burn of the scalp
3	SH12611	Scalp - 2nd degree burn
4	SH12700	Superficial partial thickness burn of the forehead
5	SH12711	Forehead - 2nd degree burn
6	SH12800	Superficial partial thickness burn of the cheek
7	SH12811	Cheek - 2nd degree burn
8	SH12900	Superficial partial thickness burn of the neck
9	SH12911	Neck - 2nd degree burn
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11	SH12A00	Deep partial thickness burn of unspecified part of face/head
12	SH12B00	Deep partial thickness burn of the ear
13	SH12C00	Deep partial thickness burn of the eye
14	SH12D00	Deep partial thickness burn of the lip(s)
15	SH12E00	Deep partial thickness burn of the chin
16	SH12F00	Deep partial thickness burn of the nose
17	SH12G00	Deep partial thickness burn of the scalp
18	SH12H00	Deep partial thickness burn of the forehead
19	SH12J00	Deep partial thickness burn of the cheek
20	SH12K00	Deep partial thickness burn of the neck
21	SH12x00	Partial thickness burn of multiple sites face, head or neck
22	SH12z00	Partial thickness burn of the face, head or neck NOS
23	SH13.00	Full thickness burn of the face, head or neck
24	SH13000	Full thickness burn of unspecified part of the face or head
25	SH13100	Full thickness burn of the ear
26	SH13200	Full thickness burn of the eye
27	SH13300	Full thickness burn of the lip(s)
28	SH13400	Full thickness burn of the chin
29	SH13500	Full thickness burn of the nose
30	SH13600	Full thickness burn of the scalp
31	SH13700	Full thickness burn of the forehead
32	SH13800	Full thickness burn of the cheek
33	SH13900	Full thickness burn of the neck
34	SH13A00	Corrosion of third degree of head and neck
35	SH13x00	Full thickness burn of multiple sites of face, head or neck
36	SH13z00	Full thickness burn of the face, head or neck NOS
37	SH14.00	Deep full thick burn face/head/neck - without loss body part
38	SH14000	Deep full thick burn unspec.part face/head-no loss body part
39	SH14100	Deep full thickness burn of ear without loss of body part
40	SH14200	Deep full thickness burn of eye without loss of body part
41	SH14300	Deep full thickness burn of lip(s) without loss of body part
42	SH14400	Deep full thickness burn of chin without loss of body part
43	SH14500	Deep full thickness burn of nose without loss of body part
44	SH14600	Deep full thickness burn of scalp without loss of body part
45	SH14700	Deep full thickness burn forehead without loss of body part
46	SH14800	Deep full thickness burn of cheek without loss of body part
47	SH14900	Deep full thickness burn of neck without loss of body part
48	SH14x00	Deep full thickness burn multip sites face/head/neck- no BPL
49	SH14z00	Deep full thick burn, no loss body part, face/head/neck NOS
50	SH15.00	Deep full thick burn face/head/neck, with loss of body part
51	SH15000	Deep full thickness burn unspec part of face/head, with BPL
52	SH15100	Deep full thickness burn of the ear, with loss of body part
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2	SH15200	Deep full thickness burn of the eye, with loss of body part
3	SH15300	Deep full thickness burn of lip(s), with loss of body part
4	SH15400	Deep full thickness burn of the chin, with loss of body part
5	SH15500	Deep full thickness burn of the nose, with loss of body part
6	SH15600	Deep full thickness burn of scalp, with loss of body part
7	SH15700	Deep full thickness burn of forehead, with loss of body part
8	SH15800	Deep full thickness burn of cheek, with loss of body part
9	SH15900	Deep full thickness burn of the neck, with loss of body part
10	SH15x00	Deep full thick burn multip parts face/head/neck - with BPL
11	SH15z00	Deep full thick burn, with loss body part,face/head/neck NOS
12	SH16.00	Corrosion of head and neck
13	SH16000	Corrosion of first degree of head and neck
14	SH16100	Corrosion of second degree of head and neck
15	SH1z.00	Burn of the face, head or neck NOS
16	SH2..00	Burn of the trunk
17	SH20.00	Unspecified thickness burn of the trunk
18	SH20000	Unspecified thickness burn of unspecified part of the trunk
19	SH20100	Unspecified thickness burn of the breast
20	SH20200	Unspecified thickness burn of the chest wall
21	SH20300	Unspecified thickness burn of the abdominal wall
22	SH20400	Unspecified thickness burn of the back (excluding buttock)
23	SH20500	Unspecified thickness burn of the buttock
24	SH20600	Unspecified thickness burn of the genitalia
25	SH20x00	Unspecified thickness burn of multiple sites of the trunk
26	SH20z00	Unspecified thickness burn of the trunk NOS
27	SH21.00	Superficial burn of the trunk
28	SH21.11	Erythema of trunk, 1st degree burn
29	SH21000	Superficial burn of unspecified part of the trunk
30	SH21100	Superficial burn of the breast
31	SH21200	Superficial burn of the chest wall
32	SH21300	Superficial burn of the abdominal wall
33	SH21400	Superficial burn of the back (excluding buttock)
34	SH21500	Superficial burn of the buttock
35	SH21600	Superficial burn of the genitalia
36	SH21700	Corrosion of first degree of trunk
37	SH21x00	Superficial burn of multiple sites of the trunk
38	SH21z00	Superficial burn of the trunk NOS
39	SH22.00	Partial thickness burn of the trunk
40	SH22.11	Blister of trunk, second degree burn
41	SH22000	Superficial partial thickness burn unspecified part of trunk
42	SH22100	Superficial partial thickness burn of the breast
43	SH22200	Superficial partial thickness burn of the chest wall
44	SH22300	Superficial partial thickness burn of the abdominal wall
45	SH22400	Superficial partial thickness burn of back (excl buttock)
46	SH22500	Superficial partial thickness burn of the buttock
47	SH22600	Superficial partial thickness burn of the genitalia
48	SH22700	Deep partial thickness burn of the trunk, unspecified
49	SH22800	Deep partial thickness burn of the breast
50	SH22900	Deep partial thickness burn of the chest wall
51	SH22A00	Deep partial thickness burn of the abdominal wall

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2	SH22B00	Deep partial thickness burn of the back (excluding buttock)
3	SH22C00	Deep partial thickness burn of the buttock
4	SH22D00	Deep partial thickness burn of the genitalia
5	SH22E00	Corrosion of second degree of trunk
6	SH22x00	Partial thickness burn of multiple sites of the trunk
7	SH22z00	Partial thickness burn of the trunk NOS
8	SH23.00	Full thickness burn of the trunk
9	SH23000	Full thickness burn of the trunk, unspecified
10	SH23100	Full thickness burn of the breast
11	SH23200	Full thickness burn of the chest wall
12	SH23300	Full thickness burn of the abdominal wall
13	SH23400	Full thickness burn of the back (excluding buttock)
14	SH23500	Full thickness burn of the buttock
15	SH23600	Full thickness burn of the genitalia
16	SH23700	Corrosion of third degree of trunk
17	SH23x00	Full thickness burn of multiple sites of the trunk
18	SH23z00	Full thickness burn of the trunk NOS
19	SH24.00	Deep full thickness burn of trunk without loss of body part
20	SH24000	Deep full thickness burn of trunk unsp, no loss of body part
21	SH24100	Deep full thickness burn of breast without loss of body part
22	SH24200	Deep full thickness burn of chest without loss of body part
23	SH24300	Deep full thickness burn of abdom.wall, no loss of body part
24	SH24400	Deep full thickness burn of back without loss of body part
25	SH24500	Deep full thickness burn of buttock, no loss of body part
26	SH24600	Deep full thickness burn of genitalia, no loss of body part
27	SH24x00	Deep full thickness burn multiple sites trunk, no BPL
28	SH24z00	Deep full thickness burn of trunk, no loss of body part NOS
29	SH25.00	Deep full thickness burn of trunk, with loss of body part
30	SH25000	Deep full thickness burn of trunk unsp, with loss body part
31	SH25100	Deep full thickness burn of breast, with loss of body part
32	SH25200	Deep full thickness burn of chest, with loss of body part
33	SH25300	Deep full thickness burn of abd.wall, with loss of body part
34	SH25400	Deep full thickness burn of back, with loss of body part
35	SH25500	Deep full thickness burn of buttock, with loss of body part
36	SH25600	Deep full thickness burn of genitalia, with loss body part
37	SH25x00	Deep full thickness burn multiple sites trunk with BPL
38	SH25z00	Deep full thickness burn of trunk, with loss body part, NOS
39	SH26.00	Corrosion of unspecified degree of trunk
40	SH2z.00	Burn of the trunk NOS
41	SH3..00	Burn of the arm (excluding wrist and hand)
42	SH30.00	Unspecified thickness burn of the arm
43	SH30000	Unspecified thickness burn of the arm, unspecified
44	SH30100	Unspecified thickness burn of the forearm
45	SH30200	Unspecified thickness burn of the elbow
46	SH30300	Unspecified thickness burn of the upper arm
47	SH30400	Unspecified thickness burn of the axilla
48	SH30500	Unspecified thickness burn of the shoulder
49	SH30600	Unspecified thickness burn of the scapular region
50	SH30x00	Unspecified thickness burn of multiple sites of the arm
51	SH30z00	Unspecified thickness burn of the arm NOS
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2	SH31.00	Superficial burn of the arm
3	SH31.11	Erythema of arm, first degree burn
4	SH31000	Superficial burn of the arm, unspecified
5	SH31100	Superficial burn of the forearm
6	SH31200	Superficial burn of the elbow
7	SH31300	Superficial burn of the upper arm
8	SH31400	Superficial burn of the axilla
9	SH31500	Superficial burn of the shoulder
10	SH31600	Superficial burn of the scapular region
11	SH31600	Superficial burn of the scapular region
12	SH31x00	Superficial burn of multiple sites of the arm
13	SH31z00	Superficial burn of the arm NOS
14	SH32.00	Partial thickness burn of the arm
15	SH32.11	Blister of arm, second degree burn
16	SH32000	Superficial partial thickness burn of the arm, unspecified
17	SH32100	Superficial partial thickness burn of the forearm
18	SH32200	Superficial partial thickness burn of the elbow
19	SH32300	Superficial partial thickness burn of the upper arm
20	SH32400	Superficial partial thickness burn of the axilla
21	SH32500	Superficial partial thickness burn of the shoulder
22	SH32600	Superficial partial thickness burn of scapular region
23	SH32700	Deep partial thickness burn of the arm, unspecified
24	SH32800	Deep partial thickness burn of the forearm
25	SH32900	Deep partial thickness burn of the elbow
26	SH32A00	Deep partial thickness burn of the upper arm
27	SH32B00	Deep partial thickness burn of the axilla
28	SH32C00	Deep partial thickness burn of the shoulder
29	SH32D00	Deep partial thickness burn of the scapular region
30	SH32x00	Partial thickness burn of multiple sites of the arm
31	SH32z00	Partial thickness burn of the arm NOS
32	SH33.00	Full thickness burn of the arm
33	SH33000	Full thickness burn of the arm, unspecified
34	SH33100	Full thickness burn of the forearm
35	SH33200	Full thickness burn of the elbow
36	SH33300	Full thickness burn of the upper arm
37	SH33400	Full thickness burn of the axilla
38	SH33500	Full thickness burn of the shoulder
39	SH33600	Full thickness burn of the scapular region
40	SH33x00	Full thickness burn of multiple sites of the arm
41	SH33z00	Full thickness burn of the arm NOS
42	SH34.00	Deep full thickness burn of arm without loss of body part
43	SH34000	Deep full thickness burn of arm unsp, no loss of body part
44	SH34100	Deep full thickness burn of forearm, no loss of body part
45	SH34200	Deep full thickness burn of elbow without loss of body part
46	SH34300	Deep full thickness burn of upper arm, no loss of body part
47	SH34400	Deep full thickness burn of axilla without loss of body part
48	SH34500	Deep full thickness burn of shoulder, no loss of body part
49	SH34600	Deep full thickness burn of scapular, no loss of body part
50	SH34x00	Deep full thickness burn of multiple sites of arm, no BPL
51	SH34z00	Deep full thickness burn without loss of body part-arm NOS
52	SH35.00	Deep full thickness burn of arm, with loss of body part
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2	SH35000	Deep full thickness burn of arm unsp, with loss of body part
3	SH35100	Deep full thickness burn of forearm, with loss of body part
4	SH35200	Deep full thickness burn of elbow, with loss of body part
5	SH35300	Deep full thickness burn of upper arm,with loss of body part
6	SH35400	Deep full thickness burn of axilla, with loss of body part
7	SH35500	Deep full thickness burn of shoulder, with loss of body part
8	SH35600	Deep full thickness burn of scapular, with loss of body part
9	SH35x00	Deep full thickness burn of multiple sites of arm with BPL
10	SH35z00	Deep full thickness burn-, with loss of body part-arm NOS
11	SH36.00	Corros/unspecf degree/shoulder+upper limb,except wrist+hand
12	SH36000	Corrosion/1st degree shoulder+upper limb,except wrist+hand
13	SH36100	Corrosion/2nd degree/shoulder and upper limb exc wrist+hand
14	SH36200	Corros/third degree/shoulder and upper limb, exc wrist+hand
15	SH3z.00	Burn of the arm (excluding wrist and hand) NOS
16	SH4..00	Burn of the wrist(s) and hand(s)
17	SH40.00	Unspecified thickness burn of the wrist and hand
18	SH40.11	Unspecified degree burn of finger
19	SH40.12	Unspecified degree burn of hand
20	SH40.13	Unspecified degree burn of thumb
21	SH40.14	Unspecified degree burn of wrist
22	SH40000	Unspecified thickness burn of the hand, unspecified
23	SH40100	Unspecified thickness burn of a single finger
24	SH40200	Unspecified thickness burn of the thumb
25	SH40300	Unspecified thickness burn of more than one finger
26	SH40400	Unspecified thickness burn of the thumb and finger(s)
27	SH40500	Unspecified thickness burn of the palm of hand
28	SH40600	Unspecified thickness burn of the back of hand
29	SH40700	Unspecified thickness burn of the wrist
30	SH40x00	Unspecified thickness burn of multiple sites of wrist/hand
31	SH40z00	Unspecified thickness burn of the wrist or hand NOS
32	SH41.00	Superficial burn of the wrist and hand
33	SH41.11	Erythema of wrist and hand,first degree burn
34	SH41.12	First degree burn of finger
35	SH41.13	First degree burn of hand
36	SH41.14	First degree burn of thumb
37	SH41.15	First degree burn of wrist
38	SH41000	Superficial burn of the hand, unspecified
39	SH41100	Superficial burn of a single finger
40	SH41200	Superficial burn of the thumb
41	SH41300	Superficial burn of more than one finger
42	SH41400	Superficial burn of the thumb and finger(s)
43	SH41500	Superficial burn of the palm of hand
44	SH41600	Superficial burn of the back of hand
45	SH41700	Superficial burn of the wrist
46	SH41x00	First degree burn of multiple sites of the wrist or hand
47	SH41z00	Superficial burn of the wrist or hand NOS
48	SH42.00	Partial thickness burn of the wrist and hand
49	SH42.11	Blister of wrist and hand, second degree burn
50	SH42.12	Second degree burn of finger
51	SH42.13	Second degree burn of hand



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2	SH42.14	Second degree burn of thumb
3	SH42.15	Second degree burn of wrist
4	SH42000	Superficial partial thickness burn of hand, unspecified
5	SH42100	Superficial partial thickness burn of a single finger
6	SH42200	Superficial partial thickness burn of the thumb
7	SH42300	Superficial partial thickness burn of more than one finger
8	SH42400	Superficial partial thickness burn of thumb and finger(s)
9	SH42500	Superficial partial thickness burn of palm of hand
10	SH42600	Superficial partial thickness burn of back of hand
11	SH42700	Superficial partial thickness burn of the wrist
12	SH42800	Deep partial thickness burn of the hand, unspecified
13	SH42900	Deep partial thickness burn of a single finger
14	SH42A00	Deep partial thickness burn of the thumb
15	SH42B00	Deep partial thickness burn of more than one finger
16	SH42C00	Deep partial thickness burn of the thumb and finger(s)
17	SH42D00	Deep partial thickness burn of the palm of hand
18	SH42E00	Deep partial thickness burn of back of hand
19	SH42F00	Deep partial thickness burn of wrist
20	SH42x00	Partial thickness burn of multiple sites of the wrist/hand
21	SH42z00	Partial thickness burn of the wrist or hand NOS
22	SH43.00	Full thickness burn of the wrist and hand
23	SH43.11	Third degree burn of finger
24	SH43.12	Third degree burn of hand
25	SH43.13	Third degree burn of thumb
26	SH43.14	Third degree burn of wrist
27	SH43000	Full thickness burn of the hand, unspecified
28	SH43100	Full thickness burn of a single finger
29	SH43200	Full thickness burn of the thumb
30	SH43300	Full thickness burn of more than one finger
31	SH43400	Full thickness burn of the thumb and finger(s)
32	SH43500	Full thickness burn of the palm of hand
33	SH43600	Full thickness burn of the back of hand
34	SH43700	Full thickness burn of the wrist
35	SH43x00	Full thickness burn of multiple sites of the wrist or hand
36	SH43z00	Full thickness burn of the wrist or hand NOS
37	SH44.00	Deep full thickness burn of wrist/hand, no loss of body part
38	SH44.11	Deep third degree burn of finger, without loss of a body part
39	SH44.12	Deep third degree burn of hand, without loss of a body part
40	SH44.13	Deep third degree burn of thumb, without loss of a body part
41	SH44.14	Deep third degree burn of wrist, without loss of a body part
42	SH44000	Deep full thickness burn of hand unsp, no loss of body part
43	SH44100	Deep full thickness burn of a finger, no loss of body part
44	SH44200	Deep full thickness burn of thumb without loss of body part
45	SH44300	Deep full thickness burn of >1 finger, no loss of body part
46	SH44400	Deep full thickness burn of thumb+fing, no loss of body part
47	SH44500	Deep full thickness burn of palm hand, no loss of body part
48	SH44600	Deep full thickness burn of back hand, no loss of body part
49	SH44700	Deep full thickness burn of wrist without loss of body part
50	SH44x00	Deep full thickness burn-multiple sites wrist/hand, no BPL
51	SH44z00	Deep full thickness burn of wrist/hand, no loss body part NOS

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2	SH45.00	Deep full thickness burn of wrist/hand, with loss body part
3	SH45.11	Deep third degree burn of finger with loss of a body part
4	SH45.12	Deep third degree burn of hand with loss of a body part
5	SH45.13	Deep third degree burn of thumb with loss of a body part
6	SH45.14	Deep third degree burn of wrist with loss of a body part
7	SH45000	Deep full thickness burn of hand unsp, with loss body part
8	SH45100	Deep full thickness burn of a finger, with loss of body part
9	SH45200	Deep full thickness burn of thumb, with loss of body part
10	SH45300	Deep full thickness burn of >1 finger, with loss body part
11	SH45400	Deep full thickness burn of thumb+fing, with loss body part
12	SH45500	Deep full thickness burn of palm hand, with loss body part
13	SH45600	Deep full thickness burn of back hand, with loss body part
14	SH45700	Deep full thickness burn of wrist, with loss of body part
15	SH45x00	Deep full thickness burn-multiple sites wrist/hand with BPL
16	SH45z00	Deep full thickness burn wrist/hand, with loss body part NOS
17	SH46.00	Corrosion of wrist and hand
18	SH46000	Corrosion of first degree of wrist and hand
19	SH46100	Corrosion of second degree of wrist and hand
20	SH46200	Corrosion of third degree of wrist and hand
21	SH4z.00	Burn of wrist or hand NOS
22	SH5..00	Burn of lower limbs
23	SH5..11	Leg burns
24	SH50.00	Unspecified thickness burn of the leg
25	SH50000	Unspecified degree burn of the leg, unspecified
26	SH50100	Unspecified thickness burn of the toe(s)
27	SH50200	Unspecified thickness burn of the foot
28	SH50300	Unspecified thickness burn of the ankle
29	SH50400	Unspecified thickness burn of the lower leg
30	SH50500	Unspecified thickness burn of the knee
31	SH50600	Unspecified thickness burn of the thigh
32	SH50x00	Unspecified thickness burn of multiple sites of the leg
33	SH50z00	Unspecified thickness burn of the leg NOS
34	SH51.00	Superficial burn of the leg
35	SH51.11	Erythema of leg, first degree burn
36	SH51000	Superficial burn of the leg, unspecified
37	SH51100	Superficial burn of the toe(s)
38	SH51200	Superficial burn of the foot
39	SH51300	Superficial burn of the ankle
40	SH51400	Superficial burn of the lower leg
41	SH51500	Superficial burn of the knee
42	SH51600	Superficial burn of the thigh
43	SH51x00	Superficial burn of multiple sites of the leg
44	SH51z00	Superficial burn of the leg NOS
45	SH52.00	Partial thickness burn of the leg
46	SH52.11	Blister of leg, second degree burn
47	SH52000	Superficial partial thickness burn of the leg, unspecified
48	SH52100	Superficial partial thickness burn of the toe(s)
49	SH52200	Superficial partial thickness burn of the foot
50	SH52300	Superficial partial thickness burn of the ankle
51	SH52400	Superficial partial thickness burn of the lower leg

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SH52500	Superficial partial thickness burn of the knee
SH52600	Superficial partial thickness burn of the thigh
SH52700	Deep partial thickness burn of the leg, unspecified
SH52800	Deep partial thickness burn of the toe(s)
SH52900	Deep partial thickness burn of the foot
SH52A00	Deep partial thickness burn of the ankle
SH52B00	Deep partial thickness burn of the lower leg
SH52C00	Deep partial thickness burn of the knee
SH52D00	Deep partial thickness burn of the thigh
SH52x00	Partial thickness burn of multiple sites of the leg
SH52z00	Partial thickness burn of the leg NOS
SH53.00	Full thickness burn of the leg
SH53000	Full thickness burn of the leg, unspecified
SH53100	Full thickness burn of the toe(s)
SH53200	Full thickness burn of the foot
SH53300	Full thickness burn of the ankle
SH53400	Full thickness burn of the lower leg
SH53500	Full thickness burn of the knee
SH53600	Full thickness burn of the thigh
SH53x00	Full thickness burn of multiple sites of the leg
SH53z00	Full thickness burn of the leg NOS
SH54.00	Deep full thickness burn of leg without loss of body part
SH54000	Deep full thickness burn of leg unsp, no loss of body part
SH54100	Deep full thickness burn of toe(s) without loss of body part
SH54200	Deep full thickness burn of foot without loss of body part
SH54300	Deep full thickness burn of ankle without loss of body part
SH54400	Deep full thickness burn of lower leg without loss of body
SH54500	Deep full thickness burn of knee without loss of body part
SH54600	Deep full thickness burn of thigh without loss of body part
SH54x00	Deep full thickness burn-mult.leg without loss of body part
SH54z00	Deep full thickness burn, no loss of body part, of leg NOS
SH55.00	Deep full thickness burn of leg, with loss of body part
SH55000	Deep full thickness burn of leg unsp, with loss body part
SH55100	Deep full thickness burn of toe(s), with loss of body part
SH55200	Deep full thickness burn of foot, with loss of body part
SH55300	Deep full thickness burn of ankle, with loss of body part
SH55400	Deep full thickness burn of lower leg, with loss body part
SH55500	Deep full thickness burn of knee, with loss of body part
SH55600	Deep full thickness burn of thigh, with loss of body part
SH55x00	Deep full thickness burn-mult.leg, with loss of body part
SH55z00	Deep full thickness burn, with loss of body part, of leg NOS
SH56.00	Burn and corrosion of hip and lower limb,except ankle & foot
SH56000	Corrosion of first degree of hip+lower limb,exc ankle + foot
SH56100	Corrosion/2nd degree/hip+lower limb,except ankle & foot
SH56200	Corrosion/third degree/hip+lower limb except ankle and foot
SH57.00	Corrosion of ankle and foot
SH57000	Corrosion of first degree of ankle and foot
SH57100	Corrosion of second degree of ankle and foot
SH57200	Corrosion of third degree of ankle and foot
SH5z.00	Burn of the lower limb NOS

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2	SH6..00	Burn of multiple specified sites
3	SH60.00	Unspecified thickness burn of multiple specified sites
4	SH61.00	Superficial burn of multiple specified sites
5	SH62.00	Partial thickness burn of multiple specified sites
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7	SH62000	Superficial partial thickness burn multiple specified sites
8	SH62100	Deep partial thickness burn of multiple specified sites
9	SH63.00	Full thickness burn of multiple specified sites
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11	SH64.00	Deep full thickness burn multiple specified sites, no BPL
12	SH65.00	Deep full thickness burn multiple specified sites, with BPL
13	SH66.00	Corrosions of multiple regions, unspecified degree
14	SH66000	Corros/multiple reg,no more than first-deg corros mentioned
15	SH66100	Corrosion/multi reg,no more than second-deg corros mentioned
16	SH66300	Corros/multi reg,at least one corros/third degree mentioned
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18	SH6z.00	Burn of multiple specified sites NOS
19	SH8..00	Burns as a percentage of body surface (BS) involved
20	SH80.00	Burn involving <10% of body surface (BS)
21	SH80000	Burn:<10% of body surface, 10%/unspec BS full thickness
22	SH80100	Corrosions involving less than 10% of body surface
23		
24	SH80z00	Burn:<10% of body surface NOS
25	SH81.00	Burn involving 10-19% of body surface (BS)
26	SH81000	Burn: 10-14% of body surface,<10%/unsp BS full thickness
27	SH81100	Burn: 10-14% of body surface, 10-14% BS full thickness
28	SH81200	Burn: 15-19% of body surface,<10%/unsp BS full thickness
29	SH81300	Burn: 15-19% of body surface, 10-19% BS full thickness
30	SH81400	Corrosions involving 10-19% of body surface
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32	SH81z00	Burn: 10-19% of body surface NOS
33	SH82.00	Burn involving 20-29% of body surface (BS)
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35	SH82000	Burn: 20-29% of body surface,<10%/unspec BS full thickness
36	SH82100	Burn: 20-29% of body surface, 10-19% BS full thickness
37	SH82200	Burn: 20-29% of body surface, 20-29% BS full thickness
38	SH82300	Corrosions involving 20-29% of body surface
39	SH82z00	Burn: 20-29% of body surface NOS
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41	SH83.00	Burn involving 30-39% of body surface (BS)
42	SH83000	Burn: 30-39% of body surface,<10%/unspec BS full thickness
43	SH83100	Burn: 30-39% of body surface, 10-19% BS full thickness
44	SH83200	Burn: 30-39% of body surface, 20-29% BS full thickness
45	SH83300	Burn: 30-39% of body surface, 30-39% BS full thickness
46	SH83400	Corrosions involving 30-39% of body surface
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48	SH83z00	Burn: 30-39% of body surface NOS
49	SH84.00	Burn involving 40-49% of body surface (BS)
50	SH84000	Burn: 40-49% of body surface,<10%/unspec BS full thickness
51	SH84100	Burn: 40-49% of body surface, 10-19% BS full thickness
52	SH84200	Burn: 40-49% of body surface, 20-29% BS full thickness
53	SH84300	Burn: 40-49% of body surface, 30-39% BS full thickness
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55	SH84400	Burn: 40-49% of body surface, 40-49% BS full thickness
56	SH84500	Corrosions involving 40-49% of body surface
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58	SH84z00	Burn: 40-49% of body surface NOS
59	SH85.00	Burn involving 50-59% of body surface (BS)
60	SH85000	Burn: 50-59% of body surface,<10%/unspec BS full thickness
	SH85100	Burn: 50-59% of body surface, 10-19% BS full thickness

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2	SH85200	Burn: 50-59% of body surface, 20-29% BS full thickness
3	SH85300	Burn: 50-59% of body surface, 30-39% BS full thickness
4	SH85400	Burn: 50-59% of body surface, 40-49% BS full thickness
5	SH85500	Burn: 50-59% of body surface, 50-59% BS full thickness
6	SH85600	Corrosions involving 50-59% of body surface
7	SH85z00	Burn: 50-59% of body surface NOS
8	SH86.00	Burn involving 60-69% of body surface (BS)
9	SH86000	Burn: 60-69% of body surface, <10%/unspec BS full thickness
10	SH86100	Burn: 60-69% of body surface, 10-19% BS full thickness
11	SH86200	Burn: 60-69% of body surface, 20-29% BS full thickness
12	SH86300	Burn: 60-69% of body surface, 30-39% BS full thickness
13	SH86400	Burn: 60-69% of body surface, 40-49% BS full thickness
14	SH86500	Burn: 60-69% of body surface, 50-59% BS full thickness
15	SH86600	Burn: 60-69% of body surface, 60-69% BS full thickness
16	SH86700	Corrosions involving 60-69% of body surface
17	SH86z00	Burn: 60-69% of body surface NOS
18	SH87.00	Burn involving 70-79% of body surface (BS)
19	SH87000	Burn: 70-79% of body surface, <10%/unspec BS full thickness
20	SH87100	Burn: 70-79% of body surface, 10-19% BS full thickness
21	SH87200	Burn: 70-79% of body surface, 20-29% BS full thickness
22	SH87300	Burn: 70-79% of body surface, 30-39% BS full thickness
23	SH87400	Burn: 70-79% of body surface, 40-49% BS full thickness
24	SH87500	Burn: 70-79% of body surface, 50-59% BS full thickness
25	SH87600	Burn: 70-79% of body surface, 60-69% BS full thickness
26	SH87700	Burn: 70-79% of body surface, 70-79% BS full thickness
27	SH87800	Corrosions involving 70-79% of body surface
28	SH87z00	Burn: 70-79% of body surface NOS
29	SH88.00	Burn involving 80-89% of body surface (BS)
30	SH88000	Burn: 80-89% of body surface, <10%/unspec BS full thickness
31	SH88100	Burn: 80-89% of body surface, 10-19% =full thickness
32	SH88200	Burn: 80-89% of body surface, 20-29% BS full thickness
33	SH88300	Burn: 80-89% of body surface, 30-39% BS full thickness
34	SH88400	Burn: 80-89% of body surface, 40-49% BS full thickness
35	SH88500	Burn: 80-89% of body surface, 50-59% BS full thickness
36	SH88600	Burn: 80-89% of body surface, 60-69% BS full thickness
37	SH88700	Burn: 80-89% of body surface, 70-79% BS full thickness
38	SH88800	Burn: 80-89% of body surface, 80-89% BS full thickness
39	SH88900	Corrosions involving 80-89% of body surface
40	SH88z00	Burn: 80-89% of body surface, NOS
41	SH89.00	Burn involving >90% of body surface (BS)
42	SH89000	Burn: >90% of body surface, <10%/unspec BS full thickness
43	SH89100	Burn: >90% of body surface, 10-19% BS full thickness
44	SH89200	Burn: >90% of body surface, 20-29% BS full thickness
45	SH89300	Burn: >90% of body surface, 30-39% BS full thickness
46	SH89400	Burn: >90% of body surface, 40-49% BS full thickness
47	SH89500	Burn: >90% of body surface, 50-59% BS full thickness
48	SH89600	Burn: >90% of body surface, 60-69% BS full thickness
49	SH89700	Burn: >90% of body surface, 70-79% BS full thickness
50	SH89800	Burn: >90% of body surface, 80-89% BS full thickness
51	SH89900	Burn: >90% of body surface, >90% BS full thickness
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2	SH89A00	Corrosions involving 90% or more of body surface
3	SH89z00	Burn: >90% of body surface NOS
4	SH8z.00	Burn as a percentage of body surface involved NOS
5	SH9..00	Burn - unspecified
6	SH90.00	Unspecified degree of burn NOS
7	SH91.00	Superficial burn NOS
8	SH91.11	First degree burn
9	SH92.00	Partial thickness burn NOS
10	SH92.11	Second degree burn
11	SH92000	Superficial partial thickness burn NOS
12	SH92100	Deep partial thickness burn NOS
13	SH93.00	Full thickness burn NOS
14	SH93.11	Third degree burn
15	SH94.00	Deep full thickness burn, without loss of body part, NOS
16	SH95.00	Deep full thickness burn, with loss of body part, NOS
17	SH9z.00	Burn - unspecified
18	SHz..00	Burns NOS
19	SK03.00	Post-traumatic wound infection NEC
20	SK1x200	Multiple open wounds of neck
21	SK1x500	Multiple open wounds of abdomen, lower back and pelvis
22	SK1x700	Multiple open wounds of forearm
23	SK1x800	Multiple open wounds of lower leg
24	SK1x900	Open wounds involv thorax with abdomen,lwr back and pelvis
25	SK1xA00	Open wounds invol multi regions of up limb(s) wth lw limb(s)
26	SP23.00	Operation wound disruption
27	SP23000	Operation wound dehiscence
28	SP23011	Postoperative wound breakdown
29	SP23100	Operation wound rupture
30	SP23200	Surgical wound necrosis
31	SP23300	Burst abdomen NEC
32	SP23400	Breakdown of totally implantable venous access device port
33	SP23z00	Operation wound disruption NOS
34	SP23z11	Delayed healing surgical wound
35	SP23z12	Healing delayed surgical wound
36	SP23z13	Wound surgical healing delayed
37	SP24300	Foreign body left in wound
38	SP25000	Postoperative stitch abscess
39	SP25100	Postoperative wound abscess
40	SP25500	Postoperative wound infection, unspecified
41	SP25600	Postoperative wound infection-deep
42	SP25700	Postoperative wound infection-superficial
43	SP25800	MRSA infection of postoperative wound
44	SP28.00	Postoperative wound sinus
45	SQ...00	Open wounds involving multiple body regions
46	Syu0200	[X]Open wound of other parts of head
47	Syu0A00	[X]Penetrating wound of orbit with or without foreign body
48	Syu1300	[X]Open wound of other parts of the neck
49	Syu1400	[X]Open wound of neck, part unspecified
50	Syu2500	[X]Open wound of other parts of thorax
51	Syu2600	[X]Open wound of thorax, part unspecified
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2	Syu3200	[X]Open wound of oth and unspecif external genital organs
3	Syu3300	[X]Open wound oth & unspecif part abdomen/lower back/pelvis
4	Syu4100	[X]Open wound of oth & unspecif parts of should & upper arm
5	Syu5200	[X]Open wound of other parts of forearm
6	Syu6200	[X]Open wound of other parts of wrist and hand
7	Syu7100	[X]Open wound of other parts of hip and thigh
8	Syu8200	[X]Open wound of other parts of lower leg
9	Syu9200	[X]Open wound of other parts of foot
10	Syu9300	[X]Open wound of other parts of ankle and foot
11	SyuA100	[X]Open wounds involving other combinations of body regions
12	SyuBA00	[X]Open wound of unspecified body region
13	SyuD.00	[X]Burns and corrosions
14	SyuD000	[X]Burns of other parts of eye and adnexa
15	SyuD800	[X]Burns of mult reg, at least 1 burn of 3rd deg mentioned
16	SyuD900	[X]Corrosn multi reg, at least 1 corr of 3rd deg mentioned
17	SyuJ000	[X]Post-traumatic wound infection, not elsewhere classified
18	TG80000	Accidental burning/scalding caused by boiling water, unspec
19	TG80100	Accidental burning/scalding caused by boiling liquid, unspec
20	TG80200	Accidental burning or scalding caused by liquid metal
21	TG80300	Accidental burning or scalding caused by steam
22	TG80400	Accidental burning/scalding by boiling water from kettle
23	TG80500	Accidental burning/scalding by boiling water from saucepan
24	TG80600	Accidental burning or scalding caused by tea
25	TG80700	Accidental burning or scalding caused by coffee
26	TG80800	Accidental burning or scalding caused by chocolate
27	TG80900	Accidental burning or scalding caused by milk
28	TG80A00	Accidental burning/scalding caused by soup, stew or curries
29	TG80B00	Accidental burning or scalding caused by fat
30	TG80C00	Accidental burning or scalding caused by steam from kettle
31	TG80D00	Accidental burning or scalding by steam from car radiator
32	TG80y00	Accidental burning or scalding caused by other hot vapour
33	TG80z00	Accidental burning/scalding caused by hot liquid/vapour NOS
34	TGyz700	Accidental wound NOS
35	Z174M00	Pressure area care
36	Z174M11	PAC - Pressure area care
37	Z174N00	Wound care
38	Z174N11	WOUND TREATMENT
39	Z174N12	WOUND THERAPY
40	Z174O00	Post-surgical wound care
41	Z174O11	Post-operative wound care
42	Z174P00	Pressure sore care
43	Z174Q00	Skin ulcer care
44	Z1B..00	Dressing of skin or wound
45	Z1B..11	Application of dressing
46	Z1B..12	Dressing
47	Z1B1.00	Attention to dressing of skin
48	Z1B1100	Checking dressing of skin
49	Z1B1200	Checking dressing for leakage
50	Z1B1300	Change of dressing
51	Z1B1311	Repeating dressing
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2	Z1B1312	Reapplying a fresh dressing
3	Z1B1313	Redressing wound
4	Z1B1400	Attention to dressing of burnt skin
5	Z1B2.00	Dressing of skin
6	Z1B2100	Dressing of burnt skin
7	Z1B2111	Burn dressing
8	Z1B2200	Covering burnt skin with plastic bag
9	Z1B2300	Dressing of skin ulcer
10	Z1B3.00	Dressing of pressure sore
11	Z1O6100	Exposing wound to air
12	Z1R2.00	Cleaning wound
13	Z1R2.11	Cleansing wound
14	Z1R2.12	Wound toilet
15	Z1R3.00	Debridement of skin
16	Z1R3.11	Debridement of wound of skin
17	Z1R3.12	Wound debridement
18	Z1R3.13	Wound debridement
19	Z1R3100	Debridement of wound with topical agent
20	Z1R3200	Surgical debridement of wound
21	Z1R4.00	Removal of slough from skin
22	Z1R4.11	Desloughing wound
23	Z1R5.00	Removal of contaminant from skin
24	ZA13E00	Insertion of quill in the nail bed
25	ZA14.00	Ablation of nail bed
26	ZA14.11	Ablation of nail matrix
27	ZA14100	Total ablation of nail matrix
28	ZA14200	Partial ablation of nail matrix
29	ZQ37.00	Wound assessment
30	ZQ38.00	Assessment of fluid loss from wound
31	ZQ38.11	Assessing seepage from wound
32	ZQ39.00	Pressure sore assessment
33	ZQ39.11	Decubitus ulcer assessment
34	ZQ39.12	Pressure ulcer assessment
35	ZQ39.13	Bed sore assessment
36	ZQ3A.00	Assessment of burn injuries
37	ZQ3A.11	Assessment of levels of burns
38	ZR1V.00	ASEPSIS score for wound infection
39	Zw02D00	[Q] Open fracture grade 1
40	Zw02E00	[Q] Open fracture grade 2
41	Zw02F00	[Q] Open fracture grade 3
42	Zw02G00	[Q] Open fracture grade 3A
43	Zw02H00	[Q] Open fracture grade 3B
44	Zw02J00	[Q] Open fracture grade 3C
45	ZX14.00	Damaging own wounds
46	ZX14300	Poking fingers into wound
47	ZX14400	Inserting objects into wound
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**The RECORD statement – checklist of items, extended from the STROBE statement, that should be reported in observational studies using routinely collected health data.**

	Item No.	STROBE items	Location in manuscript where items are reported	RECORD items	Location in manuscript where items are reported
<b>Title and abstract</b>					
	1	(a) Indicate the study's design with a commonly used term in the title or the abstract (b) Provide in the abstract an informative and balanced summary of what was done and what was found	Page 1	RECORD 1.1: The type of data used should be specified in the title or abstract. When possible, the name of the databases used should be included.  RECORD 1.2: If applicable, the geographic region and timeframe within which the study took place should be reported in the title or abstract.  RECORD 1.3: If linkage between databases was conducted for the study, this should be clearly stated in the title or abstract.	Page 1  Page 1  N/A
<b>Introduction</b>					
Background rationale	2	Explain the scientific background and rationale for the investigation being reported	Page 6		
Objectives	3	State specific objectives, including any prespecified hypotheses	Page 6		
<b>Methods</b>					
Study Design	4	Present key elements of study design early in the paper	Page 7		
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	Pages 8 and 10		

Participants	6	<p>(a) <i>Cohort study</i> - Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up</p> <p><i>Case-control study</i> - Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls</p> <p><i>Cross-sectional study</i> - Give the eligibility criteria, and the sources and methods of selection of participants</p> <p>(b) <i>Cohort study</i> - For matched studies, give matching criteria and number of exposed and unexposed</p> <p><i>Case-control study</i> - For matched studies, give matching criteria and the number of controls per case</p>	Page 8	<p>RECORD 6.1: The methods of study population selection (such as codes or algorithms used to identify subjects) should be listed in detail. If this is not possible, an explanation should be provided.</p> <p>RECORD 6.2: Any validation studies of the codes or algorithms used to select the population should be referenced. If validation was conducted for this study and not published elsewhere, detailed methods and results should be provided.</p> <p>RECORD 6.3: If the study involved linkage of databases, consider use of a flow diagram or other graphical display to demonstrate the data linkage process, including the number of individuals with linked data at each stage.</p>	<p>2,095 Read codes were used (Supplementary Table S1).</p> <p>Read codes have been used to code symptoms in the NHS since 1985. IQVIA used these codes to identify the patient population independently of the Authors.</p> <p>N/A</p>
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable.	Pages 8-10	RECORD 7.1: A complete list of codes and algorithms used to classify exposures, outcomes, confounders, and effect modifiers should be provided. If these cannot be reported, an explanation should be provided.	N/A
Data sources/ measurement	8	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	Pages 8-10		

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34	Bias	9	Describe any efforts to address potential sources of bias	Pages 8,9		
	Study size	10	Explain how the study size was arrived at	Pages 8,9		
	Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen, and why	Pages 8-10		
	Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding (b) Describe any methods used to examine subgroups and interactions (c) Explain how missing data were addressed (d) <i>Cohort study</i> - If applicable, explain how loss to follow-up was addressed <i>Case-control study</i> - If applicable, explain how matching of cases and controls was addressed <i>Cross-sectional study</i> - If applicable, describe analytical methods taking account of sampling strategy (e) Describe any sensitivity analyses	Pages 9-10  Pages 9-10  Page 9  N/A         Page10		
35 36 37 38 39 40 41 42 43 44 45 46 47	Data access and cleaning methods		..		RECORD 12.1: Authors should describe the extent to which the investigators had access to the database population used to create the study population.	Authors did not have access to the THIN database.

				RECORD 12.2: Authors should provide information on the data cleaning methods used in the study.	
Linkage		..		RECORD 12.3: State whether the study included person-level, institutional-level, or other data linkage across two or more databases. The methods of linkage and methods of linkage quality evaluation should be provided.	Pages 8-10
<b>Results</b>					
Participants	13	(a) Report the numbers of individuals at each stage of the study ( <i>e.g.</i> , numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed) (b) Give reasons for non-participation at each stage. (c) Consider use of a flow diagram	Page 11, 26	RECORD 13.1: Describe in detail the selection of the persons included in the study ( <i>i.e.</i> , study population selection) including filtering based on data quality, data availability and linkage. The selection of included persons can be described in the text and/or by means of the study flow diagram.	Pages 8-10.
Descriptive data	14	(a) Give characteristics of study participants ( <i>e.g.</i> , demographic, clinical, social) and information on exposures and potential confounders (b) Indicate the number of participants with missing data for each variable of interest (c) <i>Cohort study</i> - summarise follow-up time ( <i>e.g.</i> , average and total amount)	Pages 11-15  N/A  Pages 11-15		
Outcome data	15	<i>Cohort study</i> - Report numbers of outcome events or summary measures over time <i>Case-control study</i> - Report numbers in each exposure	Pages 11-15, 26-34		

		category, or summary measures of exposure <i>Cross-sectional study</i> - Report numbers of outcome events or summary measures			
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (e.g., 95% confidence interval). Make clear which confounders were adjusted for and why they were included (b) Report category boundaries when continuous variables were categorized (c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	Pages 11-15, 26-34  N/A  N/A		
Other analyses	17	Report other analyses done— e.g., analyses of subgroups and interactions, and sensitivity analyses	Page 15		
<b>Discussion</b>					
Key results	18	Summarise key results with reference to study objectives	Pages 16-21		
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	Pages 19-21	RECORD 19.1: Discuss the implications of using data that were not created or collected to answer the specific research question(s). Include discussion of misclassification bias, unmeasured confounding, missing data, and changing eligibility over time, as they pertain to the study being reported.	N/A
Interpretation	20	Give a cautious overall interpretation of results considering objectives,	Pages 16-21		

		limitations, multiplicity of analyses, results from similar studies, and other relevant evidence			
Generalisability	21	Discuss the generalisability (external validity) of the study results	Pages 20-21		
<b>Other Information</b>					
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	Page 3		
Accessibility of protocol, raw data, and programming code				RECORD 22.1: Authors should provide information on how to access any supplemental information such as the study protocol, raw data, or programming code.	N/A

\*Reference: Benchimol EI, Smeeth L, Guttman A, Harron K, Moher D, Petersen I, Sørensen HT, von Elm E, Langan SM, the RECORD Working Committee. The REporting of studies Conducted using Observational Routinely-collected health Data (RECORD) Statement. *PLoS Medicine* 2015; in press.

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# BMJ Open

## COHORT STUDY EVALUATING THE BURDEN OF WOUNDS TO THE UK'S NATIONAL HEALTH SERVICE IN 2017/18: UPDATE FROM 2012/13

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## ORIGINAL ARTICLE

COHORT STUDY EVALUATING THE BURDEN OF WOUNDS TO THE UK'S  
NATIONAL HEALTH SERVICE IN 2017/18: UPDATE FROM 2012/13Julian F Guest<sup>1</sup>, Graham W Fuller<sup>1</sup>, Peter Vowden<sup>2</sup><sup>1</sup>Catalyst Consultants, Poole, UK; <sup>2</sup>Bradford Teaching Hospitals NHS  
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**Running title:** Health economic impact of wounds in the UK**Word count:** 6,135 excluding Abstract and References**Number of tables and figures:** 10 tables and 0 figures

## ABSTRACT

**Objective:** To evaluate the prevalence of wounds managed by the UK's National Health Service (NHS) in 2017/18 and associated health outcomes, resource use and costs.

**Design:** Retrospective cohort analysis of the electronic records of patients from The Health Improvement Network (THIN) database.

**Setting:** Primary and secondary care sectors in the UK.

**Participants:** Randomly selected cohort of 3,000 patients from the THIN database who had a wound in 2017/18.

**Primary and secondary outcome measures:** Patients' characteristics, wound-related health outcomes, healthcare resource use and total National Health Service (NHS) cost of patient management.

**Results:** There were an estimated 3.8 million patients with a wound managed by the NHS in 2017/18, of which 70% healed in the study year; 89% and 49% of acute and chronic wounds healed, respectively. An estimated 59% of chronic wounds healed if there was no evidence of infection compared to 45% if there was a definite or suspected infection. Healing rate of acute wounds was unaffected by the presence of infection. Smoking status appeared to only affect the healing rate of chronic wounds. Annual levels of resource use attributable to wound management included 54.4 million district/community nurse visits, 53.6 million healthcare assistant visits and 28.1 million practice nurse visits. The annual NHS cost of wound management was £8.3 billion, of which £2.7 billion and £5.6 billion was associated with managing healed and unhealed wounds, respectively. Eighty one per cent of the total annual NHS cost was incurred in the community.

**Conclusion:** The annual prevalence of wounds increased by 71% between 2012/13 and 2017/18. There was a substantial increase in resource use over this period and patient management cost increased by 48% in real terms. There needs to be a structural change within the NHS in order to manage the increasing demand for wound care and improve patient outcomes.

**Keywords:** Burden; cost; ulcers; wounds; UK.

## STRENGTHS AND LIMITATIONS OF THIS STUDY

- This is the first study to estimate how the health economic burden of wounds to the UK's NHS has changed over the last five years.
- This study was undertaken using real world evidence derived from the anonymised records of a randomised sample of 3,000 patients in The Health Improvement Network (THIN) database (a nationally representative database of clinical practice among >11 million patients registered with general practitioners in the UK).
- The estimates were derived following a systematic analysis of patients' characteristics, wound-related health outcomes and community-based and secondary care resource use pertaining to wound care contained in the patients' electronic records.
- The annual number of 3.8 million wounds in 2017/18 may be an underestimate since some of the patients in our data set may have had multiple wounds, but this is not transparent in the patients' records and it is very difficult to retrospectively extricate resource use for different wounds from the records of a patient with multiple wounds of the same aetiology.
- The analysis does not consider the potential impact of those wounds that remained unhealed beyond the study period, nor the potential impact of managing patients with wounds being cared for in nursing homes.

## ETHICS APPROVAL

Ethics approval to use anonymised patients' records from the THIN database for this study was obtained from the Research Ethics Committee that appraises studies using the THIN database (Reference number 18THIN093).

For peer review only

## INTRODUCTION

Our 2012/13 burden of wounds study estimated that the UK's National Health Service (NHS) managed 2.2 million patients with a wound at a cost of £5.3 billion [1-3]. An estimated 61% of all wounds in that burden of wounds study healed in the study year (79% of acute wounds and 43% of chronic wounds). Patients were predominantly managed in the community with 18.6 million practice nurse visits, 10.9 million community nurse visits, 7.7 million general practitioner (GP) visits, 3.4 million hospital outpatient visits. Five years ago, patients also received 97.1 million drug prescriptions and 262.2 million dressings. Additionally, only 16% of all cases with an ulcer of the lower limb had a Doppler ankle brachial pressure index recorded in their records [1].

This study led to such concern among politicians that the UK Parliament (House of Lords) debated developing a national strategy for improving the standards of wound care in the NHS [4]. As a consequence, NHS England and NHS Improvement established the National Wound Care Strategy Programme in the last quarter of 2018 [5]. The aim of the Programme is to scope the development of a national strategy for wound care in England that focuses on improving care relating to pressure ulcers, lower limb ulcers and surgical wounds [5].

Between 2012 and 2017 there was an estimated 4% decline in the number of practice nurses and a 30% decline in the number of district nurses employed in front-line patient care [6-9]. During this period we reported on unwarranted variation in wound care arising in part from inconsistencies in staff involvement and dressing choice and in many instances a lack of a coherent treatment plan [10-16]. Hence, it is reasonable to assume that not all patients with equal need have always had access to, or received, the same continuous levels of healthcare. However, patients should be afforded the best care available (within the context of limited resources) in order to obtain maximum health gains [17].

The aim of this new study was to assess the extent of change in the burden of wounds over five years (i.e. between 2012/13 and 2017/18) in terms of annual prevalence, health outcomes, healthcare resource use and NHS costs.



## METHODS

### Study Design

This was a retrospective cohort analysis of the anonymised case records of patients with a wound randomly extracted from The Health Improvement Network (THIN) database. The perspective of the analysis was the UK's NHS.

### The THIN Database

The THIN database contains electronic records on >11 million anonymised patients entered by GPs from >560 practices across the UK. The patient composition within the THIN database has been shown to be representative of the UK population in terms of demographics and disease distribution [18] and the database theoretically contains patients' entire medical history. In particular, the database collects data on the dates that patients registered or left their practice as well as demographic data such as date of birth and gender. Patients who reside at the same address or are members of the same family can be linked using a household identifier, provided they are registered with the same general practice.

