Guidelines

INTERNATIONAL JOURNAL OF SURGERY

OPEN

The SCARE 2023 guideline: updating consensus Surgical CAse REport (SCARE) guidelines

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Background: The Surgical CAse REport (SCARE) guidelines were first published in 2016 as a tool for surgeons to document and report their surgical cases in a standardised and comprehensive manner. However, with advances in technology and changes in the healthcare landscape, it is important to revise and update these guidelines to ensure they remain relevant and valuable for surgeons.
Materials and methods: The updated guidelines were produced through a Delphi consensus exercise. Members of the SCARE 2020 guidelines Delphi group, editorial board members, and peer reviewers were invited to participate. Potential contributors were contacted by e-mail. An online survey was completed to indicate their agreement with the proposed changes to the guideline items.
Results: A total of 54 participants were invited to participate and 44 (81.5%) completed the survey. There was a high degree of agreement among reviewers, with 36 items (83.7%) meeting the threshold for inclusion.

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Sponsorships or competing interests that may be relevant to content are disclosed at the end of this article.

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International Journal of Surgery (2023) 109:1136–1140

Received 9 March 2023; Accepted 16 March 2023

Published online 5 April 2023

http://dx.doi.org/10.1097/JS9.0000000000000373

Conclusion: Through a completed Delphi consensus exercise we present the SCARE 2023 guidelines. This will provide surgeons with a comprehensive and up-to-date tool for documenting and reporting their surgical cases while highlighting the importance of patient-centred care.

Keywords: case report, guideline, SCARE, surgery

Introduction

The Surgical CAse REport (SCARE) guidelines were introduced in 2016 as a standardised method for reporting surgical cases in the medical literature[1]. These guidelines were developed to improve the quality and consistency of case reports, making them more valuable for clinicians and researchers[2]. However, the SCARE guidelines were last revised in 2020[3]. It is necessary to revise and update this to reflect current best practices and standards and hence keep up with the advances in medical knowledge and technology.

The revised guidelines aims to address the gaps and limitations of the previous version while also providing a more comprehensive and detailed approach to case report writing and preparation. It is divided into several sections including introduction, patient information, diagnostic assessment and interpretation, intervention, and follow-up outcomes. Each section includes specific recommendations and examples to guide authors in effectively and accurately reporting their cases.

In addition, the revised SCARE guidelines incorporates amendments to the reporting of the surgical procedure performed, including postoperative instructions, physical setting of the intervention and speciality collaborations, as well as local multidisciplinary discussions regarding patient outcomes. These updates reflect the growing importance of evidence-based medicine and the need for more robust data in surgical case reports.

We hope that this update will serve as a valuable tool for authors and editors in the surgical community and contribute to the continued advancement of medical knowledge through well-reported and informative case reports.

HIGHLIGHTS

- This paper presents an update to the SCARE guidelines, which were first published in 2016 as a tool for surgeons to document and report their surgical cases in a standardised manner.
- The updated guidelines were produced through a Delphi consensus exercise. Of the surgical experts invited, 44 (81.5%) completed the SCARE survey detailing proposed amendments. There was a high degree of agreement among reviewers.
- The SCARE 2023 guidelines is now presented. This will provide surgeons with a comprehensive and up-to-date tool for documenting and reporting their surgical cases while highlighting the importance of patient-centred care.

Materials and methods

In accordance with the original recommendations, the Delphi approach was used[4]. Members from the SCARE 2020 guidelines Delphi group, editorial board members, and peer reviewers were invited to participate. Potential contributors were contacted by e-mail. Once they conveyed their intent to participate, a Google Forms survey comprising suggested changes to the SCARE 2023 checklist was sent. These changes were rated by each participant on a scale of 1 (strongly disagree) to 9 (strongly agree). In line with the previous guidelines, consensus was defined as having a percentage of greater than or including 70% for items scoring between 7 and 9.

Table 1

SCARE 2023 Delphi scores.

Item	1–3 [%]	4–6 [%]	7–9 [%]
1	0	0	100
2	18.2	29.5	52.3
3	0	6.8	93.2
4a	0	11.4	88.6
4b	0	6.8	93.2
4c	2.3	9.1	88.6
4d	0	6.8	93.2
4e	0	9.1	90.9
5a	0	18.2	81.8
5b	0	15.9	84.1
5c	2.3	13.6	84.1
5d	4.5	34.1	61.4
6	0	4.5	95.5
7	2.3	13.6	84.1
8a	0	9.1	90.9
8b	0	22.7	77.3
8c	2.3	6.8	90.9
8d	0	15.9	84.1
8e	2.3	15.9	81.8
9	6.8	29.5	63.7
10a	2.3	29.5	68.2
10b	0	18.2	81.8
10c	0	18.2	81.8
10d	0	27.3	72.7
11a	2.3	34.1	63.6
11b	6.8	34.1	59.1
11c	4.5	25.0	70.5
11d	4.5	22.7	72.8
11e	2.3	18.2	79.5
12a	4.5	20.5	75.0
12b	4.5	15.9	79.6
12c	0	11.4	88.6
12d	4.5	18.2	77.3
13a	0	9.1	90.9
13b	2.3	11.4	86.3
13c	0	6.8	93.2
13d	0	11.4	88.6
14a	2.3	9.1	88.6
14b	4.5	9.1	86.4
15	4.5	31.8	63.7
16	6.8	6.8	86.4
17	4.5	13.6	81.9
18	0	6.8	93.2

