A patient-centred check sheet improves communication on the trauma ward round

ABSTRACT

Background: Effective communication on surgical ward rounds should clarify for patients their management plan and answer questions adequately. Pressures on time conspire against this interchange of information. A patient-centred surgical communication check sheet was devised to enable rapid two-way transfer of information between surgeon and patient.

Methods: A quality improvement project involved three cycles. Through the use of a patient survey, distributed following the daily ward round, areas for improvement in communication were highlighted in cycle one. The surgical communication check sheet was introduced in cycle two, and modified before cycle three following discussion with the orthopaedic department. The surgical communication check sheet was handed out to patients before the ward round, and its efficacy was measured by evaluating ward round communication using the survey as in cycle one.

Results: Initial results showed a variable standard of communication, which improved following the introduction of the surgical communication check sheet in cycle two. In cycle three, 84.7% patients felt that the check sheet aided communication on the ward round. Measures of communication improved between cycles one and three: the percentage of patients with unanswered questions fell from 21.8% to 16.7%, the number of patients unsure why a test was done fell from 25.9% to 12.7%, and average understanding of the management plan rose from 64.7% to 83.3%.

Conclusions: The introduction of the surgical communication check sheet improved ward round communication, and was welcomed by almost 85% of patients. Accounts from patients indicate two benefits of the check sheet: the surgeon is immediately aware of a patient with questions or concerns, allowing these to be adequately addressed, and patients can formulate questions before the ward round which bolsters their confidence to ask them.

Previous research has shown the benefit of a structured approach to surgical ward rounds. Banfield et al (2018) demonstrated improvements in documentation and understanding of the management plan in junior doctors after introducing a ward round checklist. Standardized proformas have also been shown to improve documentation between multidisciplinary team members in an orthopaedic setting by Alazzawi et al (2016) and Dolan and Broadbent (2015).

While understanding of the patient's diagnosis and management plan is vital among the multidisciplinary team, it is paramount that patients themselves understand all aspects of their care. Stewart (1995) showed that effective communication improves emotional health, encourages symptom resolution and reduces patient anxiety, especially when patients are encouraged to ask questions and share in the decision-making process. This project aimed to improve levels of patient–surgeon communication and therefore patient understanding without causing unnecessary delay to the completion of the round. With this in mind, the surgical communication check sheet was created.

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The surgical communication check sheet was designed specifically to facilitate two-way transfer of information between surgeon and patient. After identifying areas of poor communication in the first cycle four major aims were stated:

1. To decrease the percentage of patients with unanswered questions at the end of the ward round by 10%
2. To increase the patient's understanding of his/her management plan by 10%
3. To achieve a 75% approval rating for the surgical communication check sheet from patients
4. To increase satisfaction with communication on the ward round to the same level of satisfaction reported for the ward overall.

