

BMJ Open Quality Reducing readmissions and improving patient experience following urological surgery, through early telephone follow-up

Jeremy Nettleton,¹ Joseph Jelski,² Adnan Ahmad²

To cite: Nettleton J, Jelski J, Ahmad A. Reducing readmissions and improving patient experience following urological surgery, through early telephone follow-up. *BMJ Open Quality* 2020;**9**:e000533. doi:10.1136/bmjopen-2018-000533

► Additional material is published online only. To view please visit the journal online (<http://dx.doi.org/10.1136/bmjopen-2018-000533>)

Received 27 September 2018
Revised 28 January 2019
Accepted 27 June 2019



© Author(s) (or their employer(s)) 2020. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

¹Department of Urology, North Bristol NHS Trust, Bristol Urological Institute, Bristol, UK
²Department of Urology, Gloucestershire Hospitals NHS Foundation Trust, Cheltenham, UK

Correspondence to
Mr Jeremy Nettleton;
jeremy.nettleton@nhs.net

ABSTRACT

Readmission from urological surgery is common, with a readmission rate for day case surgery of 3.7% and 26% for robot-assisted cystectomy. Readmission to secondary care and representation to primary care are both expensive and preventable. This project aimed to reduce both and also enhance the care of patients following urological surgery in a large tertiary referral centre, within the National Health Service. A retrospective telephone follow-up (TFU) survey was set up in the early postoperatively period to measure reattendance and readmission rates and perception of care received. Patients were also asked to suggest how improvement could be made. Quality improvement tools were used to optimise and review the methods and timing of TFU. TFU was initiated as a strategy to enhance care and reduce readmission rates. Phone calls were targeted to occur between 48 and 72 hours following discharge. During the intervention period, 484 phone calls were attempted with 343 being successful. Reattendance rates were reduced by 13% and patient satisfaction improved by 19.6%, following TFU. This intervention also generated additional income for the organisation and enhanced patient satisfaction in the early postoperative period.

PROBLEM

Up to 82% of early readmissions to hospital are preventable.¹ Preventable reattendance leads to bad patient experience and increased cost to healthcare providers. There is a national drive as part of The Getting It Right First Time Programme to increase day case provision and reduce length of stay.² Within this key recommendation is the desire to monitor and prevent both readmission and reattendance.

In this report, we have defined readmission, as the admission to an inpatient bed, following a recent day case or inpatient admission. Reattendance has been defined as an unscheduled visit to either primary or secondary care following a recent day case or inpatient admission.

North Bristol NHS Trust and the Bristol Urological Institute provide a tertiary urology service, across most adult urological

subspecialties. This includes established day case procedures through to complex robotic and open surgery. The trust moved into a new superhospital in May 2014, with a reduced bed base. There has been an increased pressure to discharge patients early and maintain patient flow. The department has a well-established day case programme.

The project team were aware that there would be many cofactors leading to reattendance. The team felt that initial telephone questionnaires of patients would help identify key parts of the problem.

The project aimed to reduce reattendance by 10% within a 3-month period and to improve patient satisfaction by 10% within a 3-month period. There were no initial data, as such data from the initial telephone questionnaire were used as a baseline to compare results after implementation of the telephone follow-up (TFU) service.

BACKGROUND

In the USA, a large study of 7795 patients assessed the readmission rate for outpatient urological surgery to be 3.7%.³ Within this study, patients with transurethral resection of bladder tumour (TURBT) had a readmission rate of 4.97%. For larger tumours, this rose to 7.5%. Urinary tract infection was the most common reason for readmission in this study.

Prevention of readmission is an important aim for healthcare services. There are financial incentives to prevent high readmissions in England, the USA and elsewhere.

TFU has been used in a range of settings and styles. The literature describes a wide variety of work; however, there are few examples within urology. Mistiaen published a Cochrane review on this subject in 2006.⁴ This review highlights the wide variety of style and approach to TFU. It highlights that the aims of TFU were typically⁵ to improve compliance of patients with a drug regime or

appointments⁵ or to ease the transition between hospital and home and⁶ to lessen the patients distress. Typically, authors expected that achieving these aims will improve patient satisfaction, quality of life and reduce readmission rates. Additionally, the literature describes a wide variety of timings and quantity of TFU. In the Cochrane review, only six surgical studies considered readmissions. The pooled effect was not significant. This paper concluded that many questions remain with regard to optimal TFU strategy.

There is no published literature on a TFU project of this type.

Currently, follow-up following urological surgery has wide variation. Some patients would not routinely be followed up at all; other patients have close follow-up. However, no patients currently have follow-up during this early postoperative period. These telephone calls represented additional patient contact and did not replace any existing follow-up plans.