Items listed correspond to individual sections of the SCARE guidelines. Scores range from 1 (strongly disagree) to 9 (strongly agree).

Table 2

The updated SCARE 2023 checklist.

SCARE 2023 checklist

Topic	Item	Description	Page number
Title	1	The words 'case report' should appear in the title. The title should be concise and highlight the area of focus (e.g. presentation, patient population, diagnosis, surgical intervention, or outcome)	
Key words	2	Include three to six keywords that identify what is covered in the case report (e.g. patient population, diagnosis or surgical intervention). Include 'case report' as one of the keywords	
Highlights	3	Include three to five bullet points that capture the novel findings of the report. These should focus on providing a brief background to the report. Include the key results, their clinical relevance, and any validation performed	
Abstract	4a	Structure: Provide a structured abstract that includes the following headings: (1) introduction and importance, (2) presentation of case, (3) clinical discussion, and (4) conclusion	
	4b	Introduction and importance: Describe what is known currently on this topic, what is important, unique or educational about the case and what this adds to the surgical literature	
	4c	Presentation of case: Detail the presenting complaint(s), clinical and demographic details and the patient's main ideas, concerns, and expectations. Detail the clinical findings, investigations performed, main differentials, and subsequent diagnosis. Describe the rationale for choosing the intervention. Describe what was the outcome	
	4d	Clinical discussion: Discuss the clinical findings in relation to what is currently known	
	4e	Conclusion: Describe the relevance and impact of the report. Detail the main take away lessons or potential implications for clinical practice (minimum of three)	
Introduction	5a	Background: Describe the area of focus and the relevant background contextual knowledge	
	5b	Rationale: Describe why the case is different to what is already known in the literature. Describe why it is important to report this case (e.g. is the case rare or interesting for the specific healthcare setting, population or country)	
	5c	Guidelines and literature: Give reference to relevant surgical literature and current standards of care, including any specific guidelines or reports (e.g. government, national, international)	
Guideline citation	6	At the end of the introduction, include reference to the SCARE 2023 publication by stating: 'This case report has been reported in line with the SCARE Criteria [include citation]'	
Timeline	7	Summarise the sequence of events leading up to the patient's presentation. Report any delays from presentation to diagnosis and/or intervention. Use tables or figures to illustrate the timeline of events if needed. Use standardised units of time (mm:hh) and dates (dd/mm/yyyy)	
Patient information	8a	Demographic details: Include de-identified demographic information (e.g. age, sex, ethnicity, occupation). Where relevant, include other useful information (e.g. body mass index, hand dominance, income, level of education, marital status)	
	8b	Presentation: Describe the patient's presenting complaint(s). Include a collateral account of the history if relevant. Describe how the patient presented (e.g. self-presentation, ambulance or referred by family physician or other hospital clinicians). Describe where the patient presented (e.g. outpatient clinic, hospital)	
	8c	Past medical and surgical history: Include any previous interactions (e.g. prior admissions to hospital), medical or surgical interventions, and relevant outcomes	
	8d	Drug history and allergies: Specify any acute, repeat, and discontinued medications. Specify any contraindications to re-starting regular medicines for example increased bleeding risk. Specify any allergies and/or adverse reactions	
	8e	Family history: Include health information regarding first-degree relatives, specifying any inheritable conditions. Social history: Indicate any smoking, alcohol, and recreational drug use. Indicate the level of social independence, the presence of any carers, driving status, and type of accommodation. Review of systems: Provide any other information outside of the focused history (e.g. headaches, blurred vision, palpitations, abdominal pain, joint pain)	
Clinical findings	9	Describe the general and significant clinical findings based on initial inspection and physical examination	
Diagnostic assessment and interpretation	10a	Diagnostics assessment: Bedside (e.g. urinalysis, electrocardiography, echocardiography). Laboratory (e.g. biochemistry, haematology, immunology, microbiology, histopathology). Imaging (e.g. ultrasound, X-ray, CT/MRI/PET). Invasive (e.g. endoscopy, biopsy)	
	10b	Diagnostic challenges: Where applicable, describe what was challenging about the diagnoses (e.g. access, financial, cultural). Describe how these challenges were overcome	
	10c	Diagnostic reasoning: Describe the differential diagnoses, why they were considered (e.g. given the initial presentation or after assessment and investigation), why and how they were excluded	
	10d	Prognostic characteristics: Include where applicable (e.g. tumour staging) and how this was performed	
Intervention	11a	Preoperative patient optimisation: Lifestyle (e.g. weight loss). Medical (e.g. medication review, treating any relevant pre-existing medical concerns). Procedural (e.g. nil by mouth, enema). Other (e.g. psychological support)	
	11b	Surgical interventions: Describe the type(s) of intervention(s) used (e.g. pharmacological, surgical, physiotherapy, psychological, preventative). Describe any concurrent treatments (e.g. antibiotics, analgesia, antiemetics, venous thromboembolism prophylaxis) Medical devices should have manufacturer and model specifically mentioned	
	11c	Specific details regarding the intervention: Describe the rationale behind the treatment offered, how it was performed and time to intervention. Include details on the intervention (e.g. anaesthesia, patient position, skin preparation used such as chlorhexidine or shaving, use of other relevant equipment, sutures, devices, surgical stage). For surgery, include any postoperative instructions (e.g. how long to keep an abdominal drain for, when to remove sutures or staples). The degree of novelty for a surgical technique/device should be mentioned (e.g. 'first in human'). For pharmacological therapies, include information on the formulation, dosage, strength, route and duration	
	11d	Operator details: Where applicable, include operator experience and position on the learning curve, prior relevant training, and specialisation (e.g. 'junior trainee with 3 years of surgical specialty training'). Setting of intervention: Specify the setting in which	