All medical conditions and symptoms recorded electronically during a patient's consultation in the general practice are recorded in the THIN database, thereby building up long computerised medical histories using Read Codes [19]. GP prescribing is computerised and entered directly into the database. Prescriptions not issued electronically (e.g. during home visits) are also entered, however, there is a possibility of under-recording of such items. Information is also recorded on referrals to secondary care, including the specialty. Secondary care information and other medically related information received by the practice are entered into the database. This includes details on hospital admissions, discharge medication, diagnosis, outpatient consultations, investigations and treatment outcomes. Details from other healthcare interventions, such as information on lifestyle and preventative healthcare, as well as a range of variables such as height, weight, body mass index, blood pressure, smoking and alcohol status, immunisation and laboratory test results are also recorded. Hence, the information contained in the THIN database reflects actual clinical practice.

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2  
3 (THIN is a registered trademark of Cegedim SA in the United Kingdom and other countries.  
4 Reference made to the THIN database is intended to be descriptive of the data asset licensed  
5 by IQVIA, who interrogated the database and performed the randomisation independently of  
6 the Authors. The Authors had no direct access to the THIN database.)  
7  
8  
9

## 10 11 12 **Study Population** 13

14  
15 The study population comprised the anonymised case records of a randomly selected cohort of  
16 3,000 patients from the THIN database (provided to the Authors by IQVIA) who had a wound  
17 between 1 March 2017 and 28 February 2018.  
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20  
21 Patients were included in the data set if they:  
22

- 23 • Were 18 years of age or over.
- 24 • Had one of 2,095 wound-related Read codes (Table S1).
- 25 • Had continuous medical history in their case record from the first mention of a wound in  
26 the study year up to the time the data were extracted from the database, unless they died,  
27 in order to exclude patients who had moved or changed their general practice.  
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34 Patients were excluded from the data set if they had a surgical wound that healed within four  
35 weeks of the surgical procedure (since any resource use incurred would be due to the surgical  
36 procedure and not the wound) or if they had a dermatological tumour. These  
37 inclusion/exclusion criteria are identical to those used in our earlier 2012/13 study [1].  
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43 Every patient in the THIN database who fulfilled the study's inclusion and exclusion criteria  
44 was assigned a random number by IQVIA. A representative sample was then generated by  
45 random selection of the random numbers of the whole cohort using a uniform distribution. As  
46 such, IQVIA advised that the random sample was representative of the whole population from  
47 which it was derived. The complete electronic records of the 3,000 patients in the sample were  
48 then supplied to the Authors, which enabled analysis of data both within and outside of the  
49 study period.  
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## Patient and Public Involvement

Patients and members of the public were not directly involved in this study. The study population was limited to the anonymised records of patients in the THIN database.

## Study Variables and Statistical Analyses

Wound type was documented in the patients' records and the authors categorised them as being either acute (i.e. abscess, burn, open wound, unhealed surgical wound, trauma) or chronic (i.e. diabetic foot ulcer, arterial leg ulcer, mixed leg ulcer, venous leg ulcer, pressure ulcer). The following information was systematically extracted from the patients' electronic records over the 12 months from 1 March 2017 to 28 February 2018 according to the protocol approved by the ethics committee.

- Patients' characteristics.
- Patients' comorbidities (defined as a non-acute condition that patients were suffering from in the year before the start of their wound and not necessarily the year before the start of the study period).
- Wound-related healthcare resource use (i.e. dressings, bandages, topical treatments, negative pressure wound therapy, district nurse and healthcare assistants visits (both of whom provide care within a patient's home), practice nurse visits (who provide care within a GP's surgery), GP visits, hospital outpatient visits, laboratory tests), prescribed medication (i.e. analgesics, non-steroidal anti-inflammatory drugs (NSAIDs) and systemic anti-infectives (principally antibiotics)).
- Clinical outcomes (i.e. healing and putative infection).

If a patient received a bandage or dressing on a specific date, but a clinician visit was not documented in their record, it was assumed the patient had been seen outside of the general practice by a district nurse or healthcare assistant. No other assumptions were made regarding missing data and there were no other interpolations.

The use of individual healthcare resources was quantified for all the patients, individually. These quantities were then used to estimate the total utilisation of each healthcare resource attributable to wound management during the study period, stratified by wound type.

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3 Clinical outcomes and wound-related healthcare resource use associated with the sample of  
4 3,000 patients were used to model the healing rates and annual amounts of healthcare resource  
5 use associated with wound care provided by the NHS in 2017/18.  
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10 Differences between subgroups were tested for statistical significance using a  $\chi^2$  test. Logistic  
11 regression was used to investigate relationships between baseline variables and clinical  
12 outcomes. The p values  $<0.05$  were considered statistically significant and have been reported.  
13 All p values  $\geq 0.05$  were not considered to be statistically significant and these numerical values  
14 have not been reported. All statistical analyses were performed using IBM SPSS Statistics  
15 (IBM UK, Portsmouth, Hampshire, UK).  
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### 22 **Cost of Patient Management**

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25 The NHS cost of wound care for each patient was estimated by assigning unit costs at 2017/18  
26 prices [20-22] to the quantity of healthcare resources used by individual patients from the time  
27 a patient entered the data set (i.e. from 1 March 2017 or the start time of their wound if it  
28 occurred later) up to the time their wound healed or the end of the study period, whichever  
29 came first. The total cost of utilisation of each healthcare resource for the sample of 3,000  
30 patients was then combined in order to estimate their total NHS cost of wound management  
31 over the study period. The NHS cost of wound management for this cohort was then used to  
32 model the total cost of wound care provided by the NHS in 2017/18. The cost of wound care  
33 was also estimated by stratifying patients according to their category of wound. Accordingly,  
34 the study only considers the cost of patient management attributable to wounds in primary and  
35 secondary care settings, and does not estimate patients' overall healthcare costs.  
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### 46 **Sensitivity Analyses**

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49 Bootstrapping was undertaken to estimate the margin of error surrounding the annual  
50 prevalence of wounds and costs. This involved generating subsets of the data of each wound  
51 type on the basis of random sampling and replacing the data once sampled. These subsets  
52 enabled an estimation of the 95% confidence intervals (CI) of (1) the annual number of wounds  
53 managed by the NHS in 2017/18 and (2) the NHS costs of wound management.  
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3 Deterministic sensitivity analyses were performed on all of the model’s inputs to identify how  
4 the NHS cost of wound management would change by varying the different parameters in the  
5 model.  
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For peer review only

## RESULTS

### Prevalence of Wounds in the UK

The base population of the THIN database in 2017/18 was 2.4 million active adult patients who were  $\geq 18$  years of age. The database was interrogated, independently of the Authors, to identify patients with at least one of the 2,095 wound-related Read codes. The search identified 174,569 adult patients with a wound in 2017/18 who matched the study protocol's inclusion and exclusion criteria. The UK's population comprised 52.1 million adults who were  $\geq 18$  years of age in mid-2017 [23]. Using these variables, the outputs of the modelling were extrapolated to the whole adult population in the UK. Accordingly, the model estimated that there were 3.8 million adult patients with a wound in the UK in 2017/18 who matched the study protocol's inclusion and exclusion criteria, equivalent to 7% of the adult population (Table 1). Bootstrapping was undertaken using 100 subsets of the counts of each wound type. This indicated the lower and upper 95% confidence intervals of the annual number of wounds managed by the NHS in 2017/18 to be 3.67 million and 3.96 million. Hence, the margin of error surrounding the estimated annual prevalence of wounds is around 3%.

Sixteen per cent of all wounds had no diagnosis and it was not possible to infer a wound type from the patients' records. Additionally, 9% of all wounds were a leg ulcer without any further characterisation (i.e. venous, arterial or mixed). Hence, the records of 25% of all wounds lacked a recorded differential diagnoses. In total, there were 1 million ulcers of the lower limb, which equates to 2.0% of the adult population having a lower limb ulcer in the study year. Of these, the number of diagnosed venous leg ulcers (560,000) indicates that 1.1% of all adults  $\geq 18$  years of age had such an ulcer in the study year. In addition, there were an estimated 326,000 diabetic foot ulcers, which equates to 9% of all adult diabetic patients (i.e. 3.46 million individuals [24]) having a foot ulcer in the study year. There were an estimated 202,000 recorded pressure ulcers in the study year, equivalent to 0.4% of the total adult population (Table 1).

### Patients' Characteristics

A representative sample of 3,000 patients was randomly selected from the cohort of 174,569 patients with a wound-related Read code by IQVIA. Patients' age in the randomly selected study population was a mean of 57.9 years and 67% were  $< 65$  years of age. A total of 56% of

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3 patients were female. Mean blood pressure was 130/77 and patients' body mass index was a  
4 mean 29.1 kg/m<sup>2</sup>. An estimated 17% of patients were smokers, 30% were ex-smokers and 52%  
5 were non-smokers. A total of 73% of patients presented with a new wound in the study year  
6 (patients' records predated the onset of the study period, enabling both pre-existing and new  
7 wounds to be identified). Table 2 summarises patients' characteristics according to wound type.  
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13 The percentage of patients with different comorbidities in the year before the start of their  
14 wound (and not necessarily the year before the start of the study) stratified by wound type is  
15 summarised in Table 3. A total of 95% of patients had at least one comorbidity in the year  
16 before the start of their wound. Moreover, patients had a mean of 4.1 comorbid conditions and  
17 57% of all patients had diabetes. It is also noteworthy that 13% of patients with a pressure ulcer  
18 were recorded as suffering from malnutrition, whereas it was  $\leq 5\%$  of patients with other wound  
19 types.  
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## 26 27 **Clinical Outcomes**

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30 The THIN database does not define wound healing. Wound healing was a clinical observation  
31 documented in the patient's record by their managing clinician, but not necessarily confirmed  
32 by a specialist, and it is unknown if the clinicians who managed these patients used any  
33 consistent definition. Additionally, there is no Read for wound healing. Nevertheless, an  
34 episode of care was not a proxy for time to healing. Furthermore, if a wound was not recorded  
35 as being healed it was considered to be unhealed. This assumption was supported by continued  
36 clinician visits for wound care and the continued prescribing of wound care products. On this  
37 basis, Table 4 summarises the recorded healing rates stratified by wound type and various sub-  
38 groups between 1 March 2017 and 28 February 2018. A total of 70% of all wounds (n = 2.7  
39 million) healed in the study year; 89% of acute wounds healed and 49% of chronic wounds.  
40 An estimated 30% of all wounds (n = 1.1 million) remained unhealed. Patients' age did not  
41 appear to affect the overall healing rate. However, 59% of chronic wounds healed if there was  
42 no evidence of infection compared to 45% if there was a definite or suspected infection. The  
43 healing rate among acute wounds was unaffected by the presence of infection (86% versus 91%  
44 among acute wounds with no evidence of infection). An estimated 38% of chronic wounds  
45 healed if patients were smokers compared to 55% and 58% if patients were non-smokers or ex-  
46 smokers, respectively. Smoking status did not appear to affect the healing rate of acute wounds  
47 (Table 4).  
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3 For the whole cohort of patients with a wound, binary logistic regression suggested that  
4 cardiovascular disease (Odds ratio (OR) 0.57 (95% CI 0.46 to 0.71);  $p < 0.001$ ), immunological  
5 disorders (OR 0.62 (95% CI 0.45 to 0.86);  $p = 0.003$ ) and renal disorders (OR 0.56 (95% CI  
6 0.43 to 0.73);  $p < 0.001$ ) were independent risk factors for non-healing during the study period.  
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8 Additionally, the presence of renal disease was an independent risk factor for non-healing of  
9 diabetic foot ulcers (OR 0.28 (95% CI: 0.13 to 0.62);  $p = 0.002$ ), and diabetes was an  
10 independent risk factor for non-healing of venous leg ulcers (OR 0.10 (95% CI: 0.01 to 0.96);  
11  $p < 0.02$ ).

### 12 13 14 15 16 17 18 19 **Healthcare Resource Use Associated with Patient Management**

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22 Patients were predominantly managed in the community by GPs, practice nurses,  
23 district/community nurses and healthcare assistants. Table 5 summarises the percentage of  
24 patients who utilised different resources during the study year and Table 6 shows the annualised  
25 resources associated with each wound type. All the hospital admissions attributable to venous  
26 and mixed leg ulcers appeared to be linked to a suspected infection. So too were 80% of  
27 admissions attributable to diabetic foot ulcers and 95% of admissions attributable to open  
28 wounds. All these hospitalised patients with a suspect infection were prescribed antibiotics. All  
29 the open wounds and 50% of the diabetic foot ulcers healed in the study period, but none of  
30 the venous and mixed leg ulcers healed. Less than 50% of admissions attributable to the other  
31 wound types appeared to be linked to a suspected infection and 90% of them healed during the  
32 study period. Only one-third of admissions attributable to surgical wounds and trauma appeared  
33 to be linked to a suspected infection.

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36 Patients' treatment varied according to wound type and wound duration. Patients were  
37 prescribed a mix of dressings up to the time their wound healed or the end of the study period,  
38 whichever came first. Overall, patients' dressings were changed every 3-4 days at a nursing  
39 visit. However, this varied according to wound type. On average:

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41 • Those patients with a burn or a venous leg ulcer had one nursing visit/dressing change  
42 every 2-3 days.
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44 • Those patients with a diabetic foot ulcer, arterial leg ulcer, mixed leg ulcer, pressure ulcer  
45 or surgical wound had one nursing visit/dressing change every 3-4 days.
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- Those patients with an unspecified leg ulcer, open wound, trauma or unspecified wound had one nursing visit/dressing change every 4-5 days.
- Those patients with an abscess had one nursing visit/dressing change every 5-6 days

Less than 1% of patients were prescribed the same dressing for the duration of their wound or study period. On average, patients were prescribed a mean of 8 different dressing types over the study period, ranging from a mean of 4 different dressing types for patients with a burn to a mean of 9 different dressing types for patients with an unclassified wound. In addition to dressings and bandages, varying percentages of patients were prescribed analgesics, NSAIDs and antibiotics as shown in Table 5.

Assessment of peripheral perfusion is a recognised requirement for leg ulcer and diabetic foot management. However, only 15% of all those with a leg or foot ulcer had a Doppler ankle brachial pressure index (ABPI) recorded in their records, of which 75% were prescribed some form of compression. Of the 85% who did not have their ABPI recorded, 29% were prescribed compression bandages/hosiery (Table 7). Over 90% of the patients with a recorded venous leg ulcer were prescribed compression bandages/hosiery, irrespective of whether they had their ABPI recorded; so too did >50% of patients with a recorded diabetic foot ulcer (Table 7).

### **NHS Cost of Patient Management**

The total annual NHS cost of managing 3.8 million patients with a wound was estimated to be £8.3 (95% CI: £7.9; £8.5) billion (Table 8). The use of 100 bootstrapped samples indicated a 5% margin of error around the costs (Table 8). When the bootstrapping was repeated using 1,000 subsets of cost data, the margin of error decreased to 1% (i.e. 95% CI: £8.2; £8.4 billion). District/community nurse visits were the primary cost driver accounting for 29% of all costs and GP office visits were the secondary cost driver accounting for a further 18% of the total cost. Healthcare assistant visits accounted for 17% of the total cost, practice nurse visits for 7% and wound care products for a further 6% (Table 8).

Resource use associated with managing the unhealed wounds was substantially greater than that of managing the healed wounds (Table 9). Consequently, the annual cost of managing the 70% of wounds that healed was estimated to be £2.7 billion compared with £5.6 billion for the

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3 30% of wounds that did not heal within the study year. In addition, within the study period, the  
4 cost per healed wound ranged from £358 to £4,684 per patient and that of an unhealed wound  
5 ranged from £831 to £7,886 per patient (Table 10).  
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10 Eighty one per cent of the total annual NHS cost was incurred in the community and the  
11 remainder in secondary care. However, the distribution of costs varied according to wound  
12 type, with 68% and 85% of the total annual NHS cost of managing acute and chronic wounds,  
13 respectively, being incurred in the community and the remainder in secondary care.  
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### 18 **Sensitivity Analyses**

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22 When the healing rate of each wound type was simultaneously varied by  $\pm 25\%$ , the total annual  
23 NHS cost of wound management changed by  $\pm 16\%$ . When the estimated annual number of  
24 each wound type was individually changed by  $\pm 25\%$ , the total annual NHS cost of wound  
25 management changed by 10% or less. When the estimated amounts of resource use were  
26 individually varied by  $\pm 25\%$ , the total annual NHS cost of managing 3.8 million wounds  
27 changed by 7% or less. When the unit costs of wound care products were simultaneously varied  
28 by  $\pm 25\%$ , the total annual NHS cost of managing 3.8 million patients with a wound changed  
29 by  $<3\%$ .  
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## DISCUSSION

The 2012/13 burden of wounds study [1, 2] incorporated a predictive model [3] which forecast that the prevalence of wounds would increase by 11% per annum. Thus, the model predicted there would be 3.8 million patients with a wound in 2017/18. The findings from the current analysis are consistent with the estimates from this predictive model, with the overall annual number of patients with a wound having increased by 71% over the five years to 3.8 million. However, the rate of increase varied according to wound type. The annual number of patients with a wound increased by  $\geq 100\%$  for many wound types, but some acute wounds increased by 60% and pressure ulcers by only 32%, perhaps due in part to the ongoing pressure ulcer prevention campaign [25]. The model also predicted that costs would increase in parallel with prevalence. However, when the £5.3 billion [1] is updated to 2017/18 prices (i.e. £5.6 billion), it would appear that the annual cost of wound care has increased at an approximate rate of 8-9% per annum. Hence, the overall annual NHS cost of wound care has increased by 48% in real terms over the five years.

The aim of this study was to assess the annual health economic burden of wounds by quantifying the amount of resource use and corresponding costs incurred by patients in 2017/18. From the NHS' perspective, resource use and corresponding cost of managing a patient with multiple wounds does not end until all the wounds heal. Some of the patients in our data set may have had multiple wounds, but this was not specifically listed within the database and was not transparent in the patients' records. Furthermore, it would be very difficult to retrospectively extricate resource use for different wounds from the records of a patient with multiple wounds of the same aetiology. Notwithstanding this, it would be unusual for an individual to have two wounds of different aetiologies at the same time. However, it may be that in 2017/18 some of the patients with an ulcer of the lower limb had a second ulcer, although it would be unlikely that patients with other wounds would have multiple wounds. If 10% of patients with an ulcer of the lower limb had a second ulcer, the total number of wounds would increase by 5% from 3.8 million to 4.0 million. The implication of this is that the NHS may have managed more than 3.8 million wounds in 2017/18. Nevertheless, the estimated amount of resource use and corresponding costs as presented would remain unchanged since all the resources and wound care products utilised in managing each patient were documented in their record (despite the lack of granularity surrounding the number of wounds they may have had).

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3 In the 2012/13 data set, 65% of all the patients with a wound were 65 years of age or older [1,  
4 2]. However, in the 2017/18 data set, only 33% of patients were 65 years of age or older. This  
5 was a significant difference ( $p < 0.001$ ), suggesting that wounds are no longer predominantly  
6 the preserve of the elderly. In 2012/13, 39% of all patients were non-smokers. However, by  
7 2017/18 this percentage had increased significantly to 52% ( $p < 0.001$ ). In parallel with these  
8 changes in the patient demographics there was a change in the distribution of comorbidities. In  
9 particular, in 2012/13, 73% and 37% of patients had cardiovascular and musculoskeletal  
10 disorders, but in 2017/18 an estimated 53% ( $p < 0.001$ ) and 56% ( $p < 0.02$ ) had cardiovascular  
11 and musculoskeletal disorders, respectively. Most striking, however, was that 29% of the  
12 2012/13 cohort had diabetes compared with 57% in 2017/18 ( $p < 0.05$ ). Additionally, the  
13 variation in the mean number of comorbidities associated with different wound types in this  
14 study parallels the variation in Charlson Comorbidity Index associated with different wound  
15 types observed in a patient population in Asia [26].  
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27 Over the five year period, the healing rate of acute wounds increased by a mean of 13% and  
28 that of chronic wounds by a mean of 15%. However, within this estimate, the healing rate of  
29 diabetic foot ulcers and pressure ulcers increased by 27% and 43%, respectively, but the  
30 healing rate of venous and mixed leg ulcers decreased by 21% and 28%, respectively. The  
31 percentage of patients accessing different resources increased over the five years and so too  
32 did the absolute amount of resource use. For example, between 2012/13 and 2017/18 there was  
33 >11,000% increase in the number of healthcare assistant visits (from 0.5 million to 53.6  
34 million), a 401% increase in the number of district nurse visits (from 10.9 million to 54.4  
35 million), 164% increase in the number of GP visits (from 7.7 million to 20.3 million), 96%  
36 increase in the number of hospital outpatient visits (from 3.4 million to 6.8 million) and 51%  
37 increase in the number of practice nurse visits (from 18.6 million to 28.1 million). In addition,  
38 there was a 2% decrease in the number of specialist nurse visits and a 104% increase in the  
39 amount of wound care products used. The changes in the annual cost of these resources mirror  
40 the changes in utilisation of these resources. Accordingly, the NHS cost of wound care in  
41 2017/18 was an estimated £8.3 billion, which is approaching the combined annual NHS cost  
42 of managing osteo and rheumatoid arthritis, which was reported to be £10.2 billion in 2017  
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58 The shift towards greater utilisation of community-based resources is reflected in the  
59 distribution of care between secondary care and the community. In 2012/13, 48% of the costs  
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3 of managing acute wounds and 78% of the costs of managing chronic wounds were incurred  
4 in the community and the remainder in secondary care [1, 2]. In 2017/18, 68% and 85% of the  
5 costs of managing acute and chronic wounds, respectively, were incurred in the community  
6 and the remainder in secondary care.  
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11 This present study has also highlighted that resource use associated with managing the 30% of  
12 wounds that did not heal in the study year was substantially greater than that of managing the  
13 70% of wounds that did heal within the study year (e.g. 325% more hospital outpatient visits,  
14 178% more practice nurse visits, 171% more GP visits, 118% more accident & emergency  
15 attendances, 97% more district/community nurse visits and 85% more healthcare assistant  
16 visits). Consequently, the annual cost of managing wounds that healed within the study year  
17 was estimated to be £2.7 billion compared with £5.6 billion for the 30% of wounds that did not  
18 heal within the study year. In addition, the mean cost of an unhealed wound (£3,700) was  
19 approximately 2.5 times more than that of a wound that healed during the study period  
20 (£1,500). Sensitivity analysis showed the healing rate to have a large effect on the cost of  
21 wound care and regression analysis indicated that the presence of cardiovascular disease or  
22 immunological disorders or renal disorders were all independent risk factors for non-healing  
23 during the study period. In the 2012/13 study both nutritional deficiency and diabetes were  
24 independent risk factors for non-healing during the study period [1]. In this study, only a mean  
25 of 3% of patients had malnutrition, possible reflecting the significantly lower age of the study  
26 population. However, 13% of patients with a pressure ulcer had malnutrition and their BMI  
27 was a mean of 24.5 kg/m<sup>2</sup> which was lower than that of patients with other wound types.  
28 Diabetes did not exert an independent effect on healing possibly because 59% of the patients  
29 with diabetes also had cardiovascular disease, 19% had renal disease, and 11% had  
30 immunological disorders. In addition, 61% of the patients with diabetes had musculoskeletal  
31 disorders and 38% had a mental health condition (principally depression and anxiety). The age  
32 of the patients with diabetes was a mean of 59.2 years per patient and 44% were male.  
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51 This and many other studies [10-12, 28, 29] have shown that wound management is  
52 predominantly a nurse-led discipline. Nevertheless, there still seems to be minimal clinical  
53 involvement of tissue viability nurses and other specialist nurses in direct patient management.  
54 In addition, dressing and bandage types were continually switched at successive wound  
55 dressing changes for the majority of patients, suggesting confusion and conflict within the  
56 treatment plan. It was not possible to determine which professional groups were the decision  
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3 makers in relation to change in dressing type and what the goal of treatment changes were as  
4 this information was not specifically recorded in the patients' records. Moreover, an estimated  
5 25% of all wounds being managed within the NHS in 2017/18 lacked a recorded differential  
6 diagnosis in the patient's record. Furthermore, only 15% of patients with an ulcer on the lower  
7 limb had a vascular assessment with Doppler ABPI recorded in their records, contrary to  
8 national guidance [30, 31]. Nevertheless, we observed a 14% decrease in the proportion of  
9 patients with unspecified leg ulcers since 2015 which may be due to an increase in measuring  
10 ABPI even if it was not documented in the patients' records. It remains unclear and  
11 disappointing to find that records still lacked documentation of this essential investigation.  
12 Moreover, five years later, patients' records still appear to lack any evidence of consistent  
13 reporting of wound management processes. This may be indicative of the difficulties  
14 experienced by non-specialist health care professionals in the community with establishing a  
15 working diagnosis.  
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27 It seems unclear how the NHS can best respond to the ever increasing demand for wound care.  
28 The NHS Long Term Plan [32] has described how the NHS will move to a new service model  
29 in which patients will have properly joined-up care at the right time in the optimal care setting.  
30 This will involve having online 'digital' GP consultations, and redesigned hospital support in  
31 order to free-up about one-third of outpatient appointments [32]. Additionally, GP practices  
32 will be funded to create integrated teams of GPs, community health and social care staff [32].  
33 These expanded community health teams will provide fast support to people in their own  
34 homes [32]. Ultimately, the NHS will aim to create Integrated Care Systems everywhere by  
35 April 2021, which bring together local organisations to deliver a 'triple integration' of primary  
36 and specialist care, physical and mental health services and health with social care [32].  
37 Additionally, commissioners will be tasked to share decisions with providers on population  
38 health, service redesign and Long Term Plan implementation [32]. Such a change in the system  
39 may facilitate getting the optimum care to patients at the right time in the right setting in order  
40 to improve the patient experience and health outcomes, thereby freeing-up healthcare resources  
41 and reducing costs. However, will this method of care delivery improve wound care and patient  
42 outcomes? The introduction of truly seamless care with integrated electronic patient records  
43 would improve overall patient management, However, patients with wounds need face-to-face  
44 interaction with clinicians on a regular basis to monitor progress and have their dressings  
45 changed. The Authors are therefore of the opinion that this model would require the NHS to  
46 establish dedicated wound care clinics in the community at which patients receive consistent  
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3 and integrated care from clinicians with qualified experience in wound care, with the clinics  
4 linking directly to electronic patient records which are integrated across all healthcare sectors.  
5 These clinics could provide both direct care and holistic assessments of patients allowing co-  
6 ordinated management of any comorbidities which may impact on wound healing  
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11 The advantages and disadvantages of using the THIN database for this study have been  
12 previously discussed [1]. In summary, the advantage of using the THIN database is that the  
13 patient pathways and associated resource use are based on real-world evidence derived from  
14 clinical practice. However, the possibility of resource use associated with managing a  
15 comorbidity being conflated with that of wound management cannot be excluded. While the  
16 study results are compelling, the analyses were based on clinicians' entries into their patients'  
17 records and inevitably subject to a certain amount of imprecision and lack of detail. Moreover,  
18 the computerised information in the THIN database is collected by GPs for clinical care  
19 purposes and not for research. Prescriptions issued by GPs and practice nurses are recorded in  
20 the database, but it does not specify whether the prescriptions were dispensed or detail patient  
21 compliance with the product. Despite these limitations, it is the authors' opinion that the THIN  
22 database affords one of the best sources of real-world evidence for clinical practice in the UK,  
23 since it is representative of the whole UK population [18, 33] and there are only minor  
24 differences between this and other real-world evidence databases in the UK [33]. Moreover,  
25 the changes between 2012/13 and 2017/18 are clinically relevant, since the sample size in this  
26 study is 3,000 patients versus 1,000 patients in the earlier study. Furthermore a review of  
27 Medline in August 2020 identified 283 articles in peer-reviewed journals in which the THIN  
28 database had been used to characterise clinical practice in a wide range of therapeutic areas in  
29 the UK, of which 28 had been published in BMJ Open since 2014. Notwithstanding this, it is  
30 not possible to ascertain from the data set whether some of the changes between 2012/13 and  
31 2017/18 are due to increased complexity of wound aetiology and a decrease in competency of  
32 the clinical staff caring for these patients. There is no recognised complexity index/score for  
33 wounds so any measure of this would be subjective. Additionally, the low involvement of  
34 senior staff in patient management may indicate competency as a possible issue, but this cannot  
35 be quantified.  
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56 The analysis does not consider the potential impact of those wounds that remained unhealed  
57 beyond the study period. The THIN database may have under-recorded use of some health care  
58 resources outside the GP's surgery if not documented in the GP records, and the impact of this  
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3 was addressed in sensitivity analyses. In particular, not all community records may have been  
4 linked to the GP records. The analysis excludes hospital-based prescribing, but this should have  
5 minimal impact on the results as most prescribing is undertaken by GPs and nurses in the  
6 community. Also excluded is the potential impact of managing patients with wounds being  
7 cared for in nursing/residential homes.  
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13 The analysis only considered the annual cost of NHS resource use for the ‘average adult  
14 patient’, and no attempt was made to stratify resource use and costs according to gender,  
15 comorbidities, wound size, wound severity and other disease-related factors. Also excluded  
16 were the costs incurred by patients and indirect societal costs as a result of patients taking time  
17 off work. In 2012/13, only 35% of patients with a wound were of working age. However, in  
18 2017/18 nearly 70% of the cohort was less than 65 years of age and 6% of patients in this age  
19 group were admitted into hospital. In April 2018 the gross median salary for full-time  
20 employees was £569 per week [34]. Hence, the indirect societal cost in lost GDP arising from  
21 hospitalisation (assuming 96% of these patients were in full-time employment [35]) amounted  
22 to £87 million. This is likely to be an underestimate, since a proportion of patients are likely to  
23 be absent from work due to their wound, but residing in their home. Nevertheless, this is a  
24 relatively negligible indirect cost considering that nocturia (which predominantly affects the  
25 elderly population) accounts for over £4 billion in lost GDP [36].  
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37 Notwithstanding the study’s limitations, the real-world evidence highlights the substantial  
38 burden that wounds continue to impose on the NHS in an average year. Clinical and economic  
39 benefits to both patients and the NHS could accrue from strategies that focus on (a) accurate  
40 diagnosis, (b) preventing infection and (c) improving wound-healing rates. However, these  
41 benefits are unlikely to be realised unless there is a structural change within the NHS in order  
42 to manage the increasing demand for wound care.  
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## CONTRIBUTORSHIP STATEMENT

J.F.G. designed the study, obtained the THIN data set, managed the analyses, performed some analyses, checked all the other analyses, and wrote the manuscript.

G.W.F. conducted much of the analyses.

P.V. scrutinised the analyses, suggested further analyses and helped interpret some of the findings.

All the authors were involved in revising the manuscript and gave final approval. J.F.G. is the guarantor of this work and, as such, had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

## COMPETING INTERESTS

None declared.

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## DATA SHARING STATEMENT

The THIN data set cannot be shared as this restriction was a condition of the ethics approval obtained from the Research Ethics Committee (Reference number 18THIN093). Questions concerning the data underlying the results can be sent to the Corresponding Author.

For peer review only

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**Table 1: Annual number of adult patients with a wound and prevalence of different wound types in the UK. Percentage of total number in parentheses.**

	Annual number of patients with a wound in 2017/18 (thousands)	Annual prevalence among the adult UK population in 2017/18	Annual number of patients with a wound in 2012/13 (thousands) [1]	Percentage change in the annual number of patients with a wound between 2012/13 and 2017/18
Abscess	293,000 (8%)	0.0056	160,000 (7%)	83%
Burn	222,000 (6%)	0.0043	87,000 (4%)	155%
Diabetic foot ulcer	326,000 (9%)	0.0063	169,000 (8%)	93%
Leg ulcer (arterial)	31,000 (1%)	0.0022	9,000 (<1%)	244%
Leg ulcer (mixed)	102,000 (3%)	0.0003	24,000 (1%)	325%
Leg ulcer (unspecified)	361,000 (9%)	0.0069	420,000 (19%)	-14%
Leg ulcer (venous)	560,000 (15%)	0.0108	278,000 (13%)	101%
Open wound	337,000 (9%)	0.0065	240,000 (11%)	40%
Pressure ulcer	202,000 (5%)	0.0039	153,000 (7%)	32%
Surgical wound	519,000 (14%)	0.0100	253,000 (11%)	105%
Trauma	249,000 (7%)	0.0048	158,000 (7%)	58%
Unspecified	600,000 (16%)	0.0115	271,000 (12%)	121%
<b>TOTAL</b>	<b>3,802,000 (100%)</b>	<b>0.0730</b>	<b>2,222,000 (100%)</b>	<b>71%</b>

**Table 2: Patients' baseline characteristics.**

	Abscess	Burn	Diabetic foot ulcer	Leg ulcer (arterial)	Leg ulcer (mixed)	Leg ulcer (unspecified)	Leg ulcer (venous)	Open wound	Pressure ulcer	Surgical wound	Trauma	Unspecified	All wounds
Mean age per patient (years)	46.0	47.1	62.3	57.4	67.0	52.6	70.9	53.4	76.1	55.4	52.4	55.9	57.9
Percentage male	42%	35%	51%	22%	57%	39%	48%	40%	40%	42%	41%	49%	44%
Percentage smoker	29%	24%	11%	13%	10%	21%	7%	18%	7%	19%	16%	22%	17%
Percentage ex-smoker	19%	19%	37%	32%	30%	21%	44%	29%	40%	29%	23%	28%	30%
Percentage non- smoker	51%	56%	52%	55%	60%	58%	48%	51%	40%	52%	59%	49%	52%
Percentage with unknown smoking status	2%	0%	0%	0%	0%	0%	0%	2%	13%	1%	1%	1%	1%
Mean body mass index per patient (kg/m <sup>2</sup> )	29.7	27.9	30.9	28.8	32.3	27.6	31.5	29.6	24.5	28.3	27.8	28.9	29.1
Percentage with new wounds in the study period	79%	79%	61%	33%	50%	68%	59%	87%	80%	77%	84%	80%	73%
Percentage of all wounds with a recorded infection	27%	13%	78%	52%	47%	68%	41%	94%	13%	35%	29%	1%	40%

**Table 3: Percentage of patients with a comorbidity in the year before the start of their wound.** Those with diabetes are a subset of those with endocrinological comorbidities.

	Abscess	Burn	Diabetic foot ulcer	Leg ulcer (arterial)	Leg ulcer (mixed)	Leg ulcer (unspecified)	Leg ulcer (venous)	Open wound	Pressure ulcer	Surgical wound	Trauma	Unspecified	All wounds
Cardiovascular	36%	35%	70%	67%	83%	45%	78%	44%	53%	47%	38%	51%	53%
Dermatological	48%	52%	60%	44%	63%	50%	41%	51%	40%	51%	54%	45%	49%
Endocrinological	52%	56%	99%	78%	97%	18%	52%	69%	60%	63%	55%	57%	60%
Diabetes	50%	52%	100%	78%	97%	13%	37%	67%	60%	59%	51%	52%	57%
Gastroenterological	29%	32%	42%	67%	33%	29%	19%	34%	47%	37%	31%	35%	33%
Genito-urinary	21%	24%	28%	44%	33%	18%	19%	25%	27%	28%	24%	24%	24%
Immunological	7%	11%	13%	11%	17%	3%	11%	10%	7%	9%	8%	9%	9%
Malnutrition	0%	2%	2%	0%	0%	5%	4%	1%	13%	1%	2%	3%	3%
Musculoskeletal	41%	56%	62%	67%	63%	61%	59%	49%	73%	57%	49%	56%	56%
Neurological	16%	21%	24%	11%	27%	24%	33%	18%	67%	22%	17%	17%	24%
Oncological	14%	16%	25%	11%	20%	16%	7%	14%	27%	18%	15%	19%	16%
Ophthalmological	8%	15%	20%	0%	27%	13%	4%	11%	33%	13%	11%	10%	12%
Psychiatric	44%	40%	39%	33%	53%	47%	15%	35%	33%	35%	32%	35%	35%
Renal	8%	5%	30%	22%	33%	13%	30%	12%	40%	14%	9%	16%	18%
Respiratory	38%	44%	45%	56%	43%	42%	33%	36%	33%	38%	36%	37%	38%
Mean number of comorbidities per patient	3.7	4.1	5.7	6.0	5.7	3.9	4.0	4.1	5.6	4.3	3.8	4.2	4.1

**Table 4: Healing rates in the study period.**

	Abscess	Burn	Diabetic foot ulcer	Leg ulcer (arterial)	Leg ulcer (mixed)	Leg ulcer (unspecified)	Leg ulcer (venous)	Open wound	Pressure ulcer	Surgical wound	Trauma	Unspecified	All wounds
Wounds that healed in the study period	86%	84%	52%	47%	30%	55%	37%	90%	60%	85%	94%	85%	70%
New wounds that healed in the study period	85%	80%	60%	40%	27%	38%	56%	90%	75%	86%	94%	88%	76%
Existing wounds that healed in the study period	89%	96%	40%	50%	33%	92%	9%	90%	0%	80%	96%	73%	56%
Wounds that healed with no evidence of infection	92%	85%	57%	50%	34%	60%	50%	93%	62%	87%	95%	86%	77%
Wounds that healed with recorded evidence of infection	69%	75%	50%	45%	25%	52%	18%	89%	50%	81%	91%	38%	60%
Wounds that healed among smokers	84%	87%	33%	37%	28%	48%	25%	88%	33%	82%	96%	85%	64%
Wounds that healed among ex-smokers	90%	75%	53%	47%	32%	53%	39%	88%	67%	83%	95%	88%	70%
Wounds that healed among non-smokers	87%	87%	56%	50%	30%	58%	38%	93%	75%	88%	96%	84%	74%

**Table 5: Percentage of patients who utilised resources in the study year. \*Includes tissue viability nurses and diabetic nurse specialists.**

	Abscess	Burn	Diabetic foot ulcer	Leg ulcer (arterial)	Leg ulcer (mixed)	Leg ulcer (unspecified)	Leg ulcer (venous)	Open wound	Pressure ulcer	Surgical wound	Trauma	Unspecified	All wounds
District/community nurse visits	37%	52%	96%	89%	93%	82%	85%	24%	60%	46%	15%	44%	38%
Healthcare assistant visits	32%	27%	93%	89%	99%	84%	81%	21%	40%	46%	15%	44%	36%
Practice nurse visits	96%	94%	94%	100%	100%	79%	96%	97%	93%	97%	98%	98%	97%
GP office visits	94%	79%	97%	100%	100%	100%	100%	90%	93%	82%	93%	62%	84%
Dressings	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Compression bandaging/hosiery	2%	5%	15%	0%	100%	26%	93%	5%	0%	3%	0%	6%	6%
Prescribed analgesics/non-steroidal anti-inflammatories	22%	19%	57%	67%	87%	32%	81%	12%	53%	24%	10%	20%	21%
Prescribed antibiotics	82%	42%	92%	97%	90%	84%	81%	81%	67%	43%	37%	26%	50%
Hospital outpatient visits with a nurse	11%	32%	35%	22%	33%	16%	37%	8%	0%	18%	5%	31%	17%
Accident & emergency attendances	16%	18%	23%	22%	27%	5%	30%	8%	7%	8%	5%	4%	8%
Hospital admissions without surgery	7%	8%	4%	0%	3%	5%	7%	7%	13%	8%	5%	8%	7%
Hospital outpatient visits with a physician/surgeon	4%	0%	15%	22%	7%	8%	7%	4%	20%	8%	7%	1%	5%
GP home visits	2%	3%	2%	0%	10%	0%	11%	1%	13%	2%	1%	1%	2%
Diagnostic tests	1%	2%	3%	0%	10%	3%	0%	1%	0%	2%	1%	3%	2%
Ambulance services	1%	0%	3%	0%	3%	0%	4%	0%	0%	1%	0%	1%	1%
Hospital admissions with surgery	2%	2%	2%	0%	0%	0%	0%	0%	0%	6%	1%	0%	2%
Specialist nurse visits*	0%	0%	3%	0%	10%	0%	0%	0%	7%	1%	0%	1%	1%
Podiatrist visits	1%	0%	3%	33%	17%	0%	0%	1%	7%	1%	<1%	0%	1%
Day Cases	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	<1%	<1%

**Table 6: Annual amount of NHS resource use attributable to managing 3.8 million patients with a wound (thousands).** \*Includes tissue viability nurses and diabetic nurse specialists.

	Abscess	Burn	Diabetic foot ulcer	Leg ulcer (arterial)	Leg ulcer (mixed)	Leg ulcer (unspecified)	Leg ulcer (venous)	Open wound	Pressure ulcer	Surgical wound	Trauma	Unspecified	All wounds
District/community nurse visits	1069.31	2124.01	10443.18	895.38	4411.41	6093.17	17459.02	797.34	5789.24	2791.44	234.97	2305.39	54413.86
Healthcare assistant visits	1111.38	1283.91	10641.73	1020.07	4671.18	6946.81	17619.78	804.15	3839.82	3047.33	238.16	2423.08	53647.40
Practice nurse visits	745.32	484.97	3428.04	187.60	1938.34	1278.84	14461.10	545.16	1128.81	1217.10	290.62	2356.74	28062.63
GP office visits	632.13	382.27	2436.59	115.97	1173.09	1102.64	9855.13	497.20	1196.00	983.00	292.53	1424.03	20090.58
Dressings	7383.46	5580.89	51475.28	4007.17	19817.92	26030.08	79863.80	6759.11	9467.04	27172.85	4028.25	22913.59	264499.43
Compression bandaging/hosiery	160.32	62.52	588.14	0.00	1691.43	258.85	27259.29	239.70	0.00	260.19	0.00	407.91	30928.35
Prescribed medication	827.59	235.79	2948.13	242.17	1473.18	1787.04	5498.12	641.18	1760.41	922.26	177.91	1359.55	17873.33
Hospital outpatient visits with a nurse	171.46	171.49	583.20	20.47	709.31	190.11	3672.33	43.82	0.00	286.86	18.26	600.07	6467.37
Accident & emergency attendances	57.15	46.44	150.74	10.23	47.74	19.01	248.97	30.40	40.32	57.93	13.23	35.83	758.00
Hospital admissions without surgery	24.01	17.86	19.77	0.00	3.41	19.01	62.24	33.98	26.88	60.74	23.30	78.81	370.01
Hospital outpatient visits with a physician/surgeon	18.29	0.00	61.78	6.82	10.23	28.52	41.50	14.31	40.32	40.18	18.26	5.37	285.57
GP home visits	5.72	7.15	14.83	0.00	17.05	0.00	62.24	5.37	40.32	11.21	1.89	24.18	189.95
Diagnostic tests	1.14	3.57	17.30	0.00	30.69	47.53	0.00	3.58	0.00	14.02	2.83	23.29	143.95
Ambulance services	2.29	0.00	9.89	0.00	3.41	0.00	41.50	0.00	0.00	4.67	0.00	5.37	67.12
Hospital admissions with surgery	4.57	3.57	4.94	0.00	0.00	0.00	0.00	0.00	0.00	34.57	3.46	0.00	51.12
Specialist nurse visits*	0.00	0.00	17.30	0.00	10.23	0.00	0.00	0.00	13.44	0.93	0.00	3.74	45.64
Podiatrist visits	2.29	0.00	9.89	13.64	17.05	0.00	0.00	0.89	13.44	1.87	0.32	0.00	59.38
Day Cases	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87	0.00	0.90	3.91

**Table 7: Use of Doppler in patients with an ulcer of the lower limb to measure ankle brachial pressure index (ABPI).**

Ulcer type	Percentage who had a Doppler	Percentage who did not have a Doppler	Percentage of these who were prescribed a compression bandage/hosiery
Venous leg ulcer	59%		88%
		41%	99%
Arterial leg ulcer	22%		0%
		78%	0%
Mixed	27%		100%
Leg ulcer		73%	100%
Unspecified leg ulcer	0%		0%
		100%	26%
Diabetic foot ulcer	8%		50%
		92%	12%
All lower limb ulcers	15%		75%
		85%	29%



**Table 8: Annual cost of NHS resource use attributable to managing 3.8 million patients with a wound (£ million at 2017/18 prices).**

Percentage of total cost in parentheses. \*Includes tissue viability nurses and diabetic nurse specialists. \*\* Based on 100 bootstrapped samples.

	Abscess	Burn	Diabetic foot ulcer	Leg ulcer (arterial)	Leg ulcer (mixed)	Leg ulcer (unspecified)	Leg ulcer (venous)	Open wound	Pressure ulcer	Surgical wound	Trauma	Unspecified	Total
District/community nurse visits	£48.12	£95.58	£469.94	£40.29	£198.51	£274.19	£785.66	£35.88	£260.52	£125.61	£10.57	£103.74	£2,448.61 (29%)
GP office visits	£46.78	£28.29	£180.31	£8.58	£86.81	£81.60	£729.28	£36.79	£88.50	£72.74	£21.65	£105.38	£1,486.71 (18%)
Healthcare assistant visits	£28.90	£33.38	£276.69	£26.52	£121.45	£180.62	£458.11	£20.91	£99.84	£79.23	£6.19	£63.00	£1,394.84 (17%)
Hospital admissions without surgery	£30.25	£22.51	£24.91	£0.00	£11.06	£61.67	£201.92	£42.82	£33.86	£76.53	£29.36	£99.31	£634.20 (8%)
Hospital outpatient visits with a nurse	£16.65	£16.66	£56.65	£1.99	£68.90	£18.47	£356.69	£4.26	£0.00	£27.86	£1.77	£58.28	£628.18 (8%)
Practice nurse visits	£15.65	£10.18	£71.99	£3.94	£40.71	£26.86	£303.68	£11.45	£23.71	£25.56	£6.10	£49.49	£589.32 (7%)
Wound care products	£10.81	£12.65	£92.48	£5.80	£38.14	£39.24	£225.10	£10.68	£19.05	£33.57	£5.50	£38.36	£531.38 (6%)
Prescribed medication	£12.90	£3.68	£45.55	£3.74	£22.67	£27.76	£84.36	£10.00	£27.09	£14.30	£2.79	£20.90	£275.74 (3%)
Hospital admissions with surgery	£9.67	£13.38	£20.69	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£73.12	£7.33	£0.00	£124.19 (1%)
Accident & emergency attendances	£9.16	£7.44	£24.15	£1.64	£7.65	£3.05	£39.89	£4.87	£6.46	£9.28	£2.12	£5.74	£121.45 (1%)
Hospital outpatient visits with a physician/surgeon	£2.44	£0.00	£8.23	£0.91	£1.36	£3.80	£5.53	£1.91	£5.37	£5.35	£2.43	£0.72	£38.05 (<1%)
GP home visits	£0.69	£0.87	£1.80	£0.00	£2.07	£0.00	£7.56	£0.65	£4.90	£1.36	£0.23	£2.94	£23.07 (<1%)
Ambulance services	£0.35	£0.00	£1.49	£0.00	£0.52	£0.00	£6.27	£0.00	£0.00	£0.71	£0.00	£0.81	£10.15 (<1%)
Podiatrist visits	£0.31	£0.00	£1.34	£1.85	£2.31	£0.00	£0.00	£0.12	£1.82	£0.25	£0.04	£0.00	£8.04 (<1%)
Day Cases	£0.84	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£1.37	£0.00	£0.66	£2.87 (<1%)
Specialist nurse visits*	£0.00	£0.00	£1.11	£0.00	£0.66	£0.00	£0.00	£0.00	£0.86	£0.06	£0.00	£0.24	£2.93 (<1%)
Diagnostic tests	£0.00	£0.01	£0.03	£0.00	£0.06	£0.09	£0.00	£0.01	£0.00	£0.03	£0.01	£0.04	£0.28 (<1%)
<b>TOTAL COST</b>	<b>£233.52</b>	<b>£244.63</b>	<b>£1,277.36</b>	<b>£95.26</b>	<b>£602.88</b>	<b>£717.35</b>	<b>£3,204.05</b>	<b>£180.35</b>	<b>£571.98</b>	<b>£546.93</b>	<b>£96.09</b>	<b>£549.61</b>	<b>£8,320.01 (100%)</b>
95% confidence limits	£233.17;	£233.97;	£1,250.56;	£86.78;	£563.53;	£704.66;	£2,973.68;	£175.64;	£501.67;	£540.69;	£93.10;	£539.47;	£7,896.93;
around the total cost**	£241.31	£253.68	£1,292.10	£97.85	£594.45	£740.45	£3,261.84	£182.46	£577.57	£555.76	£97.87	£571.17	£8,466.51

**Table 9: Annual amount and corresponding cost (at 2017/18 prices) of NHS resource use attributable to managing 3.8 million patients with a wound, stratified by healing.** \*Includes tissue viability nurses and diabetic nurse specialists.