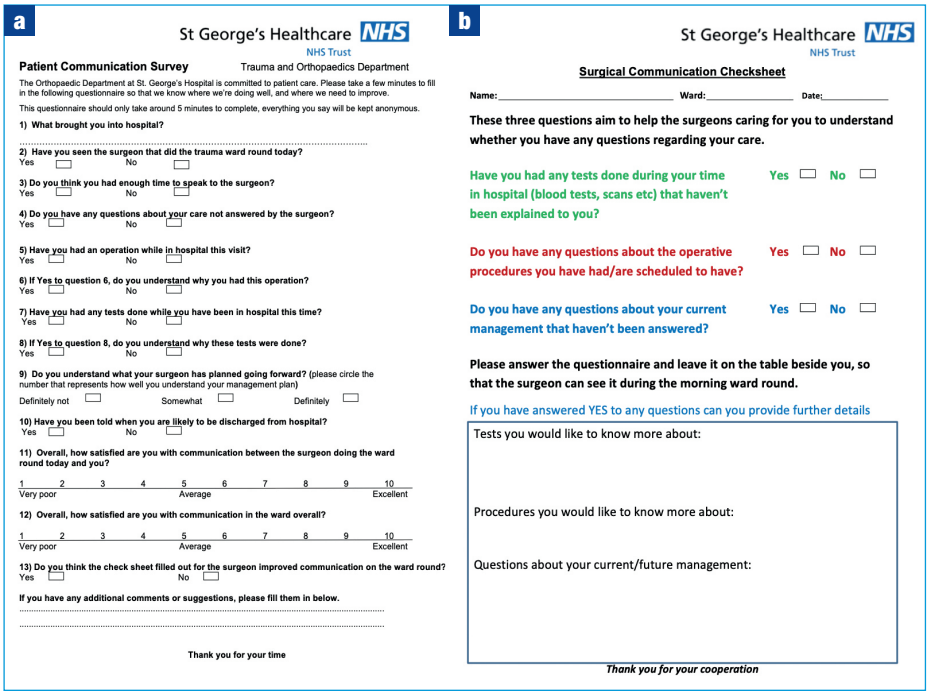
Methods

This project was carried out on the trauma unit of St George's Hospital, London, over a 7-month period from October 2016 until April 2017. Ward round communication was assessed using a survey containing 13 questions (*Figure 1a*), all standardized to restrict variability. Before the study, the format and content of the survey was practised and agreed by the team during a 1-week consultation period. Members of the team asked individual patients the survey questions, then recorded patients' answers on the survey sheets. This survey was used to assess communication in all three cycles.

The first cycle served as a control, before the surgical communication check sheet was introduced. Cycle two formed a pilot study, to evaluate the feasibility of the surgical communication check sheet as an intervention for one surgeon's trauma week. For cycle three a further question was added to the survey, asking patients whether they felt that the surgical communication check sheet was a beneficial intervention.

The initial version of the survey (*Figure 1a*) used in cycles one and two had no question thirteen. Question nine evaluated whether patients understand what their management plan entails. Three possible

Figure 1. a. Survey used in cycle three, and (b) the final surgical communication check sheet.



a

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Patient Communication Survey Trauma and Orthopaedics Department

The Orthopaedic Department at St. George's Hospital is committed to patient care. Please take a few minutes to fill in the following questionnaire so that we know where we're doing well, and where we need to improve.

This questionnaire should only take around 5 minutes to complete, everything you say will be kept anonymous.

1) What brought you into hospital?

.....

2) Have you seen the surgeon that did the trauma ward round today?
Yes ☐ No ☐

3) Do you think you had enough time to speak to the surgeon?
Yes ☐ No ☐

4) Do you have any questions about your care not answered by the surgeon?
Yes ☐ No ☐

5) Have you had an operation while in hospital this visit?
Yes ☐ No ☐

6) If Yes to question 6, do you understand why you had this operation?
Yes ☐ No ☐

7) Have you had any tests done while you have been in hospital this time?
Yes ☐ No ☐

8) If Yes to question 8, do you understand why these tests were done?
Yes ☐ No ☐

9) Do you understand what your surgeon has planned going forward? (please circle the number that represents how well you understand your management plan)
Definitely not ☐ Somewhat ☐ Definitely ☐

10) Have you been told when you are likely to be discharged from hospital?
Yes ☐ No ☐

11) Overall, how satisfied are you with communication between the surgeon doing the ward round today and you?
1 2 3 4 5 6 7 8 9 10
Very poor Average Excellent

12) Overall, how satisfied are you with communication in the ward overall?
1 2 3 4 5 6 7 8 9 10
Very poor Average Excellent

13) Do you think the check sheet filled out for the surgeon improved communication on the ward round?
Yes ☐ No ☐

If you have any additional comments or suggestions, please fill them in below.

.....

.....

Thank you for your time

b

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Surgical Communication Checksheet

Name:_____ Ward:_____ Date:_____

These three questions aim to help the surgeons caring for you to understand whether you have any questions regarding your care.

Have you had any tests done during your time in hospital (blood tests, scans etc) that haven't been explained to you? Yes ☐ No ☐

Do you have any questions about the operative procedures you have had/are scheduled to have? Yes ☐ No ☐

Do you have any questions about your current management that haven't been answered? Yes ☐ No ☐

Please answer the questionnaire and leave it on the table beside you, so that the surgeon can see it during the morning ward round.

If you have answered YES to any questions can you provide further details

Tests you would like to know more about:

Procedures you would like to know more about:

Questions about your current/future management:

Thank you for your cooperation

answers are provided, with 'definitely not' scoring zero points, 'somewhat' scoring one point and 'definitely' scoring two points. The total score for a group was converted to a percentage. Questions eleven and twelve are related to patients' perceptions of communication on the ward round, and the ward overall. Question twelve (satisfaction with the ward overall) is included as a control, to determine a baseline level of satisfaction with communication. This can be compared with communication on the ward round from question eleven.

Figure 1b shows the final surgical communication check sheet that was used in cycle three. This was modified from the version used in cycle two.