Table 2

(*Continued*)

SCARE 2023 checklist		
		the intervention was performed (e.g. district general hospital, major trauma centre) Specify the level of experience that the centre has with performing the intervention. Specify whether the procedure was performed in collaboration with another specialty (e.g. a hybrid procedure).
	11e	Deviation from initial management plan: State if there were any changes in the planned intervention(s). Provide an explanation for these changes alongside the rationale (e.g. delays to intervention, a laparoscopic procedure converted to open due to operative difficulties)
Follow-up and outcomes	12a	Specify details regarding the follow-up: When (e.g. how long after discharge in months or years, frequency, maximum follow-up length at time of submission). Where (e.g. home via video consultation, primary care, secondary care). With whom (e.g. appointment with the original operating surgeon). How (e.g. telephone consultation, virtual or digital follow-up, clinical examination, blood tests, imaging). Any specific long-term surveillance requirements (e.g. imaging surveillance for endovascular aneurysm repair or clinical exam/ultrasound of regional lymph nodes for skin cancer). Any specific postoperative instructions (e.g. postoperative medications, targeted physiotherapy, psychological therapy)
	12b	Intervention adherence and compliance: Where relevant, detail how well the patient adhered to and tolerated the advice provided (e.g. avoiding heavy lifting for abdominal surgery, or tolerance of chemotherapy and pharmacological agents). Explain how adherence and tolerance were measured. Explain whether these results will have an impact on the long-term applicability of the intervention in clinical practice
	12c	Outcomes: Expected versus attained clinical outcome as assessed by the clinician. Reference literature used to inform expected outcomes. When appropriate, include patient-reported measures (e.g. questionnaires including quality-of-life scales). Detail when the outcomes were recorded (e.g. at how many months or years postoperative)
	12d	Complications and adverse events: Precautionary measures taken to prevent complications (e.g. antibiotic or venous thromboembolism prophylaxis). All complications and adverse or unanticipated events should be described in detail and ideally categorised in accordance with the Clavien–Dindo Classification (e.g. blood loss, length of operative time, wound complications, re-exploration or revision surgery). If relevant, whether the complication was reported to the relevant national agency or pharmaceutical company–Specify the duration of time between completion of the intervention and discharge, and whether this was within the expected timeframe (if not, why not). Where applicable, the 30-day postoperative and long-term morbidity/mortality may need to be specified. Where applicable, specify whether any complications or adverse outcomes were discussed locally (eg during team or morbidity and mortality meetings). State if there were no complications or adverse outcomes
Discussion	13a	Summary of results: Provide a clear summary of the key findings of the report. Provide a rationale for the conclusions drawn
	13b	Relevant literature: Include a brief discussion of the relevant literature and, if appropriate, similar published cases
	13c	Future implications: Describe the future implications for clinical practice and guidelines
	13d	Take away lessons: Outline the key clinical lessons from this case report. Discuss any differences in approach to diagnosis, investigation, or patient management which the authors might adopt in future cases, based on their experience of the current report
Strengths and limitations	14a	Strengths: Describe the key strengths of the case. Detail any multidisciplinary or cross-specialty relevance
	14b	Weaknesses and limitations: Describe the relevant weaknesses or limitations of the caself applicable, describe how these challenges were overcome. For novel techniques or devices, outline any contraindications and alternatives, potential risks and possible complications if applied to a larger population
Patient perspective	15	Where appropriate, the patient should be given the opportunity to share their perspective on the intervention(s) they received (e.g. sharing quotes from a consented and anonymised interview)
Informed consent	16	The authors must provide evidence of consent, where applicable, and if requested by the journal. Consent should be provided for both the original intervention or procedure and publication of the current case report. State the method of consent at the end of the article (e.g. verbal, written, digital/virtual). If not provided by the patient, explain why (e.g. death of patient and consent provided by next of kin). If the patient or family members were untraceable, then document the tracing efforts undertaken
Additional information	17	Please state any author contributions, acknowledgements, conflicts of interest, sources of funding and where required, institutional review board or ethical committee approval. Disclose whether the case has been presented at a conference or regional meeting. Disclose whether this case is under consideration at any other journal
Clinical images and videos	18	Where relevant and available, include clinical images to help demonstrate the case pre-, peri-, and postintervention (e.g. radiological, histopathological, patient photographs, intraoperative images). Where relevant, ensure images are adequately annotated. Where relevant and available, a link (e.g. Google Drive, YouTube) to the narrated operative video can be included to highlight specific techniques or operative findings. Ensure all media files are appropriately captioned and indicate points of interest to allow for easy interpretation