Baseline measurements

Initially, a retrospective telephone survey was completed at 5 days following discharge. This was used to collect baseline data and refine the TFU questionnaire. This was completed for the first 60 completed phone calls.

These baseline data allowed us to understand the readmission rate, prior to a telephone call. However, this survey was an intervention in its self. Although not optimally timed, it did itself prevent reattendance.

Parameters for the initial questionnaire included demographics, date of surgery, procedure completed, primary care or accident and emergency readmission, patient rating of care and action points for urology team.

There was a continuous dialogue between the authors and the other junior doctors completing phone calls. Active engagement was encouraged to prevent stakeholder burnout.

The initial phone calls demonstrated that 6% of patients had already re-presented to A&E or General Practitioner (GP). A further 13% would have reattended or seen the GP if the phone call had not been made. There was an overall satisfaction rate of 7.2/10.

DESIGN

This project aimed to reduce reattendance and enhance patient experience. We actively encouraged both patients and those involved in the project to comment on ways to enhance the experience for both the patient and health-care professional.

The team attempted to contact all patients whom had been admitted under the urology team, both elective and emergency patients.

Two attempted phone calls were made to each patient. If no contact was made, then the reason was documented. Reasons for failed communication were documented. In addition, reattendance/admission was checked against the hospital information technology systems.

Phone calls were made to patients, by junior doctors whom were part of the Urology team. Where possible, these were completed by the doctors who knew the patient on the ward. In addition, the phone calls were made with both the discharge summary and data collection tool open.

Initially, the team sent letters to the GP after every phone call. During the initial phase, it became clear that this was an unnecessary burden for medical and secretarial staff. We decided to only contact the GP when a change in care occurred.

Overall, we had an excellent response to the initial phone calls. These were unexpected phone calls as such patients perceived that they were receiving extra care. One suggestion from patients was that phone calls should feel more like a consultation and less like a questionnaire

In addition, we made the process as easy for the team as possible, we organised extra computers and telephones for the junior doctor's office. Registrars from the team were made aware of concerns that patients had and if necessary review was organised in the hot clinic. The authors made themselves accessible at all times to allow for ideas and concerns to be resolved quickly.

We were concerned that with rotating junior staff, the project might not be sustainable. We acknowledged this early on. This was discussed with management and it was agreed that if the project was successful, then a business case could be written to allow for nurse practitioners to complete early TFU as part of their role.

Strategy

The SMART aims were to reduce reattendance to A&E/GP by 10% within a 3-month period and to improve patient satisfaction by 10% within a 3-month period. We undertook three Plan Do Study Act (PDSA) cycles.

PDSA cycle 1 (60 completed phone calls)

Our initial intervention was to collect baseline data via TFU and to understand the nature of the problem. These phone calls were made at 5 days after discharge. This cycle was completed after 60 completed telephone calls. Patients reported that TFU would be most useful between 48 hours and 72 hours after discharge. Following this, all phone calls were targeted to occur in this timeframe. Patients also wanted more of a conversation about their postoperative period rather than a series of questions. After this cycle, 6% of patients had already been readmitted or reattended GP, prior to our intervention with TFU. Thirteen per cent of patients would have seen the GP or attended A&E without the phone call. The overall satisfaction rate was 7.2.

Following this cycle, the data collection spreadsheet was updated. The following parameters were added to data collection spreadsheet: stent insertion date, stent removal date, catheter in situ, catheter plan, assessment of patient and what to do if a problem arises. These metrics were added to ensure that there was a robust postoperative plan beyond the initial few days.

Junior doctors involved in the project were rebriefed on how to and when to complete telephone calls. We indicated that letters to GPs only needed to be completed if there was a planned change in the patients care. Additional data metrics were added to the spreadsheet to ensure that patients were receiving high quality discharges, as highlighted above. Juniors engaged with the project highlighted that they thought these were significant improvements to the project. Patients also wanted more of a conversation about their postoperative period rather than a series of questions.

PDSA cycle 2 (30 completed phone calls)

A further 30 phone calls were made. After this cycle, 10% of patients had already been readmitted or attended, prior to our intervention with TFU. Sixteen per cent of patients would have seen the GP or attended A&E without the phone call. Overall, satisfaction rate was 9.5.

During this cycle, we acknowledge that there might be better stakeholder engagement if the process was easier. Prior to this time, the juniors had to add all the patients from theatre lists and emergency admissions on to the spreadsheets manually. Following a meeting with management, administration staff were asked to add elective patients to the spreadsheet in advance of admission. This made the junior doctors task easier. There was no drop in readmission rates with this cycle; however, the number of completed daily phone calls did improve. Overall, this led to improved stakeholder engagement and allowed the project to remain viable.