	Annual number (thousand)			Annual cost of wounds (£ million)		
	Healed	Unhealed	Percentage difference in resource use (%)	Healed	Unhealed	Percentage difference in resource cost (%)
Number of patients with a wound	2,677.00	1,125.00				
Ambulance services	4.51	62.61	1288%	£0.68	£9.47	1293%
Hospital outpatient visits	1,286.86	5,466.09	325%	£130.85	£535.38	309%
Practice nurse visits	7,430.80	20,631.83	178%	£156.05	£433.27	178%
GP visits	5,460.16	14,820.36	171%	£407.22	£1,102.56	171%
Podiatrist visits	16.11	43.27	169%	£2.18	£5.86	169%
Prescribed medication	5,593.33	12,280.00	120%	£86.72	£189.02	118%
Accident & Emergency attendances	238.34	519.66	118%	£38.19	£83.26	118%
District/community nurse visits	18,342.87	36,070.99	97%	£825.59	£1,623.02	97%
Wound care products (dressings/bandages/hosiery/creams/ointments/tapes etc)				£181.06	£350.32	93%
Healthcare assistant visits	18,816.65	34,830.75	85%	£489.23	£905.61	85%
Specialist nurse visits*	21.12	24.52	16%	£1.35	£1.58	17%
Hospital admissions & day cases	286.73	138.31	-52%	£427.89	£333.37	-22%
Diagnostic tests	86.89	57.06	-34%	£0.19	£0.09	-53%
TOTAL				£2,747.20	£5,572.81	103%

**Table 10: Total annual NHS cost (at 2017/18 prices) of wound care attributable to managing 3.8 million patients with a wound and cost per patient, stratified by healing.**

	Total NHS Cost for all patients (£ million)		Mean annual NHS cost per patient	
	Healed wounds	Unhealed wounds	Healed wounds	Unhealed wound
Abscess	152.12	81.40	£604.88	£1,977.94
Burn	140.23	104.40	£754.81	£2,922.16
Diabetic foot ulcer	490.11	787.25	£2,874.36	£5,056.71
Leg ulcer (arterial)	53.70	41.56	£2,623.83	£4,061.31
Leg ulcer (mixed)	143.77	459.11	£4,684.15	£6,411.01
Leg ulcer (unspecified)	379.58	337.77	£1,901.79	£2,089.98
Leg ulcer (venous)	422.56	2781.49	£2,036.67	£7,886.05
Open wound	127.51	52.84	£421.83	£1,515.03
Pressure ulcer	90.44	481.54	£747.75	£5,972.28
Surgical wound	389.92	157.01	£884.11	£2,024.49
Trauma	83.78	12.31	£358.09	£831.63
Unspecified	273.48	276.13	£533.82	£3,146.03

Read Code	Description
2924	O/E - trophic skin ulceration
2924.00	O/E - trophic skin ulceration
3511	Surgical biopsy taken
3511.00	Surgical biopsy taken
8343.00	Immobilisation of wound
14F3.00	H/O: chronic skin ulcer
14F4.00	H/O: Admission in last year for diabetes foot problem
14F5.00	H/O: venous leg ulcer
14F6.00	H/O: foot ulcer
14F7.00	H/O: arterial lower limb ulcer
22L..00	O/E - wound healing
22L1.00	O/E - Wound healed
22L2.00	O/E - Wound healing well
22L3.00	O/E - Wound healing badly
22L3.11	O/E wound healing delayed
22L4.00	O/E - Wound infected
22L5.00	O/E - protruding suture
22L6.00	O/E - wound necrotic
22Q..00	Wound observation
22Q0.00	Length of wound
22Q1.00	Width of wound
22Q3.00	Wound dirty
22Q4.00	Depth of wound
22Q6.00	Wound discharge
22Q8.00	Critical colonisation of wound
22Q9.00	Traumatic wound
22QA.00	Surgical wound
22QB.00	Fungating wound
26B8.00	O/E - ulcerated breast lesion
26B8.11	O/E - ulcer on breast
2Fb..00	Granulation of tissue
2FF..00	O/E - skin ulcer
2FF1.00	O/E - no skin ulcer
2FF2.00	O/E - skin ulcer present
2FF3.00	O/E - depth of ulcer
2FFZ.00	O/E - skin ulcer NOS
2FG7.00	O/E - healed burn scar
2Fl..00	O/E - sinus in skin
2FI2.00	O/E -skin sinus-post operation
2FI3.00	O/E - skin sinus -after injury
2FI4.00	O/E - suppuration skin sinus
2FIZ.00	O/E - skin sinus NOS
2G48.00	O/E - ankle ulcer
2G4E.00	Healed leg ulcer
2G54.00	O/E - Right foot ulcer
2G55.00	O/E - Left foot ulcer
2G5H.00	O/E - Right diabetic foot - ulcerated
2G5L.00	O/E - Left diabetic foot - ulcerated
2G5Q.00	O/E - No left foot ulcer

1		
2	2G5R.00	O/E - No right foot ulcer
3	2G5S.00	O/E - right healed foot ulcer
4	2G5T.00	O/E - left healed foot ulcer
5	2G5V.00	O/E - right chronic diabetic foot ulcer
6	2G5W.00	O/E - left chronic diabetic foot ulcer
7		
8	2G63.00	Ischaemic toe
9	2G64.00	O/E - infected toe
10	2I16.00	O/E - gangrene
11	38C4.00	Leg ulcer assessment
12	38N..00	Wound assessment
13	38Qi.00	SINBAD (site,isch,neuro,bact inf,depth) wound classification
14	39C0.00	Pressure sore
15	39C1.00	Superficial pressure sore
16	39C2.00	Deep pressure sore
17	39C3.00	Pressure sore -deep + superfic
18	39C4.00	Waterlow pressure sore risk score
19	39C4200	Waterlow major surgery/trauma score
20	39C5.00	Medley pressure sore risk score
21	39C6.00	Maelor pressure ulcer risk assessment score
22	39C6.11	Maelor score
23	39C7.00	EPUAP (European pressure ulcer advisory panel) grade 1 ulcer
24	39C8.00	EPUAP (European pressure ulcer advisory panel) grade 2 ulcer
25	39C9.00	EPUAP (European pressure ulcer advisory panel) grade 3 ulcer
26	39CA.00	EPUAP (European pressure ulcer advisory panel) grade 4 ulcer
27	4I1F.00	Wound microscopy, culture and sensitivities
28	4I2D.00	Wound exudate sample
29	4I2D.11	Wound swab
30	4I2D000	Wound swab culture positive
31	4I2D100	Wound swab culture negative
32	4JG3.00	Skin ulcer swab taken
33	4JG4.00	Skin wound swab taken
34	58C4.00	Photography of wound
35	6AD1.00	Wound repair review
36	7F23400	Repair of episiotomy
37	7F23y00	Other specified immediate repair of obstetric laceration
38	7F24.00	Other obstetric operations
39	7F24y00	Other specified other obstetric operation
40	7F24z00	Other obstetric operation NOS
41	7G06.00	Curettage of lesion of skin
42	7G06.11	Curettage of lesion of skin or subcutaneous tissue
43	7G06.12	Curettage of lesion of skin including head and neck
44	7G06000	Curettage and cauterisation of lesion of skin head or neck
45	7G06100	Curettage and cauterisation of lesion of skin NEC
46	7G06111	Curettage and cauterisation of skin wart NEC
47	7G06200	Curettage of lesion of skin of head or neck NEC
48	7G06300	Curettage of sinus NEC
49	7G06400	Curettage of wound NEC
50	7G06y00	Other specified curettage of lesion of skin
51	7G06z00	Curettage of lesion of skin NOS
52	7G2C000	Toilet or clean burnt skin of head or neck
53		
54		
55		
56		
57		
58		
59		
60		

1		
2	7G2C100	Toilet or clean burnt skin NEC
3	7G2C200	Debridement of burnt skin of head and neck
4	7G2C300	Debridement of burnt skin NEC
5	7G2C400	Toilet to burnt skin of head or neck NEC
6	7G2C500	Tangent excision of burnt skin of head or neck
7	7G2C600	Tangent excision of burnt skin NEC
8	7G2CE00	Removal of slough from burnt skin NEC
9	7G2CE11	Escharotomy of burnt skin NEC
10	7G2CF00	Cleansing and sterilisation of burnt skin of head or neck
11	7G2CG00	Dress burnt skin head or neck us vacuum assisted clos device
12	7G2CH00	Cleansing and sterilisation of burnt skin NEC
13	7G2CJ00	Dressing burnt skin using vacuum assisted closure device NEC
14	7G2Cy00	Other specified toilet to burnt skin
15	7G2Cz00	Toilet to burnt skin NOS
16	7G2D.00	Other skin toilet
17	7G2D000	Debridement of skin NEC
18	7G2D011	Debridement of wound of skin NEC
19	7G2D100	Debridement of skin of head or neck NEC
20	7G2D200	Removal of slough from skin NEC
21	7G2D300	Removal of slough from skin of head or neck NEC
22	7G2D400	Toilet to skin of head or neck NEC
23	7G2D500	Cleaning of skin wound NEC
24	7G2D600	Cleaning of skin wound of head or neck
25	7G2D700	Cleansing and sterilisation of skin of head or neck NEC
26	7G2D800	Cleansing and sterilisation of skin NEC
27	7G2D900	Dres skin head or neck us vacuum assisted closure device NEC
28	7G2DA00	Dressing of skin using vacuum assisted closure device NEC
29	7G2DB00	Removal of slough from skin using pressurised fluid jet
30	7G2Dy00	Other specified toilet to skin
31	7G2Dz00	Other toilet to skin NOS
32	7G2E.00	Dressing of skin or wound
33	7G2E.11	Dressing of skin
34	7G2E000	Dressing of burnt skin of head or neck
35	7G2E100	Dressing of burnt skin NEC
36	7G2E200	Dressing of skin of head or neck NEC
37	7G2E300	Dressing of skin NEC
38	7G2E400	Dressing of skin of head or neck NEC
39	7G2E500	Dressing of skin ulcer NEC
40	7G2E600	Attention to dressing of burn of head or neck
41	7G2E700	Attention to dressing of burnt skin NEC
42	7G2E800	Attention to dressing of skin of head or neck NEC
43	7G2E900	Attention to dressing of skin NEC
44	7G2EA00	Two layer compression bandage for skin ulcer
45	7G2EB00	Four layer compression bandaging for skin ulcer
46	7G2EC00	Three layer compression bandage for skin ulcer
47	7G2Ey00	Other specified dressing of skin
48	7G2Ez00	Dressing of skin NOS
49	7G2G000	Dermabrasion of skin of head or neck
50	7G2G100	Dermabrasion of skin NEC
51	7G2G400	Refashioning of scar
52		
53		
54		
55		
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57		
58		
59		
60		

1		
2	7P23200	Delivery of rehabilitation for burns
3	81H..00	Dressing of wound
4	81H1.00	Dressing of ulcer
5	81H2.00	Dressing of burn
6	81H3.00	Attention to dressing of skin
7	81H4.00	Checking dressing of skin
8	81H5.00	Change of dressing
9	81Hy.00	Other wound dressing
10	81HZ.00	Wound dressing NOS
11	8BC7.00	Glueing of wound
12	8BN..00	Treatment of wound with maggots
13	8C1L.00	Wound care
14	8C1M.00	Post-operative wound care
15	8C1M.11	Post-surgical wound care
16	8C1Q.00	Compression hosiery procedure
17	8C22.00	Oxygenation of slough
18	8C6..00	Wound dressing requested by accident and emergency service
19	8C7..00	Suture removal requested by accident and emergency service
20	8CA4T00	Dietary education for wound healing
21	8CA4T11	Dietary advice for wound healing
22	8Cd9.00	Advice given about wound care
23	8CK..00	Skin care
24	8CMT.00	Leg ulcer care pathway
25	8CS3.00	Agreeing on leg ulcer treatment plan
26	8CT1.00	Leg ulcer compression therapy finished
27	8CV2.00	Leg ulcer compression therapy started
28	8H15.00	Admit to burns unit
29	8H5E.00	Burns referral
30	8HIV.00	Referral for complex wound care
31	8HTh.00	Referral to leg ulcer clinic
32	9kd..00	Complex wound care - enhanced services administration
33	9ks..00	Complex skin ulcer care enhanced services administration
34	9kY..00	Review of wound repair - enhanced services administration
35	9kY..11	Review of wound repair
36	9N0t.00	Seen in primary care leg ulcer clinic
37	9N0z.00	Seen in burns clinic
38	9N2m.00	Seen by tissue viability nurse specialist
39	9N7L.00	Postop wound management gen secondary care done by practice
40	9NM5.00	Attending leg ulcer clinic
41	A056.00	Amoebic skin ulceration
42	A170.00	Tuberculosis of skin and subcutaneous tissue
43	A170z00	Tuberculosis of skin and subcutaneous tissue NOS
44	A3A0500	Gas gangrene
45	A3A0600	Gas gangrene-neck
46	A3A0700	Gas gangrene-back
47	A3A0800	Gas gangrene-shoulder
48	A3A0900	Gas gangrene-arm
49	A3A0A00	Gas gangrene-forearm
50	A3A0B00	Gas gangrene-hand
51	A3A0C00	Gas gangrene-pelvis
52		
53		
54		
55		
56		
57		
58		
59		
60		



1		
2	A3A0D00	Gas gangrene-thigh
3	A3A0E00	Gas gangrene-leg
4	A3A0F00	Gas gangrene-foot
5	A3A0z00	Gas gangrene caused by organism NOS
6	A851000	Aleppo boil
7	A851100	Baghdad boil
8	A851200	Delhi boil
9		
10	A851z00	Urban cutaneous leishmaniasis NOS
11	A852.00	Asian desert cutaneous leishmaniasis
12	A853.00	Ethiopian cutaneous leishmaniasis
13	A854.00	American cutaneous leishmaniasis
14	A854.11	Chiclero ulcer
15	A855.00	American mucocutaneous leishmaniasis
16	A85z.00	Leishmaniasis NOS
17	A86..00	Trypanosomiasis
18		
19	AD40000	Cutaneous myiasis
20	AD40100	Wound myiasis
21		
22	C107.11	Diabetes mellitus with gangrene
23	C107.12	Diabetes with gangrene
24	C107200	Diabetes mellitus, adult with gangrene
25	C108500	Insulin dependent diabetes mellitus with ulcer
26	C108511	Type I diabetes mellitus with ulcer
27	C108512	Type 1 diabetes mellitus with ulcer
28		
29	C108600	Insulin dependent diabetes mellitus with gangrene
30	C108611	Type I diabetes mellitus with gangrene
31	C108612	Type 1 diabetes mellitus with gangrene
32	C109400	Non-insulin dependent diabetes mellitus with ulcer
33	C109411	Type II diabetes mellitus with ulcer
34	C109412	Type 2 diabetes mellitus with ulcer
35		
36	C109500	Non-insulin dependent diabetes mellitus with gangrene
37	C109511	Type II diabetes mellitus with gangrene
38	C109512	Type 2 diabetes mellitus with gangrene
39		
40	C10E500	Type 1 diabetes mellitus with ulcer
41	C10E511	Type I diabetes mellitus with ulcer
42	C10E512	Insulin dependent diabetes mellitus with ulcer
43		
44	C10E600	Type 1 diabetes mellitus with gangrene
45	C10E611	Type I diabetes mellitus with gangrene
46	C10E612	Insulin dependent diabetes mellitus with gangrene
47		
48	C10F400	Type 2 diabetes mellitus with ulcer
49	C10F411	Type II diabetes mellitus with ulcer
50	C10F500	Type 2 diabetes mellitus with gangrene
51	C10F511	Type II diabetes mellitus with gangrene
52		
53	F506.00	Abscess of external ear
54	G732.00	Peripheral gangrene
55	G732000	Gangrene of toe
56	G732100	Gangrene of foot
57	G732200	Gangrene of finger
58	G732300	Gangrene of thumb
59	G732400	Gangrene of hand
60	G830.00	Varicose veins of the leg with ulcer

1		
2	G832.00	Varicose veins of the leg with ulcer and eczema
3	G835.00	Infected varicose ulcer
4	G837.00	Venous ulcer of leg
5	J085000	Abscess of lip
6	J085800	Lip ulcer
7	J54..00	Abscess of anal and rectal regions
8	J54..12	Rectal abscess
9	J540.00	Perianal abscess
10	J540.11	Perianal cellulitis
11	J541.00	Ischiorectal abscess
12	J542.00	Submucous ano-rectal abscess
13	J543.00	Pelvi-rectal abscess
14	J544.00	Ano-rectal fissure abscess
15	J545.00	Intrasphincteric abscess
16	J546.00	Rectal abscess
17	J54z.00	Ano-rectal abscess NOS
18	K272000	Penile abscess
19	K272100	Penile boil
20	K272200	Penile carbuncle
21	K272300	Cellulitis of penis
22	K27y500	Chronic ulcer of penis
23	K284600	Fournier's gangrene of scrotum
24	K424000	Abscess of vulva
25	K424011	Abscess of labia
26	K424100	Carbuncle of vulva
27	K424111	Boil of vulva
28	K424200	Furuncle of vulva
29	K424z00	Other abscess of vulva NOS
30	K425.00	Ulceration of vulva
31	K425000	Ulceration of vulva unspecified
32	K425100	Ulceration of vulva in diseases EC
33	K425200	Ulceration of vulva in Behcet's disease
34	K425z00	Ulceration of vulva NOS
35	L394500	Infection of obstetric surgical wound
36	L441.00	Caesarean wound disruption
37	L441000	Caesarean wound disruption unspecified
38	L441100	Caesarean wound disruption - delivered with p/n complication
39	L441200	Caesarean wound disruption with postnatal complication
40	L441z00	Caesarean wound disruption NOS
41	L442.00	Obstetric perineal wound disruption
42	L442.11	Breakdown of perineum
43	L442.12	Episiotomy breakdown
44	L442000	Obstetric perineal wound disruption unspecified
45	L442100	Obstetric perineal wound disruption - deliv + p/n comp
46	L442200	Obstetric perineal wound disruption with p/n complication
47	L442z00	Obstetric perineal wound disruption NOS
48	L443.00	Other complication of obstetric surgical wound
49	L443.11	Haematoma - perineal wound
50	L443.12	Infection - perineal wound
51	L443000	Other complication of obstetric surgical wound unspecified
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2	L443100	Other complication obstetric surg wound -delivered +p/n comp
3	L443200	Other complication obstetric surgical wound with p/n comp
4	L443z00	Other complication of obstetric surgical wound NOS
5	L45..00	Obstetric breast infections
6	L450.00	Obstetric nipple infection
7	L450.11	Abscess of nipple - obstetric
8	L450.12	Nipple infection - obstetric
9	L450000	Obstetric nipple infection unspecified
10	L450100	Obstetric nipple infection - delivered
11	L450200	Obstetric nipple infection - delivered with p/n complication
12	L450300	Obstetric nipple infection with antenatal complication
13	L450400	Obstetric nipple infection with postnatal complication
14	L450z00	Obstetric nipple infection NOS
15	L451.00	Obstetric breast abscess
16	L451.11	Purulent mastitis - obstetric
17	L451000	Obstetric breast abscess unspecified
18	L451100	Obstetric breast abscess - delivered
19	L451200	Obstetric breast abscess - deliv with postnatal complication
20	L451300	Obstetric breast abscess with antenatal complication
21	L451400	Obstetric breast abscess with postnatal complication
22	L451z00	Obstetric breast abscess NOS
23	Lyu6A00	[X]Infection of caesarean section wound following delivery
24	M....00	Skin and subcutaneous tissue diseases
25	M0...00	Skin and subcutaneous tissue infections
26	M00..00	Carbuncle
27	M000.00	Carbuncle of face
28	M000000	Carbuncle of ear
29	M000100	Carbuncle of face (excluding eye)
30	M000200	Carbuncle of nasal septum
31	M000300	Carbuncle of temple region
32	M000z00	Carbuncle of face NOS
33	M001.00	Carbuncle of neck
34	M002.00	Carbuncle of trunk
35	M002000	Carbuncle of chest wall
36	M002100	Carbuncle of breast
37	M002200	Carbuncle of back
38	M002300	Carbuncle of abdominal wall
39	M002400	Carbuncle of umbilicus
40	M002500	Carbuncle of flank
41	M002600	Carbuncle of groin
42	M002700	Carbuncle of perineum
43	M002z00	Carbuncle of trunk NOS
44	M003.00	Carbuncle of upper arm and forearm
45	M003000	Carbuncle of shoulder
46	M003100	Carbuncle of axilla
47	M003200	Carbuncle of upper arm
48	M003300	Carbuncle of elbow
49	M003400	Carbuncle of forearm
50	M003z00	Carbuncle of upper arm and forearm NOS
51	M004.00	Carbuncle of hand
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2	M004000	Carbuncle of wrist
3	M004100	Carbuncle of thumb
4	M004200	Carbuncle of finger
5	M004z00	Carbuncle of hand NOS
6	M005.00	Carbuncle of buttock
7	M005000	Carbuncle of anus
8	M005100	Carbuncle of gluteal region
9	M005z00	Carbuncle of buttock NOS
10	M006.00	Carbuncle of leg (excluding foot)
11	M006000	Carbuncle of hip
12	M006100	Carbuncle of thigh
13	M006200	Carbuncle of knee
14	M006300	Carbuncle of lower leg
15	M006400	Carbuncle of ankle
16	M006z00	Carbuncle of leg (excluding foot) NOS
17	M007.00	Carbuncle of foot
18	M007000	Carbuncle of foot unspecified
19	M007100	Carbuncle of heel
20	M007200	Carbuncle of toe
21	M007z00	Carbuncle of foot NOS
22	M00y.00	Carbuncle of other specified site
23	M00y000	Carbuncle of head (excluding face)
24	M00yz00	Carbuncle of other specified site NOS
25	M00z.00	Carbuncle NOS
26	M01..00	Furuncle - boil
27	M010.00	Boil of face
28	M010000	Boil of ear
29	M010100	Boil of face (excluding eye)
30	M010200	Boil of nasal septum
31	M010300	Boil of temple region
32	M010400	Boil of external nose
33	M010z00	Boil of face NOS
34	M011.00	Boil of neck
35	M012.00	Boil of trunk
36	M012000	Boil of chest wall
37	M012100	Boil of breast
38	M012200	Boil of back
39	M012300	Boil of abdominal wall
40	M012400	Boil of umbilicus
41	M012500	Boil of flank
42	M012600	Boil of groin
43	M012700	Boil of perineum
44	M012z00	Boil of trunk NOS
45	M013.00	Boil of upper arm and forearm
46	M013000	Boil of shoulder
47	M013100	Boil of axilla
48	M013200	Boil of upper arm
49	M013300	Boil of elbow
50	M013400	Boil of forearm
51	M013z00	Boil of upper arm and forearm NOS
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1	M014.00	Boil of hand
2	M014000	Boil of wrist
3	M014100	Boil of thumb
4	M014200	Boil of finger
5	M014z00	Boil of hand NOS
6	M015.00	Boil of buttock
7	M015000	Boil of anus
8	M015100	Boil of gluteal region
9	M015z00	Boil of buttock NOS
10	M016.00	Boil of leg (excluding foot)
11	M016000	Boil of hip
12	M016100	Boil of thigh
13	M016200	Boil of knee
14	M016300	Boil of lower leg
15	M016400	Boil of ankle
16	M016z00	Boil of leg (excluding foot) NOS
17	M017.00	Boil of foot
18	M017000	Boil of foot unspecified
19	M017100	Boil of heel
20	M017200	Boil of toe
21	M017z00	Boil of foot NOS
22	M01y.00	Boil of other specified site
23	M01y000	Boil of head (excluding face)
24	M01yz00	Boil of other specified site NOS
25	M01z.00	Boil NOS
26	M01z.11	Recurrent boils
27	M01z.12	Boils of multiple sites
28	M01z000	Multiple boils
29	M02.00	Cellulitis and abscess of finger and toe
30	M020.00	Cellulitis and abscess of finger
31	M020000	Cellulitis and abscess of finger unspecified
32	M020100	Finger pulp abscess
33	M020111	Felon
34	M020112	Whitlow
35	M020200	Onychia of finger
36	M020300	Paronychia of finger
37	M020311	Perionychia of finger
38	M020400	Finger web space infection
39	M020500	Pulp space infection of finger/thumb
40	M020z00	Cellulitis and abscess of finger NOS
41	M021.00	Cellulitis and abscess of toe
42	M021000	Cellulitis and abscess of toe unspecified
43	M021100	Onychia of toe
44	M021200	Paronychia of toe
45	M021300	Pulp space infection of toe
46	M021z00	Cellulitis and abscess of toe NOS
47	M021z11	Perionychia of toe
48	M02z.00	Cellulitis and abscess of digit NOS
49	M02z.11	Nail infection NOS
50	M02z.12	Paronychia

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2	M02z.13	Infected nailfold
3	M02z.14	Nailfold infected
4	M03..00	Other cellulitis and abscess
5	M03..11	Abscess of skin area excluding digits of hand or foot
6	M03..12	Acute lymphangitis of skin excluding digits of hand or foot
7	M03..13	Cellulitis of skin area excluding digits of hand or foot
8	M030.00	Cellulitis and abscess of face
9	M030000	Cellulitis and abscess of cheek (external)
10	M030011	Cellulitis and abscess of cheek
11	M030100	Cellulitis and abscess of nose (external)
12	M030111	Cellulitis and abscess of nose
13	M030200	Cellulitis and abscess of chin
14	M030300	Cellulitis and abscess of submandibular region
15	M030400	Cellulitis and abscess of forehead
16	M030500	Cellulitis and abscess of temple region
17	M030600	Cellulitis of face
18	M030z00	Cellulitis and abscess of face NOS
19	M031.00	Cellulitis and abscess of neck
20	M031.11	Cervical abscess
21	M032.00	Cellulitis and abscess of trunk
22	M032000	Cellulitis and abscess of chest wall
23	M032100	Cellulitis and abscess of breast
24	M032200	Cellulitis and abscess of back
25	M032300	Cellulitis and abscess of abdominal wall
26	M032400	Cellulitis and abscess of umbilicus
27	M032500	Cellulitis and abscess of flank
28	M032600	Cellulitis and abscess of groin
29	M032700	Cellulitis and abscess of perineum
30	M032800	Cellulitis of trunk
31	M032z00	Cellulitis and abscess of trunk NOS
32	M033.00	Cellulitis and abscess of arm
33	M033000	Cellulitis and abscess of shoulder
34	M033100	Cellulitis and abscess of axilla
35	M033200	Cellulitis and abscess of upper arm
36	M033300	Cellulitis and abscess of elbow
37	M033400	Cellulitis and abscess of forearm
38	M033z00	Cellulitis and abscess of arm NOS
39	M034.00	Cellulitis and abscess of hand excluding digits
40	M034.11	Cellulitis and abscess of hand
41	M034000	Cellulitis and abscess of hand unspecified
42	M034011	Abscess of dorsum of hand
43	M034012	Abscess of palm of hand
44	M034013	Cellulitis of dorsum of hand
45	M034014	Cellulitis of palm of hand
46	M034100	Cellulitis and abscess of wrist
47	M034z00	Cellulitis and abscess of hand NOS
48	M035.00	Cellulitis and abscess of buttock
49	M036.00	Cellulitis and abscess of leg excluding foot
50	M036.11	Cellulitis and abscess of leg
51	M036000	Cellulitis and abscess of hip
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2	M036100	Cellulitis and abscess of thigh
3	M036200	Cellulitis and abscess of knee
4	M036300	Cellulitis and abscess of lower leg
5	M036400	Cellulitis and abscess of ankle
6	M036z00	Cellulitis and abscess of leg NOS
7	M037.00	Cellulitis and abscess of foot excluding toe
8	M037.11	Cellulitis and abscess of foot
9	M037000	Cellulitis and abscess of foot unspecified
10	M037100	Cellulitis and abscess of heel
11	M037200	Cellulitis in diabetic foot
12	M037z00	Cellulitis and abscess of foot NOS
13	M038.00	Cellulitis of external ear
14	M03y.00	Other specified cellulitis and abscess
15	M03y000	Cellulitis and abscess of head unspecified
16	M03y011	Abscess of scalp
17	M03z.00	Cellulitis and abscess NOS
18	M03z000	Cellulitis NOS
19	M03z100	Abscess NOS
20	M03zz00	Cellulitis and abscess NOS
21	M060.00	Pilonidal cyst with abscess
22	M061.00	Pilonidal cyst with no abscess
23	M061.11	Dermal sinus
24	M062.00	Pilonidal sinus with abscess
25	M063.00	Pilonidal sinus without abscess
26	M06z.00	Pilonidal sinus/cyst NOS
27	M07..00	Other local infections of skin and subcutaneous tissue
28	M070200	Pyoderma gangrenosum
29	M070300	Pyoderma ulcerosum tropicalum
30	M07y.00	Local infection of skin or subcutaneous tissue OS
31	M07yz00	Other spec local skin/subc infection NOS
32	M07yz11	Infection toe
33	M07yz12	Infection foot
34	M07yz13	Infection finger
35	M07z.00	Local infection skin/subcut tissue NOS
36	M07z.11	Infected wound from insect bite
37	M07z.12	Infected skin ulcer
38	M07z.13	Septic spots
39	M07z.14	Infected dermatitis
40	M07z000	Infection foot
41	M07z100	Infection toe
42	M07z200	Infection finger
43	M09..00	Cutaneous abscess
44	M090.00	[X]Abscess of face
45	M091.00	[X]Abscess of neck
46	M092.00	[X]Abscess of trunk
47	M092000	[X]Abscess of buttock
48	M092100	[X]Abdominal wall abscess
49	M092200	[X]Perineal abscess
50	M093.00	[X]Abscess of buttock
51	M094.00	[X]Abscess of limb
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2	M094000	[X]Abscess of axilla
3	M095.00	Skin abscess
4	M09y.00	[X]Abscess of other site
5	M0y..00	Other specified infections of skin or subcutaneous tissue
6	M0z..00	Skin and subcut tissue infection NOS
7	M0z..11	Infected sebaceous cyst
8	M1...00	Other skin and subcutaneous tissue inflammatory conditions
9	M2...00	Other skin and subcutaneous tissue disorders
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11	M27..00	Chronic skin ulcer
12	M270.00	Decubitus (pressure) ulcer
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14	M270.11	Bed sore
15	M270.12	Plaster ulcer
16	M270.13	Pressure sore
17	M270.14	Decubitus ulcer and pressure area
18	M270000	Hospital acquired pressure ulcer
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20	M270100	Nursing home acquired pressure ulcer
21	M270200	Community hospital acquired pressure ulcer
22	M270300	Hospice acquired pressure ulcer
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24	M270400	Stage I decubitus ulcer and pressure area
25	M270500	Stage II decubitus ulcer
26	M270600	Stage III decubitus ulcer
27	M270700	Stage IV decubitus ulcer
28		
29	M270z00	Decubitus ulcer and pressure area NOS
30	M271.00	Non-pressure ulcer lower limb
31	M271.11	Foot ulcer
32	M271.12	Ischaemic leg ulcer
33	M271.13	Leg ulcer NOS
34		
35	M271.14	Neurogenic leg ulcer
36	M271.15	Trophic leg ulcer
37	M271000	Ischaemic ulcer diabetic foot
38	M271100	Neuropathic diabetic ulcer - foot
39	M271200	Mixed diabetic ulcer - foot
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41	M271300	Arterial leg ulcer
42	M271400	Mixed venous and arterial leg ulcer
43	M271500	Venous ulcer of leg
44	M271600	Traumatic leg ulcer
45	M271700	Neuropathic foot ulcer
46		
47	M272.00	Ulcer of skin
48	M273.00	Non-healing leg ulcer
49	M274.00	Recurrent leg ulcer
50	M27y.00	Chronic ulcer of skin, other specified sites
51	M27z.00	Chronic skin ulcer NOS
52		
53	M2y4D00	Macerated perianal skin
54	M2yA.00	Skin sinus
55	M2yB.00	Fistula of skin
56	M2yz.11	Skin lesion
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58	M2z0.00	Skin lesion
59	Myu0.00	[X]Infections of the skin and subcutaneous tissue
60	Myu0100	[X]Other specified local infections/skin+subcutaneous tissue
	R153300	[D]Positive culture findings in wound

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2	S002.00	Open fracture vault of skull without intracranial injury
3	S002000	Open #skull vlt no intracranial injury, unspec state consc
4	S002100	Open #skull vlt no intracranial injury, no loss of consc
5	S002200	Open #skull vlt no intracranial injury, <1hr loss of consc
6	S002300	Open #skull vlt no intracranial injury, 1-24hr loss of consc
7	S002400	Open #skull vlt no intracranial injury, >24hr LOC+recovery
8	S002500	Open #skull vlt no intracranial inj, >24hr LOC not restored
9	S002600	Open #skull vlt no intracranial injury, LOC unspec duration
10	S002z00	Open #skull vlt no intracranial injury + concussion unspec
11	S003.00	Open fracture vault of skull with intracranial injury
12	S003000	Open #skull vlt + intracranial injury, unspec state of consc
13	S003100	Open #skull vlt + intracranial injury, no loss of consc
14	S003200	Open #skull vlt + intracranial injury, <1hr loss of consc
15	S003300	Open #skull vlt + intracranial injury, 1-24hr loss of consc
16	S003400	Open #skull vlt + intracranial injury, >24hr LOC + recovery
17	S003500	Open #skull vlt + intracranial inj, >24hr LOC not restored
18	S003600	Open #skull vlt + intracranial injury, LOC unspec duration
19	S003z00	Open #skull vlt with intracranial injury + concussion unspec
20	S012.00	Open fracture base skull without mention intracranial injury
21	S012000	Open #skull bse no intracranial inj, unspec state of consc
22	S012100	Open #skull bse no intracranial injury, no loss of consc
23	S012200	Open #skull bse no intracranial injury, <1hr loss of consc
24	S012300	Open #skull bse no intracranial injury, 1-24hr loss of consc
25	S012400	Open #skull bse no intracranial injury, >24hr LOC+recovery
26	S012500	Open #skull bse no intracranial inj, >24hr LOC not restored
27	S012600	Open #skull bse no intracranial injury, LOC unspec duration
28	S012z00	Open #skull bse no intracranial injury + concussion unspec
29	S013.00	Open fracture base of skull with intracranial injury
30	S013000	Open #skull bse + intracranial injury, unspec state of consc
31	S013100	Open #skull bse + intracranial injury, no loss of consc
32	S013200	Open #skull bse + intracranial injury, <1hr loss of consc
33	S013300	Open #skull bse + intracranial injury, 1-24hr loss of consc
34	S013400	Open #skull bse + intracranial injury, >24hr LOC + recovery
35	S013500	Open #skull bse + intracranial inj, >24hr LOC not restored
36	S013600	Open #skull bse + intracranial injury, LOC unspec duration
37	S013z00	Open #skull bse + intracranial injury + concussion unspec
38	S032.00	Open #skull NOS without mention of intracranial injury
39	S032000	Open #skull NOS no intracranial inj, unspec state of consc
40	S032100	Open #skull NOS no intracranial inj, no loss of consc
41	S032200	Open #skull NOS no intracranial inj, <1hr loss of consc
42	S032300	Open #skull NOS no intracranial inj, 1-24hrs loss of consc
43	S032400	Open #skull NOS no intracranial inj, >24hrs LOC + recovery
44	S032500	Open #skull NOS no intracranial inj, >24hrs LOC not restored
45	S032600	Open #skull NOS no intracranial inj, LOC unspec duration
46	S032z00	Open #skull NOS no intracranial inj + concussion unspec
47	S033.00	Open fracture of skull NOS with intracranial injury
48	S033000	Open #skull NOS + intracranial inj, unspec state of consc
49	S033100	Open #skull NOS + intracranial inj, no loss of consc
50	S033200	Open #skull NOS + intracranial inj, <1hr loss of consc
51	S033300	Open #skull NOS + intracranial inj, 1-24hrs loss of consc
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S033400	Open #skull NOS + intracranial inj, >24hrs LOC + recovery
S033500	Open #skull NOS + intracranial inj, >24hrs LOC not restored
S033600	Open #skull NOS + intracranial inj, LOC unspec duration
S033z00	Open #skull NOS + intracranial inj + concussion unspec
S042000	Open #skull/face, mult, no intracranial inj, unspec consc
S042100	Open #skull/face, mult, no intracranial inj, no loss consc
S042200	Open #skull/face, mult, no intracranial inj, <1hr LOC
S042300	Open #skull/face, mult, no intracranial inj, 1-24hrs LOC
S042400	Open #skull/face, mult, no intracran inj, >24hr LOC+recovery
S042500	Open #skull/face,mult,no intracran inj,>24hr LOC no restored
S042600	Open #skull/face,mult,no intracran inj, LOC unspec duration
S042z00	Open #skull/face,mult,no intracran inj, concussion unspec
S043.00	Mult #skull/face + other bones, open + intracranial injury
S043000	Open #skull/face, mult + intracranial inj, unspec consc
S043100	Open #skull/face, mult + intracranial inj, no loss consc
S043200	Open #skull/face, mult + intracranial inj, <1hr LOC
S043300	Open #skull/face, mult + intracranial inj, 1-24hrs LOC
S043400	Open #skull/face, mult + intracran inj, >24hr LOC + recovery
S043500	Open #skull/face,mult + intracran inj, >24hr LOC no restored
S043600	Open #skull/face, mult + intracran inj, LOC unspec duration
S043z00	Open #skull/face, mult + intracran inj + concussion, unspec
S611000	Cortex cont + open intracranial wound + unspec state consc
S611100	Cortex cont + open intracranial wound + no loss of consc
S611200	Cortex cont + open intracranial wound + <1hr loss of consc
S611300	Cortex cont + open intracranial wound + 1-24hr loss of consc
S611400	Cortex cont + open intracranial wnd + >24hr LOC + recovery
S611500	Cortex cont + open intracranial wnd + >24hr LOC not restored
S611600	Cortex cont + open intracranial wnd + LOC unspec duration
S611z00	Cortex cont + open intracranial wound + concussion unspec
S613.00	Cortex laceration with open intracranial wound
S613000	Cortex lacn + open intracranial wound + unspec state consc
S613100	Cortex lacn + open intracranial wound + no loss of consc
S613200	Cortex lacn + open intracranial wound + <1hr loss of consc
S613300	Cortex lacn + open intracranial wound + 1-24hr loss of consc
S613400	Cortex lacn + open intracranial wound + >24hr LOC + recovery
S613500	Cortex lacn + open intracranial wnd + >24hr LOC not restored
S613600	Cortex lacn + open intracranial wnd + LOC unspec duration
S613z00	Cortex lacn + open intracranial wound + concussion unspec
S615000	Hind brain cont + open intracranial wnd + unspec state consc
S615100	Hind brain cont + open intracranial wound + no loss consc
S615200	Hind brain cont + open intracranial wound + <1hr loss consc
S615300	Hind brain cont + open intracranial wnd + 1-24hr loss consc
S615400	Hind brain cont + open intracranial wnd +>24hr LOC +recovery
S615500	Hind brain cont + open intracran wnd +>24hr LOC not restored
S615600	Hind brain cont + open intracranial wnd +LOC unspec duration
S615z00	Hind brain cont + open intracranial wnd + concussion unspec
S617.00	Hind brain laceration with open intracranial wound
S617000	Hind brain lacn + open intracranial wnd + unspec state consc
S617100	Hind brain lacn + open intracranial wnd + no loss consc
S617200	Hind brain lacn + open intracranial wnd + <1hr loss consc

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2	S617300 Hind brain lacn + open intracranial wnd + 1-24hr loss consc
3	S617400 Hind brain lacn + open intracranial wnd+>24hr LOC + recovery
4	S617500 Hind brain lacn open intracranial wnd+>24hr LOC not restored
5	S617600 Hind brain lacn + open intracran wnd + LOC unspec duration
6	S617z00 Hind brain lacn + open intracranial wnd + concussion unspec
7	S61y000 Brain cont + open intracranial wound + unspec state consc
8	S61y100 Brain cont + open intracranial wound + no loss of consc
9	S61y200 Brain cont + open intracranial wound + <1hr loss of consc
10	S61y300 Brain cont + open intracranial wound + 1-24hr loss of consc
11	S61y400 Brain cont + open intracranial wound + >24hr LOC + recovery
12	S61y500 Brain contusion + open intracr wound+>24hr LOC not ful reco
13	S61y600 Brain cont + open intracranial wound + LOC unspec duration
14	S61yz00 Brain cont + open intracranial wound + concussion unspec
15	S621000 Subarachnoid h'ge inj + open intracran wound + unspec consc
16	S621100 Subarachnoid h'ge inj + open intracranial wound + no LOC
17	S621200 Subarachnoid h'ge inj + open intracran wound+<1hr loss consc
18	S621300 Subarachnoid h'ge inj + open intracran wnd+1-24hr loss consc
19	S621400 Subarach h'ge inj + open intracran wnd +>24hr LOC + recovery
20	S621500 Subarach h'ge inj + open intracran wnd+>24hr LOC -restored
21	S621600 Subarach h'ge inj + open intracran wnd+LOC unspec duration
22	S621z00 Subarachnoid h'ge inj + open intracran wnd+concussion unspec
23	S623000 Subdural h'ge inj + open intracranial wound + unspec consc
24	S623100 Subdural h'ge inj + open intracranial wound+no loss consc
25	S623200 Subdural h'ge inj + open intracranial wound+<1hr loss consc
26	S623300 Subdural h'ge inj + open intracranial wnd+1-24hr loss consc
27	S623400 Subdural h'ge inj + open intracran wound+>24hr LOC +recovery
28	S623500 Subdural h'ge inj + open intracran wnd+>24hr LOC -restored
29	S623600 Subdural h'ge inj + open intracran wnd+LOC unspec duration
30	S623z00 Subdural h'ge inj + open intracranial wnd+concussion unspec
31	S625000 Extradural h'ge inj + open intracranial wnd + unspec consc
32	S625100 Extradural h'ge inj + open intracranial wound+no loss consc
33	S625200 Extradural h'ge inj + open intracranial wnd+<1hr loss consc
34	S625300 Extradural h'ge inj + open intracran wnd+1-24hr loss consc
35	S625400 Extradural h'ge inj + open intracran wnd+>24hr LOC+recovery
36	S625500 Extradural h'ge inj + open intracran wnd+>24hr LOC -restored
37	S625600 Extradural h'ge inj + open intracran wnd+LOC unspec duration
38	S625z00 Extradural h'ge inj + open intracran wnd+concussion unspec
39	S62A100 Traumatic extradural haematoma with open intracranial wound
40	S631.00 Other cerebral h'ge after injury + open intracranial wound
41	S631000 Oth cerebral h'ge inj + open intracran wnd + unspec consc
42	S631100 Oth cerebral h'ge inj + open intracranial wnd+no loss consc
43	S631200 Oth cerebral h'ge inj + open intracran wnd+<1hr loss consc
44	S631300 Oth cerebral h'ge inj + open intracran wnd+1-24hr loss consc
45	S631400 Oth cereb h'ge inj + open intracran wnd+>24hr LOC + recovery
46	S631500 Oth cereb h'ge inj + open intracran wnd+>24hr LOC -restored
47	S631600 Oth cereb h'ge inj + open intracran wnd+LOC unspec duration
48	S631z00 Oth cereb h'ge inj + open intracran wnd+concussion unspec
49	S641.00 Intracranial injury NOS + open intracranial wound
50	S641000 Intracranial inj NOS + open intracranial wnd + unspec consc
51	S641100 Intracranial inj NOS + open intracranial wound+no loss consc
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2	S641200	Intracranial inj NOS + open intracranial wnd+<1hr loss consc
3	S641300	Intracranial inj NOS + open intracranial wnd + 1-24hr LOC
4	S641400	Intracranial inj NOS + open intracran wnd+>24hr LOC+recovery
5	S641500	Intracran inj NOS + open intracran wnd+>24hr LOC -restored
6	S641600	Intracran inj NOS + open intracran wnd+LOC unspec duration
7	S641z00	Intracranial inj NOS + open intracran wnd+concussion unspec
8	S642100	Traumatic cerebral oedema with open intracranial wound
9	S645100	Intracranial injury with prolonged coma with open wound
10		
11	S701.00	Open traumatic pneumothorax
12	S703.00	Open traumatic haemothorax
13	S705.00	Open traumatic haemopneumothorax
14	S711.00	Heart injury, open
15	S711000	Heart injury with open wound into thorax, unspecified
16	S711100	Heart contusion, with open wound into thorax
17	S711200	Heart laceration open, without penetration of heart chambers
18	S711300	Heart laceration open, with penetration of heart chambers
19	S711z00	Heart injury with open wound into thorax NOS
20	S713000	Lung injury with open wound into thorax, unspecified
21	S713100	Lung contusion with open wound into thorax
22	S713200	Lung laceration with open wound into thorax
23	S713z00	Lung injury with open wound into thorax, NOS
24	S73yz00	Gastrointestinal tract injury with open wound to cavity NOS
25	S8...00	Open wound of head, neck and trunk
26	S8...12	Open wound of head
27	S8...13	Open wound of trunk
28	S80..00	Open wound of ocular adnexa
29	S80..11	Open wound of eyelid
30	S80..12	Periocular open wound
31	S800.00	Eyelid skin and periocular area laceration
32	S803.00	Penetrating wound of orbit without mention of foreign body
33	S804.00	Penetrating wound of orbit with foreign body
34	S80y.00	Other open ocular adnexa wound
35	S80z.00	Open wound of ocular adnexa NOS
36	S81..00	Open wound of eyeball
37	S81..12	Open wound of eye
38	S810.00	Ocular laceration without intraocular prolapse
39	S81z.00	Open wound of eyeball NOS
40	S82..00	Open wound of ear
41	S820.00	Open wound of external ear
42	S820000	Open wound of external ear, unspecified
43	S820100	Open wound of ear auricle
44	S820w00	Other open wound of external ear
45	S820z00	Open wound of external ear not otherwise specified
46	S821.00	Open wound of external ear with complication
47	S821000	Open wound of external ear with complication, unspecified
48	S821100	Open wound of ear auricle with complication
49	S821z00	Open wound of external ear with complication, NOS
50	S82v.00	Other open wound of ear
51	S82v011	Open wound of drumhead without complication
52	S82v012	Open wound of tympanic membrane without complication



1	S82v100	Open wound of ear ossicle
2	S82v300	Open wound of cochlea
3	S82vz00	Other open wound of ear NOS
4	S82w.00	Other open wound of ear with complication
5	S82w000	Open wound of ear drum with complication
6	S82w100	Open wound of ear ossicle with complication
7	S82w300	Open wound of cochlea with complication
8	S82wz00	Other open wound of ear with complication NOS
9	S82x.00	Open wound of ear, uncomplicated not otherwise specified
10	S82y.00	Open wound of ear with complication, NOS
11	S82z.00	Open wound of ear NOS
12	S83..00	Other open wound of head
13	S830.00	Open wound of scalp
14	S830100	Avulsion of scalp
15	S831.00	Open wound of scalp with complication
16	S832.00	Open wound of nose
17	S832000	Open wound of nose, unspecified
18	S832100	Open wound of nasal septum
19	S832200	Open wound of nasal cavity
20	S832300	Open wound of nasal sinus
21	S832x00	Multiple wounds of nose
22	S832z00	Open wound of nose NOS
23	S833.00	Open wound of nose with complication
24	S833000	Open wound of nose with complication, unspecified
25	S833100	Open wound of nasal septum with complication
26	S833200	Open wound of nasal cavity with complication
27	S833300	Open wound of nasal sinus with complication
28	S833x00	Multiple open wounds of nose with complication
29	S833z00	Open wound of nose with complication, NOS
30	S834.00	Open wound of face
31	S834000	Open wound of face, unspecified
32	S834100	Open wound of cheek
33	S834200	Open wound of forehead
34	S834300	Open wound of eyebrow
35	S834400	Open wound of lip
36	S834500	Open wound of jaw
37	S834600	Open wound of chin
38	S834x00	Multiple open wounds of face
39	S834z00	Open wound of face, NOS
40	S835.00	Open wound of face with complication
41	S835000	Open wound of face with complication, unspecified
42	S835100	Open wound of cheek with complication
43	S835200	Open wound of forehead with complication
44	S835300	Open wound of eyebrow with complication
45	S835400	Open wound of lip with complication
46	S835500	Open wound of jaw with complication
47	S835x00	Multiple open wounds of face with complication
48	S835z00	Open wound of face with complication, NOS
49	S836.00	Open wound in mouth
50	S836000	Open wound in mouth, unspecified
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2	S836100	Open wound of buccal mucosa
3	S836200	Open wound of gum
4	S836400	Open wound of tongue
5	S836500	Open wound of mouth floor
6	S836600	Open wound of palate
7	S837100	Open wound of buccal mucosa with complication
8	S837200	Open wound of gum with complication
9	S837400	Open wound of tongue with complication
10	S837500	Open wound of mouth floor with complication
11	S837600	Open wound of palate with complication
12	S83x.00	Other open wound of head
13	S83y.00	Other open wound of head with complication
14	S83z.00	Open wound of head NOS
15	S84..00	Open wound of neck
16	S840.00	Open wound of larynx and trachea
17	S840.11	Open wound of larynx without complication
18	S840.12	Open wound of trachea without complication
19	S840000	Open wound of larynx and trachea, unspecified
20	S840100	Open wound of larynx
21	S840200	Open wound of trachea
22	S840z00	Open wound of larynx and trachea not otherwise specified
23	S841.00	Open wound of larynx and trachea with complication
24	S841.11	Open wound of larynx with complication
25	S841.12	Open wound of trachea with complication
26	S841000	Open wound of larynx and trachea with complication, unspec
27	S841100	Open wound of larynx with complication
28	S841200	Open wound of trachea with complication
29	S841z00	Open wound of larynx and trachea with complication, NOS
30	S842.00	Open wound of thyroid
31	S843.00	Open wound of thyroid with complication
32	S844.00	Open wound of pharynx
33	S845.00	Open wound of pharynx with complication
34	S84x.00	Other open wound of neck
35	S84x000	Open wound of neck nape
36	S84x100	Open wound of supraclavicular region
37	S84xz00	Open wound of neck, NOS
38	S84xz11	Open wound of throat NOS
39	S84y.00	Other open wound of neck with complication
40	S84y000	Open wound of neck nape with complication
41	S84y100	Open wound of supraclavicular region with complication
42	S84yz00	Open wound of neck with complication, NOS
43	S84z.00	Open wound of neck NOS
44	S85..00	Open wound of chest wall
45	S850.00	Open wound of chest wall, uncomplicated
46	S850000	Degloving injury chest wall
47	S851.00	Open wound of chest wall with complication
48	S852.00	Open wound of front wall of thorax
49	S853.00	Multiple open wounds of thoracic wall
50	S855.00	Open wound of back wall of thorax
51	S85X.00	Open wound of thorax, part unspecified
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1	S85z.00	Open wound of chest wall NOS
2	S86..00	Open wound of back
3	S86..11	Open wound of loin
4	S86..12	Open wound of lumbar region
5	S860.00	Open wound of back, uncomplicated
6	S860000	Degloving injury back
7	S861.00	Open wound of back with complication
8	S86z.00	Open wound of back NOS
9	S87..00	Open wound of buttock
10	S87..11	Open wound of sacroiliac region
11	S870.00	Open wound of buttock, uncomplicated
12	S870000	Degloving injury buttock
13	S871.00	Open wound of buttock with complication
14	S87z.00	Open wound of buttock NOS
15	S88..00	Open wound of external genital organs
16	S880.00	Open wound of penis
17	S880000	Degloving injury penis
18	S881.00	Open wound of penis with complication
19	S882.00	Open wound of scrotum and testes
20	S882000	Open wound of scrotum
21	S882100	Open wound of testes
22	S882200	Degloving injury scrotum
23	S882z00	Open wound of scrotum and testes not otherwise specified
24	S883.00	Open wound of scrotum and testes with complication
25	S883000	Open wound of scrotum with complication
26	S883100	Open wound of testes with complication
27	S883z00	Open wound of scrotum and testes with complication, NOS
28	S884.00	Open wound of vulva
29	S884000	Open wound of vulva, unspecified
30	S884100	Open wound of labium majus
31	S884200	Open wound of labium minus
32	S884z00	Open wound of vulva, NOS
33	S885.00	Open wound of vulva with complication
34	S885000	Open wound of vulva with complication, unspecified
35	S885100	Open wound of labium majus with complication
36	S885200	Open wound of labium minus with complication
37	S885z00	Open wound of vulva with complication, NOS
38	S886.00	Open wound of vagina
39	S887.00	Open wound of vagina with complication
40	S88x.00	Other open wound of external genital organ
41	S88y.00	Other open wound of external genital organ with complication
42	S88z.00	Open wound of external genital organ NOS
43	S89..00	Other open wounds of other sites, excluding limbs
44	S890.00	Open wound of breast
45	S891.00	Open wound of breast with complication
46	S892.00	Open wound of anterior abdominal wall
47	S892000	Open wound of epigastric region
48	S892100	Open wound umbilical region
49	S892200	Open wound of hypogastric region
50	S892300	Open wound of pubic region without complication