Intervention

For cycles two and three, the surgical communication check sheet was distributed to patients the evening before the trauma ward round and the format explained to each patient. The resultant surgical communication check sheets were made available to the surgeon for inspection during the trauma ward round. In cycles two and three, the survey was used to assess communication following the ward round as in cycle one.

The surgical communication check sheet contains three yes/no questions at the top, shown in *Figure 1b*. These are easily answered by patients, and quickly identify for the surgeon areas where patient doubt remains regarding tests done, operative procedures or management plans. The section underneath enables patients to document their uncertainties for the surgeon who can answer them effectively.

Results

Analysis was performed using Microsoft Excel, with standard deviations comparing averaged results from each consultant's trauma week. Individual results varied widely, and this provided a better measure of inter-surgeon differences.

Results for all three cycles are displayed in *Table 1*, with graphical data displayed in *Figure 2*. Between cycles one and two, there was a decrease in the number of patients with unanswered questions from 21.8% (standard deviation 13.6) to 17.6%. Cycle three showed a further improvement to 16.7% (standard deviation 3.1). The percentage understanding of patients' management plans rose from 64.7% (standard deviation 11.1) in cycle one to 85.0% in cycle two, and 83.3% (standard deviation 1.8) in cycle three, representing an increase of around 20% after implementation of the surgical communication check sheet. Percentage satisfaction with communication on the ward round increased from 77.7% (standard deviation 8.0) in cycle one to 83.8% in cycle two, and 83.8% (standard deviation 2.8) in cycle three. Percentage satisfaction with communication on the ward overall was largely unchanged between cycle one (85.8%, standard deviation 3.3), cycle two (87.0%) and cycle three (84.9%, standard deviation 2.6). As such, the surgical communication check sheet elevated patients' perception of ward round communication towards those levels perceived for the ward overall.

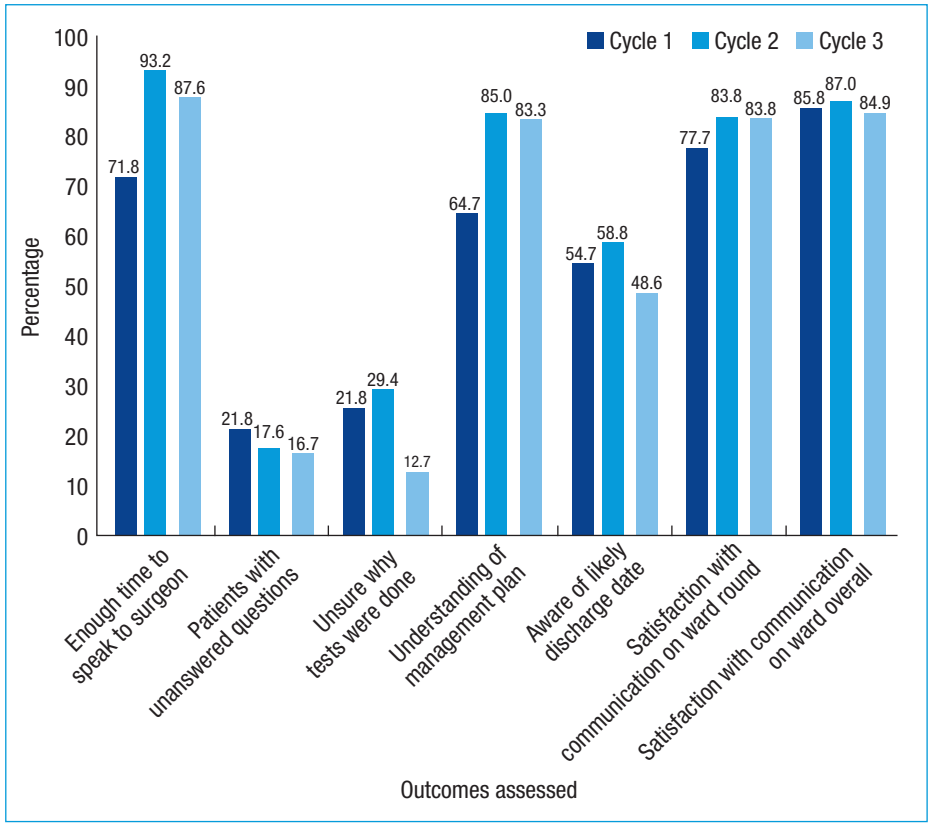
Other outcomes also provided positive results. Cycle one showed that 25.9% (standard deviation 15.5) of patients were unsure why one or more investigations or tests were done, compared to cycle three in which 12.7% (standard deviation 1.3) were unsure. In cycle two 29.4% of patients were unsure why one or more test was done. In cycle one 71.8% (standard deviation 14.8) of patients felt that they had enough time to speak to the surgeon, compared to 93.2% and 87.6% (standard deviation 5.8) in cycles

