

SMART (Surgical ModificAtion Reporting Tool) – A checklist for reporting modifications to an innovative procedure or device.

Section/Topic	Item	Checklist item	Where reported
Describe the starting point of the innovation:			Page Number(s):
Describe the innovation	1	Describe the innovation (procedure, part of procedure and/or device) as it existed at the start of the current report/description of use (i.e. before any modifications occur). This should encompass a description of its constituent components and individual steps.	
Outline patient eligibility criteria	2	Describe the initial patient eligibility criteria (i.e. the inclusion and exclusion criteria) used to select which patients received the innovation (before any modifications occurred).	
Indicate the IDEAL stage(s)	3	Identify the most appropriate IDEAL stages or IDEAL-D stages for the reported procedure or device.	
Report contextual information	4a	Provide an overview of the context in which the procedure or device was used <u>in the current report</u> in terms of: - Timeframe (i.e. dates) being reported	
	4b	- Number and type of centres involved (e.g. sizes, locations and functionality/specialisation)	
	4c	- Number and type of surgeons/operators performing the procedure/using the device (e.g. general experience, innovation-specific experience and training, grade, speciality)	
	4d	- Number of times innovation was delivered , including the number of patients receiving the innovation	
List all modifications to the innovation:			Page Number(s):
Report all modifications*			i. Which patients† ii. Why‡ iii. Implications§
Technical	5a	For procedures , examples include changes to specific procedural steps (e.g., addition, subtraction, repetition, sequence, timing or exchange), surgical approach (e.g. robotic/laparoscopic), incision/access, patient positioning, devices/tools/adjuvants used for a procedure and periprocedural aspects (e.g. medication, anaesthesia).	
		For devices , this may include changing device size, increasing or decreasing the number of parts/components, substituting a constituent part for another or altering the number of devices used. It may also include modifications to the procedure in which the device is being used or how a device is used/applied/inserted (i.e. instructions for use).	
Patient eligibility criteria	5b	Changes to inclusion and/or exclusion criteria , such as changes in complexity, co-morbidities included or pathology treated	
Abandoning, stopping or converting	5c	Any instances where a decision was made to stop using an innovation or where it was converted to another procedure or approach (e.g. robotic to open surgery), either in an individual patient or for all further patients. Here, the alternative device or procedure used should be included.	
Absence of modifications	5d	If no modifications have occurred (to aspects covered in 5a-c), report on the absence of modifications.	
Summarise modifications:			Page Number(s):
Assess stability	6	Provide views on the stability of the innovation at the end of the time period being reported (i.e. whether further changes are anticipated or planned). This stability may apply to the entire procedure/device or specific steps/components.	
Share learning	7	Summarise any learning points gained from making modifications. Examples include implications from technical or patient eligibility criteria modifications that others could learn from.	

*To aid with reporting, authors are encouraged to: Report modifications in a **dedicated sub-section** within the **main report** rather than supplementary materials. If supplementary materials are necessary, modifications reported within them should be clearly **signposted** in the main text. Also consider providing a **graphic representation** to aid reporting, e.g., the timeline of when modifications occurred during the series of procedures being reported/uses of the device

†**Which patients** – How many patients the modification was used for. ‡**Why** – The rationale. §**Implications** – Advantages and disadvantages.

Definitions of surgical innovations can be found on page 18 in the Royal College of Surgeons document 'Surgical innovation, new techniques and technologies: A Guide to Good Practice'

Users of this checklist are kindly requested to cite the following paper when using the tool: James B Olivier, Rhiannon C Macefield, Maeve Coyle, Kerry N L Avery, Natalie S Blencowe, Daisy Elliott, Concise stakeholder-informed tool for reporting modifications to innovative surgical procedures and devices: Surgical ModificAtion Reporting Tool (SMART) checklist, *BJS*, Volume 113, Issue 10, October 2026, znag117, <https://doi.org/10.1093/bjs/znag117>