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2	S892z00	Open wound anterior abdominal wall without complication NOS
3	S893.00	Open wound of anterior abdominal wall with complication
4	S893000	Open wound of epigastrium with complication
5	S893100	Open wound of umbilical region with complication
6	S893200	Open wound of hypogastrium with complication
7	S893300	Open wound of pubic region with complication
8	S893z00	Open wound of anterior abdominal wall with complication NOS
9	S894.00	Open wound of lateral abdominal wall
10	S894000	Open wound of hypochondrium
11	S894100	Open wound of lumbar region
12	S894111	Open wound of flank without complication
13	S894200	Open wound of iliac region
14	S894300	Open wound of inguinal region
15	S894311	Open wound of groin without complication
16	S894400	Open wound of flank without complication
17	S894500	Open wound of loin
18	S894z00	Open wound of lateral abdominal wall NOS
19	S895.00	Open wound of lateral abdominal wall with complication
20	S895000	Open wound of hypochondrium with complication
21	S895100	Open wound of lumbar region with complication
22	S895111	Open wound of flank with complication
23	S895200	Open wound of iliac region with complication
24	S895300	Open wound of inguinal region with complication
25	S895311	Open wound of groin with complication
26	S895400	Open wound of flank with complication
27	S895z00	Open wound of lateral abdominal wall with complication, NOS
28	S89v.00	Other and unspecified open wound of trunk
29	S89v000	Open wound of pelvic region
30	S89v100	Open wound of perineum
31	S89vz00	Other and unspecified open wound of trunk, NOS
32	S89w.00	Other and unspecified open wound of trunk with complication
33	S89w000	Open wound of pelvic region with complication
34	S89w100	Open wound of perineum with complication
35	S89wz00	Other and unspecified open wound trunk with complication NOS
36	S89x.00	Multiple open wounds, of unspecified site
37	S89y.00	Multiple open wounds with complication, of unspecified site
38	S89z.00	Other open wounds NOS
39	S8A..00	Open wounds involving head with neck
40	S8z..00	Open wound of head, neck and trunk NOS
41	S8z..11	Laceration NOS
42	S8z..12	Traumatic ulcer NOS
43	S8z..13	Laceration
44	S9...00	Open wound of upper limb
45	S9...11	Laceration of arm
46	S9...12	Open wound of arm
47	S90..00	Open wound of shoulder region and upper limb
48	S900.00	Open wound of shoulder/upper limb without complication
49	S900000	Open wound of shoulder region
50	S900100	Open wound of scapular region
51	S900200	Open wound of axillary region

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2	S900300	Open wound of upper arm
3	S900400	Multiple open wounds of shoulder and upper arm
4	S900x00	Multiple open wounds of upper arm
5	S900z00	Open wound of shoulder and upper limb NOS
6	S901.00	Open wound of shoulder and upper limb with complication
7	S901000	Open wound of shoulder region with complication
8	S901100	Open wound of scapular region with complication
9	S901200	Open wound of axillary region with complication
10	S901300	Open wound of upper arm with complication
11	S901x00	Multiple open wounds of upper arm with complication
12	S901z00	Open wound of shoulder and upper arm with complication, NOS
13	S902.00	Open wound of shoulder/upper limb with tendon involvement
14	S902.11	Open wound of arm with tendon injury
15	S902000	Open wound of shoulder region with tendon involvement
16	S902100	Open wound of scapular region with tendon involvement
17	S902200	Open wound of axillary region with tendon involvement
18	S902300	Open wound of upper arm with tendon involvement
19	S902x00	Multiple open wounds of upper arm with tendon involvement
20	S902z00	Open wound shoulder/upper arm with tendon involvement, NOS
21	S903.00	Degloving injury, shoulder or upper arm
22	S903000	Degloving injury, shoulder area
23	S903100	Degloving injury, scapular area
24	S903200	Degloving injury, axilla
25	S903300	Degloving injury, upper arm
26	S90z.00	Open wound of shoulder region and upper arm NOS
27	S91..00	Open wound of elbow, forearm and wrist
28	S910.00	Open wound of lower arm without mention of complication
29	S910000	Open wound of forearm
30	S910100	Open wound of elbow
31	S910200	Open wound of wrist, unspecified
32	S910300	Open wound of wrist, volar
33	S910400	Open wound of wrist, dorsal
34	S910z00	Open wound of lower arm, NOS
35	S911.00	Open wound of lower arm with complication
36	S911000	Open wound of forearm with complication
37	S911100	Open wound of elbow with complication
38	S911200	Open wound of wrist with complication
39	S911z00	Open wound of lower arm with complication, NOS
40	S912.00	Open wound of lower arm with tendon involvement
41	S912.11	Open wound of lower arm with tendon injury
42	S912000	Open wound of forearm with tendon involvement
43	S912100	Open wound of elbow with tendon involvement
44	S912200	Open wound of wrist with tendon involvement
45	S912300	Complete division extensor tendon wrist
46	S912400	Complete division flexor tendon wrist
47	S912z00	Open wound of lower arm with tendon involvement, NOS
48	S913.00	Degloving injury lower arm
49	S913000	Degloving injury, forearm
50	S913100	Degloving injury, elbow area
51	S913200	Degloving injury wrist, volar
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2	S913300	Degloving injury wrist, dorsum
3	S91z.00	Open wound of elbow, forearm and wrist NOS
4	S92..00	Open wound of hand, excluding finger(s)
5	S920.00	Open wound of hand without mention of complication
6	S920000	Open wound of hand, palm
7	S920100	Open wound of hand, dorsum
8	S920200	Multiple open wounds of wrist and hand
9	S921.00	Open wound of hand with complication
10	S922.00	Open wound of hand with tendon involvement
11	S923.00	Degloving injury hand
12	S923000	Degloving injury hand, palmar
13	S923100	Degloving injury hand, dorsum
14	S924.00	Severe multi tissue damage hand
15	S925.00	Massive multi tissue damage hand
16	S92z.00	Open wound of hand, excluding fingers, NOS
17	S93..00	Open wound of finger(s) or thumb
18	S93..11	Open wound of fingernail
19	S93..12	Open wound of nail
20	S93..13	Open wound of thumb
21	S93..14	Open wound of thumbnail
22	S930.00	Open wound of finger or thumb without mention of complicatn
23	S930000	Open wound, finger
24	S930100	Open wound, finger, multiple
25	S930200	Open wound, thumb
26	S931.00	Open wound of finger or thumb with complication
27	S932.00	Open wound of finger or thumb with tendon involvement
28	S932.11	Open wound of finger with tendon injury
29	S932000	Complete division, flexor digitorum superficialis tendon
30	S932100	Complete division, flexor digitorum profundus tendon
31	S932200	Complete division, both flexor tendons
32	S932300	Complete division, extensor digitorum tendon
33	S932400	Mallet finger with open tendon injury
34	S932500	Complete division, flexor pollicis longus tendon
35	S932600	Complete division, extensor pollicis longus tendon
36	S932700	Mallet thumb with open tendon injury
37	S933.00	Degloving injury, finger
38	S933000	Degloving injury, finger unspecified
39	S933100	Degloving injury, finger, multiple
40	S933200	Ring avulsion injury, class 1
41	S933300	Ring avulsion injury, class 2
42	S933400	Ring avulsion injury, class 3
43	S933500	Ring avulsion injury, class 4
44	S934.00	Degloving injury, thumb
45	S935.00	Open wound fingernail
46	S936.00	Open wound thumbnail
47	S937.00	Open wound of finger with damage to nail
48	S938.00	Open wound of thumb with damage to nail
49	S93z.00	Open wound of finger(s) NOS
50	S94..00	Multiple and unspecified open wound of upper limb
51	S940.00	Multiple/unspec open wound upper limb without complication
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2	S941.00	Multiple/unspec open wound of upper limb with complication
3	S942.00	Multiple/unspec open wound upper limb with tendon involved
4	S942.11	Multiple/unspec open wound of upper limb with tendon injury
5	S94z.00	Multiple and unspecified open wound of upper limb NOS
6	S96X.00	Comb traum amp of (part of) fing(s) + oth part wrist/hand
7	S9z..00	Open wound of upper limb NOS
8	SA...00	Open wound of lower limb
9	SA...11	Open wound of leg
10	SA...12	Laceration - leg
11	SA0..00	Open wound of hip and thigh
12	SA00.00	Open wound of hip and thigh without mention of complication
13	SA00000	Open wound of hip
14	SA00100	Open wound of thigh
15	SA00z00	Open wound hip and thigh, NOS
16	SA01.00	Open wound of hip and thigh with complication
17	SA01000	Open wound of hip with complication
18	SA01100	Open wound of thigh with complication
19	SA01z00	Open wound of hip and thigh with complication, NOS
20	SA02.00	Open wound of hip and thigh with tendon involvement
21	SA02.11	Open wound of hip and thigh with tendon injury
22	SA02000	Open wound of hip with tendon involvement
23	SA02100	Open wound of thigh with tendon involvement
24	SA02200	Complete division, quadriceps tendon
25	SA02300	Complete division, hamstring tendon
26	SA02z00	Open wound of hip and thigh with tendon involvement, NOS
27	SA03.00	Degloving injury, hip or thigh
28	SA03000	Degloving injury, hip
29	SA03100	Degloving injury, thigh
30	SA04.00	Severe multi tissue damage hip or thigh
31	SA05.00	Massive multi tissue damage hip or thigh
32	SA0z.00	Open wound of hip and thigh NOS
33	SA1..00	Open wound of knee, leg and ankle
34	SA10.00	Open wound of knee, leg and ankle without complication
35	SA10000	Open wound of knee
36	SA10100	Open wound of leg
37	SA10200	Open wound of ankle
38	SA10z00	Open wound of knee, leg and ankle NOS
39	SA11.00	Open wound of knee, leg and ankle with complication
40	SA11000	Open wound of knee with complication
41	SA11100	Open wound of lower leg with complication
42	SA11200	Open wound of ankle with complication
43	SA11z00	Open wound of knee/leg/ankle with complication, NOS
44	SA12.00	Open wound of knee, leg and ankle with tendon involvement
45	SA12.11	Open wound of leg with tendon injury
46	SA12000	Open wound of knee with tendon involvement
47	SA12100	Open wound of lower leg with tendon involvement
48	SA12200	Open wound of ankle with tendon involvement
49	SA12300	Complete division, patellar tendon
50	SA12400	Complete division, tendocalcaneus (Achilles tendon)
51	SA12z00	Open wound of knee/leg/ankle with tendon involvement, NOS
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2	SA13.00	Degloving injury, knee or leg or ankle
3	SA13000	Degloving injury, knee
4	SA13100	Degloving injury, lower leg
5	SA13200	Degloving injury, ankle
6		
7	SA14.00	Severe multi tissue damage lower leg
8	SA15.00	Massive multi tissue damage lower leg
9	SA16.00	Multiple injuries of ankle and foot
10	SA1z.00	Open wound of knee, leg and ankle NOS
11	SA2..00	Open wound of foot, excluding toe(s)
12	SA2..11	Open wound of heel
13		
14	SA20.00	Open wound of foot without mention of complication
15	SA20100	Open wound foot, plantar
16	SA20200	Open wound foot, dorsum
17	SA20300	Open wound, heel
18	SA21.00	Open wound of foot with complication
19	SA22.00	Open wound of foot with tendon involvement
20	SA22.11	Open wound of foot with tendon injury
21	SA22000	Complete division, flexor tendon, foot
22	SA22100	Complete division, extensor tendon, foot
23		
24	SA23.00	Degloving injury, foot
25	SA23000	Degloving injury foot, plantar
26	SA23100	Degloving injury foot, dorsum
27	SA23200	Degloving injury heel
28		
29	SA24.00	Severe multi tissue damage foot
30	SA25.00	Massive multi tissue damage foot
31	SA2z.00	Open wound of foot NOS
32	SA3..00	Open wound of toe(s)
33	SA3..11	Open wound of toenail
34	SA30.00	Open wound of toe(s) without mention of complication
35	SA31.00	Open wound of toe(s) with complication
36	SA32.00	Open wound of toe(s) with tendon involvement
37	SA32.11	Open wound of toe(s) with tendon injury
38	SA33.00	Degloving injury toe(s)
39	SA33000	Degloving injury toe
40	SA33100	Degloving injury, multiple toes
41	SA34.00	Open wound of toe(s) with damage to nail
42	SA3z.00	Open wound of toe(s) NOS
43	SA4..00	Multiple and unspecified open wound of lower limb
44	SA40.00	Multiple and unspec open wound leg, without complication
45	SA41.00	Multiple and unspec open wound of leg with complication
46	SA42.00	Multiple and unspec open wound leg with tendon involvement
47	SA4z.00	Multiple and unspecified open wound of lower limb NOS
48		
49	SA9..00	Multiple open wounds of hip and thigh
50	SAA..00	Open wounds involving multiple regions of lower limb(s)
51	SAz..00	Open wound of lower limb NOS
52	SC10.00	Late effect of open wound of head, neck and trunk
53	SC11.00	Late effect of open wound arm or leg without tendon injury
54	SC15.00	Late effect of burn of eye, head and neck
55	SC15.11	Late effect of burn of head or neck
56	SC16.00	Late effect of burn of wrist and hand
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2	SC17.00	Late effect of burn of arm, leg and foot
3	SC17.11	Late effect of burn of arm or leg
4	SC18.00	Late effect of other burns
5	SC19.00	Late effect of burn NOS
6	SC1A.00	Late effect of burn of upper limb
7	SC38.00	Sequelae of open wound of head
8	SC3A.00	Sequelae of superficial injury + open wound of neck + trunk
9	SC3C.00	Sequelae of open wound of upper limb
10	SC3D000	Sequelae of open wound of lower limb
11	SC44.00	Sequelae of burns, corrosions and frostbite
12	SC44000	Sequelae of burn, corrosion and frostbite of trunk
13	SC44100	Sequelae of burn, corrosion and frostbite of lower limb
14	SC44200	Seq/burn+corros classfbl only accord extent/body surf involv
15	SD01.00	Abrasion or friction burn of head, infected
16	SD01.11	Abrasion or friction burn of head, infected
17	SD01000	Abrasion of face, infected
18	SD01100	Abrasion of neck, infected
19	SD01200	Abrasion of scalp, infected
20	SD01z00	Abrasion or friction burn of head, infected, NOS
21	SD03.00	Blister of head, infected
22	SD03000	Blister of face, infected
23	SD03100	Blister of neck, infected
24	SD03200	Blister of scalp, infected
25	SD03z00	Blister of head, infected, NOS
26	SD05.00	Insect bite, nonvenomous, of head, infected
27	SD05.11	Insect bite, nonvenomous, of head, infected
28	SD05000	Insect bite, nonvenomous, of face, infected
29	SD05100	Insect bite, nonvenomous, of neck, infected
30	SD05200	Insect bite, nonvenomous, of scalp, infected
31	SD05z00	Insect bite, nonvenomous, of head, infected, NOS
32	SD11.00	Abrasion or friction burn of trunk, infected
33	SD11000	Abrasion of interscapular region, infected
34	SD11100	Abrasion of chest wall, infected
35	SD11200	Abrasion of breast, infected
36	SD11300	Abrasion of abdominal wall, infected
37	SD11400	Abrasion of back, infected
38	SD11500	Abrasion of buttock, infected
39	SD11600	Abrasion of anus, infected
40	SD11700	Abrasion of flank, infected
41	SD11800	Abrasion of groin, infected
42	SD11900	Abrasion of perineum, infected
43	SD11A00	Abrasion of penis, infected
44	SD11B00	Abrasion of scrotum and testis, infected
45	SD11B11	Abrasion or friction burn of scrotum, infected
46	SD11B12	Abrasion or friction burn of testis, infected
47	SD11C00	Abrasion of vulva, infected
48	SD11z00	Abrasion or friction burn of trunk, infected, NOS
49	SD13.00	Blister of trunk, infected
50	SD13000	Blister of interscapular region, infected
51	SD13100	Blister of chest wall, infected
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2	SD13200	Blister of breast, infected
3	SD13300	Blister of abdominal wall, infected
4	SD13400	Blister of back, infected
5	SD13500	Blister of buttock, infected
6	SD13600	Blister of anus, infected
7	SD13700	Blister of flank, infected
8	SD13800	Blister of groin, infected
9	SD13900	Blister of perineum, infected
10	SD13A00	Blister of penis, infected
11	SD13B00	Blister of scrotum and testis, infected
12	SD13B11	Blister of scrotum, infected
13	SD13B12	Blister of testis, infected
14	SD13C00	Blister of vulva, infected
15	SD13D00	Blister of vagina, infected
16	SD13z00	Blister of trunk, infected, NOS
17	SD15.00	Insect bite, nonvenomous, of trunk, infected
18	SD15000	Insect bite, nonvenomous, of interscapular region, infected
19	SD15100	Insect bite, nonvenomous, of chest wall, infected
20	SD15200	Insect bite, nonvenomous, of breast, infected
21	SD15300	Insect bite, nonvenomous, of abdominal wall, infected
22	SD15400	Insect bite, nonvenomous, of back, infected
23	SD15500	Insect bite, nonvenomous, of buttock, infected
24	SD15600	Insect bite, nonvenomous, of anus, infected
25	SD15700	Insect bite, nonvenomous, of flank, infected
26	SD15800	Insect bite, nonvenomous, of groin, infected
27	SD15900	Insect bite, nonvenomous, of perineum, infected
28	SD15A00	Insect bite, nonvenomous, of penis, infected
29	SD15B00	Insect bite, nonvenomous, of scrotum and testis, infected
30	SD15B11	Insect bite, nonvenomous, of scrotum, infected
31	SD15B12	Insect bite, nonvenomous, of testis, infected
32	SD15C00	Insect bite, nonvenomous, of vulva, infected
33	SD15D00	Insect bite, nonvenomous, of vagina, infected
34	SD15z00	Insect bite, nonvenomous, of trunk, infected, NOS
35	SD1z.00	Superficial injury of trunk NOS, infected
36	SD1z000	Superficial injury of interscapular region NOS, infected
37	SD1z100	Superficial injury of chest wall NOS, infected
38	SD1z200	Superficial injury of breast NOS, infected
39	SD1z300	Superficial injury of abdominal wall NOS, infected
40	SD1z400	Superficial injury of back NOS, infected
41	SD1z500	Superficial injury of buttock NOS, infected
42	SD1z600	Superficial injury of anus NOS, infected
43	SD1z700	Superficial injury of flank NOS, infected
44	SD1z800	Superficial injury of groin NOS, infected
45	SD1z900	Superficial injury of perineum NOS, infected
46	SD1zA00	Superficial injury of penis NOS, infected
47	SD1zB00	Superficial injury of scrotum and testis NOS, infected
48	SD1zC00	Superficial injury of vulva NOS, infected
49	SD1z00	Superficial injury of trunk NOS, infection NOS
50	SD21.00	Abrasion or friction burn of shoulder/upper arm, infected
51	SD21000	Abrasion of shoulder, infected
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2	SD21100 Abrasion of scapular region, infected
3	SD21200 Abrasion of axilla, infected
4	SD21300 Abrasion of upper arm, infected
5	SD21z00 Abrasion or friction burn shoulder/upper arm, infected, NOS
6	SD23.00 Blister of shoulder and upper arm, infected
7	SD23000 Blister of shoulder, infected
8	SD23100 Blister of scapular region, infected
9	SD23200 Blister of axilla, infected
10	SD23300 Blister of upper arm, infected
11	SD23z00 Blister of shoulder and upper arm, infected, NOS
12	SD25.00 Insect bite, nonvenomous, of shoulder/upper arm, infected
13	SD25000 Insect bite, nonvenomous, of shoulder, infected
14	SD25100 Insect bite, nonvenomous, of interscapular region, infected
15	SD25200 Insect bite, nonvenomous, of axilla, infected
16	SD25300 Insect bite, nonvenomous, of upper arm, infected
17	SD25z00 Insect bite, nonvenomous, shoulder/upper arm, infected, NOS
18	SD2z.00 Superficial injury of shoulder and upper arm NOS, infected
19	SD2z000 Superficial injury of shoulder NOS, infected
20	SD2z100 Superficial injury of scapular region NOS, infected
21	SD2z200 Superficial injury of axilla NOS, infected
22	SD2z300 Superficial injury of upper arm NOS, infected
23	SD2zz00 Superficial injury shoulder/upper arm, infection NOS
24	SD31.00 Abrasion or friction burn of lower arm, infected
25	SD31000 Abrasion of elbow, infected
26	SD31100 Abrasion of forearm, infected
27	SD31200 Abrasion of wrist, infected
28	SD31z00 Abrasion or friction burn of lower arm, infected, NOS
29	SD33.00 Blister of lower arm, infected
30	SD33000 Blister of elbow, infected
31	SD33100 Blister of forearm, infected
32	SD33200 Blister of wrist, infected
33	SD33z00 Blister of lower arm, infected, NOS
34	SD35.00 Insect bite, nonvenomous, of lower arm, infected
35	SD35000 Insect bite, nonvenomous, of elbow, infected
36	SD35100 Insect bite, nonvenomous, of forearm, infected
37	SD35200 Insect bite, nonvenomous, of wrist, infected
38	SD35z00 Insect bite, nonvenomous, of lower arm, infected, NOS
39	SD3z.00 Superficial injury of lower arm NOS, infected
40	SD3z000 Superficial injury of elbow NOS, infected
41	SD3z100 Superficial injury of forearm NOS, infected
42	SD3z200 Superficial injury of wrist NOS, infected
43	SD3zz00 Superficial injury of lower arm, infected NOS
44	SD41.00 Abrasion or friction burn of hand, infected
45	SD43.00 Blister of hand, infected
46	SD45.00 Insect bite, nonvenomous, of hand, infected
47	SD4z.00 Superficial injury of hand NOS, infected
48	SD51.00 Abrasion or friction burn of finger, infected
49	SD53.00 Blister of finger, infected
50	SD55.00 Insect bite, nonvenomous, of finger, infected
51	SD5z.00 Superficial injury of finger NOS, infected
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2	SD61.00	Abrasion or friction burn of lower limb, infected
3	SD61.11	Abrasion or friction burn of leg, infected
4	SD61000	Abrasion of hip, infected
5	SD61100	Abrasion of thigh, infected
6	SD61200	Abrasion of knee, infected
7	SD61300	Abrasion of lower leg, infected
8	SD61400	Abrasion of ankle, infected
9		
10	SD61z00	Abrasion or friction burn of lower limb, infected, NOS
11	SD63.00	Blister of lower limb, infected
12	SD63.11	Blister of leg, infected
13		
14	SD63000	Blister of hip, infected
15	SD63100	Blister of thigh, infected
16	SD63200	Blister of knee, infected
17	SD63300	Blister of lower leg, infected
18	SD63400	Blister of ankle, infected
19		
20	SD63z00	Blister of lower limb, infected, NOS
21	SD65.00	Insect bite, nonvenomous, of lower limb, infected
22	SD65.11	Insect bite, nonvenomous, of leg, infected
23		
24	SD65000	Insect bite, nonvenomous, of hip, infected
25	SD65100	Insect bite, nonvenomous, of thigh, infected
26	SD65200	Insect bite, nonvenomous, of knee, infected
27	SD65300	Insect bite, nonvenomous, of lower leg, infected
28	SD65400	Insect bite, nonvenomous, of ankle, infected
29		
30	SD65z00	Insect bite, nonvenomous, of lower limb, infected, NOS
31	SD6z.00	Superficial injury of lower limb, infected
32	SD6z000	Superficial injury of hip NOS, infected
33	SD6z100	Superficial injury of thigh NOS, infected
34	SD6z200	Superficial injury of knee NOS, infected
35	SD6z300	Superficial injury of lower leg NOS, infected
36	SD6z400	Superficial injury of ankle NOS, infected
37		
38	SD6zz00	Superficial injury of lower limb, infected, NOS
39	SD71.00	Abrasion or friction burn of foot and toe, infected
40	SD71.11	Abrasion or friction burn of heel, infected
41	SD71.12	Abrasion or friction burn of toenail, infected
42		
43	SD71000	Abrasion of foot, infected
44	SD71100	Abrasion of toe, infected
45	SD71z00	Abrasion or friction burn of foot and toe, infected, NOS
46	SD73.00	Blister of foot and toe, infected
47	SD73.11	Blister of heel, infected
48		
49	SD73000	Blister of foot, infected
50	SD73100	Blister of toe, infected
51	SD73z00	Blister of foot and toe, infected, NOS
52	SD75.00	Insect bite, nonvenomous, of foot and toe, infected
53	SD75.11	Insect bite, nonvenomous, of heel, infected
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55	SD75000	Insect bite, nonvenomous, of foot, infected
56	SD75100	Insect bite, nonvenomous, of toe, infected
57	SD75z00	Insect bite, nonvenomous, of foot and toe, infected, NOS
58	SD7z.00	Superficial injury of foot and toe NOS, infected
59	SD7z000	Superficial injury of foot NOS, infected
60	SD7z100	Superficial injury of toe NOS, infected

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2	SD7zz00	Superficial injury of foot and toe, infected, NOS
3	SD91.00	Abrasion or friction burn, infected, NOS
4	SD95.00	Insect bite, nonvenomous, infected, NOS
5	SD96000	Foreign body in skin wound
6	SD99.00	Tick bite, infected
7	SD9z.00	Other superficial injury, infected, NOS
8	SH...00	Burns
9	SH1..00	Burn of the face, head or neck
10	SH1..11	Face burns
11	SH1..12	Head burns
12	SH10.00	Unspecified thickness burn of the face, head or neck
13	SH10000	Unspecified thickness burn of unspecified part of face/head
14	SH10100	Unspecified thickness burn of the ear
15	SH10200	Unspecified thickness burn of the eye
16	SH10300	Unspecified thickness burn of the lip(s)
17	SH10400	Unspecified thickness burn of the chin
18	SH10500	Unspecified thickness burn of the nose
19	SH10600	Unspecified thickness burn of the scalp
20	SH10700	Unspecified thickness burn of the forehead
21	SH10800	Unspecified thickness burn of the cheek
22	SH10900	Unspecified thickness burn of the neck
23	SH10x00	Unspecified thickness burn multiple sites face, head or neck
24	SH10z00	Unspecified thickness burn of the face, head or neck NOS
25	SH11.00	Superficial burn of the face, head or neck
26	SH11.11	Erythema of head or neck, first degree burn
27	SH11000	Superficial burn of unspecified part of the face or head
28	SH11100	Superficial burn of the ear
29	SH11200	Superficial burn of the eye
30	SH11300	Superficial burn of the lip(s)
31	SH11400	Superficial burn of the chin
32	SH11500	Superficial burn of the nose
33	SH11600	Superficial burn of the scalp
34	SH11700	Superficial burn of the forehead
35	SH11800	Superficial burn of the cheek
36	SH11900	Superficial burn of the neck
37	SH11x00	Superficial burn of multiple sites of the face, head or neck
38	SH11z00	Superficial burn of the face, head or neck NOS
39	SH12.00	Partial thickness burn of the face, head or neck
40	SH12.11	Blister of face, head and neck, second degree burn
41	SH12000	Superficial part. thickness burn unspecified part face/head
42	SH12100	Superficial partial thickness burn of the ear
43	SH12111	Ear - 2nd degree burn
44	SH12200	Superficial partial thickness burn of the eye
45	SH12211	Eye - 2nd degree burn
46	SH12300	Superficial partial thickness burn of the lip(s)
47	SH12311	Lip - 2nd degree burn
48	SH12400	Superficial partial thickness burn of the chin
49	SH12411	Chin - 2nd degree burn
50	SH12500	Superficial partial thickness burn of the nose
51	SH12511	Nose - 2nd degree burn
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2	SH12600	Superficial partial thickness burn of the scalp
3	SH12611	Scalp - 2nd degree burn
4	SH12700	Superficial partial thickness burn of the forehead
5	SH12711	Forehead - 2nd degree burn
6	SH12800	Superficial partial thickness burn of the cheek
7	SH12811	Cheek - 2nd degree burn
8	SH12900	Superficial partial thickness burn of the neck
9	SH12911	Neck - 2nd degree burn
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11	SH12A00	Deep partial thickness burn of unspecified part of face/head
12	SH12B00	Deep partial thickness burn of the ear
13	SH12C00	Deep partial thickness burn of the eye
14	SH12D00	Deep partial thickness burn of the lip(s)
15	SH12E00	Deep partial thickness burn of the chin
16	SH12F00	Deep partial thickness burn of the nose
17	SH12G00	Deep partial thickness burn of the scalp
18	SH12H00	Deep partial thickness burn of the forehead
19	SH12J00	Deep partial thickness burn of the cheek
20	SH12K00	Deep partial thickness burn of the neck
21	SH12x00	Partial thickness burn of multiple sites face, head or neck
22	SH12z00	Partial thickness burn of the face, head or neck NOS
23	SH13.00	Full thickness burn of the face, head or neck
24	SH13000	Full thickness burn of unspecified part of the face or head
25	SH13100	Full thickness burn of the ear
26	SH13200	Full thickness burn of the eye
27	SH13300	Full thickness burn of the lip(s)
28	SH13400	Full thickness burn of the chin
29	SH13500	Full thickness burn of the nose
30	SH13600	Full thickness burn of the scalp
31	SH13700	Full thickness burn of the forehead
32	SH13800	Full thickness burn of the cheek
33	SH13900	Full thickness burn of the neck
34	SH13A00	Corrosion of third degree of head and neck
35	SH13x00	Full thickness burn of multiple sites of face, head or neck
36	SH13z00	Full thickness burn of the face, head or neck NOS
37	SH14.00	Deep full thick burn face/head/neck - without loss body part
38	SH14000	Deep full thick burn unspec.part face/head-no loss body part
39	SH14100	Deep full thickness burn of ear without loss of body part
40	SH14200	Deep full thickness burn of eye without loss of body part
41	SH14300	Deep full thickness burn of lip(s) without loss of body part
42	SH14400	Deep full thickness burn of chin without loss of body part
43	SH14500	Deep full thickness burn of nose without loss of body part
44	SH14600	Deep full thickness burn of scalp without loss of body part
45	SH14700	Deep full thickness burn forehead without loss of body part
46	SH14800	Deep full thickness burn of cheek without loss of body part
47	SH14900	Deep full thickness burn of neck without loss of body part
48	SH14x00	Deep full thickness burn multip sites face/head/neck- no BPL
49	SH14z00	Deep full thick burn, no loss body part, face/head/neck NOS
50	SH15.00	Deep full thick burn face/head/neck, with loss of body part
51	SH15000	Deep full thickness burn unspec part of face/head, with BPL
52	SH15100	Deep full thickness burn of the ear, with loss of body part
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2	SH15200	Deep full thickness burn of the eye, with loss of body part
3	SH15300	Deep full thickness burn of lip(s), with loss of body part
4	SH15400	Deep full thickness burn of the chin, with loss of body part
5	SH15500	Deep full thickness burn of the nose, with loss of body part
6	SH15600	Deep full thickness burn of scalp, with loss of body part
7	SH15700	Deep full thickness burn of forehead, with loss of body part
8	SH15800	Deep full thickness burn of cheek, with loss of body part
9	SH15900	Deep full thickness burn of the neck, with loss of body part
10	SH15x00	Deep full thick burn multip parts face/head/neck - with BPL
11	SH15z00	Deep full thick burn, with loss body part,face/head/neck NOS
12	SH16.00	Corrosion of head and neck
13	SH16000	Corrosion of first degree of head and neck
14	SH16100	Corrosion of second degree of head and neck
15	SH1z.00	Burn of the face, head or neck NOS
16	SH2..00	Burn of the trunk
17	SH20.00	Unspecified thickness burn of the trunk
18	SH20000	Unspecified thickness burn of unspecified part of the trunk
19	SH20100	Unspecified thickness burn of the breast
20	SH20200	Unspecified thickness burn of the chest wall
21	SH20300	Unspecified thickness burn of the abdominal wall
22	SH20400	Unspecified thickness burn of the back (excluding buttock)
23	SH20500	Unspecified thickness burn of the buttock
24	SH20600	Unspecified thickness burn of the genitalia
25	SH20x00	Unspecified thickness burn of multiple sites of the trunk
26	SH20z00	Unspecified thickness burn of the trunk NOS
27	SH21.00	Superficial burn of the trunk
28	SH21.11	Erythema of trunk, 1st degree burn
29	SH21000	Superficial burn of unspecified part of the trunk
30	SH21100	Superficial burn of the breast
31	SH21200	Superficial burn of the chest wall
32	SH21300	Superficial burn of the abdominal wall
33	SH21400	Superficial burn of the back (excluding buttock)
34	SH21500	Superficial burn of the buttock
35	SH21600	Superficial burn of the genitalia
36	SH21700	Corrosion of first degree of trunk
37	SH21x00	Superficial burn of multiple sites of the trunk
38	SH21z00	Superficial burn of the trunk NOS
39	SH22.00	Partial thickness burn of the trunk
40	SH22.11	Blister of trunk, second degree burn
41	SH22000	Superficial partial thickness burn unspecified part of trunk
42	SH22100	Superficial partial thickness burn of the breast
43	SH22200	Superficial partial thickness burn of the chest wall
44	SH22300	Superficial partial thickness burn of the abdominal wall
45	SH22400	Superficial partial thickness burn of back (excl buttock)
46	SH22500	Superficial partial thickness burn of the buttock
47	SH22600	Superficial partial thickness burn of the genitalia
48	SH22700	Deep partial thickness burn of the trunk, unspecified
49	SH22800	Deep partial thickness burn of the breast
50	SH22900	Deep partial thickness burn of the chest wall
51	SH22A00	Deep partial thickness burn of the abdominal wall
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2	SH22B00	Deep partial thickness burn of the back (excluding buttock)
3	SH22C00	Deep partial thickness burn of the buttock
4	SH22D00	Deep partial thickness burn of the genitalia
5	SH22E00	Corrosion of second degree of trunk
6	SH22x00	Partial thickness burn of multiple sites of the trunk
7	SH22z00	Partial thickness burn of the trunk NOS
8	SH23.00	Full thickness burn of the trunk
9	SH23000	Full thickness burn of the trunk, unspecified
10	SH23100	Full thickness burn of the breast
11	SH23200	Full thickness burn of the chest wall
12	SH23300	Full thickness burn of the abdominal wall
13	SH23400	Full thickness burn of the back (excluding buttock)
14	SH23500	Full thickness burn of the buttock
15	SH23600	Full thickness burn of the genitalia
16	SH23700	Corrosion of third degree of trunk
17	SH23x00	Full thickness burn of multiple sites of the trunk
18	SH23z00	Full thickness burn of the trunk NOS
19	SH24.00	Deep full thickness burn of trunk without loss of body part
20	SH24000	Deep full thickness burn of trunk unsp, no loss of body part
21	SH24100	Deep full thickness burn of breast without loss of body part
22	SH24200	Deep full thickness burn of chest without loss of body part
23	SH24300	Deep full thickness burn of abdom.wall, no loss of body part
24	SH24400	Deep full thickness burn of back without loss of body part
25	SH24500	Deep full thickness burn of buttock, no loss of body part
26	SH24600	Deep full thickness burn of genitalia, no loss of body part
27	SH24x00	Deep full thickness burn multiple sites trunk, no BPL
28	SH24z00	Deep full thickness burn of trunk, no loss of body part NOS
29	SH25.00	Deep full thickness burn of trunk, with loss of body part
30	SH25000	Deep full thickness burn of trunk unsp, with loss body part
31	SH25100	Deep full thickness burn of breast, with loss of body part
32	SH25200	Deep full thickness burn of chest, with loss of body part
33	SH25300	Deep full thickness burn of abd.wall, with loss of body part
34	SH25400	Deep full thickness burn of back, with loss of body part
35	SH25500	Deep full thickness burn of buttock, with loss of body part
36	SH25600	Deep full thickness burn of genitalia, with loss body part
37	SH25x00	Deep full thickness burn multiple sites trunk with BPL
38	SH25z00	Deep full thickness burn of trunk, with loss body part, NOS
39	SH26.00	Corrosion of unspecified degree of trunk
40	SH2z.00	Burn of the trunk NOS
41	SH3..00	Burn of the arm (excluding wrist and hand)
42	SH30.00	Unspecified thickness burn of the arm
43	SH30000	Unspecified thickness burn of the arm, unspecified
44	SH30100	Unspecified thickness burn of the forearm
45	SH30200	Unspecified thickness burn of the elbow
46	SH30300	Unspecified thickness burn of the upper arm
47	SH30400	Unspecified thickness burn of the axilla
48	SH30500	Unspecified thickness burn of the shoulder
49	SH30600	Unspecified thickness burn of the scapular region
50	SH30x00	Unspecified thickness burn of multiple sites of the arm
51	SH30z00	Unspecified thickness burn of the arm NOS



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2	SH31.00	Superficial burn of the arm
3	SH31.11	Erythema of arm, first degree burn
4	SH31000	Superficial burn of the arm, unspecified
5	SH31100	Superficial burn of the forearm
6	SH31200	Superficial burn of the elbow
7	SH31300	Superficial burn of the upper arm
8	SH31400	Superficial burn of the axilla
9	SH31500	Superficial burn of the shoulder
10	SH31600	Superficial burn of the scapular region
11	SH31x00	Superficial burn of multiple sites of the arm
12	SH31z00	Superficial burn of the arm NOS
13	SH32.00	Partial thickness burn of the arm
14	SH32.11	Blister of arm, second degree burn
15	SH32000	Superficial partial thickness burn of the arm, unspecified
16	SH32100	Superficial partial thickness burn of the forearm
17	SH32200	Superficial partial thickness burn of the elbow
18	SH32300	Superficial partial thickness burn of the upper arm
19	SH32400	Superficial partial thickness burn of the axilla
20	SH32500	Superficial partial thickness burn of the shoulder
21	SH32600	Superficial partial thickness burn of scapular region
22	SH32700	Deep partial thickness burn of the arm, unspecified
23	SH32800	Deep partial thickness burn of the forearm
24	SH32900	Deep partial thickness burn of the elbow
25	SH32A00	Deep partial thickness burn of the upper arm
26	SH32B00	Deep partial thickness burn of the axilla
27	SH32C00	Deep partial thickness burn of the shoulder
28	SH32D00	Deep partial thickness burn of the scapular region
29	SH32x00	Partial thickness burn of multiple sites of the arm
30	SH32z00	Partial thickness burn of the arm NOS
31	SH33.00	Full thickness burn of the arm
32	SH33000	Full thickness burn of the arm, unspecified
33	SH33100	Full thickness burn of the forearm
34	SH33200	Full thickness burn of the elbow
35	SH33300	Full thickness burn of the upper arm
36	SH33400	Full thickness burn of the axilla
37	SH33500	Full thickness burn of the shoulder
38	SH33600	Full thickness burn of the scapular region
39	SH33x00	Full thickness burn of multiple sites of the arm
40	SH33z00	Full thickness burn of the arm NOS
41	SH34.00	Deep full thickness burn of arm without loss of body part
42	SH34000	Deep full thickness burn of arm unsp, no loss of body part
43	SH34100	Deep full thickness burn of forearm, no loss of body part
44	SH34200	Deep full thickness burn of elbow without loss of body part
45	SH34300	Deep full thickness burn of upper arm, no loss of body part
46	SH34400	Deep full thickness burn of axilla without loss of body part
47	SH34500	Deep full thickness burn of shoulder, no loss of body part
48	SH34600	Deep full thickness burn of scapular, no loss of body part
49	SH34x00	Deep full thickness burn of multiple sites of arm, no BPL
50	SH34z00	Deep full thickness burn without loss of body part-arm NOS
51	SH35.00	Deep full thickness burn of arm, with loss of body part
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SH35000	Deep full thickness burn of arm unsp, with loss of body part
SH35100	Deep full thickness burn of forearm, with loss of body part
SH35200	Deep full thickness burn of elbow, with loss of body part
SH35300	Deep full thickness burn of upper arm,with loss of body part
SH35400	Deep full thickness burn of axilla, with loss of body part
SH35500	Deep full thickness burn of shoulder, with loss of body part
SH35600	Deep full thickness burn of scapular, with loss of body part
SH35x00	Deep full thickness burn of multiple sites of arm with BPL
SH35z00	Deep full thickness burn-, with loss of body part-arm NOS
SH36.00	Corros/unspecf degree/shoulder+upper limb,except wrist+hand
SH36000	Corrosion/1st degree shoulder+upper limb,except wrist+hand
SH36100	Corrosion/2nd degree/shoulder and upper limb exc wrist+hand
SH36200	Corros/third degree/shoulder and upper limb, exc wrist+hand
SH3z.00	Burn of the arm (excluding wrist and hand) NOS
SH4..00	Burn of the wrist(s) and hand(s)
SH40.00	Unspecified thickness burn of the wrist and hand
SH40.11	Unspecified degree burn of finger
SH40.12	Unspecified degree burn of hand
SH40.13	Unspecified degree burn of thumb
SH40.14	Unspecified degree burn of wrist
SH40000	Unspecified thickness burn of the hand, unspecified
SH40100	Unspecified thickness burn of a single finger
SH40200	Unspecified thickness burn of the thumb
SH40300	Unspecified thickness burn of more than one finger
SH40400	Unspecified thickness burn of the thumb and finger(s)
SH40500	Unspecified thickness burn of the palm of hand
SH40600	Unspecified thickness burn of the back of hand
SH40700	Unspecified thickness burn of the wrist
SH40x00	Unspecified thickness burn of multiple sites of wrist/hand
SH40z00	Unspecified thickness burn of the wrist or hand NOS
SH41.00	Superficial burn of the wrist and hand
SH41.11	Erythema of wrist and hand,first degree burn
SH41.12	First degree burn of finger
SH41.13	First degree burn of hand
SH41.14	First degree burn of thumb
SH41.15	First degree burn of wrist
SH41000	Superficial burn of the hand, unspecified
SH41100	Superficial burn of a single finger
SH41200	Superficial burn of the thumb
SH41300	Superficial burn of more than one finger
SH41400	Superficial burn of the thumb and finger(s)
SH41500	Superficial burn of the palm of hand
SH41600	Superficial burn of the back of hand
SH41700	Superficial burn of the wrist
SH41x00	First degree burn of multiple sites of the wrist or hand
SH41z00	Superficial burn of the wrist or hand NOS
SH42.00	Partial thickness burn of the wrist and hand
SH42.11	Blister of wrist and hand, second degree burn
SH42.12	Second degree burn of finger
SH42.13	Second degree burn of hand

