A ward round proforma improves documentation and communication

ABSTRACT

This article present the results of an audit cycle which evaluated the quality of inpatient ward round documentation in a busy district general hospital before and after the implementation of a standardized proforma which was specifically designed for trauma and orthopaedic patients. In each cycle, 20 case notes were examined and the data analysed to examine three main areas:

1. Diagnosis, management and/or discharge plan
2. Objective assessments including neurovascular status, weight-bearing status, surgical wound review, observations, results of investigations and decision from the daily trauma meeting
3. Logistics of the documentation such as legibility, date and time, name and grade of the doctor and contact number.

This audit demonstrated that using a ward round proforma can significantly enhance the quality of documentation and improve communication between multidisciplinary team members.

A daily ward round provides clinical daily assessment for the patient and outlines the management plan (Thompson et al, 2004; Zegers et al, 2011). It is imperative that accurate documentation takes place to ensure correct records about each patient encounter are made in the notes, not only for medicolegal purposes, but also to ensure good written communication between members of the health-care team (Thompson et al, 2004; Zegers et al, 2011).

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Several studies have demonstrated that implementation of a structured ward round proforma improves documentation, communication and overall quality of care (Thompson et al, 2004; Wright, 2009; Ehsanullah et al, 2015). One successful example widely used in trauma and orthopaedic surgery is the use of a standardized care proforma for patients suffering a femoral neck facture (Butt et al, 2011). However, there is limited evidence from within this specialty about the use of a similar proforma for routine inpatient ward rounds.

This article presents the results of an audit which evaluated the quality of inpatient ward round documentation in a busy district general hospital before and after the implementation of a standardized proforma designed for trauma and orthopaedic patients.

Methods

The authors' institution is a large district general hospital with a catchment area of around 750 000. Elective patients are managed on a separate site to the trauma admissions. This audit focuses on trauma inpatients only. All new trauma admissions are discussed in a multidisciplinary trauma meeting the following morning. In addition, a board round of every trauma inpatient occurs twice weekly (Mondays and Fridays).

The audit standards used were based on guidelines for clinicians on medical records and notes published by the Royal College of Surgeons of England (Anonymous, 1990), as well as guidance on the physician's role (Black, 2000) and *Writing Good Medical Notes* from the Royal Colleges of Physicians of the UK (Carpenter, 2011).

This audit was registered and approved by the authors' institution's clinical governance department and was conducted between January and June 2015.

Patients' medical records were reviewed over the course of three consecutive days. The notes were scrutinized for the following information:

- Legibility, date and time, name and grade of the doctor, contact number
- Documented diagnosis, problems, management and/or discharge plan
- Specialist assessments including neurovascular status, weight-bearing status, surgical wound review, observations, early warning score, results of investigations and decision from the daily trauma meeting.

The notes were reviewed by two of the authors using a pre-determined checklist (*Table 1*). The handwriting was considered legible if the main structure of the sentence was understood. In the first cycle, the medical records of a random sample of twenty inpatients were analysed. These results were presented in a clinical governance meeting and a ward round proforma was suggested as an intervention. Two versions of the ward round proforma (*Figures 1* and *2*) were designed. One predominantly consisted of tick boxes to allow doctors to check all the relevant information during the daily ward round (version 1). The other incorporated more 'white box' space, designed to provide more flexibility for the end user, but also contained several prompts or reminders for consideration during the review (version 2). These forms were printed on a single sheet of bright yellow paper, making them easily identifiable. One form was used per patient per day and this was filed in the patient's notes.

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Before formal introduction of the new form, a training session was provided to all clinical staff. Each was trialled over 7 days and a random sample of 20 notes was reviewed. There was a 2-week minimum gap between the trial of proforma version 1 and version 2.

In addition, direct feedback was collected from other health-care staff (nurses, physiotherapists and occupational therapists). Following this, proforma version 1 was selected for implementation within the department after seeking approval from the medical records committee.

Results

In total 60 sets of case notes were reviewed, 20 in each phase. Phase 1 looked at notes before intervention (*Table 1*). The patient's diagnosis was documented in only 70% of cases and no discharge plan was found in 50%. The neurovascular status of the injured limb was not assessed in 65% of the patients for at least three consecutive days. The management plan from the daily trauma meeting was not documented in 90% of case notes. Weight-bearing status was unclear in 55%. The names of the reviewing doctors were missing in 25%. Time of review was not documented in 65%.

Proforma version 1 was trialled for 1 week, and then, following a 2-week gap, proforma version 2 was trialled (*Table 1*). The authors asked 10 members of staff from different roles (physiotherapists, nurses, occupational therapists) whether they preferred the use of proforma and if they had any comments. They all preferred the proforma as they found it easier to read and contained more and clearer information than was previously available.