Table 1. Results of all three cycles

	Cycle 1 (*n*=170) (SD)	Cycle 2 (*n*=39)	Cycle 3 (*n*=72) (SD)
Enough time to speak to surgeon	71.8% (14.8)	93.2%	87.6% (5.8)
Patients with unanswered questions	21.8% (13.6)	17.6%	16.7% (3.1)
Unsure why tests were done	25.9% (15.5)	29.4%	12.7% (1.3)
Understanding of management plan	64.7% (11.1)	85.0%	83.3% (1.8)
Aware of likely discharge date	54.7% (8.4)	58.8%	48.6% (8.2)
Satisfaction with communication on ward round	77.7% (8.0)	83.8%	83.8% (2.8)
Satisfaction with communication on ward overall	85.8% (3.3)	87.0%	84.9% (2.6)
Patients perceived check sheet to be useful	–	–	84.7% (2.9)

SD = standard deviation.

Figure 2. Results of cycles 1–3.



two and three respectively. Finally, 84.7% (standard deviation 2.9) of patients in cycle three overall felt that the introduction of the surgical communication check sheet improved communication on the trauma ward round.

Discussion

Non-technical skills such as communication play a vital role in any patient encounter. Evidence suggests that inadequate use of non-technical skills can be linked to ward rounds being poorly rated by patients. Pucher et al (2015) found that 48% of patients felt that poor communication was the principal reason for poor quality ward rounds. Furthermore, patients selected explanation of the management plan as the most important feature of a good ward round.

To the authors' knowledge, there is no prior evidence of use of a patient-centred communication check sheet. However, other tools to improve communication on ward rounds have been studied. Christensen et al (2017) showed increased patient safety outcomes using a standardized ward round format in an obstetrics unit. They found no difference in mean duration of patient encounters compared to the control ward round.

The use of modern tools, such as an iPad, to share clinical information with surgical patients has been investigated by Baysari et al (2014), although this only evaluated one-way communication. Two-way communication is integral to the modern patient-centred model of care, and Swenne and Skytt (2014) indicated that encouragement of patient participation is vital for effective ward rounds. The current study reinforces the importance of patient involvement in decision making, and this surgical communication check sheet represents a simple and cheap method of improving patient care.

The authors defined four principal objectives after communication difficulties were identified in the first cycle. Three out of the four were met: understanding of management plan increased from under 65% to almost 85%, patient satisfaction with ward round communication increased to levels reported on the ward overall, and almost 85% patients saw use of the surgical communication check sheet as a benefit. A modest reduction in the number of patients with unanswered questions at the end of the ward round was also achieved (from 21.8% to 16.7%). Patients sometimes had many questions, and unless all were answered this was recorded as having unanswered questions. The improvement with the use of the surgical communication check sheet may have been more pronounced if the authors had asked how many questions had been answered on the ward round. Patients may also have thought of questions between the ward round and completion of the questionnaire.

Study limitations

Blinding was a major limitation, as it was impossible to blind surgeons to the surgical communication check sheet. Results from cycle one show greater variation between surgeons than cycle three, as represented by standard deviation. This indicates that the surgical communication check sheet improves the reliability of communication on the ward round. The authors did not ask specifically whether surgeons felt that they were under peer pressure to communicate during the trial, but this is a possibility. Anecdotally, surgeons commented that the surgical communication check sheet made them deal with questions that they might not have considered before.

Unfortunately, it was not possible to obtain information from all patients for a number of reasons: patient turnover, language difficulties, ward round absentees and patient consciousness all contributed to a reduced sample size. The authors did not include patients in side rooms, potentially the most unwell group, in order to prevent spread of infection.

The surgical ward round is characteristically time pressured. Consequently, a further study could investigate the effect that the surgical communication check sheet has on the mean duration of the patient–surgeon encounter.

Lessons learned

From the beginning of the project, it was clear that data collection would pose challenges. Before data collection began the team met to discuss how the survey questions would be asked. Following this, a 1-week consultation period enabled the team to practise asking the questions in a standardized format to limit inter-collector variation. Question two 'have you seen the surgeon that did the trauma round today?' was intended to ensure that the patient was under the orthopaedic team, to exclude medical patients boarding on the orthopaedic ward, and to confirm that the patient had been seen on the ward round that day.