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2	SH42.14	Second degree burn of thumb
3	SH42.15	Second degree burn of wrist
4	SH42000	Superficial partial thickness burn of hand, unspecified
5	SH42100	Superficial partial thickness burn of a single finger
6	SH42200	Superficial partial thickness burn of the thumb
7	SH42300	Superficial partial thickness burn of more than one finger
8	SH42400	Superficial partial thickness burn of thumb and finger(s)
9	SH42500	Superficial partial thickness burn of palm of hand
10	SH42600	Superficial partial thickness burn of back of hand
11	SH42700	Superficial partial thickness burn of the wrist
12	SH42800	Deep partial thickness burn of the hand, unspecified
13	SH42900	Deep partial thickness burn of a single finger
14	SH42A00	Deep partial thickness burn of the thumb
15	SH42B00	Deep partial thickness burn of more than one finger
16	SH42C00	Deep partial thickness burn of the thumb and finger(s)
17	SH42D00	Deep partial thickness burn of the palm of hand
18	SH42E00	Deep partial thickness burn of back of hand
19	SH42F00	Deep partial thickness burn of wrist
20	SH42x00	Partial thickness burn of multiple sites of the wrist/hand
21	SH42z00	Partial thickness burn of the wrist or hand NOS
22	SH43.00	Full thickness burn of the wrist and hand
23	SH43.11	Third degree burn of finger
24	SH43.12	Third degree burn of hand
25	SH43.13	Third degree burn of thumb
26	SH43.14	Third degree burn of wrist
27	SH43000	Full thickness burn of the hand, unspecified
28	SH43100	Full thickness burn of a single finger
29	SH43200	Full thickness burn of the thumb
30	SH43300	Full thickness burn of more than one finger
31	SH43400	Full thickness burn of the thumb and finger(s)
32	SH43500	Full thickness burn of the palm of hand
33	SH43600	Full thickness burn of the back of hand
34	SH43700	Full thickness burn of the wrist
35	SH43x00	Full thickness burn of multiple sites of the wrist or hand
36	SH43z00	Full thickness burn of the wrist or hand NOS
37	SH44.00	Deep full thickness burn of wrist/hand, no loss of body part
38	SH44.11	Deep third degree burn of finger, without loss of a body part
39	SH44.12	Deep third degree burn of hand, without loss of a body part
40	SH44.13	Deep third degree burn of thumb, without loss of a body part
41	SH44.14	Deep third degree burn of wrist, without loss of a body part
42	SH44000	Deep full thickness burn of hand unsp, no loss of body part
43	SH44100	Deep full thickness burn of a finger, no loss of body part
44	SH44200	Deep full thickness burn of thumb without loss of body part
45	SH44300	Deep full thickness burn of >1 finger, no loss of body part
46	SH44400	Deep full thickness burn of thumb+fing, no loss of body part
47	SH44500	Deep full thickness burn of palm hand, no loss of body part
48	SH44600	Deep full thickness burn of back hand, no loss of body part
49	SH44700	Deep full thickness burn of wrist without loss of body part
50	SH44x00	Deep full thickness burn-multiple sites wrist/hand, no BPL
51	SH44z00	Deep full thickness burn of wrist/hand, no loss body part NOS
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2	SH45.00	Deep full thickness burn of wrist/hand, with loss body part
3	SH45.11	Deep third degree burn of finger with loss of a body part
4	SH45.12	Deep third degree burn of hand with loss of a body part
5	SH45.13	Deep third degree burn of thumb with loss of a body part
6	SH45.14	Deep third degree burn of wrist with loss of a body part
7	SH45000	Deep full thickness burn of hand unsp, with loss body part
8	SH45100	Deep full thickness burn of a finger, with loss of body part
9	SH45200	Deep full thickness burn of thumb, with loss of body part
10	SH45300	Deep full thickness burn of >1 finger, with loss body part
11	SH45400	Deep full thickness burn of thumb+fing, with loss body part
12	SH45500	Deep full thickness burn of palm hand, with loss body part
13	SH45600	Deep full thickness burn of back hand, with loss body part
14	SH45700	Deep full thickness burn of wrist, with loss of body part
15	SH45x00	Deep full thickness burn-multiple sites wrist/hand with BPL
16	SH45z00	Deep full thickness burn wrist/hand, with loss body part NOS
17	SH46.00	Corrosion of wrist and hand
18	SH46000	Corrosion of first degree of wrist and hand
19	SH46100	Corrosion of second degree of wrist and hand
20	SH46200	Corrosion of third degree of wrist and hand
21	SH4z.00	Burn of wrist or hand NOS
22	SH5..00	Burn of lower limbs
23	SH5..11	Leg burns
24	SH50.00	Unspecified thickness burn of the leg
25	SH50000	Unspecified degree burn of the leg, unspecified
26	SH50100	Unspecified thickness burn of the toe(s)
27	SH50200	Unspecified thickness burn of the foot
28	SH50300	Unspecified thickness burn of the ankle
29	SH50400	Unspecified thickness burn of the lower leg
30	SH50500	Unspecified thickness burn of the knee
31	SH50600	Unspecified thickness burn of the thigh
32	SH50x00	Unspecified thickness burn of multiple sites of the leg
33	SH50z00	Unspecified thickness burn of the leg NOS
34	SH51.00	Superficial burn of the leg
35	SH51.11	Erythema of leg, first degree burn
36	SH51000	Superficial burn of the leg, unspecified
37	SH51100	Superficial burn of the toe(s)
38	SH51200	Superficial burn of the foot
39	SH51300	Superficial burn of the ankle
40	SH51400	Superficial burn of the lower leg
41	SH51500	Superficial burn of the knee
42	SH51600	Superficial burn of the thigh
43	SH51x00	Superficial burn of multiple sites of the leg
44	SH51z00	Superficial burn of the leg NOS
45	SH52.00	Partial thickness burn of the leg
46	SH52.11	Blister of leg, second degree burn
47	SH52000	Superficial partial thickness burn of the leg, unspecified
48	SH52100	Superficial partial thickness burn of the toe(s)
49	SH52200	Superficial partial thickness burn of the foot
50	SH52300	Superficial partial thickness burn of the ankle
51	SH52400	Superficial partial thickness burn of the lower leg
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2	SH52500	Superficial partial thickness burn of the knee
3	SH52600	Superficial partial thickness burn of the thigh
4	SH52700	Deep partial thickness burn of the leg, unspecified
5	SH52800	Deep partial thickness burn of the toe(s)
6	SH52900	Deep partial thickness burn of the foot
7	SH52A00	Deep partial thickness burn of the ankle
8	SH52B00	Deep partial thickness burn of the lower leg
9	SH52C00	Deep partial thickness burn of the knee
10	SH52D00	Deep partial thickness burn of the thigh
11	SH52x00	Partial thickness burn of multiple sites of the leg
12	SH52z00	Partial thickness burn of the leg NOS
13	SH53.00	Full thickness burn of the leg
14	SH53000	Full thickness burn of the leg, unspecified
15	SH53100	Full thickness burn of the toe(s)
16	SH53200	Full thickness burn of the foot
17	SH53300	Full thickness burn of the ankle
18	SH53400	Full thickness burn of the lower leg
19	SH53500	Full thickness burn of the knee
20	SH53600	Full thickness burn of the thigh
21	SH53x00	Full thickness burn of multiple sites of the leg
22	SH53z00	Full thickness burn of the leg NOS
23	SH54.00	Deep full thickness burn of leg without loss of body part
24	SH54000	Deep full thickness burn of leg unsp, no loss of body part
25	SH54100	Deep full thickness burn of toe(s) without loss of body part
26	SH54200	Deep full thickness burn of foot without loss of body part
27	SH54300	Deep full thickness burn of ankle without loss of body part
28	SH54400	Deep full thickness burn of lower leg without loss of body
29	SH54500	Deep full thickness burn of knee without loss of body part
30	SH54600	Deep full thickness burn of thigh without loss of body part
31	SH54x00	Deep full thickness burn-mult.leg without loss of body part
32	SH54z00	Deep full thickness burn, no loss of body part, of leg NOS
33	SH55.00	Deep full thickness burn of leg, with loss of body part
34	SH55000	Deep full thickness burn of leg unsp, with loss body part
35	SH55100	Deep full thickness burn of toe(s), with loss of body part
36	SH55200	Deep full thickness burn of foot, with loss of body part
37	SH55300	Deep full thickness burn of ankle, with loss of body part
38	SH55400	Deep full thickness burn of lower leg, with loss body part
39	SH55500	Deep full thickness burn of knee, with loss of body part
40	SH55600	Deep full thickness burn of thigh, with loss of body part
41	SH55x00	Deep full thickness burn-mult.leg, with loss of body part
42	SH55z00	Deep full thickness burn, with loss of body part, of leg NOS
43	SH56.00	Burn and corrosion of hip and lower limb, except ankle & foot
44	SH56000	Corrosion of first degree of hip+lower limb, exc ankle + foot
45	SH56100	Corrosion/2nd degree/hip+lower limb, except ankle & foot
46	SH56200	Corrosion/third degree/hip+lower limb except ankle and foot
47	SH57.00	Corrosion of ankle and foot
48	SH57000	Corrosion of first degree of ankle and foot
49	SH57100	Corrosion of second degree of ankle and foot
50	SH57200	Corrosion of third degree of ankle and foot
51	SH5z.00	Burn of the lower limb NOS
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2	SH6..00	Burn of multiple specified sites
3	SH60.00	Unspecified thickness burn of multiple specified sites
4	SH61.00	Superficial burn of multiple specified sites
5	SH62.00	Partial thickness burn of multiple specified sites
6	SH62000	Superficial partial thickness burn multiple specified sites
7	SH62100	Deep partial thickness burn of multiple specified sites
8	SH63.00	Full thickness burn of multiple specified sites
9	SH64.00	Deep full thickness burn multiple specified sites, no BPL
10	SH65.00	Deep full thickness burn multiple specified sites, with BPL
11	SH66.00	Corrosions of multiple regions, unspecified degree
12	SH66000	Corros/multiple reg,no more than first-deg corros mentioned
13	SH66100	Corrosion/multi reg,no more than second-deg corros mentioned
14	SH66300	Corros/multi reg,at least one corros/third degree mentioned
15	SH6z.00	Burn of multiple specified sites NOS
16	SH8..00	Burns as a percentage of body surface (BS) involved
17	SH80.00	Burn involving <10% of body surface (BS)
18	SH80000	Burn:<10% of body surface, 10%/unspec BS full thickness
19	SH80100	Corrosions involving less than 10% of body surface
20	SH80z00	Burn:<10% of body surface NOS
21	SH81.00	Burn involving 10-19% of body surface (BS)
22	SH81000	Burn: 10-14% of body surface,<10%/unsp BS full thickness
23	SH81100	Burn: 10-14% of body surface, 10-14% BS full thickness
24	SH81200	Burn: 15-19% of body surface,<10%/unsp BS full thickness
25	SH81300	Burn: 15-19% of body surface, 10-19% BS full thickness
26	SH81400	Corrosions involving 10-19% of body surface
27	SH81z00	Burn: 10-19% of body surface NOS
28	SH82.00	Burn involving 20-29% of body surface (BS)
29	SH82000	Burn: 20-29% of body surface,<10%/unspec BS full thickness
30	SH82100	Burn: 20-29% of body surface, 10-19% BS full thickness
31	SH82200	Burn: 20-29% of body surface, 20-29% BS full thickness
32	SH82300	Corrosions involving 20-29% of body surface
33	SH82z00	Burn: 20-29% of body surface NOS
34	SH83.00	Burn involving 30-39% of body surface (BS)
35	SH83000	Burn: 30-39% of body surface,<10%/unspec BS full thickness
36	SH83100	Burn: 30-39% of body surface, 10-19% BS full thickness
37	SH83200	Burn: 30-39% of body surface, 20-29% BS full thickness
38	SH83300	Burn: 30-39% of body surface, 30-39% BS full thickness
39	SH83400	Corrosions involving 30-39% of body surface
40	SH83z00	Burn: 30-39% of body surface NOS
41	SH84.00	Burn involving 40-49% of body surface (BS)
42	SH84000	Burn: 40-49% of body surface,<10%/unspec BS full thickness
43	SH84100	Burn: 40-49% of body surface, 10-19% BS full thickness
44	SH84200	Burn: 40-49% of body surface, 20-29% BS full thickness
45	SH84300	Burn: 40-49% of body surface, 30-39% BS full thickness
46	SH84400	Burn: 40-49% of body surface, 40-49% BS full thickness
47	SH84500	Corrosions involving 40-49% of body surface
48	SH84z00	Burn: 40-49% of body surface NOS
49	SH85.00	Burn involving 50-59% of body surface (BS)
50	SH85000	Burn: 50-59% of body surface,<10%/unspec BS full thickness
51	SH85100	Burn: 50-59% of body surface, 10-19% BS full thickness
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2	SH85200	Burn: 50-59% of body surface, 20-29% BS full thickness
3	SH85300	Burn: 50-59% of body surface, 30-39% BS full thickness
4	SH85400	Burn: 50-59% of body surface, 40-49% BS full thickness
5	SH85500	Burn: 50-59% of body surface, 50-59% BS full thickness
6	SH85600	Corrosions involving 50-59% of body surface
7	SH85z00	Burn: 50-59% of body surface NOS
8	SH86.00	Burn involving 60-69% of body surface (BS)
9	SH86000	Burn: 60-69% of body surface, <10%/unspec BS full thickness
10	SH86100	Burn: 60-69% of body surface, 10-19% BS full thickness
11	SH86200	Burn: 60-69% of body surface, 20-29% BS full thickness
12	SH86300	Burn: 60-69% of body surface, 30-39% BS full thickness
13	SH86400	Burn: 60-69% of body surface, 40-49% BS full thickness
14	SH86500	Burn: 60-69% of body surface, 50-59% BS full thickness
15	SH86600	Burn: 60-69% of body surface, 60-69% BS full thickness
16	SH86700	Corrosions involving 60-69% of body surface
17	SH86z00	Burn: 60-69% of body surface NOS
18	SH87.00	Burn involving 70-79% of body surface (BS)
19	SH87000	Burn: 70-79% of body surface, <10%/unspec BS full thickness
20	SH87100	Burn: 70-79% of body surface, 10-19% BS full thickness
21	SH87200	Burn: 70-79% of body surface, 20-29% BS full thickness
22	SH87300	Burn: 70-79% of body surface, 30-39% BS full thickness
23	SH87400	Burn: 70-79% of body surface, 40-49% BS full thickness
24	SH87500	Burn: 70-79% of body surface, 50-59% BS full thickness
25	SH87600	Burn: 70-79% of body surface, 60-69% BS full thickness
26	SH87700	Burn: 70-79% of body surface, 70-79% BS full thickness
27	SH87800	Corrosions involving 70-79% of body surface
28	SH87z00	Burn: 70-79% of body surface NOS
29	SH88.00	Burn involving 80-89% of body surface (BS)
30	SH88000	Burn: 80-89% of body surface, <10%/unspec BS full thickness
31	SH88100	Burn: 80-89% of body surface, 10-19% =full thickness
32	SH88200	Burn: 80-89% of body surface, 20-29% BS full thickness
33	SH88300	Burn: 80-89% of body surface, 30-39% BS full thickness
34	SH88400	Burn: 80-89% of body surface, 40-49% BS full thickness
35	SH88500	Burn: 80-89% of body surface, 50-59% BS full thickness
36	SH88600	Burn: 80-89% of body surface, 60-69% BS full thickness
37	SH88700	Burn: 80-89% of body surface, 70-79% BS full thickness
38	SH88800	Burn: 80-89% of body surface, 80-89% BS full thickness
39	SH88900	Corrosions involving 80-89% of body surface
40	SH88z00	Burn: 80-89% of body surface, NOS
41	SH89.00	Burn involving >90% of body surface (BS)
42	SH89000	Burn: >90% of body surface, <10%/unspec BS full thickness
43	SH89100	Burn: >90% of body surface, 10-19% BS full thickness
44	SH89200	Burn: >90% of body surface, 20-29% BS full thickness
45	SH89300	Burn: >90% of body surface, 30-39% BS full thickness
46	SH89400	Burn: >90% of body surface, 40-49% BS full thickness
47	SH89500	Burn: >90% of body surface, 50-59% BS full thickness
48	SH89600	Burn: >90% of body surface, 60-69% BS full thickness
49	SH89700	Burn: >90% of body surface, 70-79% BS full thickness
50	SH89800	Burn: >90% of body surface, 80-89% BS full thickness
51	SH89900	Burn: >90% of body surface, >90% BS full thickness
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2	SH89A00	Corrosions involving 90% or more of body surface
3	SH89z00	Burn: >90% of body surface NOS
4	SH8z.00	Burn as a percentage of body surface involved NOS
5	SH9..00	Burn - unspecified
6	SH90.00	Unspecified degree of burn NOS
7	SH91.00	Superficial burn NOS
8	SH91.11	First degree burn
9	SH92.00	Partial thickness burn NOS
10	SH92.11	Second degree burn
11	SH92000	Superficial partial thickness burn NOS
12	SH92100	Deep partial thickness burn NOS
13	SH93.00	Full thickness burn NOS
14	SH93.11	Third degree burn
15	SH94.00	Deep full thickness burn, without loss of body part, NOS
16	SH95.00	Deep full thickness burn, with loss of body part, NOS
17	SH9z.00	Burn - unspecified
18	SHz..00	Burns NOS
19	SK03.00	Post-traumatic wound infection NEC
20	SK1x200	Multiple open wounds of neck
21	SK1x500	Multiple open wounds of abdomen, lower back and pelvis
22	SK1x700	Multiple open wounds of forearm
23	SK1x800	Multiple open wounds of lower leg
24	SK1x900	Open wounds involv thorax with abdomen,lwr back and pelvis
25	SK1xA00	Open wounds invol multi regions of up limb(s) wth lw limb(s)
26	SP23.00	Operation wound disruption
27	SP23000	Operation wound dehiscence
28	SP23011	Postoperative wound breakdown
29	SP23100	Operation wound rupture
30	SP23200	Surgical wound necrosis
31	SP23300	Burst abdomen NEC
32	SP23400	Breakdown of totally implantable venous access device port
33	SP23z00	Operation wound disruption NOS
34	SP23z11	Delayed healing surgical wound
35	SP23z12	Healing delayed surgical wound
36	SP23z13	Wound surgical healing delayed
37	SP24300	Foreign body left in wound
38	SP25000	Postoperative stitch abscess
39	SP25100	Postoperative wound abscess
40	SP25500	Postoperative wound infection, unspecified
41	SP25600	Postoperative wound infection-deep
42	SP25700	Postoperative wound infection-superficial
43	SP25800	MRSA infection of postoperative wound
44	SP28.00	Postoperative wound sinus
45	SQ...00	Open wounds involving multiple body regions
46	Syu0200	[X]Open wound of other parts of head
47	Syu0A00	[X]Penetrating wound of orbit with or without foreign body
48	Syu1300	[X]Open wound of other parts of the neck
49	Syu1400	[X]Open wound of neck, part unspecified
50	Syu2500	[X]Open wound of other parts of thorax
51	Syu2600	[X]Open wound of thorax, part unspecified
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2	Syu3200	[X]Open wound of oth and unspecif external genital organs
3	Syu3300	[X]Open wound oth & unspecif part abdomen/lower back/pelvis
4	Syu4100	[X]Open wound of oth & unspecif parts of should & upper arm
5	Syu5200	[X]Open wound of other parts of forearm
6	Syu6200	[X]Open wound of other parts of wrist and hand
7	Syu7100	[X]Open wound of other parts of hip and thigh
8	Syu8200	[X]Open wound of other parts of lower leg
9	Syu9200	[X]Open wound of other parts of foot
10	Syu9300	[X]Open wound of other parts of ankle and foot
11	SyuA100	[X]Open wounds involving other combinations of body regions
12	SyuBA00	[X]Open wound of unspecified body region
13	SyuD.00	[X]Burns and corrosions
14	SyuD000	[X]Burns of other parts of eye and adnexa
15	SyuD800	[X]Burns of mult reg, at least 1 burn of 3rd deg mentioned
16	SyuD900	[X]Corrosn multi reg, at least 1 corr of 3rd deg mentioned
17	SyuJ000	[X]Post-traumatic wound infection, not elsewhere classified
18	TG80000	Accidental burning/scalding caused by boiling water, unspec
19	TG80100	Accidental burning/scalding caused by boiling liquid, unspec
20	TG80200	Accidental burning or scalding caused by liquid metal
21	TG80300	Accidental burning or scalding caused by steam
22	TG80400	Accidental burning/scalding by boiling water from kettle
23	TG80500	Accidental burning/scalding by boiling water from saucepan
24	TG80600	Accidental burning or scalding caused by tea
25	TG80700	Accidental burning or scalding caused by coffee
26	TG80800	Accidental burning or scalding caused by chocolate
27	TG80900	Accidental burning or scalding caused by milk
28	TG80A00	Accidental burning/scalding caused by soup, stew or curries
29	TG80B00	Accidental burning or scalding caused by fat
30	TG80C00	Accidental burning or scalding caused by steam from kettle
31	TG80D00	Accidental burning or scalding by steam from car radiator
32	TG80y00	Accidental burning or scalding caused by other hot vapour
33	TG80z00	Accidental burning/scalding caused by hot liquid/vapour NOS
34	TGyz700	Accidental wound NOS
35	Z174M00	Pressure area care
36	Z174M11	PAC - Pressure area care
37	Z174N00	Wound care
38	Z174N11	WOUND TREATMENT
39	Z174N12	WOUND THERAPY
40	Z174O00	Post-surgical wound care
41	Z174O11	Post-operative wound care
42	Z174P00	Pressure sore care
43	Z174Q00	Skin ulcer care
44	Z1B..00	Dressing of skin or wound
45	Z1B..11	Application of dressing
46	Z1B..12	Dressing
47	Z1B1.00	Attention to dressing of skin
48	Z1B1100	Checking dressing of skin
49	Z1B1200	Checking dressing for leakage
50	Z1B1300	Change of dressing
51	Z1B1311	Repeating dressing
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2	Z1B1312	Reapplying a fresh dressing
3	Z1B1313	Redressing wound
4	Z1B1400	Attention to dressing of burnt skin
5	Z1B2.00	Dressing of skin
6	Z1B2100	Dressing of burnt skin
7	Z1B2111	Burn dressing
8	Z1B2200	Covering burnt skin with plastic bag
9	Z1B2300	Dressing of skin ulcer
10	Z1B3.00	Dressing of pressure sore
11	Z1O6100	Exposing wound to air
12	Z1R2.00	Cleaning wound
13	Z1R2.11	Cleansing wound
14	Z1R2.12	Wound toilet
15	Z1R3.00	Debridement of skin
16	Z1R3.11	Debridement of wound of skin
17	Z1R3.12	Wound debridement
18	Z1R3.13	Wound debridement
19	Z1R3100	Debridement of wound with topical agent
20	Z1R3200	Surgical debridement of wound
21	Z1R4.00	Removal of slough from skin
22	Z1R4.11	Desloughing wound
23	Z1R5.00	Removal of contaminant from skin
24	ZA13E00	Insertion of quill in the nail bed
25	ZA14.00	Ablation of nail bed
26	ZA14.11	Ablation of nail matrix
27	ZA14100	Total ablation of nail matrix
28	ZA14200	Partial ablation of nail matrix
29	ZQ37.00	Wound assessment
30	ZQ38.00	Assessment of fluid loss from wound
31	ZQ38.11	Assessing seepage from wound
32	ZQ39.00	Pressure sore assessment
33	ZQ39.11	Decubitus ulcer assessment
34	ZQ39.12	Pressure ulcer assessment
35	ZQ39.13	Bed sore assessment
36	ZQ3A.00	Assessment of burn injuries
37	ZQ3A.11	Assessment of levels of burns
38	ZR1V.00	ASEPSIS score for wound infection
39	Zw02D00	[Q] Open fracture grade 1
40	Zw02E00	[Q] Open fracture grade 2
41	Zw02F00	[Q] Open fracture grade 3
42	Zw02G00	[Q] Open fracture grade 3A
43	Zw02H00	[Q] Open fracture grade 3B
44	Zw02J00	[Q] Open fracture grade 3C
45	ZX14.00	Damaging own wounds
46	ZX14300	Poking fingers into wound
47	ZX14400	Inserting objects into wound
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**The RECORD statement – checklist of items, extended from the STROBE statement, that should be reported in observational studies using routinely collected health data.**

	Item No.	STROBE items	Location in manuscript where items are reported	RECORD items	Location in manuscript where items are reported
<b>Title and abstract</b>					
	1	(a) Indicate the study's design with a commonly used term in the title or the abstract (b) Provide in the abstract an informative and balanced summary of what was done and what was found	Page 1	RECORD 1.1: The type of data used should be specified in the title or abstract. When possible, the name of the databases used should be included.  RECORD 1.2: If applicable, the geographic region and timeframe within which the study took place should be reported in the title or abstract.  RECORD 1.3: If linkage between databases was conducted for the study, this should be clearly stated in the title or abstract.	Page 1  Page 1  N/A
<b>Introduction</b>					
Background rationale	2	Explain the scientific background and rationale for the investigation being reported	Page 6		
Objectives	3	State specific objectives, including any prespecified hypotheses	Page 6		
<b>Methods</b>					
Study Design	4	Present key elements of study design early in the paper	Page 7		
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	Pages 8 and 11		

<p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27</p> <p>Participants</p>	<p>6</p>	<p>(a) <i>Cohort study</i> - Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up  <i>Case-control study</i> - Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls  <i>Cross-sectional study</i> - Give the eligibility criteria, and the sources and methods of selection of participants</p> <p>(b) <i>Cohort study</i> - For matched studies, give matching criteria and number of exposed and unexposed  <i>Case-control study</i> - For matched studies, give matching criteria and the number of controls per case</p>	<p>Page 8</p>	<p>RECORD 6.1: The methods of study population selection (such as codes or algorithms used to identify subjects) should be listed in detail. If this is not possible, an explanation should be provided.</p> <p>RECORD 6.2: Any validation studies of the codes or algorithms used to select the population should be referenced. If validation was conducted for this study and not published elsewhere, detailed methods and results should be provided.</p> <p>RECORD 6.3: If the study involved linkage of databases, consider use of a flow diagram or other graphical display to demonstrate the data linkage process, including the number of individuals with linked data at each stage.</p>	<p>2,095 Read codes were used (Supplementary Table S1).</p> <p>Read codes have been used to code symptoms in the NHS since 1985. IQVIA used these codes to identify the patient population independently of the Authors.</p> <p>N/A</p>
<p>28 29 30 31 32 33 34</p> <p>Variables</p>	<p>7</p>	<p>Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable.</p>	<p>Pages 8-11</p>	<p>RECORD 7.1: A complete list of codes and algorithms used to classify exposures, outcomes, confounders, and effect modifiers should be provided. If these cannot be reported, an explanation should be provided.</p>	<p>N/A</p>
<p>35 36 37 38 39 40 41 42</p> <p>Data sources/ measurement</p>	<p>8</p>	<p>For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group</p>	<p>Pages 8-11</p>		

1 2 3 4 5 6 7 8 9 10	Bias	9	Describe any efforts to address potential sources of bias	Pages 8-10		
11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34	Study size	10	Explain how the study size was arrived at	Pages 8-10		
35 36 37 38 39 40 41 42 43 44 45 46 47	Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen, and why	Pages 8-11		
	Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding (b) Describe any methods used to examine subgroups and interactions (c) Explain how missing data were addressed (d) <i>Cohort study</i> - If applicable, explain how loss to follow-up was addressed <i>Case-control study</i> - If applicable, explain how matching of cases and controls was addressed <i>Cross-sectional study</i> - If applicable, describe analytical methods taking account of sampling strategy (e) Describe any sensitivity analyses	Pages 9-11  Pages 9-11  Page 9-11  N/A         Page10-11		
	Data access and cleaning methods		..		RECORD 12.1: Authors should describe the extent to which the investigators had access to the database population used to create the study population.	Authors did not have access to the THIN database.

				RECORD 12.2: Authors should provide information on the data cleaning methods used in the study.	
Linkage		..		RECORD 12.3: State whether the study included person-level, institutional-level, or other data linkage across two or more databases. The methods of linkage and methods of linkage quality evaluation should be provided.	Pages 8-11
<b>Results</b>					
Participants	13	(a) Report the numbers of individuals at each stage of the study ( <i>e.g.</i> , numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed) (b) Give reasons for non-participation at each stage. (c) Consider use of a flow diagram	Page 12, 27	RECORD 13.1: Describe in detail the selection of the persons included in the study ( <i>i.e.</i> , study population selection) including filtering based on data quality, data availability and linkage. The selection of included persons can be described in the text and/or by means of the study flow diagram.	Pages 8-11.
Descriptive data	14	(a) Give characteristics of study participants ( <i>e.g.</i> , demographic, clinical, social) and information on exposures and potential confounders (b) Indicate the number of participants with missing data for each variable of interest (c) <i>Cohort study</i> - summarise follow-up time ( <i>e.g.</i> , average and total amount)	Pages 12-16  N/A  Pages 12-16		
Outcome data	15	<i>Cohort study</i> - Report numbers of outcome events or summary measures over time <i>Case-control study</i> - Report numbers in each exposure	Pages 12-16, 27-35		



		category, or summary measures of exposure <i>Cross-sectional study</i> - Report numbers of outcome events or summary measures			
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (e.g., 95% confidence interval). Make clear which confounders were adjusted for and why they were included (b) Report category boundaries when continuous variables were categorized (c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	Pages 12-16, 27-35  N/A  N/A		
Other analyses	17	Report other analyses done— e.g., analyses of subgroups and interactions, and sensitivity analyses	Pages 12, 15, 16		
<b>Discussion</b>					
Key results	18	Summarise key results with reference to study objectives	Pages 17-22		
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	Pages 20-22	RECORD 19.1: Discuss the implications of using data that were not created or collected to answer the specific research question(s). Include discussion of misclassification bias, unmeasured confounding, missing data, and changing eligibility over time, as they pertain to the study being reported.	N/A
Interpretation	20	Give a cautious overall interpretation of results considering objectives,	Pages 17-22		

		limitations, multiplicity of analyses, results from similar studies, and other relevant evidence			
Generalisability	21	Discuss the generalisability (external validity) of the study results	Pages 21-22		
<b>Other Information</b>					
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	Page 3		
Accessibility of protocol, raw data, and programming code				RECORD 22.1: Authors should provide information on how to access any supplemental information such as the study protocol, raw data, or programming code.	N/A

\*Reference: Benchimol EI, Smeeth L, Guttman A, Harron K, Moher D, Petersen I, Sørensen HT, von Elm E, Langan SM, the RECORD Working Committee. The REporting of studies Conducted using Observational Routinely-collected health Data (RECORD) Statement. *PLoS Medicine* 2015; in press.

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## COHORT STUDY EVALUATING THE BURDEN OF WOUNDS TO THE UK'S NATIONAL HEALTH SERVICE IN 2017/18: UPDATE FROM 2012/13

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**ORIGINAL ARTICLE****COHORT STUDY EVALUATING THE BURDEN OF WOUNDS TO THE UK'S  
NATIONAL HEALTH SERVICE IN 2017/18: UPDATE FROM 2012/13****Julian F Guest<sup>1</sup>, Graham W Fuller<sup>1</sup>, Peter Vowden<sup>2</sup>****<sup>1</sup>Catalyst Consultants, Poole, UK; <sup>2</sup>Bradford Teaching Hospitals NHS  
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E-mail: [julian.guest@catalyst-health.com](mailto:julian.guest@catalyst-health.com)**Running title:** Health economic impact of wounds in the UK**Word count:** 6,179 excluding Abstract and References**Number of tables and figures:** 10 tables and 0 figures

## ABSTRACT

**Objective:** To evaluate the prevalence of wounds managed by the UK's National Health Service (NHS) in 2017/18 and associated health outcomes, resource use and costs.

**Design:** Retrospective cohort analysis of the electronic records of patients from The Health Improvement Network (THIN) database.

**Setting:** Primary and secondary care sectors in the UK.

**Participants:** Randomly selected cohort of 3,000 patients from the THIN database who had a wound in 2017/18.

**Primary and secondary outcome measures:** Patients' characteristics, wound-related health outcomes, healthcare resource use and total National Health Service (NHS) cost of patient management.

**Results:** There were an estimated 3.8 million patients with a wound managed by the NHS in 2017/18, of which 70% healed in the study year; 89% and 49% of acute and chronic wounds healed, respectively. An estimated 59% of chronic wounds healed if there was no evidence of infection compared to 45% if there was a definite or suspected infection. Healing rate of acute wounds was unaffected by the presence of infection. Smoking status appeared to only affect the healing rate of chronic wounds. Annual levels of resource use attributable to wound management included 54.4 million district/community nurse visits, 53.6 million healthcare assistant visits and 28.1 million practice nurse visits. The annual NHS cost of wound management was £8.3 billion, of which £2.7 billion and £5.6 billion was associated with managing healed and unhealed wounds, respectively. Eighty one per cent of the total annual NHS cost was incurred in the community.

**Conclusion:** The annual prevalence of wounds increased by 71% between 2012/13 and 2017/18. There was a substantial increase in resource use over this period and patient management cost increased by 48% in real terms. There needs to be a structural change within the NHS in order to manage the increasing demand for wound care and improve patient outcomes.

**Keywords:** Burden; cost; ulcers; wounds; UK.

## STRENGTHS AND LIMITATIONS OF THIS STUDY

- This is the first study to estimate how the health economic burden of wounds to the UK's NHS has changed over the last five years.
- This study was undertaken using real world evidence derived from the anonymised records of a randomised sample of 3,000 patients in The Health Improvement Network (THIN) database (a nationally representative database of clinical practice among >11 million patients registered with general practitioners in the UK).
- The estimates were derived following a systematic analysis of patients' characteristics, wound-related health outcomes and community-based and secondary care resource use pertaining to wound care contained in the patients' electronic records.
- The annual number of 3.8 million wounds in 2017/18 may be an underestimate since some of the patients in our data set may have had multiple wounds, but this is not transparent in the patients' records and it is very difficult to retrospectively extricate resource use for different wounds from the records of a patient with multiple wounds of the same aetiology.
- The analysis does not consider the potential impact of those wounds that remained unhealed beyond the study period, nor the potential impact of managing patients with wounds being cared for in nursing homes.



## ETHICS APPROVAL

Ethics approval to use anonymised patients' records from the THIN database for this study was obtained from the Research Ethics Committee that appraises studies using the THIN database (Reference number 18THIN093).

For peer review only

## INTRODUCTION

Our 2012/13 burden of wounds study estimated that the UK's National Health Service (NHS) managed 2.2 million patients with a wound at a cost of £5.3 billion [1-3]. An estimated 61% of all wounds in that burden of wounds study healed in the study year (79% of acute wounds and 43% of chronic wounds). Patients were predominantly managed in the community with 18.6 million practice nurse visits, 10.9 million community nurse visits, 7.7 million general practitioner (GP) visits, 3.4 million hospital outpatient visits. Five years ago, patients also received 97.1 million drug prescriptions and 262.2 million dressings. Additionally, only 16% of all cases with an ulcer of the lower limb had a Doppler ankle brachial pressure index recorded in their records [1].

This study led to such concern among politicians that the UK Parliament (House of Lords) debated developing a national strategy for improving the standards of wound care in the NHS [4]. As a consequence, NHS England and NHS Improvement established the National Wound Care Strategy Programme in the last quarter of 2018 [5]. The aim of the Programme is to scope the development of a national strategy for wound care in England that focuses on improving care relating to pressure ulcers, lower limb ulcers and surgical wounds [5].

Between 2012 and 2017 there was an estimated 4% decline in the number of practice nurses and a 30% decline in the number of district nurses employed in front-line patient care [6-9]. During this period we reported on unwarranted variation in wound care arising in part from inconsistencies in staff involvement and dressing choice and in many instances a lack of a coherent treatment plan [10-16]. Hence, it is reasonable to assume that not all patients with equal need have always had access to, or received, the same continuous levels of healthcare. However, patients should be afforded the best care available (within the context of limited resources) in order to obtain maximum health gains [17].

The aim of this new study was to assess the extent of change in the burden of wounds over five years (i.e. between 2012/13 and 2017/18) in terms of annual prevalence, health outcomes, healthcare resource use and NHS costs.

## METHODS

### Study Design

This was a retrospective cohort analysis of the anonymised case records of patients with a wound randomly extracted from The Health Improvement Network (THIN) database. The perspective of the analysis was the UK's NHS.

### The THIN Database

The THIN database contains electronic records on >11 million anonymised patients entered by GPs from >560 practices across the UK. The patient composition within the THIN database has been shown to be representative of the UK population in terms of demographics and disease distribution [18] and the database theoretically contains patients' entire medical history. In particular, the database collects data on the dates that patients registered or left their practice as well as demographic data, such as date of birth and gender. Patients who reside at the same address or are members of the same family can be linked using a household identifier, provided they are registered with the same general practice.

All medical conditions and symptoms recorded electronically during a patient's consultation in the general practice are recorded in the THIN database, thereby building up long computerised medical histories using Read Codes [19]. GP prescribing is computerised and entered directly into the database. Prescriptions not issued electronically (e.g. during home visits) are also entered, however there is a possibility of under-recording of such items. Information is also recorded on referrals to secondary care, including the specialty. Secondary care information and other medically related information received by the practice are entered into the database. This includes details on hospital admissions, discharge medication, diagnosis, outpatient consultations, investigations and treatment outcomes. Details from other healthcare interventions, such as information on lifestyle and preventative healthcare, as well as a range of variables such as height, weight, body mass index, blood pressure, smoking, alcohol status, immunisation and laboratory test results are also recorded. Hence, the information contained in the THIN database reflects actual clinical practice.

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3 (THIN is a registered trademark of Cegedim SA in the United Kingdom and other countries.  
4 Reference made to the THIN database is intended to be descriptive of the data asset licensed  
5 by IQVIA, who interrogated the database and performed the randomisation independently of  
6 the Authors. The Authors had no direct access to the THIN database.)  
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## 10 11 12 **Study Population** 13

14  
15 The study population comprised the anonymised case records of a randomly selected cohort of  
16 3,000 patients from the THIN database (provided to the Authors by IQVIA) who had a wound  
17 between 1 March 2017 and 28 February 2018.  
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21 Patients were included in the data set if they:  
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- 23 • Were 18 years of age or over.
- 24 • Had one of 2,095 wound-related Read codes (Supplementary table S1).
- 25 • Had continuous medical history in their case record from the first mention of a wound in  
26 the study year up to the time the data were extracted from the database, unless they died,  
27 in order to exclude patients who had moved or changed their general practice.  
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34 Patients were excluded from the data set if they had a surgical wound that healed within four  
35 weeks of the surgical procedure (since any resource use incurred would be due to the surgical  
36 procedure and not the wound) or if they had a dermatological tumour. These  
37 inclusion/exclusion criteria are identical to those used in our earlier 2012/13 study [1].  
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43 Every patient in the THIN database who fulfilled the study's inclusion and exclusion criteria  
44 was assigned a random number by IQVIA. A representative sample was then generated by  
45 random selection of the random numbers of the whole cohort using a uniform distribution. As  
46 such, IQVIA advised that the random sample was representative of the whole population from  
47 which it was derived. The complete electronic records of the 3,000 patients in the sample were  
48 then supplied to the Authors, which enabled analysis of data both within and outside of the  
49 study period.  
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## Patient and Public Involvement

Patients and members of the public were not directly involved in this study. The study population was limited to the anonymised records of patients in the THIN database.

## Study Variables and Statistical Analyses

Wound type was documented in the patients' records and the authors categorised them as being either acute (i.e. abscess, burn, open wound, unhealed surgical wound, trauma) or chronic (i.e. diabetic foot ulcer, arterial leg ulcer, mixed leg ulcer, venous leg ulcer, pressure ulcer). The following information was systematically extracted from the patients' electronic records over the 12 months from 1 March 2017 to 28 February 2018 according to the protocol approved by the ethics committee.

- Patients' characteristics.
- Patients' comorbidities (defined as a non-acute condition that patients were suffering from in the year before the start of their wound and not necessarily the year before the start of the study period).
- Wound-related healthcare resource use (i.e. dressings, bandages, topical treatments, negative pressure wound therapy, district nurse and healthcare assistants visits (both of whom provide care within a patient's home), practice nurse visits (who provide care within the general practice), GP visits, hospital outpatient visits, laboratory tests), prescribed medication (i.e. analgesics, non-steroidal anti-inflammatory drugs (NSAIDs) and systemic anti-infectives (principally antibiotics)).
- Clinical outcomes (i.e. healing and putative infection).

If a patient received a bandage or dressing on a specific date, but a clinician visit was not documented in their record, it was assumed the patient had been seen outside of the general practice by a district nurse or healthcare assistant. No other assumptions were made regarding missing data and there were no other interpolations.

The use of individual healthcare resources was quantified for all the patients, individually. These quantities were then used to estimate the total utilisation of each healthcare resource attributable to wound management during the study period, stratified by wound type.

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2  
3 Clinical outcomes and wound-related healthcare resource use associated with the sample of  
4 3,000 patients were used to model the healing rates and the total annual amounts of healthcare  
5 resource use associated with wound care provided to adult patients who were  $\geq 18$  years of age  
6 by the NHS in 2017/18.  
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11 Differences between subgroups were tested for statistical significance using a  $\chi^2$  test. Logistic  
12 regression was used to investigate relationships between baseline variables and clinical  
13 outcomes. The p values  $< 0.05$  were considered statistically significant and have been reported.  
14 All p values  $\geq 0.05$  were not considered to be statistically significant and these numerical values  
15 have not been reported. All statistical analyses were performed using IBM SPSS Statistics  
16 (IBM UK, Portsmouth, Hampshire, UK).  
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### 23 24 **Cost of Patient Management**

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27 The NHS cost of wound care for each patient was estimated by assigning unit costs at 2017/18  
28 prices [20-22] to the quantity of healthcare resources used by individual patients from the time  
29 a patient entered the data set (i.e. from 1 March 2017 or the start time of their wound if it  
30 occurred later) up to the time their wound healed or the end of the study period, whichever  
31 came first. The total cost of utilisation of each healthcare resource for the sample of 3,000  
32 patients was then combined in order to estimate their total NHS cost of wound management  
33 over the study period. The NHS cost of wound management for this cohort was then used to  
34 model the total cost of wound care provided to adult patients who were  $\geq 18$  years of age by the  
35 NHS in 2017/18. The cost of wound care was also estimated by stratifying patients according  
36 to their category of wound. Accordingly, the study only considers the cost of patient  
37 management attributable to wounds in primary and secondary care settings, and does not  
38 estimate patients' overall healthcare costs.  
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### 49 50 **Sensitivity Analyses**

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53 Bootstrapping was undertaken to estimate the margin of error surrounding the annual  
54 prevalence of wounds and costs. This involved generating subsets of the data of each wound  
55 type on the basis of random sampling and replacing the data once sampled. These subsets  
56 enabled an estimation of the 95% confidence intervals (CI) of (1) the annual number of wounds  
57 managed by the NHS in 2017/18 and (2) the NHS costs of wound management.  
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3 Deterministic sensitivity analyses were performed on all of the model’s inputs to identify how  
4 the NHS cost of wound management would change by varying the different parameters in the  
5 model.  
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## RESULTS

### Prevalence of Wounds in the UK

The base population of the THIN database in 2017/18 was 2.4 million active adult patients who were  $\geq 18$  years of age. The database was interrogated, independently of the Authors, to identify patients with at least one of the 2,095 wound-related Read codes. The search identified 174,569 adult patients with a wound in 2017/18 who matched the study protocol's inclusion and exclusion criteria. The UK's population comprised 52.1 million adults who were  $\geq 18$  years of age in mid-2017 [23]. Using these variables, the outputs of the modelling were extrapolated to the whole adult population in the UK. Accordingly, the model estimated that there were 3.8 million adult patients with a wound in the UK in 2017/18 who matched the study protocol's inclusion and exclusion criteria, equivalent to 7% of the adult population (Table 1). Bootstrapping was undertaken using 100 subsets of the counts of each wound type. This indicated the lower and upper 95% confidence intervals of the annual number of wounds managed by the NHS in 2017/18 to be 3.67 million and 3.96 million. Hence, the margin of error surrounding the estimated annual prevalence of wounds is around 3%.

Sixteen per cent of all wounds had no diagnosis and it was not possible to infer a wound type from the patients' records. Additionally, 9% of all wounds were a leg ulcer without any further characterisation (i.e. venous, arterial or mixed). Hence, the records of 25% of all wounds lacked a recorded differential diagnoses. In total, there were 1 million ulcers of the lower limb, which equates to 2.0% of the adult population having a lower limb ulcer in the study year. Of these, the number of diagnosed venous leg ulcers (560,000) indicates that 1.1% of all adults  $\geq 18$  years of age had such an ulcer in the study year. In addition, there were an estimated 326,000 diabetic foot ulcers, which equates to 9% of all adult diabetic patients (i.e. 3.46 million individuals [24]) having a foot ulcer in the study year. There were an estimated 202,000 recorded pressure ulcers in the study year, equivalent to 0.4% of the total adult population (Table 1).

### Patients' Characteristics

A representative sample of 3,000 patients was randomly selected from the cohort of 174,569 patients with a wound-related Read code by IQVIA. Patients' age in the randomly selected study population was a mean of 57.9 years and 67% were  $< 65$  years of age. A total of 56% of

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3 patients were female. Mean blood pressure was 130/77 and patients' body mass index was a  
4 mean 29.1 kg/m<sup>2</sup>. An estimated 17% of patients were smokers, 30% were ex-smokers and 52%  
5 were non-smokers. A total of 73% of patients presented with a new wound in the study year  
6 (patients' records predated the onset of the study period, enabling both pre-existing and new  
7 wounds to be identified). Table 2 (and supplementary Table S2) summarise patients'  
8 characteristics according to wound type.  
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15 The percentage of patients with different comorbidities in the year before the start of their  
16 wound (and not necessarily the year before the start of the study) stratified by wound type is  
17 summarised in Table 3 (and supplementary Table S3). A total of 95% of patients had at least  
18 one comorbidity in the year before the start of their wound. Moreover, patients had a mean of  
19 4.1 comorbid conditions and 57% of all patients had diabetes. It is also noteworthy that 13%  
20 of patients with a pressure ulcer were recorded as suffering from malnutrition, whereas it was  
21 ≤5% of patients with other wound types.  
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### 29 **Clinical Outcomes**

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32 The THIN database does not define wound healing. Wound healing was a clinical observation  
33 documented in the patient's record by their managing clinician, but not necessarily confirmed  
34 by a specialist, and it is unknown if the clinicians who managed these patients used any  
35 consistent definition. Additionally, there is no Read for wound healing. Nevertheless, an  
36 episode of care was not a proxy for time to healing. Furthermore, if a wound was not recorded  
37 as being healed it was considered to be unhealed. This assumption was supported by continued  
38 clinician visits for wound care and the continued prescribing of wound care products. On this  
39 basis, Table 4 (and supplementary Table S4) summarise the recorded healing rates stratified by  
40 wound type and various sub-groups between 1 March 2017 and 28 February 2018. A total of  
41 70% of all wounds (n = 2.7 million) healed in the study year; 89% of acute wounds healed and  
42 49% of chronic wounds. An estimated 30% of all wounds (n = 1.1 million) remained unhealed.  
43 Patients' age did not appear to affect the overall healing rate. However, 59% of chronic wounds  
44 healed if there was no evidence of infection compared to 45% if there was a definite or  
45 suspected infection. The healing rate among acute wounds was unaffected by the presence of  
46 infection (86% versus 91% among acute wounds with no evidence of infection). An estimated  
47 38% of chronic wounds healed if patients were smokers compared to 55% and 58% if patients  
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3 were non-smokers or ex-smokers, respectively. Smoking status did not appear to affect the  
4 healing rate of acute wounds (Table 4 and supplementary Table S4).  
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7 For the whole cohort of patients with a wound, binary logistic regression suggested that  
8 cardiovascular disease (Odds ratio (OR) 0.57 (95% CI 0.46 to 0.71);  $p < 0.001$ ), immunological  
9 disorders (OR 0.62 (95% CI 0.45 to 0.86);  $p = 0.003$ ) and renal disorders (OR 0.56 (95% CI  
10 0.43 to 0.73);  $p < 0.001$ ) were independent risk factors for non-healing during the study period.  
11 Additionally, the presence of renal disease was an independent risk factor for non-healing of  
12 diabetic foot ulcers (OR 0.28 (95% CI: 0.13 to 0.62);  $p = 0.002$ ), and diabetes was an  
13 independent risk factor for non-healing of venous leg ulcers (OR 0.10 (95% CI: 0.01 to 0.96);  
14  $p < 0.02$ ).  
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### 23 **Healthcare Resource Use Associated with Patient Management**

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26 Patients were predominantly managed in the community by GPs, practice nurses,  
27 district/community nurses and healthcare assistants. Table 5 (and supplementary Table S5)  
28 summarise the percentage of patients who utilised different resources during the study year and  
29 Table 6 shows the annualised resources associated with each wound type. All the hospital  
30 admissions attributable to venous and mixed leg ulcers appeared to be linked to a suspected  
31 infection. So too were 80% of admissions attributable to diabetic foot ulcers and 95% of  
32 admissions attributable to open wounds. All these hospitalised patients with a suspected  
33 infection were prescribed antibiotics. All the open wounds and 50% of the diabetic foot ulcers  
34 healed in the study period, but none of the venous and mixed leg ulcers healed. Less than 50%  
35 of admissions attributable to the other wound types appeared to be linked to a suspected  
36 infection and 90% of them healed during the study period. Only one-third of admissions  
37 attributable to surgical wounds and trauma appeared to be linked to a suspected infection.  
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49 Patients' treatment varied according to wound type and wound duration. Patients were  
50 prescribed a mix of dressings up to the time their wound healed or the end of the study period,  
51 whichever came first. Overall, patients' dressings were changed every 3-4 days at a nursing  
52 visit. However, this varied according to wound type. On average:  
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- 55 • Those patients with a burn or a venous leg ulcer had one nursing visit/dressing change  
56 every 2-3 days.  
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- Those patients with a diabetic foot ulcer, arterial leg ulcer, mixed leg ulcer, pressure ulcer or surgical wound had one nursing visit/dressing change every 3-4 days.
- Those patients with an unspecified leg ulcer, open wound, trauma or unspecified wound had one nursing visit/dressing change every 4-5 days.
- Those patients with an abscess had one nursing visit/dressing change every 5-6 days

Less than 1% of patients were prescribed the same dressing for the duration of their wound or study period. On average, patients were prescribed a mean of 8 different dressing types over the study period, ranging from a mean of 4 different dressing types for patients with a burn to a mean of 9 different dressing types for patients with an unclassified wound. In addition to dressings and bandages, varying percentages of patients were prescribed analgesics, NSAIDs and antibiotics as shown in Table 5 (and supplementary Table S5).

Assessment of peripheral perfusion is a recognised requirement for leg ulcer and diabetic foot management. However, only 15% of all those with a leg or foot ulcer had a Doppler ankle brachial pressure index (ABPI) recorded in their records, of which 75% were prescribed some form of compression. Of the 85% who did not have their ABPI recorded, 29% were prescribed compression bandages/hosiery (Table 7). Over 90% of the patients with a recorded venous leg ulcer were prescribed compression bandages/hosiery, irrespective of whether they had their ABPI recorded; so too did >50% of patients with a recorded diabetic foot ulcer (Table 7).

### **NHS Cost of Patient Management**

The total annual NHS cost of managing 3.8 million patients with a wound was estimated to be £8.3 billion (95% CI: £7.9; £8.5) billion (Table 8). The use of 100 bootstrapped samples indicated a 5% margin of error around the costs (Table 8). When the bootstrapping was repeated using 1,000 subsets of cost data, the margin of error decreased to 1% (i.e. 95% CI: £8.2; £8.4 billion). District/community nurse visits were the primary cost driver accounting for 29% of all costs and GP office visits were the secondary cost driver accounting for a further 18% of the total cost. Healthcare assistant visits accounted for 17% of the total cost, practice nurse visits for 7% and wound care products for a further 6% (Table 8).

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3 Resource use associated with managing the unhealed wounds was substantially greater than  
4 that of managing the healed wounds (Table 9). Consequently, the annual cost of managing the  
5 70% of wounds that healed was estimated to be £2.7 billion compared with £5.6 billion for the  
6 30% of wounds that did not heal within the study year. In addition, within the study period, the  
7 cost per healed wound ranged from £358 to £4,684 per patient and that of an unhealed wound  
8 ranged from £831 to £7,886 per patient (Table 10).  
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15 Eighty-one per cent of the total annual NHS cost was incurred in the community and the  
16 remainder in secondary care. However, the distribution of costs varied according to wound  
17 type, with 68% and 85% of the total annual NHS cost of managing acute and chronic wounds,  
18 respectively, being incurred in the community and the remainder in secondary care.  
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### 24 **Sensitivity Analyses**

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27 When the healing rate of each wound type was simultaneously varied by  $\pm 25\%$ , the total annual  
28 NHS cost of wound management changed by  $\pm 16\%$ . When the estimated annual number of  
29 each wound type was individually changed by  $\pm 25\%$ , the total annual NHS cost of wound  
30 management changed by 10% or less. When the estimated amounts of resource use were  
31 individually varied by  $\pm 25\%$ , the total annual NHS cost of managing 3.8 million wounds  
32 changed by 7% or less. When the unit costs of wound care products were simultaneously varied  
33 by  $\pm 25\%$ , the total annual NHS cost of managing 3.8 million patients with a wound changed  
34 by  $<3\%$ .  
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## DISCUSSION

The 2012/13 burden of wounds study [1, 2] incorporated a predictive model [3] which forecast that the prevalence of wounds would increase by 11% per annum. Thus, the model predicted there would be 3.8 million patients with a wound in 2017/18. The findings from the current analysis are consistent with the estimates from this predictive model, with the overall annual number of patients with a wound having increased by 71% over the five years to 3.8 million. However, the rate of increase varied according to wound type. The annual number of patients with a wound increased by  $\geq 100\%$  for many wound types, but some acute wounds increased by 60% and pressure ulcers by only 32%, perhaps due in part to the ongoing pressure ulcer prevention campaign [25]. The model also predicted that costs would increase in parallel with prevalence. However, when the £5.3 billion [1] is updated to 2017/18 prices (i.e. £5.6 billion), it would appear that the annual cost of wound care has increased at an approximate rate of 8-9% per annum. Hence, the overall annual NHS cost of wound care has increased by 48% in real terms over the five years.

The aim of this study was to assess the annual health economic burden of wounds by quantifying the amount of resource use and corresponding costs associated with wound management in 2017/18. From the NHS' perspective, resource use and corresponding cost of managing a patient with multiple wounds does not end until all the wounds heal. Some of the patients in our data set may have had multiple wounds, but this was not specifically listed within the database and was not transparent in the patients' records. Furthermore, it would be very difficult to retrospectively extricate resource use for different wounds from the records of a patient with multiple wounds of the same aetiology. Notwithstanding this, it would be unusual for an individual to have two wounds of different aetiologies at the same time. However, it may be that in 2017/18 some of the patients with an ulcer of the lower limb had a second ulcer, although it would be unlikely that patients with other wounds would have multiple wounds. If 10% of patients with an ulcer of the lower limb had a second ulcer, the total number of wounds would increase by 5% from 3.8 million to 4.0 million. The implication of this is that the NHS may have managed more than 3.8 million wounds in 2017/18. Nevertheless, the estimated amount of resource use and corresponding costs as presented would remain unchanged since all the resources and wound care products utilised in managing each patient were documented in their record (despite the lack of granularity surrounding the number of wounds they may have had).



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3 In the 2012/13 data set, 65% of all the patients with a wound were 65 years of age or older [1,  
4 2]. However, in the 2017/18 data set, only 33% of patients were 65 years of age or older. This  
5 was a significant difference ( $p < 0.001$ ), suggesting that wounds are no longer predominantly  
6 the preserve of the elderly. In 2012/13, 39% of all patients were non-smokers. However, by  
7 2017/18 this percentage had increased significantly to 52% ( $p < 0.001$ ). In parallel with these  
8 changes in the patient demographics there was a change in the distribution of comorbidities. In  
9 particular, in 2012/13, 73% and 37% of patients had cardiovascular and musculoskeletal  
10 disorders, but in 2017/18 an estimated 53% ( $p < 0.001$ ) and 56% ( $p < 0.02$ ) had cardiovascular  
11 and musculoskeletal disorders, respectively. Most striking, however, was that 29% of the  
12 2012/13 cohort had diabetes compared with 57% in 2017/18 ( $p < 0.05$ ). Additionally, the  
13 variation in the mean number of comorbidities associated with different wound types in this  
14 study parallels the variation in Charlson Comorbidity Index associated with different wound  
15 types observed in a patient population in Asia [26].  
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27 Over the five year period, the healing rate of acute wounds increased by a mean of 13% and  
28 that of chronic wounds by a mean of 15%. However, within this estimate, the healing rate of  
29 diabetic foot ulcers and pressure ulcers increased by 27% and 43%, respectively, but the  
30 healing rate of venous and mixed leg ulcers decreased by 21% and 28%, respectively. The  
31 percentage of patients accessing different resources increased over the five years and so too  
32 did the absolute amount of resource use. For example, between 2012/13 and 2017/18 there was  
33 >11,000% increase in the number of healthcare assistant visits (from 0.5 million to 53.6  
34 million), a 401% increase in the number of district nurse visits (from 10.9 million to 54.4  
35 million), 164% increase in the number of GP visits (from 7.7 million to 20.3 million), 96%  
36 increase in the number of hospital outpatient visits (from 3.4 million to 6.8 million) and 51%  
37 increase in the number of practice nurse visits (from 18.6 million to 28.1 million). In addition,  
38 there was a 2% decrease in the number of specialist nurse visits and a 104% increase in the  
39 amount of wound care products used. The changes in the annual cost of these resources mirror  
40 the changes in utilisation of these resources. Accordingly, the NHS cost of wound care in  
41 2017/18 was an estimated £8.3 billion, which is approaching the combined annual NHS cost  
42 of managing osteo and rheumatoid arthritis, which was reported to be £10.2 billion in 2017  
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58 The shift towards greater utilisation of community-based resources is reflected in the  
59 distribution of care between secondary care and the community. In 2012/13, 48% of the costs  
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3 of managing acute wounds and 78% of the costs of managing chronic wounds were incurred  
4 in the community and the remainder in secondary care [1, 2]. In 2017/18, 68% and 85% of the  
5 costs of managing acute and chronic wounds, respectively, were incurred in the community  
6 and the remainder in secondary care.  
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11 This present study has also highlighted that resource use associated with managing the 30% of  
12 wounds that did not heal in the study year was substantially greater than that of managing the  
13 70% of wounds that did heal within the study year (e.g. 325% more hospital outpatient visits,  
14 178% more practice nurse visits, 171% more GP visits, 118% more accident & emergency  
15 attendances, 97% more district/community nurse visits and 85% more healthcare assistant  
16 visits). Consequently, the annual cost of managing wounds that healed within the study year  
17 was estimated to be £2.7 billion compared with £5.6 billion for the 30% of wounds that did not  
18 heal within the study year. In addition, the mean cost of an unhealed wound (£3,700) was  
19 approximately 2.5 times more than that of a wound that healed during the study period  
20 (£1,500). Sensitivity analysis showed the healing rate to have a large effect on the cost of  
21 wound care and regression analysis indicated that the presence of cardiovascular disease or  
22 immunological disorders or renal disorders were all independent risk factors for non-healing  
23 during the study period. In the 2012/13 study both nutritional deficiency and diabetes were  
24 independent risk factors for non-healing during the study period [1]. In this study, only a mean  
25 of 3% of patients had malnutrition, possibly reflecting the significantly lower age of the study  
26 population. However, 13% of patients with a pressure ulcer had malnutrition and their BMI  
27 was a mean of 24.5 kg/m<sup>2</sup> which was lower than that of patients with other wound types.  
28 Diabetes did not exert an independent effect on healing possibly because 59% of the patients  
29 with diabetes also had cardiovascular disease, 19% had renal disease, and 11% had  
30 immunological disorders. In addition, 61% of the patients with diabetes had musculoskeletal  
31 disorders and 38% had a mental health condition (principally depression and anxiety). The age  
32 of the patients with diabetes was a mean of 59.2 years per patient and 44% were male.  
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51 This and many other studies [10-12, 28, 29] have shown that wound management is  
52 predominantly a nurse-led discipline. Nevertheless, there still seems to be minimal clinical  
53 involvement of tissue viability nurses and other specialist nurses in direct patient management.  
54 In addition, dressing and bandage types were continually switched at successive wound  
55 dressing changes for the majority of patients, suggesting confusion and conflict within the  
56 treatment plan. It was not possible to determine which professional groups were the decision  
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3 makers in relation to changes in dressing type and what the goal of treatment changes were as  
4 this information was not specifically recorded in the patients' records. Moreover, an estimated  
5 25% of all wounds being managed within the NHS in 2017/18 lacked a recorded differential  
6 diagnosis in the patient's record. Furthermore, only 15% of patients with an ulcer on the lower  
7 limb had a vascular assessment with Doppler ABPI recorded in their records, contrary to  
8 national guidance [30, 31]. Nevertheless, we observed a 14% decrease in the proportion of  
9 patients with unspecified leg ulcers since 2015 which may be due to an increase in measuring  
10 ABPI even if it was not documented in the patients' records. It remains unclear and  
11 disappointing to find that records still lacked documentation of this essential investigation.  
12 Moreover, five years later, patients' records still appear to lack any evidence of consistent  
13 reporting of wound management processes. This may be indicative of the difficulties  
14 experienced by non-specialist health care professionals in the community with establishing a  
15 working diagnosis.