PDSA cycle 3 (253 phone calls)

After this cycle, 6% of patients had already been readmitted or reattended prior to our intervention with TFU. Thirteen per cent of patients would have seen the GP or attended A&E without the phone call. Overall, satisfaction rate was 8.95/10. No further modifications were completed.

RESULTS

The main outcome measures were reattendance rates and patient satisfaction rates. These rates improved during the project. The TFU reduced reattendance rates by 13% and patient satisfaction improved by 19.6% to 8.95. 10.6% of patients reattended prior to TFU. The data suggest that TFU does improve both reattendance and satisfaction rates.

In 70.8% of cases (343/484), a phone call was completed. 5.7% (28/484) of patients had either no contact number or no recorded contact number. In the remaining cases, the phone was not answered. The lack of contact details for some patients was raised at clinical governance.

Twenty-seven per cent (95/343) of contacted patients went home with a catheter, and 12.6% of these patients reported no plan for their catheter prior to TFU. Twenty-seven patients were discharged with ureteric stents, all of these patients were aware of their stent and all had a plan for stent exchange or removal. Six out of 343 were unaware of their follow-up plan. In all cases, this was confirmed with TFU. All 343 patients were asked if they had concerns with

regard to discharge medications. Six patients complained of constipation and verbal advice was given at TFU. Seven patients queried their anticoagulation plan and advice was given at TFU. These data suggest that the existing discharge process is of high quality and that TFU is a useful adjunct

All of these telephone calls were documented on the Lorenzo IT system and as such attracted an income for the trust. This was subsequently challenged by the clinical commissioning group.

Lessons and limitations

This project required dedicated input from junior doctors. Keeping these stakeholders motivated was essential to the viability of the project. While we attempted to make their role as easy as possible, a significant extra amount of work was required. We did reward those who made especially significant effort.

Our hope was that we could prove the concept by completing TFU with junior doctors and then subsequently write a business plan for urology nurse practitioners to complete this work as part of their role. However, the trust was in financial special measures at the time and this project would have had to have no cost base, to be approved.

Having a reliable baseline data is a large limitation of this work. Our baseline data are potentially biased as it was collected in part from our initial telephone survey. Data were compared with hospital episodes for the trust. If we were to undertake the project again, we would aim to complete a readmission audit prior to completing the survey as an adjunct to the baseline data.

Overall, patients seemed very satisfied with their TFU service. No complaints were made by patients in this cohort. We made no provision to record a baseline complaint rate. This would have been a helpful outcome metric.

CONCLUSION

Our project supports the role of TFU in improving patient satisfaction and reattendance rates. This project supports existing literature complementing the use of perioperative TFU. While acknowledging the level of evidence of Mistiaen's Cochrane review, TFU in this study reduced reattendance rates which is in contrast to the Cochrane findings.⁵ Our SMART aims to reduce reattendance by 10% in a 3-month period was reliably achieved. For departments considering undertaking a similar project, we recommend that staff be allocated dedicated time and resources to successfully complete the project. In summary, TFU is a valuable tool in ensuring high-quality discharge and preventing reattendance and readmission.

Contributors JN designed and led the project from conception through to completion. JN was actively involved in all stages including, design, implementation, PDSA cycles, data collection, write-up and submission for publication. JJ contributed to data collection, PDSA cycles and review of write-up. AA contributed to data analysis and review of write-up. JN is the guarantor.

Funding This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.



Provenance and peer review Not commissioned; externally peer reviewed.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

REFERENCES

- 1 Ghali F, Moses RA, Raffin E, *et al*. What factors are associated with unplanned return following transurethral resection of bladder tumor? an analysis of a large single institution's experience. *Scand J Urol* 2016;50:370–3.
- 2 NHS. GIRFT programme national specialty report, 2018. Available: <https://gettingitrightfirsttime.co.uk/wp-content/uploads/2018/07/GIRFT-Urology.pdf>
- 3 Rambachan A, Matulewicz RS, Pilecki M, *et al*. Predictors of readmission following outpatient urological surgery. *J Urol* 2014;192:183–8.
- 4 Mistiaen P, Poot E, follow-up T. Telephone follow-up, initiated by a hospital-based health professional, for postdischarge problems in patients discharged from hospital to home. *Cochrane Database Syst Rev* 2006:CD004510.
- 5 Zafar SN, Shah AA, Nembhard C, *et al*. Readmissions after complex cancer surgery: analysis of the nationwide readmissions database. *J Oncol Pract* 2018;14:e335–45.
- 6 Al-Daghmin A, Aboumohamed A, Din R, *et al*. Readmission after robot-assisted radical cystectomy: outcomes and predictors at 90-day follow-up. *Urology* 2014;83:350–6.