Question seven 'what brought you into hospital?' was rephrased as 'what medical condition are you suffering from?' if the patient did not understand the question initially. During the consultation period the authors found that question seven helped patients to answer question eight more succinctly. The results from question seven showed that 100% of patients had investigations performed as expected, and this was excluded from the results. Question ten, regarding knowledge of discharge date, proved difficult as patient knowledge of this was not necessarily related to ward round communication.

The authors learned many lessons from patient anecdotes recorded by the team during data collection. In cycle one, one patient reflected that they 'have lots of questions, but get flustered when the surgeon comes and forget to ask the important ones'. This was a recurring theme, and the surgical communication check sheet was designed to address this issue.

One patient reflected during cycle two that 'the words are too small, and the surgeon didn't read all of it anyway'. Following advice from patients and surgeons, the surgical communication check sheet was consolidated between cycles two and three: three questions were placed at the top enabling the surgeon to immediately recognize those who had questions remaining or did not understand an aspect of their management plan. A single long answer box at the bottom was provided for patients to note any further questions they might have, compared to three long answer boxes in the previous version. This followed feedback from a number of surgeons who felt that it would be easier to interpret that way. The sheet was laminated for cycle three to prevent damage and to save paper.

The pilot study demonstrated that the best time of day to introduce the surgical communication check sheet was in the afternoon of the preceding day. This enabled the patient to consider questions before the ward round, and avoided meal times. Importantly, patient anecdotes told the authors that the surgical communication check sheet gave them more confidence to ask questions of the surgeon: 'this sheet is great, helps me focus on what I want to know and lets me know that it's ok to ask the questions'. Consequently, the surgical communication check sheet has successfully achieved its aim of facilitating two-way information transfer between surgeon and patient.

Conclusions

Accounts from patients indicate two benefits of the surgical communication check sheet. First, the surgeon is immediately aware of a patient with questions or concerns. Second, patients can formulate questions before the ward round and feel confident to ask questions of the surgeon. The authors plan to test the surgical communication check sheet in other surgical environments, and to evaluate whether implementing the surgical communication check sheet lengthens the average time that surgeons spend with each patient. **BJHM**

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KEY POINTS

- The introduction of a patient-centred communication check sheet was welcomed by 84.7% of patients.
- The use of the surgical communication check sheet improved patient understanding of their management plan by almost 20%.
- The surgical communication check sheet improved patient perception of communication on the ward round.
- Patient accounts indicate that the surgical communication check sheet facilitates two-way communication between patient and surgeon, and makes patients feel more confident about asking questions during the ward round.

Alazzawi S, Silk Z, Saha UU, Auplish S, Masterson S. A ward round proforma improves documentation and communication. Br J Hosp Med (Lond) 2016 Dec. 77(12):712-716. https://doi.org/10.12968/hmed.2016.77.12.712

Banfield DA, Adamson C, Tomsett A, Povey J, Fordham T, Richards SK. 'Take Ten' improving the surgical post-take ward round: a quality improvement project. BMJ Open Qual. 2018 Mar 1;7(1):e000045. https://doi.org/10.1136/bmjoq-2017-000045

Baysari MT, Adams K, Lehnbom EC, Westbrook JI, Day RO. iPad use at the bedside: a tool for engaging patients in care processes during ward rounds? Intern Med J. 2014 Oct;44(10):986–990. https://doi.org/10.1111/imj.12518

Christensen K, Janssens S, Beckmann M. Evaluation of a standardized ward round in a prenatal inpatient setting. Int J Gynaecol Obstet. 2017 Mar;136(3):357–361. https://doi.org/10.1002/ijgo.12080

Dolan R, Broadbent P. A quality improvement project using a problem based post take ward round proforma based on the SOAP acronym to improve documentation in acute surgical receiving. Ann Med Surg (Lond). 2015 Dec 12;5:45–48. https://doi.org/10.1016/j.amsu.2015.11.011

Pucher PH, Aggarwal R, Singh P, Tahir M, Darzi A. Identifying quality markers and improvement measures for ward-based surgical care: a semistructured interview study. Am J Surg. 2015 Aug;210(2):211–218. https://doi.org/ 10.1016/j.amjsurg.2014.11.013

Stewart MA. Effective physician-patient communication and health outcomes: a review. CMAJ. 1995 May 1;152(9):1423–1433.

Swenne CL, Skytt B. The ward round-patient experiences and barriers to participation. Scand J Caring Sci. 2014 Jun;28(2):297–304. https://doi.org/10.1111/scs.12059