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27 It seems unclear how the NHS can best respond to the ever-increasing demand for wound care.  
28 The NHS Long Term Plan [32] has described how the NHS will move to a new service model  
29 in which patients will have properly joined-up care at the right time in the optimal care setting.  
30 This will involve having online 'digital' GP consultations, and redesigned hospital support in  
31 order to free-up about one-third of outpatient appointments [32]. Additionally, GP practices  
32 will be funded to create integrated teams of GPs, community health and social care staff [32].  
33 These expanded community health teams will provide fast support to people in their own  
34 homes [32]. Ultimately, the NHS will aim to create Integrated Care Systems everywhere by  
35 April 2021, which bring together local organisations to deliver a 'triple integration' of primary  
36 and specialist care, physical and mental health services and health with social care [32].  
37 Additionally, commissioners will be tasked to share decisions with providers on population  
38 health, service redesign and Long Term Plan implementation [32]. Such a change in the system  
39 may facilitate getting the optimum care to patients at the right time in the right setting in order  
40 to improve the patient experience and health outcomes, thereby freeing-up healthcare resources  
41 and reducing costs. However, will this method of care delivery improve wound care and  
42 associated patient outcomes? The introduction of truly seamless care with integrated electronic  
43 patient records would improve overall patient management, However, patients with wounds  
44 need face-to-face interaction with clinicians on a regular basis to monitor progress and have  
45 their dressings changed. The Authors are therefore of the opinion that this model would require  
46 the NHS to establish dedicated wound care clinics in the community at which patients receive  
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3 consistent and integrated care from clinicians with qualified experience in wound care, with  
4 the clinics linking directly to electronic patient records which are integrated across all  
5 healthcare sectors. These clinics could provide both direct care and holistic assessments of  
6 patients allowing co-ordinated management of any comorbidities which may impact on wound  
7 healing  
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13 The advantages and disadvantages of using the THIN database for this study have been  
14 previously discussed [1]. In summary, the advantage of using the THIN database is that the  
15 patient pathways and associated resource use are based on real-world evidence derived from  
16 clinical practice. However, the possibility of resource use associated with managing a  
17 comorbidity being conflated with that of wound management cannot be excluded. While the  
18 study results are compelling, the analyses were based on clinicians' entries into their patients'  
19 records and inevitably subject to a certain amount of imprecision and lack of detail. Moreover,  
20 the computerised information in the THIN database is collected by GPs for clinical care  
21 purposes and not for research. Prescriptions issued by GPs and practice nurses are recorded in  
22 the database, but it does not specify whether the prescriptions were dispensed or detail patient  
23 compliance with the product. Despite these limitations, it is the authors' opinion that the THIN  
24 database affords one of the best sources of real-world evidence for clinical practice in the UK,  
25 since it is representative of the whole UK population [18, 33] and there are only minor  
26 differences between this and other real-world evidence databases in the UK [33]. Moreover,  
27 the changes between 2012/13 and 2017/18 are clinically relevant, since the sample size in this  
28 study is 3,000 patients versus 1,000 patients in the earlier study. Furthermore a review of  
29 Medline in August 2020 identified 283 articles in peer-reviewed journals in which the THIN  
30 database had been used to characterise clinical practice in a wide range of therapeutic areas in  
31 the UK, of which 28 had been published in BMJ Open since 2014. Notwithstanding this, it is  
32 not possible to ascertain from the data set whether some of the changes between 2012/13 and  
33 2017/18 are due to increased complexity of wound aetiology and a decrease in competency of  
34 the clinical staff caring for these patients. There is no recognised complexity index/score for  
35 wounds so any measure of this would be subjective. Additionally, the low involvement of  
36 senior staff in patient management may indicate competency as a possible issue, but this cannot  
37 be quantified.  
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58 The analysis does not consider the potential impact of those wounds that remained unhealed  
59 beyond the study period. The THIN database may have under-recorded use of some health care  
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3 resources outside the GP's surgery if not documented in the GP records, and the impact of this  
4 was addressed in sensitivity analyses. In particular, not all community records may have been  
5 linked to the GP records. The analysis excludes hospital-based prescribing, but this should have  
6 minimal impact on the results as most prescribing is undertaken by GPs and nurses in the  
7 community. Also excluded is the potential impact of managing patients with wounds being  
8 cared for in nursing/residential homes.  
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15 The analysis only considered the annual cost of NHS resource use for the 'average adult  
16 patient', and no attempt was made to stratify resource use and costs according to gender,  
17 comorbidities, wound size, wound severity and other disease-related factors. Also excluded  
18 were the costs incurred by patients and indirect societal costs as a result of patients taking time  
19 off work. In 2012/13, only 35% of patients with a wound were of working age. However, in  
20 2017/18 nearly 70% of the cohort was less than 65 years of age and 6% of patients in this age  
21 group were admitted into hospital. In April 2018 the gross median salary for full-time  
22 employees was £569 per week [34]. Hence, the indirect societal cost in lost GDP arising from  
23 hospitalisation (assuming 96% of these patients were in full-time employment [35]) amounted  
24 to £87 million. This is likely to be an underestimate, since a proportion of patients are likely to  
25 be absent from work due to their wound, but residing in their home. Nevertheless, this is a  
26 relatively negligible indirect cost considering that nocturia (which predominantly affects the  
27 elderly population) accounts for over £4 billion in lost GDP [36].  
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39 Notwithstanding the study's limitations, real-world evidence highlights the substantial burden  
40 that wounds continue to impose on the NHS in an average year. Clinical and economic benefits  
41 to both patients and the NHS could accrue from strategies that focus on (a) accurate diagnosis,  
42 (b) preventing infection and (c) improving wound-healing rates. However, these benefits are  
43 unlikely to be realised unless there is a structural change within the NHS in order to manage  
44 the increasing demand for wound care.  
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## CONTRIBUTORSHIP STATEMENT

J.F.G. designed the study, obtained the THIN data set, managed the analyses, performed some analyses, checked all the other analyses, and wrote the manuscript.

G.W.F. conducted much of the analyses.

P.V. scrutinised the analyses, suggested further analyses and helped interpret some of the findings.

All the authors were involved in revising the manuscript and gave final approval. J.F.G. is the guarantor of this work and, as such, had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

## COMPETING INTERESTS

None declared.

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## DATA SHARING STATEMENT

The THIN data set cannot be shared as this restriction was a condition of the ethics approval obtained from the Research Ethics Committee (Reference number 18THIN093). Questions concerning the data underlying the results can be sent to the Corresponding Author.

For peer review only

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**Table 1: Annual number of adult patients with a wound and prevalence of different wound types in the UK. Percentage of total number in parentheses.**

	Annual number of patients with a wound in 2017/18 (thousands)	Annual prevalence among the adult UK population in 2017/18	Annual number of patients with a wound in 2012/13 (thousands) [1]	Percentage change in the annual number of patients with a wound between 2012/13 and 2017/18
Abscess	293,000 (8%)	0.0056	160,000 (7%)	83%
Burn	222,000 (6%)	0.0043	87,000 (4%)	155%
Diabetic foot ulcer	326,000 (9%)	0.0063	169,000 (8%)	93%
Leg ulcer (arterial)	31,000 (1%)	0.0022	9,000 (<1%)	244%
Leg ulcer (mixed)	102,000 (3%)	0.0003	24,000 (1%)	325%
Leg ulcer (unspecified)	361,000 (9%)	0.0069	420,000 (19%)	-14%
Leg ulcer (venous)	560,000 (15%)	0.0108	278,000 (13%)	101%
Open wound	337,000 (9%)	0.0065	240,000 (11%)	40%
Pressure ulcer	202,000 (5%)	0.0039	153,000 (7%)	32%
Surgical wound	519,000 (14%)	0.0100	253,000 (11%)	105%
Trauma	249,000 (7%)	0.0048	158,000 (7%)	58%
Unspecified	600,000 (16%)	0.0115	271,000 (12%)	121%
<b>TOTAL</b>	<b>3,802,000 (100%)</b>	<b>0.0730</b>	<b>2,222,000 (100%)</b>	<b>71%</b>

**Table 2: Patients' baseline characteristics.** \*Other acute wounds comprise abscesses, burns and traumatic wounds. \*\*Other chronic wounds comprise arterial, mixed and unspecified leg ulcers. Full details are available in supplementary Table S2.

	Diabetic foot ulcer	Leg ulcer (venous)	Open wound	Pressure ulcer	Surgical wound	Unspecified	Other acute wounds*	Other chronic wounds**	All wounds
Mean age per patient (years)	62.3	70.9	53.4	76.1	55.4	55.9	48.4	55.9	57.9
Percentage male	51%	48%	40%	40%	42%	49%	40%	42%	44%
Percentage smoker	11%	7%	18%	7%	19%	22%	23%	18%	17%
Percentage ex-smoker	37%	44%	29%	40%	29%	28%	20%	24%	30%
Percentage non- smoker	52%	48%	51%	40%	52%	49%	55%	58%	52%
Percentage with unknown smoking status	0%	0%	2%	13%	1%	1%	1%	0%	1%
Mean body mass index per patient (kg/m <sup>2</sup> )	30.9	31.5	29.6	24.5	28.3	28.9	28.6	28.6	29.1
Percentage with new wounds in the study period	61%	59%	87%	80%	77%	80%	81%	62%	73%
Percentage of all wounds with a recorded infection	78%	41%	94%	13%	35%	1%	24%	63%	40%

**Table 3: Percentage of patients with a comorbidity in the year before the start of their wound.** Those with diabetes are a subset of those with endocrinological comorbidities. \*Other acute wounds comprise abscesses, burns and traumatic wounds. \*\*Other chronic wounds comprise arterial, mixed and unspecified leg ulcers. Full details are available in supplementary Table S3.

	Diabetic foot ulcer	Leg ulcer (venous)	Open wound	Pressure ulcer	Surgical wound	Unspecified	Other acute wounds*	Other chronic wounds**	All wounds
Cardiovascular	70%	78%	44%	53%	47%	51%	36%	54%	53%
Dermatological	60%	41%	51%	40%	51%	45%	51%	52%	49%
Endocrinological	99%	52%	69%	60%	63%	57%	54%	38%	60%
Diabetes	100%	37%	67%	60%	59%	52%	51%	34%	57%
Gastroenterological	42%	19%	34%	47%	37%	35%	31%	32%	33%
Genito-urinary	28%	19%	25%	27%	28%	24%	23%	23%	24%
Immunological	13%	11%	10%	7%	9%	9%	8%	6%	9%
Malnutrition	2%	4%	1%	13%	1%	3%	1%	4%	3%
Musculoskeletal	62%	59%	49%	73%	57%	56%	48%	62%	56%
Neurological	24%	33%	18%	67%	22%	17%	18%	24%	24%
Oncological	25%	7%	14%	27%	18%	19%	15%	17%	16%
Ophthalmological	20%	4%	11%	33%	13%	10%	11%	15%	12%
Psychiatric	39%	15%	35%	33%	35%	35%	39%	47%	35%
Renal	30%	30%	12%	40%	14%	16%	7%	18%	18%
Respiratory	45%	33%	36%	33%	38%	37%	39%	43%	38%
Mean number of comorbidities per patient	5.7	4.0	4.1	5.6	4.3	4.2	3.8	4.4	4.1

**Table 4: Healing rates in the study period.** \*Other acute wounds comprise abscesses, burns and traumatic wounds. \*\*Other chronic wounds comprise arterial, mixed and unspecified leg ulcers. Full details are available in supplementary Table S4.

	Diabetic foot ulcer	Leg ulcer (venous)	Open wound	Pressure ulcer	Surgical wound	Unspecified	Other acute wounds*	Other chronic wounds**	All wounds
Wounds that healed in the study period	52%	37%	90%	60%	85%	85%	88%	49%	70%
New wounds that healed in the study period	60%	56%	90%	75%	86%	88%	86%	36%	76%
Existing wounds that healed in the study period	40%	9%	90%	0%	80%	73%	93%	77%	56%
Wounds that healed with no evidence of infection	57%	50%	93%	62%	87%	86%	91%	54%	77%
Wounds that healed with recorded evidence of infection	50%	18%	89%	50%	81%	38%	78%	46%	60%
Wounds that healed among smokers	33%	25%	88%	33%	82%	85%	89%	43%	64%
Wounds that healed among ex-smokers	53%	39%	88%	67%	83%	88%	87%	48%	70%
Wounds that healed among non-smokers	56%	38%	93%	75%	88%	84%	90%	52%	74%

**Table 5: Percentage of patients who utilised resources in the study year.** †Includes tissue viability nurses and diabetic nurse specialists. \*Other acute wounds comprise abscesses, burns and traumatic wounds. \*\*Other chronic wounds comprise arterial, mixed and unspecified leg ulcers. Full details are available in supplementary Table S5.

	Diabetic foot ulcer	Leg ulcer (venous)	Open wound	Pressure ulcer	Surgical wound	Unspecified	Other acute wounds*	Other chronic wounds**	All wounds
District/community nurse visits	96%	85%	24%	60%	46%	44%	34%	85%	38%
Healthcare assistant visits	93%	81%	21%	40%	46%	44%	25%	87%	36%
Practice nurse visits	94%	96%	97%	93%	97%	98%	96%	85%	97%
GP office visits	97%	100%	90%	93%	82%	62%	89%	100%	84%
Dressings	100%	100%	100%	100%	100%	100%	100%	100%	100%
Compression bandaging/ hosiery	15%	93%	5%	0%	3%	6%	2%	40%	6%
Prescribed analgesics/non-steroidal anti-inflammatories	57%	81%	12%	53%	24%	20%	17%	46%	21%
Prescribed antibiotics	92%	81%	81%	67%	43%	26%	56%	86%	50%
Hospital outpatient visits with a nurse	35%	37%	8%	0%	18%	31%	15%	20%	17%
Accident & emergency attendances	23%	30%	8%	7%	8%	4%	13%	11%	8%
Hospital admissions without surgery	4%	7%	7%	13%	8%	8%	7%	4%	7%
Hospital outpatient visits with a physician/surgeon	15%	7%	4%	20%	8%	1%	4%	9%	5%
GP home visits	2%	11%	1%	13%	2%	1%	2%	2%	2%
Diagnostic tests	3%	0%	1%	0%	2%	3%	1%	4%	2%
Ambulance services	3%	4%	0%	0%	1%	1%	0%	1%	1%
Hospital admissions with surgery	2%	0%	0%	0%	6%	0%	2%	0%	2%
Specialist nurse visits†	3%	0%	0%	7%	1%	1%	0%	2%	1%
Podiatrist visits	3%	0%	1%	7%	1%	0%	1%	6%	1%
Day Cases	0%	0%	0%	0%	1%	<1%	0%	0%	<1%



**Table 6: Annual amount of NHS resource use attributable to managing 3.8 million patients with a wound (thousands).** †Includes tissue viability nurses and diabetic nurse specialists.

	Abscess	Burn	Diabetic foot ulcer	Leg ulcer (arterial)	Leg ulcer (mixed)	Leg ulcer (unspecified)	Leg ulcer (venous)	Open wound	Pressure ulcer	Surgical wound	Trauma	Unspecified	All wounds
District/community nurse visits	1069.31	2124.01	10443.18	895.38	4411.41	6093.17	17459.02	797.34	5789.24	2791.44	234.97	2305.39	54413.86
Healthcare assistant visits	1111.38	1283.91	10641.73	1020.07	4671.18	6946.81	17619.78	804.15	3839.82	3047.33	238.16	2423.08	53647.40
Practice nurse visits	745.32	484.97	3428.04	187.60	1938.34	1278.84	14461.10	545.16	1128.81	1217.10	290.62	2356.74	28062.63
GP office visits	632.13	382.27	2436.59	115.97	1173.09	1102.64	9855.13	497.20	1196.00	983.00	292.53	1424.03	20090.58
Dressings	7383.46	5580.89	51475.28	4007.17	19817.92	26030.08	79863.80	6759.11	9467.04	27172.85	4028.25	22913.59	264499.43
Compression bandaging/hosiery	160.32	62.52	588.14	0.00	1691.43	258.85	27259.29	239.70	0.00	260.19	0.00	407.91	30928.35
Prescribed medication	827.59	235.79	2948.13	242.17	1473.18	1787.04	5498.12	641.18	1760.41	922.26	177.91	1359.55	17873.33
Hospital outpatient visits with a nurse	171.46	171.49	583.20	20.47	709.31	190.11	3672.33	43.82	0.00	286.86	18.26	600.07	6467.37
Accident & emergency attendances	57.15	46.44	150.74	10.23	47.74	19.01	248.97	30.40	40.32	57.93	13.23	35.83	758.00
Hospital admissions without surgery	24.01	17.86	19.77	0.00	3.41	19.01	62.24	33.98	26.88	60.74	23.30	78.81	370.01
Hospital outpatient visits with a physician/surgeon	18.29	0.00	61.78	6.82	10.23	28.52	41.50	14.31	40.32	40.18	18.26	5.37	285.57
GP home visits	5.72	7.15	14.83	0.00	17.05	0.00	62.24	5.37	40.32	11.21	1.89	24.18	189.95
Diagnostic tests	1.14	3.57	17.30	0.00	30.69	47.53	0.00	3.58	0.00	14.02	2.83	23.29	143.95
Ambulance services	2.29	0.00	9.89	0.00	3.41	0.00	41.50	0.00	0.00	4.67	0.00	5.37	67.12
Hospital admissions with surgery	4.57	3.57	4.94	0.00	0.00	0.00	0.00	0.00	0.00	34.57	3.46	0.00	51.12
Specialist nurse visits†	0.00	0.00	17.30	0.00	10.23	0.00	0.00	0.00	13.44	0.93	0.00	3.74	45.64
Podiatrist visits	2.29	0.00	9.89	13.64	17.05	0.00	0.00	0.89	13.44	1.87	0.32	0.00	59.38
Day Cases	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87	0.00	0.90	3.91

**Table 7: Use of Doppler in patients with an ulcer of the lower limb to measure ankle brachial pressure index (ABPI).**

Ulcer type	Percentage who had a Doppler	Percentage who did not have a Doppler	Percentage of these who were prescribed a compression bandage/hosiery
Venous leg ulcer	59%	41%	88%
Arterial leg ulcer	22%	78%	0%
Mixed Leg ulcer	27%	73%	100%
Unspecified leg ulcer	0%	100%	0%
Diabetic foot ulcer	8%	92%	50%
All lower limb ulcers	15%	85%	75%

**Table 8: Annual cost of NHS resource use attributable to managing 3.8 million patients with a wound (£ million at 2017/18 prices).**

Percentage of total cost in parentheses. †Includes tissue viability nurses and diabetic nurse specialists. \*Based on 100 bootstrapped samples.

	Abscess	Burn	Diabetic foot ulcer	Leg ulcer (arterial)	Leg ulcer (mixed)	Leg ulcer (unspecified)	Leg ulcer (venous)	Open wound	Pressure ulcer	Surgical wound	Trauma	Unspecified	Total
District/community nurse visits	£48.12	£95.58	£469.94	£40.29	£198.51	£274.19	£785.66	£35.88	£260.52	£125.61	£10.57	£103.74	£2,448.61 (29%)
GP office visits	£46.78	£28.29	£180.31	£8.58	£86.81	£81.60	£729.28	£36.79	£88.50	£72.74	£21.65	£105.38	£1,486.71 (18%)
Healthcare assistant visits	£28.90	£33.38	£276.69	£26.52	£121.45	£180.62	£458.11	£20.91	£99.84	£79.23	£6.19	£63.00	£1,394.84 (17%)
Hospital admissions without surgery	£30.25	£22.51	£24.91	£0.00	£11.06	£61.67	£201.92	£42.82	£33.86	£76.53	£29.36	£99.31	£634.20 (8%)
Hospital outpatient visits with a nurse	£16.65	£16.66	£56.65	£1.99	£68.90	£18.47	£356.69	£4.26	£0.00	£27.86	£1.77	£58.28	£628.18 (8%)
Practice nurse visits	£15.65	£10.18	£71.99	£3.94	£40.71	£26.86	£303.68	£11.45	£23.71	£25.56	£6.10	£49.49	£589.32 (7%)
Wound care products	£10.81	£12.65	£92.48	£5.80	£38.14	£39.24	£225.10	£10.68	£19.05	£33.57	£5.50	£38.36	£531.38 (6%)
Prescribed medication	£12.90	£3.68	£45.55	£3.74	£22.67	£27.76	£84.36	£10.00	£27.09	£14.30	£2.79	£20.90	£275.74 (3%)
Hospital admissions with surgery	£9.67	£13.38	£20.69	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£73.12	£7.33	£0.00	£124.19 (1%)
Accident & emergency attendances	£9.16	£7.44	£24.15	£1.64	£7.65	£3.05	£39.89	£4.87	£6.46	£9.28	£2.12	£5.74	£121.45 (1%)
Hospital outpatient visits with a physician/surgeon	£2.44	£0.00	£8.23	£0.91	£1.36	£3.80	£5.53	£1.91	£5.37	£5.35	£2.43	£0.72	£38.05 (<1%)
GP home visits	£0.69	£0.87	£1.80	£0.00	£2.07	£0.00	£7.56	£0.65	£4.90	£1.36	£0.23	£2.94	£23.07 (<1%)
Ambulance services	£0.35	£0.00	£1.49	£0.00	£0.52	£0.00	£6.27	£0.00	£0.00	£0.71	£0.00	£0.81	£10.15 (<1%)
Podiatrist visits	£0.31	£0.00	£1.34	£1.85	£2.31	£0.00	£0.00	£0.12	£1.82	£0.25	£0.04	£0.00	£8.04 (<1%)
Day Cases	£0.84	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£1.37	£0.00	£0.66	£2.87 (<1%)
Specialist nurse visits†	£0.00	£0.00	£1.11	£0.00	£0.66	£0.00	£0.00	£0.00	£0.86	£0.06	£0.00	£0.24	£2.93 (<1%)
Diagnostic tests	£0.00	£0.01	£0.03	£0.00	£0.06	£0.09	£0.00	£0.01	£0.00	£0.03	£0.01	£0.04	£0.28 (<1%)
<b>TOTAL COST</b>	<b>£233.52</b>	<b>£244.63</b>	<b>£1,277.36</b>	<b>£95.26</b>	<b>£602.88</b>	<b>£717.35</b>	<b>£3,204.05</b>	<b>£180.35</b>	<b>£571.98</b>	<b>£546.93</b>	<b>£96.09</b>	<b>£549.61</b>	<b>£8,320.01 (100%)</b>
95% confidence limits	£233.17;	£233.97;	£1,250.56;	£86.78;	£563.53;	£704.66;	£2,973.68;	£175.64;	£501.67;	£540.69;	£93.10;	£539.47;	£7,896.93;
around the total cost*	£241.31	£253.68	£1,292.10	£97.85	£594.45	£740.45	£3,261.84	£182.46	£577.57	£555.76	£97.87	£571.17	£8,466.51

**Table 9: Annual amount and corresponding cost (at 2017/18 prices) of NHS resource use attributable to managing 3.8 million patients with a wound, stratified by healing.** †Includes tissue viability nurses and diabetic nurse specialists.

	Annual number (thousand)			Annual cost of wounds (£ million)		
	Healed	Unhealed	Percentage difference in resource use (%)	Healed	Unhealed	Percentage difference in resource cost (%)
Number of patients with a wound	2,677.00	1,125.00				
Ambulance services	4.51	62.61	1288%	£0.68	£9.47	1293%
Hospital outpatient visits	1,286.86	5,466.09	325%	£130.85	£535.38	309%
Practice nurse visits	7,430.80	20,631.83	178%	£156.05	£433.27	178%
GP visits	5,460.16	14,820.36	171%	£407.22	£1,102.56	171%
Podiatrist visits	16.11	43.27	169%	£2.18	£5.86	169%
Prescribed medication	5,593.33	12,280.00	120%	£86.72	£189.02	118%
Accident & Emergency attendances	238.34	519.66	118%	£38.19	£83.26	118%
District/community nurse visits	18,342.87	36,070.99	97%	£825.59	£1,623.02	97%
Wound care products (dressings/bandages/hosiery/creams/ointments/tapes etc)				£181.06	£350.32	93%
Healthcare assistant visits	18,816.65	34,830.75	85%	£489.23	£905.61	85%
Specialist nurse visits†	21.12	24.52	16%	£1.35	£1.58	17%
Hospital admissions & day cases	286.73	138.31	-52%	£427.89	£333.37	-22%
Diagnostic tests	86.89	57.06	-34%	£0.19	£0.09	-53%
<b>TOTAL</b>				<b>£2,747.20</b>	<b>£5,572.81</b>	<b>103%</b>

**Table 10: Total annual NHS cost (at 2017/18 prices) of wound care attributable to managing 3.8 million patients with a wound and cost per patient, stratified by healing.**

	Total NHS Cost for all patients (£ million)		Mean annual NHS cost per patient	
	Healed wounds	Unhealed wounds	Healed wounds	Unhealed wound
Abscess	152.12	81.40	£604.88	£1,977.94
Burn	140.23	104.40	£754.81	£2,922.16
Diabetic foot ulcer	490.11	787.25	£2,874.36	£5,056.71
Leg ulcer (arterial)	53.70	41.56	£2,623.83	£4,061.31
Leg ulcer (mixed)	143.77	459.11	£4,684.15	£6,411.01
Leg ulcer (unspecified)	379.58	337.77	£1,901.79	£2,089.98
Leg ulcer (venous)	422.56	2781.49	£2,036.67	£7,886.05
Open wound	127.51	52.84	£421.83	£1,515.03
Pressure ulcer	90.44	481.54	£747.75	£5,972.28
Surgical wound	389.92	157.01	£884.11	£2,024.49
Trauma	83.78	12.31	£358.09	£831.63
Unspecified	273.48	276.13	£533.82	£3,146.03

Read Code	Description
2924	O/E - trophic skin ulceration
2924.00	O/E - trophic skin ulceration
3511	Surgical biopsy taken
3511.00	Surgical biopsy taken
8343.00	Immobilisation of wound
14F3.00	H/O: chronic skin ulcer
14F4.00	H/O: Admission in last year for diabetes foot problem
14F5.00	H/O: venous leg ulcer
14F6.00	H/O: foot ulcer
14F7.00	H/O: arterial lower limb ulcer
22L..00	O/E - wound healing
22L1.00	O/E - Wound healed
22L2.00	O/E - Wound healing well
22L3.00	O/E - Wound healing badly
22L3.11	O/E wound healing delayed
22L4.00	O/E - Wound infected
22L5.00	O/E - protruding suture
22L6.00	O/E - wound necrotic
22Q..00	Wound observation
22Q0.00	Length of wound
22Q1.00	Width of wound
22Q3.00	Wound dirty
22Q4.00	Depth of wound
22Q6.00	Wound discharge
22Q8.00	Critical colonisation of wound
22Q9.00	Traumatic wound
22QA.00	Surgical wound
22QB.00	Fungating wound
26B8.00	O/E - ulcerated breast lesion
26B8.11	O/E - ulcer on breast
2Fb..00	Granulation of tissue
2FF..00	O/E - skin ulcer
2FF1.00	O/E - no skin ulcer
2FF2.00	O/E - skin ulcer present
2FF3.00	O/E - depth of ulcer
2FFZ.00	O/E - skin ulcer NOS
2FG7.00	O/E - healed burn scar
2FI..00	O/E - sinus in skin
2FI2.00	O/E -skin sinus-post operation
2FI3.00	O/E - skin sinus -after injury
2FI4.00	O/E - suppuration skin sinus
2FIZ.00	O/E - skin sinus NOS
2G48.00	O/E - ankle ulcer
2G4E.00	Healed leg ulcer
2G54.00	O/E - Right foot ulcer
2G55.00	O/E - Left foot ulcer
2G5H.00	O/E - Right diabetic foot - ulcerated
2G5L.00	O/E - Left diabetic foot - ulcerated
2G5Q.00	O/E - No left foot ulcer

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2	2G5R.00	O/E - No right foot ulcer
3	2G5S.00	O/E - right healed foot ulcer
4	2G5T.00	O/E - left healed foot ulcer
5	2G5V.00	O/E - right chronic diabetic foot ulcer
6	2G5W.00	O/E - left chronic diabetic foot ulcer
7		
8	2G63.00	Ischaemic toe
9	2G64.00	O/E - infected toe
10	2I16.00	O/E - gangrene
11	38C4.00	Leg ulcer assessment
12	38N..00	Wound assessment
13	38Qi.00	SINBAD (site,isch,neuro,bact inf,depth) wound classification
14	39C0.00	Pressure sore
15	39C1.00	Superficial pressure sore
16	39C2.00	Deep pressure sore
17	39C3.00	Pressure sore -deep + superfic
18	39C4.00	Waterlow pressure sore risk score
19	39C4200	Waterlow major surgery/trauma score
20	39C5.00	Medley pressure sore risk score
21	39C6.00	Maelor pressure ulcer risk assessment score
22	39C6.11	Maelor score
23	39C7.00	EPUAP (European pressure ulcer advisory panel) grade 1 ulcer
24	39C8.00	EPUAP (European pressure ulcer advisory panel) grade 2 ulcer
25	39C9.00	EPUAP (European pressure ulcer advisory panel) grade 3 ulcer
26	39CA.00	EPUAP (European pressure ulcer advisory panel) grade 4 ulcer
27	4I1F.00	Wound microscopy, culture and sensitivities
28	4I2D.00	Wound exudate sample
29	4I2D.11	Wound swab
30	4I2D000	Wound swab culture positive
31	4I2D100	Wound swab culture negative
32	4JG3.00	Skin ulcer swab taken
33	4JG4.00	Skin wound swab taken
34	58C4.00	Photography of wound
35	6AD1.00	Wound repair review
36	7F23400	Repair of episiotomy
37	7F23y00	Other specified immediate repair of obstetric laceration
38	7F24.00	Other obstetric operations
39	7F24y00	Other specified other obstetric operation
40	7F24z00	Other obstetric operation NOS
41	7G06.00	Curettage of lesion of skin
42	7G06.11	Curettage of lesion of skin or subcutaneous tissue
43	7G06.12	Curettage of lesion of skin including head and neck
44	7G06000	Curettage and cauterisation of lesion of skin head or neck
45	7G06100	Curettage and cauterisation of lesion of skin NEC
46	7G06111	Curettage and cauterisation of skin wart NEC
47	7G06200	Curettage of lesion of skin of head or neck NEC
48	7G06300	Curettage of sinus NEC
49	7G06400	Curettage of wound NEC
50	7G06y00	Other specified curettage of lesion of skin
51	7G06z00	Curettage of lesion of skin NOS
52	7G2C000	Toilet or clean burnt skin of head or neck
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2	7G2C100	Toilet or clean burnt skin NEC
3	7G2C200	Debridement of burnt skin of head and neck
4	7G2C300	Debridement of burnt skin NEC
5	7G2C400	Toilet to burnt skin of head or neck NEC
6	7G2C500	Tangent excision of burnt skin of head or neck
7	7G2C600	Tangent excision of burnt skin NEC
8	7G2CE00	Removal of slough from burnt skin NEC
9	7G2CE11	Escharotomy of burnt skin NEC
10	7G2CF00	Cleansing and sterilisation of burnt skin of head or neck
11	7G2CG00	Dress burnt skin head or neck us vacuum assisted clos device
12	7G2CH00	Cleansing and sterilisation of burnt skin NEC
13	7G2CJ00	Dressing burnt skin using vacuum assisted closure device NEC
14	7G2Cy00	Other specified toilet to burnt skin
15	7G2Cz00	Toilet to burnt skin NOS
16	7G2D.00	Other skin toilet
17	7G2D000	Debridement of skin NEC
18	7G2D011	Debridement of wound of skin NEC
19	7G2D100	Debridement of skin of head or neck NEC
20	7G2D200	Removal of slough from skin NEC
21	7G2D300	Removal of slough from skin of head or neck NEC
22	7G2D400	Toilet to skin of head or neck NEC
23	7G2D500	Cleaning of skin wound NEC
24	7G2D600	Cleaning of skin wound of head or neck
25	7G2D700	Cleansing and sterilisation of skin of head or neck NEC
26	7G2D800	Cleansing and sterilisation of skin NEC
27	7G2D900	Dres skin head or neck us vacuum assisted closure device NEC
28	7G2DA00	Dressing of skin using vacuum assisted closure device NEC
29	7G2DB00	Removal of slough from skin using pressurised fluid jet
30	7G2Dy00	Other specified toilet to skin
31	7G2Dz00	Other toilet to skin NOS
32	7G2E.00	Dressing of skin or wound
33	7G2E.11	Dressing of skin
34	7G2E000	Dressing of burnt skin of head or neck
35	7G2E100	Dressing of burnt skin NEC
36	7G2E200	Dressing of skin of head or neck NEC
37	7G2E300	Dressing of skin NEC
38	7G2E400	Dressing of skin of head or neck NEC
39	7G2E500	Dressing of skin ulcer NEC
40	7G2E600	Attention to dressing of burn of head or neck
41	7G2E700	Attention to dressing of burnt skin NEC
42	7G2E800	Attention to dressing of skin of head or neck NEC
43	7G2E900	Attention to dressing of skin NEC
44	7G2EA00	Two layer compression bandage for skin ulcer
45	7G2EB00	Four layer compression bandaging for skin ulcer
46	7G2EC00	Three layer compression bandage for skin ulcer
47	7G2Ey00	Other specified dressing of skin
48	7G2Ez00	Dressing of skin NOS
49	7G2G000	Dermabrasion of skin of head or neck
50	7G2G100	Dermabrasion of skin NEC
51	7G2G400	Refashioning of scar
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2	7P23200	Delivery of rehabilitation for burns
3	81H..00	Dressing of wound
4	81H1.00	Dressing of ulcer
5	81H2.00	Dressing of burn
6	81H3.00	Attention to dressing of skin
7	81H4.00	Checking dressing of skin
8	81H5.00	Change of dressing
9	81Hy.00	Other wound dressing
10	81HZ.00	Wound dressing NOS
11	8BC7.00	Glueing of wound
12	8BN..00	Treatment of wound with maggots
13	8C1L.00	Wound care
14	8C1M.00	Post-operative wound care
15	8C1M.11	Post-surgical wound care
16	8C1Q.00	Compression hosiery procedure
17	8C22.00	Oxygenation of slough
18	8C6..00	Wound dressing requested by accident and emergency service
19	8C7..00	Suture removal requested by accident and emergency service
20	8CA4T00	Dietary education for wound healing
21	8CA4T11	Dietary advice for wound healing
22	8Cd9.00	Advice given about wound care
23	8CK..00	Skin care
24	8CMT.00	Leg ulcer care pathway
25	8CS3.00	Agreeing on leg ulcer treatment plan
26	8CT1.00	Leg ulcer compression therapy finished
27	8CV2.00	Leg ulcer compression therapy started
28	8H15.00	Admit to burns unit
29	8H5E.00	Burns referral
30	8HIV.00	Referral for complex wound care
31	8HTh.00	Referral to leg ulcer clinic
32	9kd..00	Complex wound care - enhanced services administration
33	9ks..00	Complex skin ulcer care enhanced services administration
34	9kY..00	Review of wound repair - enhanced services administration
35	9kY..11	Review of wound repair
36	9N0t.00	Seen in primary care leg ulcer clinic
37	9N0z.00	Seen in burns clinic
38	9N2m.00	Seen by tissue viability nurse specialist
39	9N7L.00	Postop wound management gen secondary care done by practice
40	9NM5.00	Attending leg ulcer clinic
41	A056.00	Amoebic skin ulceration
42	A170.00	Tuberculosis of skin and subcutaneous tissue
43	A170z00	Tuberculosis of skin and subcutaneous tissue NOS
44	A3A0500	Gas gangrene
45	A3A0600	Gas gangrene-neck
46	A3A0700	Gas gangrene-back
47	A3A0800	Gas gangrene-shoulder
48	A3A0900	Gas gangrene-arm
49	A3A0A00	Gas gangrene-forearm
50	A3A0B00	Gas gangrene-hand
51	A3A0C00	Gas gangrene-pelvis

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2	A3A0D00	Gas gangrene-thigh
3	A3A0E00	Gas gangrene-leg
4	A3A0F00	Gas gangrene-foot
5	A3A0z00	Gas gangrene caused by organism NOS
6	A851000	Aleppo boil
7	A851100	Baghdad boil
8	A851200	Delhi boil
9		
10	A851z00	Urban cutaneous leishmaniasis NOS
11	A852.00	Asian desert cutaneous leishmaniasis
12	A853.00	Ethiopian cutaneous leishmaniasis
13	A854.00	American cutaneous leishmaniasis
14	A854.11	Chiclero ulcer
15	A855.00	American mucocutaneous leishmaniasis
16	A85z.00	Leishmaniasis NOS
17	A86..00	Trypanosomiasis
18		
19	AD40000	Cutaneous myiasis
20	AD40100	Wound myiasis
21		
22	C107.11	Diabetes mellitus with gangrene
23	C107.12	Diabetes with gangrene
24	C107200	Diabetes mellitus, adult with gangrene
25	C108500	Insulin dependent diabetes mellitus with ulcer
26	C108511	Type I diabetes mellitus with ulcer
27	C108512	Type 1 diabetes mellitus with ulcer
28		
29	C108600	Insulin dependent diabetes mellitus with gangrene
30	C108611	Type I diabetes mellitus with gangrene
31	C108612	Type 1 diabetes mellitus with gangrene
32	C109400	Non-insulin dependent diabetes mellitus with ulcer
33	C109411	Type II diabetes mellitus with ulcer
34	C109412	Type 2 diabetes mellitus with ulcer
35		
36	C109500	Non-insulin dependent diabetes mellitus with gangrene
37	C109511	Type II diabetes mellitus with gangrene
38	C109512	Type 2 diabetes mellitus with gangrene
39		
40	C10E500	Type 1 diabetes mellitus with ulcer
41	C10E511	Type I diabetes mellitus with ulcer
42	C10E512	Insulin dependent diabetes mellitus with ulcer
43		
44	C10E600	Type 1 diabetes mellitus with gangrene
45	C10E611	Type I diabetes mellitus with gangrene
46	C10E612	Insulin dependent diabetes mellitus with gangrene
47		
48	C10F400	Type 2 diabetes mellitus with ulcer
49	C10F411	Type II diabetes mellitus with ulcer
50	C10F500	Type 2 diabetes mellitus with gangrene
51	C10F511	Type II diabetes mellitus with gangrene
52		
53	F506.00	Abscess of external ear
54	G732.00	Peripheral gangrene
55	G732000	Gangrene of toe
56	G732100	Gangrene of foot
57	G732200	Gangrene of finger
58	G732300	Gangrene of thumb
59	G732400	Gangrene of hand
60	G830.00	Varicose veins of the leg with ulcer

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2	G832.00	Varicose veins of the leg with ulcer and eczema
3	G835.00	Infected varicose ulcer
4	G837.00	Venous ulcer of leg
5	J085000	Abscess of lip
6	J085800	Lip ulcer
7	J54..00	Abscess of anal and rectal regions
8	J54..12	Rectal abscess
9	J540.00	Perianal abscess
10	J540.11	Perianal cellulitis
11	J541.00	Ischiorectal abscess
12	J542.00	Submucous ano-rectal abscess
13	J543.00	Pelvi-rectal abscess
14	J544.00	Ano-rectal fissure abscess
15	J545.00	Intrasphincteric abscess
16	J546.00	Rectal abscess
17	J54z.00	Ano-rectal abscess NOS
18	K272000	Penile abscess
19	K272100	Penile boil
20	K272200	Penile carbuncle
21	K272300	Cellulitis of penis
22	K27y500	Chronic ulcer of penis
23	K284600	Fournier's gangrene of scrotum
24	K424000	Abscess of vulva
25	K424011	Abscess of labia
26	K424100	Carbuncle of vulva
27	K424111	Boil of vulva
28	K424200	Furuncle of vulva
29	K424z00	Other abscess of vulva NOS
30	K425.00	Ulceration of vulva
31	K425000	Ulceration of vulva unspecified
32	K425100	Ulceration of vulva in diseases EC
33	K425200	Ulceration of vulva in Behcet's disease
34	K425z00	Ulceration of vulva NOS
35	L394500	Infection of obstetric surgical wound
36	L441.00	Caesarean wound disruption
37	L441000	Caesarean wound disruption unspecified
38	L441100	Caesarean wound disruption - delivered with p/n complication
39	L441200	Caesarean wound disruption with postnatal complication
40	L441z00	Caesarean wound disruption NOS
41	L442.00	Obstetric perineal wound disruption
42	L442.11	Breakdown of perineum
43	L442.12	Episiotomy breakdown
44	L442000	Obstetric perineal wound disruption unspecified
45	L442100	Obstetric perineal wound disruption - deliv + p/n comp
46	L442200	Obstetric perineal wound disruption with p/n complication
47	L442z00	Obstetric perineal wound disruption NOS
48	L443.00	Other complication of obstetric surgical wound
49	L443.11	Haematoma - perineal wound
50	L443.12	Infection - perineal wound
51	L443000	Other complication of obstetric surgical wound unspecified
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2	L443100	Other complication obstetric surg wound -delivered +p/n comp
3	L443200	Other complication obstetric surgical wound with p/n comp
4	L443z00	Other complication of obstetric surgical wound NOS
5	L45..00	Obstetric breast infections
6	L450.00	Obstetric nipple infection
7	L450.11	Abscess of nipple - obstetric
8	L450.12	Nipple infection - obstetric
9	L450000	Obstetric nipple infection unspecified
10	L450100	Obstetric nipple infection - delivered
11	L450200	Obstetric nipple infection - delivered with p/n complication
12	L450300	Obstetric nipple infection with antenatal complication
13	L450400	Obstetric nipple infection with postnatal complication
14	L450z00	Obstetric nipple infection NOS
15	L451.00	Obstetric breast abscess
16	L451.11	Purulent mastitis - obstetric
17	L451000	Obstetric breast abscess unspecified
18	L451100	Obstetric breast abscess - delivered
19	L451200	Obstetric breast abscess - deliv with postnatal complication
20	L451300	Obstetric breast abscess with antenatal complication
21	L451400	Obstetric breast abscess with postnatal complication
22	L451z00	Obstetric breast abscess NOS
23	Lyu6A00	[X]Infection of caesarean section wound following delivery
24	M....00	Skin and subcutaneous tissue diseases
25	M0...00	Skin and subcutaneous tissue infections
26	M00..00	Carbuncle
27	M000.00	Carbuncle of face
28	M000000	Carbuncle of ear
29	M000100	Carbuncle of face (excluding eye)
30	M000200	Carbuncle of nasal septum
31	M000300	Carbuncle of temple region
32	M000z00	Carbuncle of face NOS
33	M001.00	Carbuncle of neck
34	M002.00	Carbuncle of trunk
35	M002000	Carbuncle of chest wall
36	M002100	Carbuncle of breast
37	M002200	Carbuncle of back
38	M002300	Carbuncle of abdominal wall
39	M002400	Carbuncle of umbilicus
40	M002500	Carbuncle of flank
41	M002600	Carbuncle of groin
42	M002700	Carbuncle of perineum
43	M002z00	Carbuncle of trunk NOS
44	M003.00	Carbuncle of upper arm and forearm
45	M003000	Carbuncle of shoulder
46	M003100	Carbuncle of axilla
47	M003200	Carbuncle of upper arm
48	M003300	Carbuncle of elbow
49	M003400	Carbuncle of forearm
50	M003z00	Carbuncle of upper arm and forearm NOS
51	M004.00	Carbuncle of hand
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2	M004000	Carbuncle of wrist
3	M004100	Carbuncle of thumb
4	M004200	Carbuncle of finger
5	M004z00	Carbuncle of hand NOS
6	M005.00	Carbuncle of buttock
7	M005000	Carbuncle of anus
8	M005100	Carbuncle of gluteal region
9	M005z00	Carbuncle of buttock NOS
10	M006.00	Carbuncle of leg (excluding foot)
11	M006000	Carbuncle of hip
12	M006100	Carbuncle of thigh
13	M006200	Carbuncle of knee
14	M006300	Carbuncle of lower leg
15	M006400	Carbuncle of ankle
16	M006z00	Carbuncle of leg (excluding foot) NOS
17	M007.00	Carbuncle of foot
18	M007000	Carbuncle of foot unspecified
19	M007100	Carbuncle of heel
20	M007200	Carbuncle of toe
21	M007z00	Carbuncle of foot NOS
22	M00y.00	Carbuncle of other specified site
23	M00y000	Carbuncle of head (excluding face)
24	M00yz00	Carbuncle of other specified site NOS
25	M00z.00	Carbuncle NOS
26	M01..00	Furuncle - boil
27	M010.00	Boil of face
28	M010000	Boil of ear
29	M010100	Boil of face (excluding eye)
30	M010200	Boil of nasal septum
31	M010300	Boil of temple region
32	M010400	Boil of external nose
33	M010z00	Boil of face NOS
34	M011.00	Boil of neck
35	M012.00	Boil of trunk
36	M012000	Boil of chest wall
37	M012100	Boil of breast
38	M012200	Boil of back
39	M012300	Boil of abdominal wall
40	M012400	Boil of umbilicus
41	M012500	Boil of flank
42	M012600	Boil of groin
43	M012700	Boil of perineum
44	M012z00	Boil of trunk NOS
45	M013.00	Boil of upper arm and forearm
46	M013000	Boil of shoulder
47	M013100	Boil of axilla
48	M013200	Boil of upper arm
49	M013300	Boil of elbow
50	M013400	Boil of forearm
51	M013z00	Boil of upper arm and forearm NOS

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2	M014.00	Boil of hand
3	M014000	Boil of wrist
4	M014100	Boil of thumb
5	M014200	Boil of finger
6	M014z00	Boil of hand NOS
7	M015.00	Boil of buttock
8	M015000	Boil of anus
9	M015100	Boil of gluteal region
10	M015z00	Boil of buttock NOS
11	M016.00	Boil of leg (excluding foot)
12	M016000	Boil of hip
13	M016100	Boil of thigh
14	M016200	Boil of knee
15	M016300	Boil of lower leg
16	M016400	Boil of ankle
17	M016z00	Boil of leg (excluding foot) NOS
18	M017.00	Boil of foot
19	M017000	Boil of foot unspecified
20	M017100	Boil of heel
21	M017200	Boil of toe
22	M017z00	Boil of foot NOS
23	M01y.00	Boil of other specified site
24	M01y000	Boil of head (excluding face)
25	M01yz00	Boil of other specified site NOS
26	M01z.00	Boil NOS
27	M01z.11	Recurrent boils
28	M01z.12	Boils of multiple sites
29	M01z000	Multiple boils
30	M02.00	Cellulitis and abscess of finger and toe
31	M020.00	Cellulitis and abscess of finger
32	M020000	Cellulitis and abscess of finger unspecified
33	M020100	Finger pulp abscess
34	M020111	Felon
35	M020112	Whitlow
36	M020200	Onychia of finger
37	M020300	Paronychia of finger
38	M020311	Perionychia of finger
39	M020400	Finger web space infection
40	M020500	Pulp space infection of finger/thumb
41	M020z00	Cellulitis and abscess of finger NOS
42	M021.00	Cellulitis and abscess of toe
43	M021000	Cellulitis and abscess of toe unspecified
44	M021100	Onychia of toe
45	M021200	Paronychia of toe
46	M021300	Pulp space infection of toe
47	M021z00	Cellulitis and abscess of toe NOS
48	M021z11	Perionychia of toe
49	M02z.00	Cellulitis and abscess of digit NOS
50	M02z.11	Nail infection NOS
51	M02z.12	Paronychia
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2	M02z.13	Infected nailfold
3	M02z.14	Nailfold infected
4	M03..00	Other cellulitis and abscess
5	M03..11	Abscess of skin area excluding digits of hand or foot
6	M03..12	Acute lymphangitis of skin excluding digits of hand or foot
7	M03..13	Cellulitis of skin area excluding digits of hand or foot
8	M030.00	Cellulitis and abscess of face
9	M030000	Cellulitis and abscess of cheek (external)
10	M030011	Cellulitis and abscess of cheek
11	M030100	Cellulitis and abscess of nose (external)
12	M030111	Cellulitis and abscess of nose
13	M030200	Cellulitis and abscess of chin
14	M030300	Cellulitis and abscess of submandibular region
15	M030400	Cellulitis and abscess of forehead
16	M030500	Cellulitis and abscess of temple region
17	M030600	Cellulitis of face
18	M030z00	Cellulitis and abscess of face NOS
19	M031.00	Cellulitis and abscess of neck
20	M031.11	Cervical abscess
21	M032.00	Cellulitis and abscess of trunk
22	M032000	Cellulitis and abscess of chest wall
23	M032100	Cellulitis and abscess of breast
24	M032200	Cellulitis and abscess of back
25	M032300	Cellulitis and abscess of abdominal wall
26	M032400	Cellulitis and abscess of umbilicus
27	M032500	Cellulitis and abscess of flank
28	M032600	Cellulitis and abscess of groin
29	M032700	Cellulitis and abscess of perineum
30	M032800	Cellulitis of trunk
31	M032z00	Cellulitis and abscess of trunk NOS
32	M033.00	Cellulitis and abscess of arm
33	M033000	Cellulitis and abscess of shoulder
34	M033100	Cellulitis and abscess of axilla
35	M033200	Cellulitis and abscess of upper arm
36	M033300	Cellulitis and abscess of elbow
37	M033400	Cellulitis and abscess of forearm
38	M033z00	Cellulitis and abscess of arm NOS
39	M034.00	Cellulitis and abscess of hand excluding digits
40	M034.11	Cellulitis and abscess of hand
41	M034000	Cellulitis and abscess of hand unspecified
42	M034011	Abscess of dorsum of hand
43	M034012	Abscess of palm of hand
44	M034013	Cellulitis of dorsum of hand
45	M034014	Cellulitis of palm of hand
46	M034100	Cellulitis and abscess of wrist
47	M034z00	Cellulitis and abscess of hand NOS
48	M035.00	Cellulitis and abscess of buttock
49	M036.00	Cellulitis and abscess of leg excluding foot
50	M036.11	Cellulitis and abscess of leg
51	M036000	Cellulitis and abscess of hip
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2	M036100	Cellulitis and abscess of thigh
3	M036200	Cellulitis and abscess of knee
4	M036300	Cellulitis and abscess of lower leg
5	M036400	Cellulitis and abscess of ankle
6	M036z00	Cellulitis and abscess of leg NOS
7	M037.00	Cellulitis and abscess of foot excluding toe
8	M037.11	Cellulitis and abscess of foot
9	M037000	Cellulitis and abscess of foot unspecified
10	M037100	Cellulitis and abscess of heel
11	M037200	Cellulitis in diabetic foot
12	M037z00	Cellulitis and abscess of foot NOS
13	M038.00	Cellulitis of external ear
14	M03y.00	Other specified cellulitis and abscess
15	M03y000	Cellulitis and abscess of head unspecified
16	M03y011	Abscess of scalp
17	M03z.00	Cellulitis and abscess NOS
18	M03z000	Cellulitis NOS
19	M03z100	Abscess NOS
20	M03zz00	Cellulitis and abscess NOS
21	M060.00	Pilonidal cyst with abscess
22	M061.00	Pilonidal cyst with no abscess
23	M061.11	Dermal sinus
24	M062.00	Pilonidal sinus with abscess
25	M063.00	Pilonidal sinus without abscess
26	M06z.00	Pilonidal sinus/cyst NOS
27	M07..00	Other local infections of skin and subcutaneous tissue
28	M070200	Pyoderma gangrenosum
29	M070300	Pyoderma ulcerosum tropicalum
30	M07y.00	Local infection of skin or subcutaneous tissue OS
31	M07yz00	Other spec local skin/subc infection NOS
32	M07yz11	Infection toe
33	M07yz12	Infection foot
34	M07yz13	Infection finger
35	M07z.00	Local infection skin/subcut tissue NOS
36	M07z.11	Infected wound from insect bite
37	M07z.12	Infected skin ulcer
38	M07z.13	Septic spots
39	M07z.14	Infected dermatitis
40	M07z000	Infection foot
41	M07z100	Infection toe
42	M07z200	Infection finger
43	M09..00	Cutaneous abscess
44	M090.00	[X]Abscess of face
45	M091.00	[X]Abscess of neck
46	M092.00	[X]Abscess of trunk
47	M092000	[X]Abscess of buttock
48	M092100	[X]Abdominal wall abscess
49	M092200	[X]Perineal abscess
50	M093.00	[X]Abscess of buttock
51	M094.00	[X]Abscess of limb
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2	M094000	[X]Abscess of axilla
3	M095.00	Skin abscess
4	M09y.00	[X]Abscess of other site
5	M0y..00	Other specified infections of skin or subcutaneous tissue
6	M0z..00	Skin and subcut tissue infection NOS
7	M0z..11	Infected sebaceous cyst
8	M1...00	Other skin and subcutaneous tissue inflammatory conditions
9	M2...00	Other skin and subcutaneous tissue disorders
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11	M27..00	Chronic skin ulcer
12	M270.00	Decubitus (pressure) ulcer
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14	M270.11	Bed sore
15	M270.12	Plaster ulcer
16	M270.13	Pressure sore
17	M270.14	Decubitus ulcer and pressure area
18	M270000	Hospital acquired pressure ulcer
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20	M270100	Nursing home acquired pressure ulcer
21	M270200	Community hospital acquired pressure ulcer
22	M270300	Hospice acquired pressure ulcer
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24	M270400	Stage I decubitus ulcer and pressure area
25	M270500	Stage II decubitus ulcer
26	M270600	Stage III decubitus ulcer
27	M270700	Stage IV decubitus ulcer
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29	M270z00	Decubitus ulcer and pressure area NOS
30	M271.00	Non-pressure ulcer lower limb
31	M271.11	Foot ulcer
32	M271.12	Ischaemic leg ulcer
33	M271.13	Leg ulcer NOS
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35	M271.14	Neurogenic leg ulcer
36	M271.15	Trophic leg ulcer
37	M271000	Ischaemic ulcer diabetic foot
38	M271100	Neuropathic diabetic ulcer - foot
39	M271200	Mixed diabetic ulcer - foot
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41	M271300	Arterial leg ulcer
42	M271400	Mixed venous and arterial leg ulcer
43	M271500	Venous ulcer of leg
44	M271600	Traumatic leg ulcer
45	M271700	Neuropathic foot ulcer
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47	M272.00	Ulcer of skin
48	M273.00	Non-healing leg ulcer
49	M274.00	Recurrent leg ulcer
50	M27y.00	Chronic ulcer of skin, other specified sites
51	M27z.00	Chronic skin ulcer NOS
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53	M2y4D00	Macerated perianal skin
54	M2yA.00	Skin sinus
55	M2yB.00	Fistula of skin
56	M2yz.11	Skin lesion
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58	M2z0.00	Skin lesion
59	Myu0.00	[X]Infections of the skin and subcutaneous tissue
60	Myu0100	[X]Other specified local infections/skin+subcutaneous tissue
	R153300	[D]Positive culture findings in wound