Table 1. Quality of documentation in medical notes before use of the proforma, and from use of the first and second versions of the proforma

		Before using proforma	Proforma version 1	Proforma version 2
Diagnosis and management	Diagnosis	14/20 (70%)	20/20 (100%)	20/20 (100%)
	Management plan	18/20 (90%)	20/20 (100%)	20/20 (100%)
	'Current issues' documented	8/20 (40%)	19/20 (95%)	20/20 (100%)
	Discharge plan	10/20 (50%)	14/20 (70%)	16/20 (80%)
Objective assessments	Injured limb neurovascular status	7/20 (35%)	19/20 (95%)	4/20 (20%)
	Weight bearing advice of the injured limb	9/20 (45%)	15/20 (75%)	8/20 (40%)
	Surgical wound review	14/20 (70%)	19/20 (95%)	8/20 (40%)
	Observations noted	20/20 (100%)	10/20 (50%)	20/20 (100%)
	Early warning score (EWS) noted	1/20 (5%)	16/20 (80%)	0/20 (0%)
	Results of investigations	6/20 (30%)	19/20 (95%)	16/20 (80%)
	Decision from the daily trauma meeting	2/20 (10%)	19/20 (95%)	4/20 (20%)
Logistics	Legible writing	16/20 (80%)	20/20 (100%)	20/20 (100%)
	Contact (bleep) no	13/20 (65%)	20/20 (100%)	20/20 (100%)
	Names and grade of the senior	15/20 (75%)	19/20 (95%)	20/20 (100%)
	Date	20/20 (100%)	19/20 (95%)	20/20 (100%)
	Time	13/20 (65%)	16/20 (80%)	12/20 (60%)

Discussion

This audit demonstrates that a ward round proforma can significantly enhance the quality of documentation. As an indirect benefit, the new proforma also improved the way in which trauma and orthopaedic patients were clinically assessed as it also served as an aide-memoire. Other health-care staff, including physiotherapists and nurses, reported that they found the proforma was a clearer method of written communication. In addition, the colour helped staff save time as it was easily identifiable in the medical notes. Following this study, proforma version 1 was approved by the trust medical record committee to be used as the ward round clinical document in the authors' department.

Similar results have been demonstrated by other authors, although more focus was placed on the post-take ward round, as opposed to daily ward rounds which was the focus of this study. In his 2009 report, Wright demonstrated a significant improvement in documentation when a proforma was introduced for post-take ward rounds at a busy 400-bed city hospital.

Thompson et al (2004) examined 100 clinical records over a 3-week period investigating the documentation for a post-take ward round. Their results demonstrated that using a proforma leads to better communication and patient care. A few other studies have shown similar outcomes (Goodyear and Lloyd, 1995; Robinson et al, 1996; O'Driscoll and Al-Nuaimi, 2003; Diver and Craig, 2005). Most published studies have focused on acute admission, post-take ward rounds or weekend plans, whereas this study looked at documentation in the daily ward round.

There are many reasons for using a daily ward round proforma. The authors' unit, like many other NHS hospitals, often relies on temporary staff. A ward round proforma provides consistency and acts as a clinical guide for those with less experience in the specialty. In addition, previous clinical incidents highlighted the importance of improved documentation, especially if called upon in medicolegal cases. The main drawback of using a proforma is the increased time initially required for its proper completion because of the learning curve involved in such a change of practice. With increased use and familiarization, it seemed that the time taken to complete the proforma decreased, although this was not specifically measured.

In this study, proforma version 1 appeared to outperform proforma version 2 in terms of completeness and ease of use. It was designed with a simple checklist allowing the doctor to quickly indicate that the relevant parts of the clinical review have been undertaken. Proforma version 2 relied

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Figure 1. Proforma version 1 – two pages printed on one sheet of yellow paper.

Trauma and orthopaedics inpatient daily ward round

Hospital number:
Surname:
First name:
Date of birth:
Gender:

Ward: Amb A / Amb B / other

Date: __ __ / __ __ / 20__ __

Time: __ __ : __ __ hrs (24 hr check)

Resuscitation status:

Consultant in charge of patient	Senior doctor doing ward round: consultant / registrar / middle grade / associate specialist Name:
Diagnosis	Operations with date:

Relevant comorbidities

Multidisciplinary - trauma meeting outcome (in the last 24 hours)

Significant events / complications and highest early warning score (EWS) in past 24 hours

Subjective assessment of the patient:

Objective assessment of the patient:

Temp:	Pulse: reg/irreg	Blood pressure	Respiratory rate	Sats Air / O_2		Fluid balance last 24 hours		Glucose control – 24 hours	Glasgow Coma Scale
						Input	Output		

Skin under plaster cast / skin traction:
Wound / dressings:
Injured limb neurovascular status:

Calf examination for deep vein thrombosis:
Bowels: last opened: today / yesterday / ___ days ago
Urine: no concerns or incontinent If catheterised since:
Nutrition: no concerns /
Further exam:

Investigations (with date): White blood cells (WBC): Haemoglobin (Hb): C-reactive protein (CRP): K: Na: Urea:	**Imaging results (with date):**	**Micro (with date):**

Management plan

1) Investigations to be done / checked / chased:
2) Medication changes / reviews: (for antibiotics - indication + duration / review date)
3) Frequency of routine obs: 6-hourly / 4-hourly / 2-hourly / _____
4) Venous thromboembolism prophylaxis: Unchanged / changes made =
5) Plaster / dressing changes: unchanged /

Referrals to be made to other clinical teams	Weight-bearing status: full weight-bearing (FWB) / partial weight-bearing (PWB) / non-weight-bearing (NWB) /weight-bearing as tolerated
Fit for discharge from trauma and orthopaedics: yes / no	If no – expected date for discharge
To be handed to the right team: yes / no	
Doctor completing note: Signature Name/stamp + grade	Name of nurse on ward round:

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Figure 2. Proforma version 2 – one page printed on one sheet of yellow paper.

Hospital number: Surname: First name: Date of birth: Gender:	Affix patient ID label inside this box	
Consultant in charge of patient:	Ward: Amb A / Amb b / other	
Name and grade of senior doctor doing ward round:	Date: _____ / _____ / 20 _____ Time: _____ : _____ hrs (24 hr clock)	
		Considerations
Diagnosis / operation (date):		• Relevant comorbities • New events (last 24 hours)
Subjective assessment of the patient:		• General condition • Pain • Mobility • Any new complaints
Objective assessment of the patient:		• Observation and early warning score (EWS) • Neurovascular status • Wound review • Skin under plaster • Plaster change • Urine output and fluid balance • Bowel motion? • Signs of deep vein thrombosis
Investigations:		• Bloods • Imaging • Micro • Histology
Outcome of orthopaedic multidisciplinary meeting / specialist referral:		
Plan:		• Weight-bearing status • Venous thromboembolism prophylaxis • Plaster/dressing changes • Investigations
Doctor completing note: Signature: Name/stamp + grade	Name of nurse on ward round:	

more on white-space questions. While this gave clinicians the flexibility to document what was felt necessary, it relied too heavily on their personal clinical experience to ensure a complete assessment was made. In addition, if short of time, the clinician may not have enough time to document what he/she wished to in prose, helping to explain why the checklist format of proforma version 1 performed better in this study.

The use of proforma version 2 has shown a significant improvement in the quality of documentation of 15 out of the 16 items looked at during this study. The only item which had lower results with the use of the proforma was the notification of patients' observations (blood pressure, pulse, temperature and heart rate). Having asked participants their reasons for this, it was because doctors started to note the early warning score which they had not previously documented. In cases where the early warning score was low (normal), the doctors concluded that the observations were within the normal limits and did not document this in the notes. Following this study, the medical team was educated on the importance of including the observations as well as the early warning score.

There are some notable limitations to this study. The study design focused on quality of documentation as opposed to clinical outcomes. The study demonstrates that the use of a structured proforma improved documentation but the quality of the actual clinical assessment and any improvement in patients' care were not measured. In addition, while the authors relied heavily on the documentation to prove certain clinical assessments and treatment had taken place, they were able to see that a large amount of clinical activity takes place in an undocumented fashion. It was also not possible to make the study blinded for the

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KEY POINTS

- As many hospitals often rely on temporary staff, using a structured proforma provides consistency and acts as a clinical guide for those with less experience in the specialty.
- Using a ward round proforma can significantly enhance the quality of documentation and improve communication between health-care professionals.
- This study showed that a simple intervention can improve the quality of documentation and thus could potentially improve patients' care.

assessors as it was clear whether they were collecting information from the proforma (as it was printed on yellow paper) or directly from the notes.

Conclusions

The use of a structured ward round proforma can improve the quality of documentation and communication between health-care professionals. The authors would encourage departments to audit the standards of the ward round documentation in their hospitals and consider using similar proforma. The long-term vision is to incorporate this proforma into an electronic medical record, which is believed to provide superior results to handwritten records (Zegers et al, 2011). While this study encourages the use of structured ward round proforma, further work is needed to correlate the quality of medical notes with patient care and outcomes. **BJHM**

Statement of contributions: Mr S Alazzawi designed the audit and proforma, and wrote the paper; Mr Z Silk edited the proforma and the paper; Dr UU Saha collected the data; Mr S Auplish edited the proforma and the paper; Mr S Masterson edited the proforma and the paper.
Conflict of interest: none.

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