Results

A total of 54 participants were invited to participate and 44 (81.5%) completed the Delphi survey. A summary of scores is shown in Table 1. A total of 43 items were assessed of which 36 (83.7%) met the threshold for inclusion. The revised SCARE 2023 guidelines is shown in Table 2.

Discussion

The SCARE guidelines provide a standardised framework for reporting surgical cases. The updated version of these guidelines aims to improve the completeness and quality of surgical case reports, making them more useful for clinicians and researchers.

Previous research has shown that most surgical journals do not include reporting guidelines as part of their instructions for authors[5]. However, when implemented, there is a statistically significant increase in reporting completeness[6]. As such, we encourage authors, reviewers, editors, and journals to use the updated SCARE 2023 checklist to facilitate improvement in the consistency of reports.

The revised SCARE 2023 guidelines incorporates several changes to the original format. This includes updates to the section on patient information, such as the setting in which the patient originally presented, any specific contraindications to medications or interventions, and a focused review of systems. This information is important for understanding the overall health status of a patient and in identifying any potential risk factors for the surgical procedure.

The follow-up and outcomes section has also been updated. This includes information on the individual with whom follow-up was performed, the modality used to achieve this, such as telephone, virtual or face-to-face consultations, and whether the study results will impact the long-term applicability of the intervention in real-world clinical practice. This information is important for understanding the long-term outcomes of the surgery performed and assessing the effectiveness of a procedure.

In addition to these changes, the revised SCARE guidelines now includes a separate strengths and limitations section. This acknowledges any limitations of the study and discusses any relevant implications.

Overall, the revised SCARE 2023 guidelines provide a more comprehensive and detailed format for reporting surgical cases in the medical and surgical literature. Authors should cite the guidelines and upload a completed checklist of compliance for reviewers and editors to inspect. This checklist will be provided in various formats for easy use via the SCARE website (https://www.scareguideline.com).

Conclusion

The updated SCARE 2023 guidelines provide a comprehensive and standardised approach for reporting surgical cases. This addresses the importance of patient privacy, consent, ethical considerations, and the need for clear and concise reporting of surgical procedures and outcomes. Adhering to these guidelines will help contribute to the advancement of surgical knowledge and practice. Overall, the revised guidelines provide a valuable tool for surgical teams to improve their reporting and communication of surgical cases, and to ultimately improve patient care.

Ethical approval

Not applicable.

Sources of funding

None.

Author contribution

R.A.A.: concept and design, data interpretation and analysis, drafting, revision and approval of final manuscript. C.S., M.M., M.N., A.K. and T.F.: Design, data collection, data interpretation and analysis, drafting, revision and approval of final manuscript.

Conflicts of interest disclosure

The authors have no financial, consultative, institutional or any other relationships that might lead to bias or conflict of interest.

Research registration unique identifying number (UIN)

1. Name of the registry: not applicable.
2. Unique Identifying number or registration ID: not applicable.
3. Hyperlink to your specific registration (must be publicly accessible and will be checked): not applicable.

Guarantor

Riaz A. Agha.

Data statement

The data in this guideline are derived from individual responses to the survey and are therefore confidential and not in the public domain.

Provenance and peer review

Not commissioned, internally reviewed.

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