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2	S002.00	Open fracture vault of skull without intracranial injury
3	S002000	Open #skull vlt no intracranial injury, unspec state consc
4	S002100	Open #skull vlt no intracranial injury, no loss of consc
5	S002200	Open #skull vlt no intracranial injury, <1hr loss of consc
6	S002300	Open #skull vlt no intracranial injury, 1-24hr loss of consc
7	S002400	Open #skull vlt no intracranial injury, >24hr LOC+recovery
8	S002500	Open #skull vlt no intracranial inj, >24hr LOC not restored
9	S002600	Open #skull vlt no intracranial injury, LOC unspec duration
10	S002z00	Open #skull vlt no intracranial injury + concussion unspec
11	S003.00	Open fracture vault of skull with intracranial injury
12	S003000	Open #skull vlt + intracranial injury, unspec state of consc
13	S003100	Open #skull vlt + intracranial injury, no loss of consc
14	S003200	Open #skull vlt + intracranial injury, <1hr loss of consc
15	S003300	Open #skull vlt + intracranial injury, 1-24hr loss of consc
16	S003400	Open #skull vlt + intracranial injury, >24hr LOC + recovery
17	S003500	Open #skull vlt + intracranial inj, >24hr LOC not restored
18	S003600	Open #skull vlt + intracranial injury, LOC unspec duration
19	S003z00	Open #skull vlt with intracranial injury + concussion unspec
20	S012.00	Open fracture base skull without mention intracranial injury
21	S012000	Open #skull bse no intracranial inj, unspec state of consc
22	S012100	Open #skull bse no intracranial injury, no loss of consc
23	S012200	Open #skull bse no intracranial injury, <1hr loss of consc
24	S012300	Open #skull bse no intracranial injury, 1-24hr loss of consc
25	S012400	Open #skull bse no intracranial injury, >24hr LOC+recovery
26	S012500	Open #skull bse no intracranial inj, >24hr LOC not restored
27	S012600	Open #skull bse no intracranial injury, LOC unspec duration
28	S012z00	Open #skull bse no intracranial injury + concussion unspec
29	S013.00	Open fracture base of skull with intracranial injury
30	S013000	Open #skull bse + intracranial injury, unspec state of consc
31	S013100	Open #skull bse + intracranial injury, no loss of consc
32	S013200	Open #skull bse + intracranial injury, <1hr loss of consc
33	S013300	Open #skull bse + intracranial injury, 1-24hr loss of consc
34	S013400	Open #skull bse + intracranial injury, >24hr LOC + recovery
35	S013500	Open #skull bse + intracranial inj, >24hr LOC not restored
36	S013600	Open #skull bse + intracranial injury, LOC unspec duration
37	S013z00	Open #skull bse + intracranial injury + concussion unspec
38	S032.00	Open #skull NOS without mention of intracranial injury
39	S032000	Open #skull NOS no intracranial inj, unspec state of consc
40	S032100	Open #skull NOS no intracranial inj, no loss of consc
41	S032200	Open #skull NOS no intracranial inj, <1hr loss of consc
42	S032300	Open #skull NOS no intracranial inj, 1-24hrs loss of consc
43	S032400	Open #skull NOS no intracranial inj, >24hrs LOC + recovery
44	S032500	Open #skull NOS no intracranial inj, >24hrs LOC not restored
45	S032600	Open #skull NOS no intracranial inj, LOC unspec duration
46	S032z00	Open #skull NOS no intracranial inj + concussion unspec
47	S033.00	Open fracture of skull NOS with intracranial injury
48	S033000	Open #skull NOS + intracranial inj, unspec state of consc
49	S033100	Open #skull NOS + intracranial inj, no loss of consc
50	S033200	Open #skull NOS + intracranial inj, <1hr loss of consc
51	S033300	Open #skull NOS + intracranial inj, 1-24hrs loss of consc
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S033400	Open #skull NOS + intracranial inj, >24hrs LOC + recovery
S033500	Open #skull NOS + intracranial inj, >24hrs LOC not restored
S033600	Open #skull NOS + intracranial inj, LOC unspec duration
S033z00	Open #skull NOS + intracranial inj + concussion unspec
S042000	Open #skull/face, mult, no intracranial inj, unspec consc
S042100	Open #skull/face, mult, no intracranial inj, no loss consc
S042200	Open #skull/face, mult, no intracranial inj, <1hr LOC
S042300	Open #skull/face, mult, no intracranial inj, 1-24hrs LOC
S042400	Open #skull/face, mult, no intracran inj, >24hr LOC+recovery
S042500	Open #skull/face,mult,no intracran inj,>24hr LOC no restored
S042600	Open #skull/face,mult,no intracran inj, LOC unspec duration
S042z00	Open #skull/face,mult,no intracran inj, concussion unspec
S043.00	Mult #skull/face + other bones, open + intracranial injury
S043000	Open #skull/face, mult + intracranial inj, unspec consc
S043100	Open #skull/face, mult + intracranial inj, no loss consc
S043200	Open #skull/face, mult + intracranial inj, <1hr LOC
S043300	Open #skull/face, mult + intracranial inj, 1-24hrs LOC
S043400	Open #skull/face, mult + intracran inj, >24hr LOC + recovery
S043500	Open #skull/face,mult + intracran inj, >24hr LOC no restored
S043600	Open #skull/face, mult + intracran inj, LOC unspec duration
S043z00	Open #skull/face, mult + intracran inj + concussion, unspec
S611000	Cortex cont + open intracranial wound + unspec state consc
S611100	Cortex cont + open intracranial wound + no loss of consc
S611200	Cortex cont + open intracranial wound + <1hr loss of consc
S611300	Cortex cont + open intracranial wound + 1-24hr loss of consc
S611400	Cortex cont + open intracranial wnd + >24hr LOC + recovery
S611500	Cortex cont + open intracranial wnd + >24hr LOC not restored
S611600	Cortex cont + open intracranial wnd + LOC unspec duration
S611z00	Cortex cont + open intracranial wound + concussion unspec
S613.00	Cortex laceration with open intracranial wound
S613000	Cortex lacn + open intracranial wound + unspec state consc
S613100	Cortex lacn + open intracranial wound + no loss of consc
S613200	Cortex lacn + open intracranial wound + <1hr loss of consc
S613300	Cortex lacn + open intracranial wound + 1-24hr loss of consc
S613400	Cortex lacn + open intracranial wound + >24hr LOC + recovery
S613500	Cortex lacn + open intracranial wnd + >24hr LOC not restored
S613600	Cortex lacn + open intracranial wnd + LOC unspec duration
S613z00	Cortex lacn + open intracranial wound + concussion unspec
S615000	Hind brain cont + open intracranial wnd + unspec state consc
S615100	Hind brain cont + open intracranial wound + no loss consc
S615200	Hind brain cont + open intracranial wound + <1hr loss consc
S615300	Hind brain cont + open intracranial wnd + 1-24hr loss consc
S615400	Hind brain cont + open intracranial wnd +>24hr LOC +recovery
S615500	Hind brain cont + open intracran wnd +>24hr LOC not restored
S615600	Hind brain cont + open intracranial wnd +LOC unspec duration
S615z00	Hind brain cont + open intracranial wnd + concussion unspec
S617.00	Hind brain laceration with open intracranial wound
S617000	Hind brain lacn + open intracranial wnd + unspec state consc
S617100	Hind brain lacn + open intracranial wnd + no loss consc
S617200	Hind brain lacn + open intracranial wnd + <1hr loss consc

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2	S617300 Hind brain lacn + open intracranial wnd + 1-24hr loss consc
3	S617400 Hind brain lacn + open intracranial wnd+>24hr LOC + recovery
4	S617500 Hind brain lacn open intracranial wnd+>24hr LOC not restored
5	S617600 Hind brain lacn + open intracran wnd + LOC unspec duration
6	S617z00 Hind brain lacn + open intracranial wnd + concussion unspec
7	S61y000 Brain cont + open intracranial wound + unspec state consc
8	S61y100 Brain cont + open intracranial wound + no loss of consc
9	S61y200 Brain cont + open intracranial wound + <1hr loss of consc
10	S61y300 Brain cont + open intracranial wound + 1-24hr loss of consc
11	S61y400 Brain cont + open intracranial wound + >24hr LOC + recovery
12	S61y500 Brain contusion + open intracr wound+>24hr LOC not ful reco
13	S61y600 Brain cont + open intracranial wound + LOC unspec duration
14	S61yz00 Brain cont + open intracranial wound + concussion unspec
15	S621000 Subarachnoid h'ge inj + open intracran wound + unspec consc
16	S621100 Subarachnoid h'ge inj + open intracranial wound + no LOC
17	S621200 Subarachnoid h'ge inj + open intracran wound+<1hr loss consc
18	S621300 Subarachnoid h'ge inj + open intracran wnd+1-24hr loss consc
19	S621400 Subarach h'ge inj + open intracran wnd +>24hr LOC + recovery
20	S621500 Subarach h'ge inj + open intracran wnd+>24hr LOC -restored
21	S621600 Subarach h'ge inj + open intracran wnd+LOC unspec duration
22	S621z00 Subarachnoid h'ge inj + open intracran wnd+concussion unspec
23	S623000 Subdural h'ge inj + open intracranial wound + unspec consc
24	S623100 Subdural h'ge inj + open intracranial wound+no loss consc
25	S623200 Subdural h'ge inj + open intracranial wound+<1hr loss consc
26	S623300 Subdural h'ge inj + open intracranial wnd+1-24hr loss consc
27	S623400 Subdural h'ge inj + open intracran wound+>24hr LOC +recovery
28	S623500 Subdural h'ge inj + open intracran wnd+>24hr LOC -restored
29	S623600 Subdural h'ge inj + open intracran wnd+LOC unspec duration
30	S623z00 Subdural h'ge inj + open intracranial wnd+concussion unspec
31	S625000 Extradural h'ge inj + open intracranial wnd + unspec consc
32	S625100 Extradural h'ge inj + open intracranial wound+no loss consc
33	S625200 Extradural h'ge inj + open intracranial wnd+<1hr loss consc
34	S625300 Extradural h'ge inj + open intracran wnd+1-24hr loss consc
35	S625400 Extradural h'ge inj + open intracran wnd+>24hr LOC+recovery
36	S625500 Extradural h'ge inj + open intracran wnd+>24hr LOC -restored
37	S625600 Extradural h'ge inj + open intracran wnd+LOC unspec duration
38	S625z00 Extradural h'ge inj + open intracran wnd+concussion unspec
39	S62A100 Traumatic extradural haematoma with open intracranial wound
40	S631.00 Other cerebral h'ge after injury + open intracranial wound
41	S631000 Oth cerebral h'ge inj + open intracran wnd + unspec consc
42	S631100 Oth cerebral h'ge inj + open intracranial wnd+no loss consc
43	S631200 Oth cerebral h'ge inj + open intracran wnd+<1hr loss consc
44	S631300 Oth cerebral h'ge inj + open intracran wnd+1-24hr loss consc
45	S631400 Oth cereb h'ge inj + open intracran wnd+>24hr LOC + recovery
46	S631500 Oth cereb h'ge inj + open intracran wnd+>24hr LOC -restored
47	S631600 Oth cereb h'ge inj + open intracran wnd+LOC unspec duration
48	S631z00 Oth cereb h'ge inj + open intracran wnd+concussion unspec
49	S641.00 Intracranial injury NOS + open intracranial wound
50	S641000 Intracranial inj NOS + open intracranial wnd + unspec consc
51	S641100 Intracranial inj NOS + open intracranial wound+no loss consc
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2	S641200	Intracranial inj NOS + open intracranial wnd+<1hr loss consc
3	S641300	Intracranial inj NOS + open intracranial wnd + 1-24hr LOC
4	S641400	Intracranial inj NOS + open intracran wnd+>24hr LOC+recovery
5	S641500	Intracran inj NOS + open intracran wnd+>24hr LOC -restored
6	S641600	Intracran inj NOS + open intracran wnd+LOC unspec duration
7	S641z00	Intracranial inj NOS + open intracran wnd+concussion unspec
8	S642100	Traumatic cerebral oedema with open intracranial wound
9	S645100	Intracranial injury with prolonged coma with open wound
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11	S701.00	Open traumatic pneumothorax
12	S703.00	Open traumatic haemothorax
13	S705.00	Open traumatic haemopneumothorax
14	S711.00	Heart injury, open
15	S711000	Heart injury with open wound into thorax, unspecified
16	S711100	Heart contusion, with open wound into thorax
17	S711200	Heart laceration open, without penetration of heart chambers
18	S711300	Heart laceration open, with penetration of heart chambers
19	S711z00	Heart injury with open wound into thorax NOS
20	S713000	Lung injury with open wound into thorax, unspecified
21	S713100	Lung contusion with open wound into thorax
22	S713200	Lung laceration with open wound into thorax
23	S713z00	Lung injury with open wound into thorax, NOS
24	S73yz00	Gastrointestinal tract injury with open wound to cavity NOS
25	S8...00	Open wound of head, neck and trunk
26	S8...12	Open wound of head
27	S8...13	Open wound of trunk
28	S80..00	Open wound of ocular adnexa
29	S80..11	Open wound of eyelid
30	S80..12	Periocular open wound
31	S800.00	Eyelid skin and periocular area laceration
32	S803.00	Penetrating wound of orbit without mention of foreign body
33	S804.00	Penetrating wound of orbit with foreign body
34	S80y.00	Other open ocular adnexa wound
35	S80z.00	Open wound of ocular adnexa NOS
36	S81..00	Open wound of eyeball
37	S81..12	Open wound of eye
38	S810.00	Ocular laceration without intraocular prolapse
39	S81z.00	Open wound of eyeball NOS
40	S82..00	Open wound of ear
41	S820.00	Open wound of external ear
42	S820000	Open wound of external ear, unspecified
43	S820100	Open wound of ear auricle
44	S820w00	Other open wound of external ear
45	S820z00	Open wound of external ear not otherwise specified
46	S821.00	Open wound of external ear with complication
47	S821000	Open wound of external ear with complication, unspecified
48	S821100	Open wound of ear auricle with complication
49	S821z00	Open wound of external ear with complication, NOS
50	S82v.00	Other open wound of ear
51	S82v011	Open wound of drumhead without complication
52	S82v012	Open wound of tympanic membrane without complication



1	S82v100	Open wound of ear ossicle
2	S82v300	Open wound of cochlea
3	S82vz00	Other open wound of ear NOS
4	S82w.00	Other open wound of ear with complication
5	S82w000	Open wound of ear drum with complication
6	S82w100	Open wound of ear ossicle with complication
7	S82w300	Open wound of cochlea with complication
8	S82wz00	Other open wound of ear with complication NOS
9	S82x.00	Open wound of ear, uncomplicated not otherwise specified
10	S82y.00	Open wound of ear with complication, NOS
11	S82z.00	Open wound of ear NOS
12	S83..00	Other open wound of head
13	S830.00	Open wound of scalp
14	S830100	Avulsion of scalp
15	S831.00	Open wound of scalp with complication
16	S832.00	Open wound of nose
17	S832000	Open wound of nose, unspecified
18	S832100	Open wound of nasal septum
19	S832200	Open wound of nasal cavity
20	S832300	Open wound of nasal sinus
21	S832x00	Multiple wounds of nose
22	S832z00	Open wound of nose NOS
23	S833.00	Open wound of nose with complication
24	S833000	Open wound of nose with complication, unspecified
25	S833100	Open wound of nasal septum with complication
26	S833200	Open wound of nasal cavity with complication
27	S833300	Open wound of nasal sinus with complication
28	S833x00	Multiple open wounds of nose with complication
29	S833z00	Open wound of nose with complication, NOS
30	S834.00	Open wound of face
31	S834000	Open wound of face, unspecified
32	S834100	Open wound of cheek
33	S834200	Open wound of forehead
34	S834300	Open wound of eyebrow
35	S834400	Open wound of lip
36	S834500	Open wound of jaw
37	S834600	Open wound of chin
38	S834x00	Multiple open wounds of face
39	S834z00	Open wound of face, NOS
40	S835.00	Open wound of face with complication
41	S835000	Open wound of face with complication, unspecified
42	S835100	Open wound of cheek with complication
43	S835200	Open wound of forehead with complication
44	S835300	Open wound of eyebrow with complication
45	S835400	Open wound of lip with complication
46	S835500	Open wound of jaw with complication
47	S835x00	Multiple open wounds of face with complication
48	S835z00	Open wound of face with complication, NOS
49	S836.00	Open wound in mouth
50	S836000	Open wound in mouth, unspecified
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2	S836100	Open wound of buccal mucosa
3	S836200	Open wound of gum
4	S836400	Open wound of tongue
5	S836500	Open wound of mouth floor
6	S836600	Open wound of palate
7	S837100	Open wound of buccal mucosa with complication
8	S837200	Open wound of gum with complication
9	S837400	Open wound of tongue with complication
10	S837500	Open wound of mouth floor with complication
11	S837600	Open wound of palate with complication
12	S83x.00	Other open wound of head
13	S83y.00	Other open wound of head with complication
14	S83z.00	Open wound of head NOS
15	S84..00	Open wound of neck
16	S840.00	Open wound of larynx and trachea
17	S840.11	Open wound of larynx without complication
18	S840.12	Open wound of trachea without complication
19	S840000	Open wound of larynx and trachea, unspecified
20	S840100	Open wound of larynx
21	S840200	Open wound of trachea
22	S840z00	Open wound of larynx and trachea not otherwise specified
23	S841.00	Open wound of larynx and trachea with complication
24	S841.11	Open wound of larynx with complication
25	S841.12	Open wound of trachea with complication
26	S841000	Open wound of larynx and trachea with complication, unspec
27	S841100	Open wound of larynx with complication
28	S841200	Open wound of trachea with complication
29	S841z00	Open wound of larynx and trachea with complication, NOS
30	S842.00	Open wound of thyroid
31	S843.00	Open wound of thyroid with complication
32	S844.00	Open wound of pharynx
33	S845.00	Open wound of pharynx with complication
34	S84x.00	Other open wound of neck
35	S84x000	Open wound of neck nape
36	S84x100	Open wound of supraclavicular region
37	S84xz00	Open wound of neck, NOS
38	S84xz11	Open wound of throat NOS
39	S84y.00	Other open wound of neck with complication
40	S84y000	Open wound of neck nape with complication
41	S84y100	Open wound of supraclavicular region with complication
42	S84yz00	Open wound of neck with complication, NOS
43	S84z.00	Open wound of neck NOS
44	S85..00	Open wound of chest wall
45	S850.00	Open wound of chest wall, uncomplicated
46	S850000	Degloving injury chest wall
47	S851.00	Open wound of chest wall with complication
48	S852.00	Open wound of front wall of thorax
49	S853.00	Multiple open wounds of thoracic wall
50	S855.00	Open wound of back wall of thorax
51	S85X.00	Open wound of thorax, part unspecified
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1	S85z.00	Open wound of chest wall NOS
2	S86..00	Open wound of back
3	S86..11	Open wound of loin
4	S86..12	Open wound of lumbar region
5	S860.00	Open wound of back, uncomplicated
6	S860000	Degloving injury back
7	S861.00	Open wound of back with complication
8	S86z.00	Open wound of back NOS
9	S87..00	Open wound of buttock
10	S87..11	Open wound of sacroiliac region
11	S870.00	Open wound of buttock, uncomplicated
12	S870000	Degloving injury buttock
13	S871.00	Open wound of buttock with complication
14	S87z.00	Open wound of buttock NOS
15	S88..00	Open wound of external genital organs
16	S880.00	Open wound of penis
17	S880000	Degloving injury penis
18	S881.00	Open wound of penis with complication
19	S882.00	Open wound of scrotum and testes
20	S882000	Open wound of scrotum
21	S882100	Open wound of testes
22	S882200	Degloving injury scrotum
23	S882z00	Open wound of scrotum and testes not otherwise specified
24	S883.00	Open wound of scrotum and testes with complication
25	S883000	Open wound of scrotum with complication
26	S883100	Open wound of testes with complication
27	S883z00	Open wound of scrotum and testes with complication, NOS
28	S884.00	Open wound of vulva
29	S884000	Open wound of vulva, unspecified
30	S884100	Open wound of labium majus
31	S884200	Open wound of labium minus
32	S884z00	Open wound of vulva, NOS
33	S885.00	Open wound of vulva with complication
34	S885000	Open wound of vulva with complication, unspecified
35	S885100	Open wound of labium majus with complication
36	S885200	Open wound of labium minus with complication
37	S885z00	Open wound of vulva with complication, NOS
38	S886.00	Open wound of vagina
39	S887.00	Open wound of vagina with complication
40	S88x.00	Other open wound of external genital organ
41	S88y.00	Other open wound of external genital organ with complication
42	S88z.00	Open wound of external genital organ NOS
43	S89..00	Other open wounds of other sites, excluding limbs
44	S890.00	Open wound of breast
45	S891.00	Open wound of breast with complication
46	S892.00	Open wound of anterior abdominal wall
47	S892000	Open wound of epigastric region
48	S892100	Open wound umbilical region
49	S892200	Open wound of hypogastric region
50	S892300	Open wound of pubic region without complication

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2	S892z00	Open wound anterior abdominal wall without complication NOS
3	S893.00	Open wound of anterior abdominal wall with complication
4	S893000	Open wound of epigastrium with complication
5	S893100	Open wound of umbilical region with complication
6	S893200	Open wound of hypogastrium with complication
7	S893300	Open wound of pubic region with complication
8	S893z00	Open wound of anterior abdominal wall with complication NOS
9	S894.00	Open wound of lateral abdominal wall
10	S894000	Open wound of hypochondrium
11	S894100	Open wound of lumbar region
12	S894111	Open wound of flank without complication
13	S894200	Open wound of iliac region
14	S894300	Open wound of inguinal region
15	S894311	Open wound of groin without complication
16	S894400	Open wound of flank without complication
17	S894500	Open wound of loin
18	S894z00	Open wound of lateral abdominal wall NOS
19	S895.00	Open wound of lateral abdominal wall with complication
20	S895000	Open wound of hypochondrium with complication
21	S895100	Open wound of lumbar region with complication
22	S895111	Open wound of flank with complication
23	S895200	Open wound of iliac region with complication
24	S895300	Open wound of inguinal region with complication
25	S895311	Open wound of groin with complication
26	S895400	Open wound of flank with complication
27	S895z00	Open wound of lateral abdominal wall with complication, NOS
28	S89v.00	Other and unspecified open wound of trunk
29	S89v000	Open wound of pelvic region
30	S89v100	Open wound of perineum
31	S89vz00	Other and unspecified open wound of trunk, NOS
32	S89w.00	Other and unspecified open wound of trunk with complication
33	S89w000	Open wound of pelvic region with complication
34	S89w100	Open wound of perineum with complication
35	S89wz00	Other and unspecified open wound trunk with complication NOS
36	S89x.00	Multiple open wounds, of unspecified site
37	S89y.00	Multiple open wounds with complication, of unspecified site
38	S89z.00	Other open wounds NOS
39	S8A..00	Open wounds involving head with neck
40	S8z..00	Open wound of head, neck and trunk NOS
41	S8z..11	Laceration NOS
42	S8z..12	Traumatic ulcer NOS
43	S8z..13	Laceration
44	S9...00	Open wound of upper limb
45	S9...11	Laceration of arm
46	S9...12	Open wound of arm
47	S90..00	Open wound of shoulder region and upper limb
48	S900.00	Open wound of shoulder/upper limb without complication
49	S900000	Open wound of shoulder region
50	S900100	Open wound of scapular region
51	S900200	Open wound of axillary region

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2	S900300	Open wound of upper arm
3	S900400	Multiple open wounds of shoulder and upper arm
4	S900x00	Multiple open wounds of upper arm
5	S900z00	Open wound of shoulder and upper limb NOS
6	S901.00	Open wound of shoulder and upper limb with complication
7	S901000	Open wound of shoulder region with complication
8	S901100	Open wound of scapular region with complication
9	S901200	Open wound of axillary region with complication
10	S901300	Open wound of upper arm with complication
11	S901x00	Multiple open wounds of upper arm with complication
12	S901z00	Open wound of shoulder and upper arm with complication, NOS
13	S902.00	Open wound of shoulder/upper limb with tendon involvement
14	S902.11	Open wound of arm with tendon injury
15	S902000	Open wound of shoulder region with tendon involvement
16	S902100	Open wound of scapular region with tendon involvement
17	S902200	Open wound of axillary region with tendon involvement
18	S902300	Open wound of upper arm with tendon involvement
19	S902x00	Multiple open wounds of upper arm with tendon involvement
20	S902z00	Open wound shoulder/upper arm with tendon involvement, NOS
21	S903.00	Degloving injury, shoulder or upper arm
22	S903000	Degloving injury, shoulder area
23	S903100	Degloving injury, scapular area
24	S903200	Degloving injury, axilla
25	S903300	Degloving injury, upper arm
26	S90z.00	Open wound of shoulder region and upper arm NOS
27	S91..00	Open wound of elbow, forearm and wrist
28	S910.00	Open wound of lower arm without mention of complication
29	S910000	Open wound of forearm
30	S910100	Open wound of elbow
31	S910200	Open wound of wrist, unspecified
32	S910300	Open wound of wrist, volar
33	S910400	Open wound of wrist, dorsal
34	S910z00	Open wound of lower arm, NOS
35	S911.00	Open wound of lower arm with complication
36	S911000	Open wound of forearm with complication
37	S911100	Open wound of elbow with complication
38	S911200	Open wound of wrist with complication
39	S911z00	Open wound of lower arm with complication, NOS
40	S912.00	Open wound of lower arm with tendon involvement
41	S912.11	Open wound of lower arm with tendon injury
42	S912000	Open wound of forearm with tendon involvement
43	S912100	Open wound of elbow with tendon involvement
44	S912200	Open wound of wrist with tendon involvement
45	S912300	Complete division extensor tendon wrist
46	S912400	Complete division flexor tendon wrist
47	S912z00	Open wound of lower arm with tendon involvement, NOS
48	S913.00	Degloving injury lower arm
49	S913000	Degloving injury, forearm
50	S913100	Degloving injury, elbow area
51	S913200	Degloving injury wrist, volar
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2	S913300	Degloving injury wrist, dorsum
3	S91z.00	Open wound of elbow, forearm and wrist NOS
4	S92..00	Open wound of hand, excluding finger(s)
5	S920.00	Open wound of hand without mention of complication
6	S920000	Open wound of hand, palm
7	S920100	Open wound of hand, dorsum
8	S920200	Multiple open wounds of wrist and hand
9	S921.00	Open wound of hand with complication
10	S922.00	Open wound of hand with tendon involvement
11	S923.00	Degloving injury hand
12	S923000	Degloving injury hand, palmar
13	S923100	Degloving injury hand, dorsum
14	S924.00	Severe multi tissue damage hand
15	S925.00	Massive multi tissue damage hand
16	S92z.00	Open wound of hand, excluding fingers, NOS
17	S93..00	Open wound of finger(s) or thumb
18	S93..11	Open wound of fingernail
19	S93..12	Open wound of nail
20	S93..13	Open wound of thumb
21	S93..14	Open wound of thumbnail
22	S930.00	Open wound of finger or thumb without mention of complicatn
23	S930000	Open wound, finger
24	S930100	Open wound, finger, multiple
25	S930200	Open wound, thumb
26	S931.00	Open wound of finger or thumb with complication
27	S932.00	Open wound of finger or thumb with tendon involvement
28	S932.11	Open wound of finger with tendon injury
29	S932000	Complete division, flexor digitorum superficialis tendon
30	S932100	Complete division, flexor digitorum profundus tendon
31	S932200	Complete division, both flexor tendons
32	S932300	Complete division, extensor digitorum tendon
33	S932400	Mallet finger with open tendon injury
34	S932500	Complete division, flexor pollicis longus tendon
35	S932600	Complete division, extensor pollicis longus tendon
36	S932700	Mallet thumb with open tendon injury
37	S933.00	Degloving injury, finger
38	S933000	Degloving injury, finger unspecified
39	S933100	Degloving injury, finger, multiple
40	S933200	Ring avulsion injury, class 1
41	S933300	Ring avulsion injury, class 2
42	S933400	Ring avulsion injury, class 3
43	S933500	Ring avulsion injury, class 4
44	S934.00	Degloving injury, thumb
45	S935.00	Open wound fingernail
46	S936.00	Open wound thumbnail
47	S937.00	Open wound of finger with damage to nail
48	S938.00	Open wound of thumb with damage to nail
49	S93z.00	Open wound of finger(s) NOS
50	S94..00	Multiple and unspecified open wound of upper limb
51	S940.00	Multiple/unspec open wound upper limb without complication
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2	S941.00	Multiple/unspec open wound of upper limb with complication
3	S942.00	Multiple/unspec open wound upper limb with tendon involved
4	S942.11	Multiple/unspec open wound of upper limb with tendon injury
5	S94z.00	Multiple and unspecified open wound of upper limb NOS
6	S96X.00	Comb traum amp of (part of) fing(s) + oth part wrist/hand
7	S9z..00	Open wound of upper limb NOS
8	SA...00	Open wound of lower limb
9	SA...11	Open wound of leg
10	SA...12	Laceration - leg
11	SA0..00	Open wound of hip and thigh
12	SA00.00	Open wound of hip and thigh without mention of complication
13	SA00000	Open wound of hip
14	SA00100	Open wound of thigh
15	SA00z00	Open wound hip and thigh, NOS
16	SA01.00	Open wound of hip and thigh with complication
17	SA01000	Open wound of hip with complication
18	SA01100	Open wound of thigh with complication
19	SA01z00	Open wound of hip and thigh with complication, NOS
20	SA02.00	Open wound of hip and thigh with tendon involvement
21	SA02.11	Open wound of hip and thigh with tendon injury
22	SA02000	Open wound of hip with tendon involvement
23	SA02100	Open wound of thigh with tendon involvement
24	SA02200	Complete division, quadriceps tendon
25	SA02300	Complete division, hamstring tendon
26	SA02z00	Open wound of hip and thigh with tendon involvement, NOS
27	SA03.00	Degloving injury, hip or thigh
28	SA03000	Degloving injury, hip
29	SA03100	Degloving injury, thigh
30	SA04.00	Severe multi tissue damage hip or thigh
31	SA05.00	Massive multi tissue damage hip or thigh
32	SA0z.00	Open wound of hip and thigh NOS
33	SA1..00	Open wound of knee, leg and ankle
34	SA10.00	Open wound of knee, leg and ankle without complication
35	SA10000	Open wound of knee
36	SA10100	Open wound of leg
37	SA10200	Open wound of ankle
38	SA10z00	Open wound of knee, leg and ankle NOS
39	SA11.00	Open wound of knee, leg and ankle with complication
40	SA11000	Open wound of knee with complication
41	SA11100	Open wound of lower leg with complication
42	SA11200	Open wound of ankle with complication
43	SA11z00	Open wound of knee/leg/ankle with complication, NOS
44	SA12.00	Open wound of knee, leg and ankle with tendon involvement
45	SA12.11	Open wound of leg with tendon injury
46	SA12000	Open wound of knee with tendon involvement
47	SA12100	Open wound of lower leg with tendon involvement
48	SA12200	Open wound of ankle with tendon involvement
49	SA12300	Complete division, patellar tendon
50	SA12400	Complete division, tendocalcaneus (Achilles tendon)
51	SA12z00	Open wound of knee/leg/ankle with tendon involvement, NOS
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2	SA13.00	Degloving injury, knee or leg or ankle
3	SA13000	Degloving injury, knee
4	SA13100	Degloving injury, lower leg
5	SA13200	Degloving injury, ankle
6		
7	SA14.00	Severe multi tissue damage lower leg
8	SA15.00	Massive multi tissue damage lower leg
9	SA16.00	Multiple injuries of ankle and foot
10	SA1z.00	Open wound of knee, leg and ankle NOS
11	SA2..00	Open wound of foot, excluding toe(s)
12	SA2..11	Open wound of heel
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14	SA20.00	Open wound of foot without mention of complication
15	SA20100	Open wound foot, plantar
16	SA20200	Open wound foot, dorsum
17	SA20300	Open wound, heel
18	SA21.00	Open wound of foot with complication
19	SA22.00	Open wound of foot with tendon involvement
20	SA22.11	Open wound of foot with tendon injury
21	SA22000	Complete division, flexor tendon, foot
22	SA22100	Complete division, extensor tendon, foot
23		
24	SA23.00	Degloving injury, foot
25	SA23000	Degloving injury foot, plantar
26	SA23100	Degloving injury foot, dorsum
27	SA23200	Degloving injury heel
28		
29	SA24.00	Severe multi tissue damage foot
30	SA25.00	Massive multi tissue damage foot
31	SA2z.00	Open wound of foot NOS
32	SA3..00	Open wound of toe(s)
33	SA3..11	Open wound of toenail
34	SA30.00	Open wound of toe(s) without mention of complication
35	SA31.00	Open wound of toe(s) with complication
36	SA32.00	Open wound of toe(s) with tendon involvement
37	SA32.11	Open wound of toe(s) with tendon injury
38	SA33.00	Degloving injury toe(s)
39	SA33000	Degloving injury toe
40	SA33100	Degloving injury, multiple toes
41	SA34.00	Open wound of toe(s) with damage to nail
42	SA3z.00	Open wound of toe(s) NOS
43	SA4..00	Multiple and unspecified open wound of lower limb
44	SA40.00	Multiple and unspec open wound leg, without complication
45	SA41.00	Multiple and unspec open wound of leg with complication
46	SA42.00	Multiple and unspec open wound leg with tendon involvement
47	SA4z.00	Multiple and unspecified open wound of lower limb NOS
48	SA9..00	Multiple open wounds of hip and thigh
49	SAA..00	Open wounds involving multiple regions of lower limb(s)
50	SAz..00	Open wound of lower limb NOS
51	SC10.00	Late effect of open wound of head, neck and trunk
52	SC11.00	Late effect of open wound arm or leg without tendon injury
53	SC15.00	Late effect of burn of eye, head and neck
54	SC15.11	Late effect of burn of head or neck
55	SC16.00	Late effect of burn of wrist and hand
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2	SC17.00	Late effect of burn of arm, leg and foot
3	SC17.11	Late effect of burn of arm or leg
4	SC18.00	Late effect of other burns
5	SC19.00	Late effect of burn NOS
6	SC1A.00	Late effect of burn of upper limb
7	SC38.00	Sequelae of open wound of head
8	SC3A.00	Sequelae of superficial injury + open wound of neck + trunk
9	SC3C.00	Sequelae of open wound of upper limb
10	SC3D000	Sequelae of open wound of lower limb
11	SC44.00	Sequelae of burns, corrosions and frostbite
12	SC44000	Sequelae of burn, corrosion and frostbite of trunk
13	SC44100	Sequelae of burn, corrosion and frostbite of lower limb
14	SC44200	Seq/burn+corros classfbl only accord extent/body surf involv
15	SD01.00	Abrasion or friction burn of head, infected
16	SD01.11	Abrasion or friction burn of head, infected
17	SD01000	Abrasion of face, infected
18	SD01100	Abrasion of neck, infected
19	SD01200	Abrasion of scalp, infected
20	SD01z00	Abrasion or friction burn of head, infected, NOS
21	SD03.00	Blister of head, infected
22	SD03000	Blister of face, infected
23	SD03100	Blister of neck, infected
24	SD03200	Blister of scalp, infected
25	SD03z00	Blister of head, infected, NOS
26	SD05.00	Insect bite, nonvenomous, of head, infected
27	SD05.11	Insect bite, nonvenomous, of head, infected
28	SD05000	Insect bite, nonvenomous, of face, infected
29	SD05100	Insect bite, nonvenomous, of neck, infected
30	SD05200	Insect bite, nonvenomous, of scalp, infected
31	SD05z00	Insect bite, nonvenomous, of head, infected, NOS
32	SD11.00	Abrasion or friction burn of trunk, infected
33	SD11000	Abrasion of interscapular region, infected
34	SD11100	Abrasion of chest wall, infected
35	SD11200	Abrasion of breast, infected
36	SD11300	Abrasion of abdominal wall, infected
37	SD11400	Abrasion of back, infected
38	SD11500	Abrasion of buttock, infected
39	SD11600	Abrasion of anus, infected
40	SD11700	Abrasion of flank, infected
41	SD11800	Abrasion of groin, infected
42	SD11900	Abrasion of perineum, infected
43	SD11A00	Abrasion of penis, infected
44	SD11B00	Abrasion of scrotum and testis, infected
45	SD11B11	Abrasion or friction burn of scrotum, infected
46	SD11B12	Abrasion or friction burn of testis, infected
47	SD11C00	Abrasion of vulva, infected
48	SD11z00	Abrasion or friction burn of trunk, infected, NOS
49	SD13.00	Blister of trunk, infected
50	SD13000	Blister of interscapular region, infected
51	SD13100	Blister of chest wall, infected
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2	SD13200	Blister of breast, infected
3	SD13300	Blister of abdominal wall, infected
4	SD13400	Blister of back, infected
5	SD13500	Blister of buttock, infected
6	SD13600	Blister of anus, infected
7	SD13700	Blister of flank, infected
8	SD13800	Blister of groin, infected
9	SD13900	Blister of perineum, infected
10	SD13A00	Blister of penis, infected
11	SD13B00	Blister of scrotum and testis, infected
12	SD13B11	Blister of scrotum, infected
13	SD13B12	Blister of testis, infected
14	SD13C00	Blister of vulva, infected
15	SD13D00	Blister of vagina, infected
16	SD13z00	Blister of trunk, infected, NOS
17	SD15.00	Insect bite, nonvenomous, of trunk, infected
18	SD15000	Insect bite, nonvenomous, of interscapular region, infected
19	SD15100	Insect bite, nonvenomous, of chest wall, infected
20	SD15200	Insect bite, nonvenomous, of breast, infected
21	SD15300	Insect bite, nonvenomous, of abdominal wall, infected
22	SD15400	Insect bite, nonvenomous, of back, infected
23	SD15500	Insect bite, nonvenomous, of buttock, infected
24	SD15600	Insect bite, nonvenomous, of anus, infected
25	SD15700	Insect bite, nonvenomous, of flank, infected
26	SD15800	Insect bite, nonvenomous, of groin, infected
27	SD15900	Insect bite, nonvenomous, of perineum, infected
28	SD15A00	Insect bite, nonvenomous, of penis, infected
29	SD15B00	Insect bite, nonvenomous, of scrotum and testis, infected
30	SD15B11	Insect bite, nonvenomous, of scrotum, infected
31	SD15B12	Insect bite, nonvenomous, of testis, infected
32	SD15C00	Insect bite, nonvenomous, of vulva, infected
33	SD15D00	Insect bite, nonvenomous, of vagina, infected
34	SD15z00	Insect bite, nonvenomous, of trunk, infected, NOS
35	SD1z.00	Superficial injury of trunk NOS, infected
36	SD1z000	Superficial injury of interscapular region NOS, infected
37	SD1z100	Superficial injury of chest wall NOS, infected
38	SD1z200	Superficial injury of breast NOS, infected
39	SD1z300	Superficial injury of abdominal wall NOS, infected
40	SD1z400	Superficial injury of back NOS, infected
41	SD1z500	Superficial injury of buttock NOS, infected
42	SD1z600	Superficial injury of anus NOS, infected
43	SD1z700	Superficial injury of flank NOS, infected
44	SD1z800	Superficial injury of groin NOS, infected
45	SD1z900	Superficial injury of perineum NOS, infected
46	SD1zA00	Superficial injury of penis NOS, infected
47	SD1zB00	Superficial injury of scrotum and testis NOS, infected
48	SD1zC00	Superficial injury of vulva NOS, infected
49	SD1z000	Superficial injury of trunk NOS, infection NOS
50	SD21.00	Abrasion or friction burn of shoulder/upper arm, infected
51	SD21000	Abrasion of shoulder, infected
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2	SD21100 Abrasion of scapular region, infected
3	SD21200 Abrasion of axilla, infected
4	SD21300 Abrasion of upper arm, infected
5	SD21z00 Abrasion or friction burn shoulder/upper arm, infected, NOS
6	SD23.00 Blister of shoulder and upper arm, infected
7	SD23000 Blister of shoulder, infected
8	SD23100 Blister of scapular region, infected
9	SD23200 Blister of axilla, infected
10	SD23300 Blister of upper arm, infected
11	SD23z00 Blister of shoulder and upper arm, infected, NOS
12	SD25.00 Insect bite, nonvenomous, of shoulder/upper arm, infected
13	SD25000 Insect bite, nonvenomous, of shoulder, infected
14	SD25100 Insect bite, nonvenomous, of interscapular region, infected
15	SD25200 Insect bite, nonvenomous, of axilla, infected
16	SD25300 Insect bite, nonvenomous, of upper arm, infected
17	SD25z00 Insect bite, nonvenomous, shoulder/upper arm, infected, NOS
18	SD2z.00 Superficial injury of shoulder and upper arm NOS, infected
19	SD2z000 Superficial injury of shoulder NOS, infected
20	SD2z100 Superficial injury of scapular region NOS, infected
21	SD2z200 Superficial injury of axilla NOS, infected
22	SD2z300 Superficial injury of upper arm NOS, infected
23	SD2zz00 Superficial injury shoulder/upper arm, infection NOS
24	SD31.00 Abrasion or friction burn of lower arm, infected
25	SD31000 Abrasion of elbow, infected
26	SD31100 Abrasion of forearm, infected
27	SD31200 Abrasion of wrist, infected
28	SD31z00 Abrasion or friction burn of lower arm, infected, NOS
29	SD33.00 Blister of lower arm, infected
30	SD33000 Blister of elbow, infected
31	SD33100 Blister of forearm, infected
32	SD33200 Blister of wrist, infected
33	SD33z00 Blister of lower arm, infected, NOS
34	SD35.00 Insect bite, nonvenomous, of lower arm, infected
35	SD35000 Insect bite, nonvenomous, of elbow, infected
36	SD35100 Insect bite, nonvenomous, of forearm, infected
37	SD35200 Insect bite, nonvenomous, of wrist, infected
38	SD35z00 Insect bite, nonvenomous, of lower arm, infected, NOS
39	SD3z.00 Superficial injury of lower arm NOS, infected
40	SD3z000 Superficial injury of elbow NOS, infected
41	SD3z100 Superficial injury of forearm NOS, infected
42	SD3z200 Superficial injury of wrist NOS, infected
43	SD3zz00 Superficial injury of lower arm, infected NOS
44	SD41.00 Abrasion or friction burn of hand, infected
45	SD43.00 Blister of hand, infected
46	SD45.00 Insect bite, nonvenomous, of hand, infected
47	SD4z.00 Superficial injury of hand NOS, infected
48	SD51.00 Abrasion or friction burn of finger, infected
49	SD53.00 Blister of finger, infected
50	SD55.00 Insect bite, nonvenomous, of finger, infected
51	SD5z.00 Superficial injury of finger NOS, infected
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2	SD61.00	Abrasion or friction burn of lower limb, infected
3	SD61.11	Abrasion or friction burn of leg, infected
4	SD61000	Abrasion of hip, infected
5	SD61100	Abrasion of thigh, infected
6	SD61200	Abrasion of knee, infected
7	SD61300	Abrasion of lower leg, infected
8	SD61400	Abrasion of ankle, infected
9		
10	SD61z00	Abrasion or friction burn of lower limb, infected, NOS
11	SD63.00	Blister of lower limb, infected
12	SD63.11	Blister of leg, infected
13		
14	SD63000	Blister of hip, infected
15	SD63100	Blister of thigh, infected
16	SD63200	Blister of knee, infected
17	SD63300	Blister of lower leg, infected
18	SD63400	Blister of ankle, infected
19		
20	SD63z00	Blister of lower limb, infected, NOS
21	SD65.00	Insect bite, nonvenomous, of lower limb, infected
22	SD65.11	Insect bite, nonvenomous, of leg, infected
23		
24	SD65000	Insect bite, nonvenomous, of hip, infected
25	SD65100	Insect bite, nonvenomous, of thigh, infected
26	SD65200	Insect bite, nonvenomous, of knee, infected
27	SD65300	Insect bite, nonvenomous, of lower leg, infected
28	SD65400	Insect bite, nonvenomous, of ankle, infected
29		
30	SD65z00	Insect bite, nonvenomous, of lower limb, infected, NOS
31	SD6z.00	Superficial injury of lower limb, infected
32	SD6z000	Superficial injury of hip NOS, infected
33	SD6z100	Superficial injury of thigh NOS, infected
34	SD6z200	Superficial injury of knee NOS, infected
35	SD6z300	Superficial injury of lower leg NOS, infected
36	SD6z400	Superficial injury of ankle NOS, infected
37		
38	SD6zz00	Superficial injury of lower limb, infected, NOS
39	SD71.00	Abrasion or friction burn of foot and toe, infected
40	SD71.11	Abrasion or friction burn of heel, infected
41	SD71.12	Abrasion or friction burn of toenail, infected
42		
43	SD71000	Abrasion of foot, infected
44	SD71100	Abrasion of toe, infected
45	SD71z00	Abrasion or friction burn of foot and toe, infected, NOS
46	SD73.00	Blister of foot and toe, infected
47	SD73.11	Blister of heel, infected
48		
49	SD73000	Blister of foot, infected
50	SD73100	Blister of toe, infected
51	SD73z00	Blister of foot and toe, infected, NOS
52	SD75.00	Insect bite, nonvenomous, of foot and toe, infected
53	SD75.11	Insect bite, nonvenomous, of heel, infected
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55	SD75000	Insect bite, nonvenomous, of foot, infected
56	SD75100	Insect bite, nonvenomous, of toe, infected
57	SD75z00	Insect bite, nonvenomous, of foot and toe, infected, NOS
58	SD7z.00	Superficial injury of foot and toe NOS, infected
59	SD7z000	Superficial injury of foot NOS, infected
60	SD7z100	Superficial injury of toe NOS, infected

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2	SD7zz00	Superficial injury of foot and toe, infected, NOS
3	SD91.00	Abrasion or friction burn, infected, NOS
4	SD95.00	Insect bite, nonvenomous, infected, NOS
5	SD96000	Foreign body in skin wound
6	SD99.00	Tick bite, infected
7	SD9z.00	Other superficial injury, infected, NOS
8	SH...00	Burns
9	SH1..00	Burn of the face, head or neck
10	SH1..11	Face burns
11	SH1..12	Head burns
12	SH10.00	Unspecified thickness burn of the face, head or neck
13	SH10000	Unspecified thickness burn of unspecified part of face/head
14	SH10100	Unspecified thickness burn of the ear
15	SH10200	Unspecified thickness burn of the eye
16	SH10300	Unspecified thickness burn of the lip(s)
17	SH10400	Unspecified thickness burn of the chin
18	SH10500	Unspecified thickness burn of the nose
19	SH10600	Unspecified thickness burn of the scalp
20	SH10700	Unspecified thickness burn of the forehead
21	SH10800	Unspecified thickness burn of the cheek
22	SH10900	Unspecified thickness burn of the neck
23	SH10x00	Unspecified thickness burn multiple sites face, head or neck
24	SH10z00	Unspecified thickness burn of the face, head or neck NOS
25	SH11.00	Superficial burn of the face, head or neck
26	SH11.11	Erythema of head or neck, first degree burn
27	SH11000	Superficial burn of unspecified part of the face or head
28	SH11100	Superficial burn of the ear
29	SH11200	Superficial burn of the eye
30	SH11300	Superficial burn of the lip(s)
31	SH11400	Superficial burn of the chin
32	SH11500	Superficial burn of the nose
33	SH11600	Superficial burn of the scalp
34	SH11700	Superficial burn of the forehead
35	SH11800	Superficial burn of the cheek
36	SH11900	Superficial burn of the neck
37	SH11x00	Superficial burn of multiple sites of the face, head or neck
38	SH11z00	Superficial burn of the face, head or neck NOS
39	SH12.00	Partial thickness burn of the face, head or neck
40	SH12.11	Blister of face, head and neck, second degree burn
41	SH12000	Superficial part. thickness burn unspecified part face/head
42	SH12100	Superficial partial thickness burn of the ear
43	SH12111	Ear - 2nd degree burn
44	SH12200	Superficial partial thickness burn of the eye
45	SH12211	Eye - 2nd degree burn
46	SH12300	Superficial partial thickness burn of the lip(s)
47	SH12311	Lip - 2nd degree burn
48	SH12400	Superficial partial thickness burn of the chin
49	SH12411	Chin - 2nd degree burn
50	SH12500	Superficial partial thickness burn of the nose
51	SH12511	Nose - 2nd degree burn
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2	SH12600	Superficial partial thickness burn of the scalp
3	SH12611	Scalp - 2nd degree burn
4	SH12700	Superficial partial thickness burn of the forehead
5	SH12711	Forehead - 2nd degree burn
6	SH12800	Superficial partial thickness burn of the cheek
7	SH12811	Cheek - 2nd degree burn
8	SH12900	Superficial partial thickness burn of the neck
9	SH12911	Neck - 2nd degree burn
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11	SH12A00	Deep partial thickness burn of unspecified part of face/head
12	SH12B00	Deep partial thickness burn of the ear
13	SH12C00	Deep partial thickness burn of the eye
14	SH12D00	Deep partial thickness burn of the lip(s)
15	SH12E00	Deep partial thickness burn of the chin
16	SH12F00	Deep partial thickness burn of the nose
17	SH12G00	Deep partial thickness burn of the scalp
18	SH12H00	Deep partial thickness burn of the forehead
19	SH12J00	Deep partial thickness burn of the cheek
20	SH12K00	Deep partial thickness burn of the neck
21	SH12x00	Partial thickness burn of multiple sites face, head or neck
22	SH12z00	Partial thickness burn of the face, head or neck NOS
23	SH13.00	Full thickness burn of the face, head or neck
24	SH13000	Full thickness burn of unspecified part of the face or head
25	SH13100	Full thickness burn of the ear
26	SH13200	Full thickness burn of the eye
27	SH13300	Full thickness burn of the lip(s)
28	SH13400	Full thickness burn of the chin
29	SH13500	Full thickness burn of the nose
30	SH13600	Full thickness burn of the scalp
31	SH13700	Full thickness burn of the forehead
32	SH13800	Full thickness burn of the cheek
33	SH13900	Full thickness burn of the neck
34	SH13A00	Corrosion of third degree of head and neck
35	SH13x00	Full thickness burn of multiple sites of face, head or neck
36	SH13z00	Full thickness burn of the face, head or neck NOS
37	SH14.00	Deep full thick burn face/head/neck - without loss body part
38	SH14000	Deep full thick burn unspec.part face/head-no loss body part
39	SH14100	Deep full thickness burn of ear without loss of body part
40	SH14200	Deep full thickness burn of eye without loss of body part
41	SH14300	Deep full thickness burn of lip(s) without loss of body part
42	SH14400	Deep full thickness burn of chin without loss of body part
43	SH14500	Deep full thickness burn of nose without loss of body part
44	SH14600	Deep full thickness burn of scalp without loss of body part
45	SH14700	Deep full thickness burn forehead without loss of body part
46	SH14800	Deep full thickness burn of cheek without loss of body part
47	SH14900	Deep full thickness burn of neck without loss of body part
48	SH14x00	Deep full thickness burn multip sites face/head/neck- no BPL
49	SH14z00	Deep full thick burn, no loss body part, face/head/neck NOS
50	SH15.00	Deep full thick burn face/head/neck, with loss of body part
51	SH15000	Deep full thickness burn unspec part of face/head, with BPL
52	SH15100	Deep full thickness burn of the ear, with loss of body part
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2	SH15200	Deep full thickness burn of the eye, with loss of body part
3	SH15300	Deep full thickness burn of lip(s), with loss of body part
4	SH15400	Deep full thickness burn of the chin, with loss of body part
5	SH15500	Deep full thickness burn of the nose, with loss of body part
6	SH15600	Deep full thickness burn of scalp, with loss of body part
7	SH15700	Deep full thickness burn of forehead, with loss of body part
8	SH15800	Deep full thickness burn of cheek, with loss of body part
9	SH15900	Deep full thickness burn of the neck, with loss of body part
10	SH15x00	Deep full thick burn multip parts face/head/neck - with BPL
11	SH15z00	Deep full thick burn, with loss body part,face/head/neck NOS
12	SH16.00	Corrosion of head and neck
13	SH16000	Corrosion of first degree of head and neck
14	SH16100	Corrosion of second degree of head and neck
15	SH1z.00	Burn of the face, head or neck NOS
16	SH2..00	Burn of the trunk
17	SH20.00	Unspecified thickness burn of the trunk
18	SH20000	Unspecified thickness burn of unspecified part of the trunk
19	SH20100	Unspecified thickness burn of the breast
20	SH20200	Unspecified thickness burn of the chest wall
21	SH20300	Unspecified thickness burn of the abdominal wall
22	SH20400	Unspecified thickness burn of the back (excluding buttock)
23	SH20500	Unspecified thickness burn of the buttock
24	SH20600	Unspecified thickness burn of the genitalia
25	SH20x00	Unspecified thickness burn of multiple sites of the trunk
26	SH20z00	Unspecified thickness burn of the trunk NOS
27	SH21.00	Superficial burn of the trunk
28	SH21.11	Erythema of trunk, 1st degree burn
29	SH21000	Superficial burn of unspecified part of the trunk
30	SH21100	Superficial burn of the breast
31	SH21200	Superficial burn of the chest wall
32	SH21300	Superficial burn of the abdominal wall
33	SH21400	Superficial burn of the back (excluding buttock)
34	SH21500	Superficial burn of the buttock
35	SH21600	Superficial burn of the genitalia
36	SH21700	Corrosion of first degree of trunk
37	SH21x00	Superficial burn of multiple sites of the trunk
38	SH21z00	Superficial burn of the trunk NOS
39	SH22.00	Partial thickness burn of the trunk
40	SH22.11	Blister of trunk, second degree burn
41	SH22000	Superficial partial thickness burn unspecified part of trunk
42	SH22100	Superficial partial thickness burn of the breast
43	SH22200	Superficial partial thickness burn of the chest wall
44	SH22300	Superficial partial thickness burn of the abdominal wall
45	SH22400	Superficial partial thickness burn of back (excl buttock)
46	SH22500	Superficial partial thickness burn of the buttock
47	SH22600	Superficial partial thickness burn of the genitalia
48	SH22700	Deep partial thickness burn of the trunk, unspecified
49	SH22800	Deep partial thickness burn of the breast
50	SH22900	Deep partial thickness burn of the chest wall
51	SH22A00	Deep partial thickness burn of the abdominal wall
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2	SH22B00	Deep partial thickness burn of the back (excluding buttock)
3	SH22C00	Deep partial thickness burn of the buttock
4	SH22D00	Deep partial thickness burn of the genitalia
5	SH22E00	Corrosion of second degree of trunk
6	SH22x00	Partial thickness burn of multiple sites of the trunk
7	SH22z00	Partial thickness burn of the trunk NOS
8	SH23.00	Full thickness burn of the trunk
9	SH23000	Full thickness burn of the trunk, unspecified
10	SH23100	Full thickness burn of the breast
11	SH23200	Full thickness burn of the chest wall
12	SH23300	Full thickness burn of the abdominal wall
13	SH23400	Full thickness burn of the back (excluding buttock)
14	SH23500	Full thickness burn of the buttock
15	SH23600	Full thickness burn of the genitalia
16	SH23700	Corrosion of third degree of trunk
17	SH23x00	Full thickness burn of multiple sites of the trunk
18	SH23z00	Full thickness burn of the trunk NOS
19	SH24.00	Deep full thickness burn of trunk without loss of body part
20	SH24000	Deep full thickness burn of trunk unsp, no loss of body part
21	SH24100	Deep full thickness burn of breast without loss of body part
22	SH24200	Deep full thickness burn of chest without loss of body part
23	SH24300	Deep full thickness burn of abdom.wall, no loss of body part
24	SH24400	Deep full thickness burn of back without loss of body part
25	SH24500	Deep full thickness burn of buttock, no loss of body part
26	SH24600	Deep full thickness burn of genitalia, no loss of body part
27	SH24x00	Deep full thickness burn multiple sites trunk, no BPL
28	SH24z00	Deep full thickness burn of trunk, no loss of body part NOS
29	SH25.00	Deep full thickness burn of trunk, with loss of body part
30	SH25000	Deep full thickness burn of trunk unsp, with loss body part
31	SH25100	Deep full thickness burn of breast, with loss of body part
32	SH25200	Deep full thickness burn of chest, with loss of body part
33	SH25300	Deep full thickness burn of abd.wall, with loss of body part
34	SH25400	Deep full thickness burn of back, with loss of body part
35	SH25500	Deep full thickness burn of buttock, with loss of body part
36	SH25600	Deep full thickness burn of genitalia, with loss body part
37	SH25x00	Deep full thickness burn multiple sites trunk with BPL
38	SH25z00	Deep full thickness burn of trunk, with loss body part, NOS
39	SH26.00	Corrosion of unspecified degree of trunk
40	SH2z.00	Burn of the trunk NOS
41	SH3..00	Burn of the arm (excluding wrist and hand)
42	SH30.00	Unspecified thickness burn of the arm
43	SH30000	Unspecified thickness burn of the arm, unspecified
44	SH30100	Unspecified thickness burn of the forearm
45	SH30200	Unspecified thickness burn of the elbow
46	SH30300	Unspecified thickness burn of the upper arm
47	SH30400	Unspecified thickness burn of the axilla
48	SH30500	Unspecified thickness burn of the shoulder
49	SH30600	Unspecified thickness burn of the scapular region
50	SH30x00	Unspecified thickness burn of multiple sites of the arm
51	SH30z00	Unspecified thickness burn of the arm NOS

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2	SH31.00	Superficial burn of the arm
3	SH31.11	Erythema of arm, first degree burn
4	SH31000	Superficial burn of the arm, unspecified
5	SH31100	Superficial burn of the forearm
6	SH31200	Superficial burn of the elbow
7	SH31300	Superficial burn of the upper arm
8	SH31400	Superficial burn of the axilla
9	SH31500	Superficial burn of the shoulder
10	SH31600	Superficial burn of the scapular region
11	SH31x00	Superficial burn of multiple sites of the arm
12	SH31z00	Superficial burn of the arm NOS
13	SH32.00	Partial thickness burn of the arm
14	SH32.11	Blister of arm, second degree burn
15	SH32000	Superficial partial thickness burn of the arm, unspecified
16	SH32100	Superficial partial thickness burn of the forearm
17	SH32200	Superficial partial thickness burn of the elbow
18	SH32300	Superficial partial thickness burn of the upper arm
19	SH32400	Superficial partial thickness burn of the axilla
20	SH32500	Superficial partial thickness burn of the shoulder
21	SH32600	Superficial partial thickness burn of scapular region
22	SH32700	Deep partial thickness burn of the arm, unspecified
23	SH32800	Deep partial thickness burn of the forearm
24	SH32900	Deep partial thickness burn of the elbow
25	SH32A00	Deep partial thickness burn of the upper arm
26	SH32B00	Deep partial thickness burn of the axilla
27	SH32C00	Deep partial thickness burn of the shoulder
28	SH32D00	Deep partial thickness burn of the scapular region
29	SH32x00	Partial thickness burn of multiple sites of the arm
30	SH32z00	Partial thickness burn of the arm NOS
31	SH33.00	Full thickness burn of the arm
32	SH33000	Full thickness burn of the arm, unspecified
33	SH33100	Full thickness burn of the forearm
34	SH33200	Full thickness burn of the elbow
35	SH33300	Full thickness burn of the upper arm
36	SH33400	Full thickness burn of the axilla
37	SH33500	Full thickness burn of the shoulder
38	SH33600	Full thickness burn of the scapular region
39	SH33x00	Full thickness burn of multiple sites of the arm
40	SH33z00	Full thickness burn of the arm NOS
41	SH34.00	Deep full thickness burn of arm without loss of body part
42	SH34000	Deep full thickness burn of arm unsp, no loss of body part
43	SH34100	Deep full thickness burn of forearm, no loss of body part
44	SH34200	Deep full thickness burn of elbow without loss of body part
45	SH34300	Deep full thickness burn of upper arm, no loss of body part
46	SH34400	Deep full thickness burn of axilla without loss of body part
47	SH34500	Deep full thickness burn of shoulder, no loss of body part
48	SH34600	Deep full thickness burn of scapular, no loss of body part
49	SH34x00	Deep full thickness burn of multiple sites of arm, no BPL
50	SH34z00	Deep full thickness burn without loss of body part-arm NOS
51	SH35.00	Deep full thickness burn of arm, with loss of body part
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2	SH35000	Deep full thickness burn of arm unsp, with loss of body part
3	SH35100	Deep full thickness burn of forearm, with loss of body part
4	SH35200	Deep full thickness burn of elbow, with loss of body part
5	SH35300	Deep full thickness burn of upper arm,with loss of body part
6	SH35400	Deep full thickness burn of axilla, with loss of body part
7	SH35500	Deep full thickness burn of shoulder, with loss of body part
8	SH35600	Deep full thickness burn of scapular, with loss of body part
9	SH35x00	Deep full thickness burn of multiple sites of arm with BPL
10	SH35z00	Deep full thickness burn-, with loss of body part-arm NOS
11	SH36.00	Corros/unspecf degree/shoulder+upper limb,except wrist+hand
12	SH36000	Corrosion/1st degree shoulder+upper limb,except wrist+hand
13	SH36100	Corrosion/2nd degree/shoulder and upper limb exc wrist+hand
14	SH36200	Corros/third degree/shoulder and upper limb, exc wrist+hand
15	SH3z.00	Burn of the arm (excluding wrist and hand) NOS
16	SH4..00	Burn of the wrist(s) and hand(s)
17	SH40.00	Unspecified thickness burn of the wrist and hand
18	SH40.11	Unspecified degree burn of finger
19	SH40.12	Unspecified degree burn of hand
20	SH40.13	Unspecified degree burn of thumb
21	SH40.14	Unspecified degree burn of wrist
22	SH40000	Unspecified thickness burn of the hand, unspecified
23	SH40100	Unspecified thickness burn of a single finger
24	SH40200	Unspecified thickness burn of the thumb
25	SH40300	Unspecified thickness burn of more than one finger
26	SH40400	Unspecified thickness burn of the thumb and finger(s)
27	SH40500	Unspecified thickness burn of the palm of hand
28	SH40600	Unspecified thickness burn of the back of hand
29	SH40700	Unspecified thickness burn of the wrist
30	SH40x00	Unspecified thickness burn of multiple sites of wrist/hand
31	SH40z00	Unspecified thickness burn of the wrist or hand NOS
32	SH41.00	Superficial burn of the wrist and hand
33	SH41.11	Erythema of wrist and hand,first degree burn
34	SH41.12	First degree burn of finger
35	SH41.13	First degree burn of hand
36	SH41.14	First degree burn of thumb
37	SH41.15	First degree burn of wrist
38	SH41000	Superficial burn of the hand, unspecified
39	SH41100	Superficial burn of a single finger
40	SH41200	Superficial burn of the thumb
41	SH41300	Superficial burn of more than one finger
42	SH41400	Superficial burn of the thumb and finger(s)
43	SH41500	Superficial burn of the palm of hand
44	SH41600	Superficial burn of the back of hand
45	SH41700	Superficial burn of the wrist
46	SH41x00	First degree burn of multiple sites of the wrist or hand
47	SH41z00	Superficial burn of the wrist or hand NOS
48	SH42.00	Partial thickness burn of the wrist and hand
49	SH42.11	Blister of wrist and hand, second degree burn
50	SH42.12	Second degree burn of finger
51	SH42.13	Second degree burn of hand

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2	SH42.14	Second degree burn of thumb
3	SH42.15	Second degree burn of wrist
4	SH42000	Superficial partial thickness burn of hand, unspecified
5	SH42100	Superficial partial thickness burn of a single finger
6	SH42200	Superficial partial thickness burn of the thumb
7	SH42300	Superficial partial thickness burn of more than one finger
8	SH42400	Superficial partial thickness burn of thumb and finger(s)
9	SH42500	Superficial partial thickness burn of palm of hand
10	SH42600	Superficial partial thickness burn of back of hand
11	SH42700	Superficial partial thickness burn of the wrist
12	SH42800	Deep partial thickness burn of the hand, unspecified
13	SH42900	Deep partial thickness burn of a single finger
14	SH42A00	Deep partial thickness burn of the thumb
15	SH42B00	Deep partial thickness burn of more than one finger
16	SH42C00	Deep partial thickness burn of the thumb and finger(s)
17	SH42D00	Deep partial thickness burn of the palm of hand
18	SH42E00	Deep partial thickness burn of back of hand
19	SH42F00	Deep partial thickness burn of wrist
20	SH42x00	Partial thickness burn of multiple sites of the wrist/hand
21	SH42z00	Partial thickness burn of the wrist or hand NOS
22	SH43.00	Full thickness burn of the wrist and hand
23	SH43.11	Third degree burn of finger
24	SH43.12	Third degree burn of hand
25	SH43.13	Third degree burn of thumb
26	SH43.14	Third degree burn of wrist
27	SH43000	Full thickness burn of the hand, unspecified
28	SH43100	Full thickness burn of a single finger
29	SH43200	Full thickness burn of the thumb
30	SH43300	Full thickness burn of more than one finger
31	SH43400	Full thickness burn of the thumb and finger(s)
32	SH43500	Full thickness burn of the palm of hand
33	SH43600	Full thickness burn of the back of hand
34	SH43700	Full thickness burn of the wrist
35	SH43x00	Full thickness burn of multiple sites of the wrist or hand
36	SH43z00	Full thickness burn of the wrist or hand NOS
37	SH44.00	Deep full thickness burn of wrist/hand, no loss of body part
38	SH44.11	Deep third degree burn of finger, without loss of a body part
39	SH44.12	Deep third degree burn of hand, without loss of a body part
40	SH44.13	Deep third degree burn of thumb, without loss of a body part
41	SH44.14	Deep third degree burn of wrist, without loss of a body part
42	SH44000	Deep full thickness burn of hand unsp, no loss of body part
43	SH44100	Deep full thickness burn of a finger, no loss of body part
44	SH44200	Deep full thickness burn of thumb without loss of body part
45	SH44300	Deep full thickness burn of >1 finger, no loss of body part
46	SH44400	Deep full thickness burn of thumb+fing, no loss of body part
47	SH44500	Deep full thickness burn of palm hand, no loss of body part
48	SH44600	Deep full thickness burn of back hand, no loss of body part
49	SH44700	Deep full thickness burn of wrist without loss of body part
50	SH44x00	Deep full thickness burn-multiple sites wrist/hand, no BPL
51	SH44z00	Deep full thickness burn of wrist/hand, no loss body part NOS
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2	SH45.00	Deep full thickness burn of wrist/hand, with loss body part
3	SH45.11	Deep third degree burn of finger with loss of a body part
4	SH45.12	Deep third degree burn of hand with loss of a body part
5	SH45.13	Deep third degree burn of thumb with loss of a body part
6	SH45.14	Deep third degree burn of wrist with loss of a body part
7	SH45000	Deep full thickness burn of hand unsp, with loss body part
8	SH45100	Deep full thickness burn of a finger, with loss of body part
9	SH45200	Deep full thickness burn of thumb, with loss of body part
10	SH45300	Deep full thickness burn of >1 finger, with loss body part
11	SH45400	Deep full thickness burn of thumb+fing, with loss body part
12	SH45500	Deep full thickness burn of palm hand, with loss body part
13	SH45600	Deep full thickness burn of back hand, with loss body part
14	SH45700	Deep full thickness burn of wrist, with loss of body part
15	SH45x00	Deep full thickness burn-multiple sites wrist/hand with BPL
16	SH45z00	Deep full thickness burn wrist/hand, with loss body part NOS
17	SH46.00	Corrosion of wrist and hand
18	SH46000	Corrosion of first degree of wrist and hand
19	SH46100	Corrosion of second degree of wrist and hand
20	SH46200	Corrosion of third degree of wrist and hand
21	SH4z.00	Burn of wrist or hand NOS
22	SH5..00	Burn of lower limbs
23	SH5..11	Leg burns
24	SH50.00	Unspecified thickness burn of the leg
25	SH50000	Unspecified degree burn of the leg, unspecified
26	SH50100	Unspecified thickness burn of the toe(s)
27	SH50200	Unspecified thickness burn of the foot
28	SH50300	Unspecified thickness burn of the ankle
29	SH50400	Unspecified thickness burn of the lower leg
30	SH50500	Unspecified thickness burn of the knee
31	SH50600	Unspecified thickness burn of the thigh
32	SH50x00	Unspecified thickness burn of multiple sites of the leg
33	SH50z00	Unspecified thickness burn of the leg NOS
34	SH51.00	Superficial burn of the leg
35	SH51.11	Erythema of leg, first degree burn
36	SH51000	Superficial burn of the leg, unspecified
37	SH51100	Superficial burn of the toe(s)
38	SH51200	Superficial burn of the foot
39	SH51300	Superficial burn of the ankle
40	SH51400	Superficial burn of the lower leg
41	SH51500	Superficial burn of the knee
42	SH51600	Superficial burn of the thigh
43	SH51x00	Superficial burn of multiple sites of the leg
44	SH51z00	Superficial burn of the leg NOS
45	SH52.00	Partial thickness burn of the leg
46	SH52.11	Blister of leg, second degree burn
47	SH52000	Superficial partial thickness burn of the leg, unspecified
48	SH52100	Superficial partial thickness burn of the toe(s)
49	SH52200	Superficial partial thickness burn of the foot
50	SH52300	Superficial partial thickness burn of the ankle
51	SH52400	Superficial partial thickness burn of the lower leg







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2	SH6..00	Burn of multiple specified sites
3	SH60.00	Unspecified thickness burn of multiple specified sites
4	SH61.00	Superficial burn of multiple specified sites
5	SH62.00	Partial thickness burn of multiple specified sites
6	SH62000	Superficial partial thickness burn multiple specified sites
7	SH62100	Deep partial thickness burn of multiple specified sites
8	SH63.00	Full thickness burn of multiple specified sites
9	SH64.00	Deep full thickness burn multiple specified sites, no BPL
10	SH65.00	Deep full thickness burn multiple specified sites, with BPL
11	SH66.00	Corrosions of multiple regions, unspecified degree
12	SH66000	Corros/multiple reg,no more than first-deg corros mentioned
13	SH66100	Corrosion/multi reg,no more than second-deg corros mentioned
14	SH66300	Corros/multi reg,at least one corros/third degree mentioned
15	SH6z.00	Burn of multiple specified sites NOS
16	SH8..00	Burns as a percentage of body surface (BS) involved
17	SH80.00	Burn involving <10% of body surface (BS)
18	SH80000	Burn:<10% of body surface, 10%/unspec BS full thickness
19	SH80100	Corrosions involving less than 10% of body surface
20	SH80z00	Burn:<10% of body surface NOS
21	SH81.00	Burn involving 10-19% of body surface (BS)
22	SH81000	Burn: 10-14% of body surface,<10%/unsp BS full thickness
23	SH81100	Burn: 10-14% of body surface, 10-14% BS full thickness
24	SH81200	Burn: 15-19% of body surface,<10%/unsp BS full thickness
25	SH81300	Burn: 15-19% of body surface, 10-19% BS full thickness
26	SH81400	Corrosions involving 10-19% of body surface
27	SH81z00	Burn: 10-19% of body surface NOS
28	SH82.00	Burn involving 20-29% of body surface (BS)
29	SH82000	Burn: 20-29% of body surface,<10%/unspec BS full thickness
30	SH82100	Burn: 20-29% of body surface, 10-19% BS full thickness
31	SH82200	Burn: 20-29% of body surface, 20-29% BS full thickness
32	SH82300	Corrosions involving 20-29% of body surface
33	SH82z00	Burn: 20-29% of body surface NOS
34	SH83.00	Burn involving 30-39% of body surface (BS)
35	SH83000	Burn: 30-39% of body surface,<10%/unspec BS full thickness
36	SH83100	Burn: 30-39% of body surface, 10-19% BS full thickness
37	SH83200	Burn: 30-39% of body surface, 20-29% BS full thickness
38	SH83300	Burn: 30-39% of body surface, 30-39% BS full thickness
39	SH83400	Corrosions involving 30-39% of body surface
40	SH83z00	Burn: 30-39% of body surface NOS
41	SH84.00	Burn involving 40-49% of body surface (BS)
42	SH84000	Burn: 40-49% of body surface,<10%/unspec BS full thickness
43	SH84100	Burn: 40-49% of body surface, 10-19% BS full thickness
44	SH84200	Burn: 40-49% of body surface, 20-29% BS full thickness
45	SH84300	Burn: 40-49% of body surface, 30-39% BS full thickness
46	SH84400	Burn: 40-49% of body surface, 40-49% BS full thickness
47	SH84500	Corrosions involving 40-49% of body surface
48	SH84z00	Burn: 40-49% of body surface NOS
49	SH85.00	Burn involving 50-59% of body surface (BS)
50	SH85000	Burn: 50-59% of body surface,<10%/unspec BS full thickness
51	SH85100	Burn: 50-59% of body surface, 10-19% BS full thickness
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2	SH85200	Burn: 50-59% of body surface, 20-29% BS full thickness
3	SH85300	Burn: 50-59% of body surface, 30-39% BS full thickness
4	SH85400	Burn: 50-59% of body surface, 40-49% BS full thickness
5	SH85500	Burn: 50-59% of body surface, 50-59% BS full thickness
6	SH85600	Corrosions involving 50-59% of body surface
7	SH85z00	Burn: 50-59% of body surface NOS
8	SH86.00	Burn involving 60-69% of body surface (BS)
9	SH86000	Burn: 60-69% of body surface, <10%/unspec BS full thickness
10	SH86100	Burn: 60-69% of body surface, 10-19% BS full thickness
11	SH86200	Burn: 60-69% of body surface, 20-29% BS full thickness
12	SH86300	Burn: 60-69% of body surface, 30-39% BS full thickness
13	SH86400	Burn: 60-69% of body surface, 40-49% BS full thickness
14	SH86500	Burn: 60-69% of body surface, 50-59% BS full thickness
15	SH86600	Burn: 60-69% of body surface, 60-69% BS full thickness
16	SH86700	Corrosions involving 60-69% of body surface
17	SH86z00	Burn: 60-69% of body surface NOS
18	SH87.00	Burn involving 70-79% of body surface (BS)
19	SH87000	Burn: 70-79% of body surface, <10%/unspec BS full thickness
20	SH87100	Burn: 70-79% of body surface, 10-19% BS full thickness
21	SH87200	Burn: 70-79% of body surface, 20-29% BS full thickness
22	SH87300	Burn: 70-79% of body surface, 30-39% BS full thickness
23	SH87400	Burn: 70-79% of body surface, 40-49% BS full thickness
24	SH87500	Burn: 70-79% of body surface, 50-59% BS full thickness
25	SH87600	Burn: 70-79% of body surface, 60-69% BS full thickness
26	SH87700	Burn: 70-79% of body surface, 70-79% BS full thickness
27	SH87800	Corrosions involving 70-79% of body surface
28	SH87z00	Burn: 70-79% of body surface NOS
29	SH88.00	Burn involving 80-89% of body surface (BS)
30	SH88000	Burn: 80-89% of body surface, <10%/unspec BS full thickness
31	SH88100	Burn: 80-89% of body surface, 10-19% =full thickness
32	SH88200	Burn: 80-89% of body surface, 20-29% BS full thickness
33	SH88300	Burn: 80-89% of body surface, 30-39% BS full thickness
34	SH88400	Burn: 80-89% of body surface, 40-49% BS full thickness
35	SH88500	Burn: 80-89% of body surface, 50-59% BS full thickness
36	SH88600	Burn: 80-89% of body surface, 60-69% BS full thickness
37	SH88700	Burn: 80-89% of body surface, 70-79% BS full thickness
38	SH88800	Burn: 80-89% of body surface, 80-89% BS full thickness
39	SH88900	Corrosions involving 80-89% of body surface
40	SH88z00	Burn: 80-89% of body surface, NOS
41	SH89.00	Burn involving >90% of body surface (BS)
42	SH89000	Burn: >90% of body surface, <10%/unspec BS full thickness
43	SH89100	Burn: >90% of body surface, 10-19% BS full thickness
44	SH89200	Burn: >90% of body surface, 20-29% BS full thickness
45	SH89300	Burn: >90% of body surface, 30-39% BS full thickness
46	SH89400	Burn: >90% of body surface, 40-49% BS full thickness
47	SH89500	Burn: >90% of body surface, 50-59% BS full thickness
48	SH89600	Burn: >90% of body surface, 60-69% BS full thickness
49	SH89700	Burn: >90% of body surface, 70-79% BS full thickness
50	SH89800	Burn: >90% of body surface, 80-89% BS full thickness
51	SH89900	Burn: >90% of body surface, >90% BS full thickness
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2	SH89A00	Corrosions involving 90% or more of body surface
3	SH89z00	Burn: >90% of body surface NOS
4	SH8z.00	Burn as a percentage of body surface involved NOS
5	SH9..00	Burn - unspecified
6	SH90.00	Unspecified degree of burn NOS
7	SH91.00	Superficial burn NOS
8	SH91.11	First degree burn
9	SH92.00	Partial thickness burn NOS
10	SH92.11	Second degree burn
11	SH92000	Superficial partial thickness burn NOS
12	SH92100	Deep partial thickness burn NOS
13	SH93.00	Full thickness burn NOS
14	SH93.11	Third degree burn
15	SH94.00	Deep full thickness burn, without loss of body part, NOS
16	SH95.00	Deep full thickness burn, with loss of body part, NOS
17	SH9z.00	Burn - unspecified
18	SHz..00	Burns NOS
19	SK03.00	Post-traumatic wound infection NEC
20	SK1x200	Multiple open wounds of neck
21	SK1x500	Multiple open wounds of abdomen, lower back and pelvis
22	SK1x700	Multiple open wounds of forearm
23	SK1x800	Multiple open wounds of lower leg
24	SK1x900	Open wounds involv thorax with abdomen,lwr back and pelvis
25	SK1xA00	Open wounds invol multi regions of up limb(s) wth lw limb(s)
26	SP23.00	Operation wound disruption
27	SP23000	Operation wound dehiscence
28	SP23011	Postoperative wound breakdown
29	SP23100	Operation wound rupture
30	SP23200	Surgical wound necrosis
31	SP23300	Burst abdomen NEC
32	SP23400	Breakdown of totally implantable venous access device port
33	SP23z00	Operation wound disruption NOS
34	SP23z11	Delayed healing surgical wound
35	SP23z12	Healing delayed surgical wound
36	SP23z13	Wound surgical healing delayed
37	SP24300	Foreign body left in wound
38	SP25000	Postoperative stitch abscess
39	SP25100	Postoperative wound abscess
40	SP25500	Postoperative wound infection, unspecified
41	SP25600	Postoperative wound infection-deep
42	SP25700	Postoperative wound infection-superficial
43	SP25800	MRSA infection of postoperative wound
44	SP28.00	Postoperative wound sinus
45	SQ...00	Open wounds involving multiple body regions
46	Syu0200	[X]Open wound of other parts of head
47	Syu0A00	[X]Penetrating wound of orbit with or without foreign body
48	Syu1300	[X]Open wound of other parts of the neck
49	Syu1400	[X]Open wound of neck, part unspecified
50	Syu2500	[X]Open wound of other parts of thorax
51	Syu2600	[X]Open wound of thorax, part unspecified
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2	Syu3200	[X]Open wound of oth and unspecif external genital organs
3	Syu3300	[X]Open wound oth & unspecif part abdomen/lower back/pelvis
4	Syu4100	[X]Open wound of oth & unspecif parts of should & upper arm
5	Syu5200	[X]Open wound of other parts of forearm
6	Syu6200	[X]Open wound of other parts of wrist and hand
7	Syu7100	[X]Open wound of other parts of hip and thigh
8	Syu8200	[X]Open wound of other parts of lower leg
9	Syu9200	[X]Open wound of other parts of foot
10	Syu9300	[X]Open wound of other parts of ankle and foot
11	SyuA100	[X]Open wounds involving other combinations of body regions
12	SyuBA00	[X]Open wound of unspecified body region
13	SyuD.00	[X]Burns and corrosions
14	SyuD000	[X]Burns of other parts of eye and adnexa
15	SyuD800	[X]Burns of mult reg, at least 1 burn of 3rd deg mentioned
16	SyuD900	[X]Corrosn multi reg, at least 1 corr of 3rd deg mentioned
17	SyuJ000	[X]Post-traumatic wound infection, not elsewhere classified
18	TG80000	Accidental burning/scalding caused by boiling water, unspec
19	TG80100	Accidental burning/scalding caused by boiling liquid, unspec
20	TG80200	Accidental burning or scalding caused by liquid metal
21	TG80300	Accidental burning or scalding caused by steam
22	TG80400	Accidental burning/scalding by boiling water from kettle
23	TG80500	Accidental burning/scalding by boiling water from saucepan
24	TG80600	Accidental burning or scalding caused by tea
25	TG80700	Accidental burning or scalding caused by coffee
26	TG80800	Accidental burning or scalding caused by chocolate
27	TG80900	Accidental burning or scalding caused by milk
28	TG80A00	Accidental burning/scalding caused by soup, stew or curries
29	TG80B00	Accidental burning or scalding caused by fat
30	TG80C00	Accidental burning or scalding caused by steam from kettle
31	TG80D00	Accidental burning or scalding by steam from car radiator
32	TG80y00	Accidental burning or scalding caused by other hot vapour
33	TG80z00	Accidental burning/scalding caused by hot liquid/vapour NOS
34	TGyz700	Accidental wound NOS
35	Z174M00	Pressure area care
36	Z174M11	PAC - Pressure area care
37	Z174N00	Wound care
38	Z174N11	WOUND TREATMENT
39	Z174N12	WOUND THERAPY
40	Z174O00	Post-surgical wound care
41	Z174O11	Post-operative wound care
42	Z174P00	Pressure sore care
43	Z174Q00	Skin ulcer care
44	Z1B..00	Dressing of skin or wound
45	Z1B..11	Application of dressing
46	Z1B..12	Dressing
47	Z1B1.00	Attention to dressing of skin
48	Z1B1100	Checking dressing of skin
49	Z1B1200	Checking dressing for leakage
50	Z1B1300	Change of dressing
51	Z1B1311	Repeating dressing
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2	Z1B1312	Reapplying a fresh dressing
3	Z1B1313	Redressing wound
4	Z1B1400	Attention to dressing of burnt skin
5	Z1B2.00	Dressing of skin
6	Z1B2100	Dressing of burnt skin
7	Z1B2111	Burn dressing
8	Z1B2200	Covering burnt skin with plastic bag
9	Z1B2300	Dressing of skin ulcer
10	Z1B3.00	Dressing of pressure sore
11	Z1O6100	Exposing wound to air
12	Z1R2.00	Cleaning wound
13	Z1R2.11	Cleansing wound
14	Z1R2.12	Wound toilet
15	Z1R3.00	Debridement of skin
16	Z1R3.11	Debridement of wound of skin
17	Z1R3.12	Wound debridement
18	Z1R3.13	Wound debridement
19	Z1R3100	Debridement of wound with topical agent
20	Z1R3200	Surgical debridement of wound
21	Z1R4.00	Removal of slough from skin
22	Z1R4.11	Desloughing wound
23	Z1R5.00	Removal of contaminant from skin
24	ZA13E00	Insertion of quill in the nail bed
25	ZA14.00	Ablation of nail bed
26	ZA14.11	Ablation of nail matrix
27	ZA14100	Total ablation of nail matrix
28	ZA14200	Partial ablation of nail matrix
29	ZQ37.00	Wound assessment
30	ZQ38.00	Assessment of fluid loss from wound
31	ZQ38.11	Assessing seepage from wound
32	ZQ39.00	Pressure sore assessment
33	ZQ39.11	Decubitus ulcer assessment
34	ZQ39.12	Pressure ulcer assessment
35	ZQ39.13	Bed sore assessment
36	ZQ3A.00	Assessment of burn injuries
37	ZQ3A.11	Assessment of levels of burns
38	ZR1V.00	ASEPSIS score for wound infection
39	Zw02D00	[Q] Open fracture grade 1
40	Zw02E00	[Q] Open fracture grade 2
41	Zw02F00	[Q] Open fracture grade 3
42	Zw02G00	[Q] Open fracture grade 3A
43	Zw02H00	[Q] Open fracture grade 3B
44	Zw02J00	[Q] Open fracture grade 3C
45	ZX14.00	Damaging own wounds
46	ZX14300	Poking fingers into wound
47	ZX14400	Inserting objects into wound
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**Table S2: Patients' baseline characteristics.**

	Abscess	Burn	Diabetic foot ulcer	Leg ulcer (arterial)	Leg ulcer (mixed)	Leg ulcer (unspecified)	Leg ulcer (venous)	Open wound	Pressure ulcer	Surgical wound	Trauma	Unspecified	All wounds
Mean age per patient (years)	46.0	47.1	62.3	57.4	67.0	52.6	70.9	53.4	76.1	55.4	52.4	55.9	57.9
Percentage male	42%	35%	51%	22%	57%	39%	48%	40%	40%	42%	41%	49%	44%
Percentage smoker	29%	24%	11%	13%	10%	21%	7%	18%	7%	19%	16%	22%	17%
Percentage ex-smoker	19%	19%	37%	32%	30%	21%	44%	29%	40%	29%	23%	28%	30%
Percentage non- smoker	51%	56%	52%	55%	60%	58%	48%	51%	40%	52%	59%	49%	52%
Percentage with unknown smoking status	2%	0%	0%	0%	0%	0%	0%	2%	13%	1%	1%	1%	1%
Mean body mass index per patient (kg/m <sup>2</sup> )	29.7	27.9	30.9	28.8	32.3	27.6	31.5	29.6	24.5	28.3	27.8	28.9	29.1
Percentage with new wounds in the study period	79%	79%	61%	33%	50%	68%	59%	87%	80%	77%	84%	80%	73%
Percentage of all wounds with a recorded infection	27%	13%	78%	52%	47%	68%	41%	94%	13%	35%	29%	1%	40%



**Table S3: Percentage of patients with a comorbidity in the year before the start of their wound.** Those with diabetes are a subset of those with endocrinological comorbidities.

	Abscess	Burn	Diabetic foot ulcer	Leg ulcer (arterial)	Leg ulcer (mixed)	Leg ulcer (unspecified)	Leg ulcer (venous)	Open wound	Pressure ulcer	Surgical wound	Trauma	Unspecified	All wounds
Cardiovascular	36%	35%	70%	67%	83%	45%	78%	44%	53%	47%	38%	51%	53%
Dermatological	48%	52%	60%	44%	63%	50%	41%	51%	40%	51%	54%	45%	49%
Endocrinological	52%	56%	99%	78%	97%	18%	52%	69%	60%	63%	55%	57%	60%
Diabetes	50%	52%	100%	78%	97%	13%	37%	67%	60%	59%	51%	52%	57%
Gastroenterological	29%	32%	42%	67%	33%	29%	19%	34%	47%	37%	31%	35%	33%
Genito-urinary	21%	24%	28%	44%	33%	18%	19%	25%	27%	28%	24%	24%	24%
Immunological	7%	11%	13%	11%	17%	3%	11%	10%	7%	9%	8%	9%	9%
Malnutrition	0%	2%	2%	0%	0%	5%	4%	1%	13%	1%	2%	3%	3%
Musculoskeletal	41%	56%	62%	67%	63%	61%	59%	49%	73%	57%	49%	56%	56%
Neurological	16%	21%	24%	11%	27%	24%	33%	18%	67%	22%	17%	17%	24%
Oncological	14%	16%	25%	11%	20%	16%	7%	14%	27%	18%	15%	19%	16%
Ophthalmological	8%	15%	20%	0%	27%	13%	4%	11%	33%	13%	11%	10%	12%
Psychiatric	44%	40%	39%	33%	53%	47%	15%	35%	33%	35%	32%	35%	35%
Renal	8%	5%	30%	22%	33%	13%	30%	12%	40%	14%	9%	16%	18%
Respiratory	38%	44%	45%	56%	43%	42%	33%	36%	33%	38%	36%	37%	38%
Mean number of comorbidities per patient	3.7	4.1	5.7	6.0	5.7	3.9	4.0	4.1	5.6	4.3	3.8	4.2	4.1



**Table S4: Healing rates in the study period.**

	Abscess	Burn	Diabetic foot ulcer	Leg ulcer (arterial)	Leg ulcer (mixed)	Leg ulcer (unspecified)	Leg ulcer (venous)	Open wound	Pressure ulcer	Surgical wound	Trauma	Unspecified	All wounds
Wounds that healed in the study period	86%	84%	52%	47%	30%	55%	37%	90%	60%	85%	94%	85%	70%
New wounds that healed in the study period	85%	80%	60%	40%	27%	38%	56%	90%	75%	86%	94%	88%	76%
Existing wounds that healed in the study period	89%	96%	40%	50%	33%	92%	9%	90%	0%	80%	96%	73%	56%
Wounds that healed with no evidence of infection	92%	85%	57%	50%	34%	60%	50%	93%	62%	87%	95%	86%	77%
Wounds that healed with recorded evidence of infection	69%	75%	50%	45%	25%	52%	18%	89%	50%	81%	91%	38%	60%
Wounds that healed among smokers	84%	87%	33%	37%	28%	48%	25%	88%	33%	82%	96%	85%	64%
Wounds that healed among ex-smokers	90%	75%	53%	47%	32%	53%	39%	88%	67%	83%	95%	88%	70%
Wounds that healed among non-smokers	87%	87%	56%	50%	30%	58%	38%	93%	75%	88%	96%	84%	74%

**Table S5: Percentage of patients who utilised resources in the study year.** †Includes tissue viability nurses and diabetic nurse specialists.

	Abscess	Burn	Diabetic foot ulcer	Leg ulcer (arterial)	Leg ulcer (mixed)	Leg ulcer (unspecified)	Leg ulcer (venous)	Open wound	Pressure ulcer	Surgical wound	Trauma	Unspecified	All wounds
District/community nurse visits	37%	52%	96%	89%	93%	82%	85%	24%	60%	46%	15%	44%	38%
Healthcare assistant visits	32%	27%	93%	89%	99%	84%	81%	21%	40%	46%	15%	44%	36%
Practice nurse visits	96%	94%	94%	100%	100%	79%	96%	97%	93%	97%	98%	98%	97%
GP office visits	94%	79%	97%	100%	100%	100%	100%	90%	93%	82%	93%	62%	84%
Dressings	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Compression bandaging/hosiery	2%	5%	15%	0%	100%	26%	93%	5%	0%	3%	0%	6%	6%
Prescribed analgesics/non-steroidal anti-inflammatories	22%	19%	57%	67%	87%	32%	81%	12%	53%	24%	10%	20%	21%
Prescribed antibiotics	82%	42%	92%	97%	90%	84%	81%	81%	67%	43%	37%	26%	50%
Hospital outpatient visits with a nurse	11%	32%	35%	22%	33%	16%	37%	8%	0%	18%	5%	31%	17%
Accident & emergency attendances	16%	18%	23%	22%	27%	5%	30%	8%	7%	8%	5%	4%	8%
Hospital admissions without surgery	7%	8%	4%	0%	3%	5%	7%	7%	13%	8%	5%	8%	7%
Hospital outpatient visits with a physician/surgeon	4%	0%	15%	22%	7%	8%	7%	4%	20%	8%	7%	1%	5%
GP home visits	2%	3%	2%	0%	10%	0%	11%	1%	13%	2%	1%	1%	2%
Diagnostic tests	1%	2%	3%	0%	10%	3%	0%	1%	0%	2%	1%	3%	2%
Ambulance services	1%	0%	3%	0%	3%	0%	4%	0%	0%	1%	0%	1%	1%
Hospital admissions with surgery	2%	2%	2%	0%	0%	0%	0%	0%	0%	6%	1%	0%	2%
Specialist nurse visits†	0%	0%	3%	0%	10%	0%	0%	0%	7%	1%	0%	1%	1%
Podiatrist visits	1%	0%	3%	33%	17%	0%	0%	1%	7%	1%	<1%	0%	1%
Day Cases	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	<1%	<1%

**The RECORD statement – checklist of items, extended from the STROBE statement, that should be reported in observational studies using routinely collected health data.**

	Item No.	STROBE items	Location in manuscript where items are reported	RECORD items	Location in manuscript where items are reported
<b>Title and abstract</b>					
	1	(a) Indicate the study's design with a commonly used term in the title or the abstract (b) Provide in the abstract an informative and balanced summary of what was done and what was found	Page 1	RECORD 1.1: The type of data used should be specified in the title or abstract. When possible, the name of the databases used should be included.  RECORD 1.2: If applicable, the geographic region and timeframe within which the study took place should be reported in the title or abstract.  RECORD 1.3: If linkage between databases was conducted for the study, this should be clearly stated in the title or abstract.	Page 1  Page 1  N/A
<b>Introduction</b>					
Background rationale	2	Explain the scientific background and rationale for the investigation being reported	Page 6		
Objectives	3	State specific objectives, including any prespecified hypotheses	Page 6		
<b>Methods</b>					
Study Design	4	Present key elements of study design early in the paper	Page 7		
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	Pages 8 and 11		

<p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27</p> <p>Participants</p>	<p>6</p>	<p>(a) <i>Cohort study</i> - Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up  <i>Case-control study</i> - Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls  <i>Cross-sectional study</i> - Give the eligibility criteria, and the sources and methods of selection of participants</p> <p>(b) <i>Cohort study</i> - For matched studies, give matching criteria and number of exposed and unexposed  <i>Case-control study</i> - For matched studies, give matching criteria and the number of controls per case</p>	<p>Page 8</p>	<p>RECORD 6.1: The methods of study population selection (such as codes or algorithms used to identify subjects) should be listed in detail. If this is not possible, an explanation should be provided.</p> <p>RECORD 6.2: Any validation studies of the codes or algorithms used to select the population should be referenced. If validation was conducted for this study and not published elsewhere, detailed methods and results should be provided.</p> <p>RECORD 6.3: If the study involved linkage of databases, consider use of a flow diagram or other graphical display to demonstrate the data linkage process, including the number of individuals with linked data at each stage.</p>	<p>2,095 Read codes were used (Supplementary Table S1).</p> <p>Read codes have been used to code symptoms in the NHS since 1985. IQVIA used these codes to identify the patient population independently of the Authors.</p> <p>N/A</p>
<p>28 29 30 31 32 33 34</p> <p>Variables</p>	<p>7</p>	<p>Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable.</p>	<p>Pages 8-11</p>	<p>RECORD 7.1: A complete list of codes and algorithms used to classify exposures, outcomes, confounders, and effect modifiers should be provided. If these cannot be reported, an explanation should be provided.</p>	<p>N/A</p>
<p>35 36 37 38 39 40 41 42</p> <p>Data sources/ measurement</p>	<p>8</p>	<p>For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group</p>	<p>Pages 8-11</p>		

1 2 3 4	Bias	9	Describe any efforts to address potential sources of bias	Pages 8-10		
5 6 7 8 9	Study size	10	Explain how the study size was arrived at	Pages 8-10		
10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34	Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen, and why	Pages 8-11		
35 36 37 38 39 40 41 42 43 44 45 46 47	Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding (b) Describe any methods used to examine subgroups and interactions (c) Explain how missing data were addressed (d) <i>Cohort study</i> - If applicable, explain how loss to follow-up was addressed <i>Case-control study</i> - If applicable, explain how matching of cases and controls was addressed <i>Cross-sectional study</i> - If applicable, describe analytical methods taking account of sampling strategy (e) Describe any sensitivity analyses	Pages 9-11  Pages 9-11  Page 9-11  N/A          Page10-11		
	Data access and cleaning methods		..		RECORD 12.1: Authors should describe the extent to which the investigators had access to the database population used to create the study population.	Authors did not have access to the THIN database.

				RECORD 12.2: Authors should provide information on the data cleaning methods used in the study.	
Linkage		..		RECORD 12.3: State whether the study included person-level, institutional-level, or other data linkage across two or more databases. The methods of linkage and methods of linkage quality evaluation should be provided.	Pages 8-11
<b>Results</b>					
Participants	13	(a) Report the numbers of individuals at each stage of the study ( <i>e.g.</i> , numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed) (b) Give reasons for non-participation at each stage. (c) Consider use of a flow diagram	Page 12, 27	RECORD 13.1: Describe in detail the selection of the persons included in the study ( <i>i.e.</i> , study population selection) including filtering based on data quality, data availability and linkage. The selection of included persons can be described in the text and/or by means of the study flow diagram.	Pages 8-11.
Descriptive data	14	(a) Give characteristics of study participants ( <i>e.g.</i> , demographic, clinical, social) and information on exposures and potential confounders (b) Indicate the number of participants with missing data for each variable of interest (c) <i>Cohort study</i> - summarise follow-up time ( <i>e.g.</i> , average and total amount)	Pages 12-16  N/A  Pages 12-16		
Outcome data	15	<i>Cohort study</i> - Report numbers of outcome events or summary measures over time <i>Case-control study</i> - Report numbers in each exposure	Pages 12-16, 27-35		

		category, or summary measures of exposure <i>Cross-sectional study</i> - Report numbers of outcome events or summary measures			
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (e.g., 95% confidence interval). Make clear which confounders were adjusted for and why they were included (b) Report category boundaries when continuous variables were categorized (c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	Pages 12-16, 27-35  N/A  N/A		
Other analyses	17	Report other analyses done— e.g., analyses of subgroups and interactions, and sensitivity analyses	Pages 12, 15, 16		
<b>Discussion</b>					
Key results	18	Summarise key results with reference to study objectives	Pages 17-22		
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	Pages 20-22	RECORD 19.1: Discuss the implications of using data that were not created or collected to answer the specific research question(s). Include discussion of misclassification bias, unmeasured confounding, missing data, and changing eligibility over time, as they pertain to the study being reported.	N/A
Interpretation	20	Give a cautious overall interpretation of results considering objectives,	Pages 17-22		



		limitations, multiplicity of analyses, results from similar studies, and other relevant evidence			
Generalisability	21	Discuss the generalisability (external validity) of the study results	Pages 21-22		
<b>Other Information</b>					
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	Page 3		
Accessibility of protocol, raw data, and programming code				RECORD 22.1: Authors should provide information on how to access any supplemental information such as the study protocol, raw data, or programming code.	N/A

\*Reference: Benchimol EI, Smeeth L, Guttman A, Harron K, Moher D, Petersen I, Sørensen HT, von Elm E, Langan SM, the RECORD Working Committee. The REporting of studies Conducted using Observational Routinely-collected health Data (RECORD) Statement. *PLoS Medicine* 2015; in press.

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