



## Commentary

## The use of abbreviations in surgical note keeping

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## HIGHLIGHTS

- Inappropriately used abbreviations lead to miscommunication and mistakes in patient care.
- We review our Orthopaedic practice for the use of abbreviations.
- In our practice we routinely use abbreviations frequently and inappropriately.

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## ABSTRACT

Abbreviations are used to improve the speed of note keeping and to simplify patient notes. However studies have shown that they can reduce clarity, increase mistakes and cause confusion in management plans. Our review highlights the misuse of abbreviations in surgical note keeping.

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## 1. Main introduction

Abbreviations have been widely used for many years to document various aspects of clinical practice. Abbreviations are used to improve the speed of note keeping and to simplify patient notes. However studies have shown they can reduce clarity, increase mistakes and cause confusion in management plans [1].

The misuse of abbreviations in surgical note keeping has recently been subject to a large observational study. Kilshaw, Rooker and Harding stated that abbreviations though currently commonly used, are associated with medical errors and can be a source of irritation and misunderstanding [1]. Abbreviations are often highly ambiguous and may have a wide range of meanings to different members of the clinical team. There is concern that inappropriate use of abbreviations may hinder patient care.

It is the individual clinician's responsibility to ensure patient records are clear, well documented and easy to follow for optimal patient care. Abbreviations are used correctly when the correct expanded form is also clearly stated, such as displayed in Standard English literature. However in clinical note keeping this is rarely, if ever done correctly [2]. The clear statement of the correct expanded form in the notes, or on the trust intranet would allow clarification and prevent confusion and misinterpretation by those interpreting the abbreviation [2].

The clarity of patient documentation is particularly important, as new shift patterns that have arisen as a result of the European Working Time Directive (EWTD). These shifts result in different clinicians being involved in an individual patients care within a short period of time [3]. This common use of abbreviations may introduce confusion and mistakes as different interpretations of shortened words is undertaken.

The aim of our study was to establish the frequency and variety of abbreviations that are being used commonly in surgical clinical practice. We looked at the notes at different stages during an inpatients stay and the level of the clinician making the documentation. Our study aims to review the use of abbreviations in our surgical practice.

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## 2. Method

We carried out a retrospective study, of consecutive surgical patients clinical notes between period 15 November 2010 and 15 December 2010. All surgical patients admitted to the Orthopaedic ward were included in this study. We analysed the clinical notes for abbreviations documented.

An abbreviation is defined as per the Mosby's Medical Dictionary, "as a short form of a word or phrase" [4]. For example using "R" as an abbreviation for right. We also included acronyms, contractures and initialisms for completion. (They have been described in the results and conclusions under the heading of abbreviations for simplicity.) These included; "NOF" (neck of femur acronym), "S Bifida" (Spina Bifida contracture), and "NGT" (nasogastric tube initialism) [5].

We looked specifically at four aspects of the clinical notes for each patient. We recorded if an abbreviation had been used, what the abbreviation was and also the presence of a definition [6]. Firstly we looked at the initial diagnosis detailed in the admission clerking. This clerking was usually carried out by the senior house officer on call during the day or night period of admission. Secondly we reviewed the notes detailed from the consultant review on the post take ward round. This was usually documented by a senior house officer. Thirdly we reviewed the operation consent form, in particular noting the procedure, benefits and risks detailed. This was usually noted by the registrar. Finally we reviewed the surgical operation notes.

All abbreviations were noted and collated using an excel spreadsheet. The Mosby's Medical dictionary was used as our standard with which to compare our abbreviations for clarification [4].

## 3. Results

Our study consisted of reviewing 107 patients clinical notes, admitted to a surgical ward over the period over a 1 month period. No patients were discounted from the study. Overall 92% (98 of 107) of clinical notes reviewed used at least one abbreviation either in their pre ward admission clerking, post take ward round notes, consent form or operative notes. At no point in any of the notes, at any of the stages examined was the abbreviation ever defined.

The most common place for an abbreviation to be used was in the admission clerking. This occurred in 73% (78 of 107) of the notes analysed. The least likely place for an abbreviation to be found was in the consent form. (Table 1) In 54% (58 of 107) of the post take ward round notes abbreviations were noted. In 33% (35 of 107) of the consent forms and in 36% (38 of 107) of the operation notes were abbreviations detected. This is likely to have been affected by the different members of the clinical team who write in the clinical notes at each of these stages. The admission clerking was completed by senior house officers in 100% (107 of 107) of the cases. However the theatre operation notes which were compiled by registrars or consultants in 97% (104 of 107) of cases. These notes

**Table 1**

Table showing the use of abbreviations in a review of Orthopaedic note keeping.

	Number of patients	Number of abbreviations	Percentage of notes with at least one abbreviation
Admission clerking	107	78	73%
Post take ward round clerking	107	58	54%
Consent form	107	35	33%
Operative notes	107	38	36%
Total	107	209	92% (98 of 107)

**Table 2**

Table displaying which member of the clinical team completed the appropriate documentation.

	Senior house officer	Registrar	Consultant
Admission clerking	100% (107 of 107)	0% (0 of 107)	0% (0 of 107)
Post take ward round clerking	98% (105 of 107)	2% (2 of 107)	0% (0 of 107)
Consent form	78% (83 of 107)	22% (24 of 107)	0% (0 of 107)
Operative notes	3% (3 of 107)	76% (81 of 107)	21% (23 of 107)

were found to have abbreviations in 44% (41 of 107) of their notes. (Table 2).

The most commonly used abbreviation in the preadmission clerking was NOF (neck of femur). In the post take ward round notes the most commonly used abbreviation was NBM (nil by mouth). In the consent forms the most commonly used abbreviation was DVT (deep vein thrombosis) and PE (pulmonary embolism). In the operative notes the signs L (left) and R (right) were frequently noted. Other shortened forms frequently noted included SOB (short of breath), ORIF (open reduction internal fixation), NG (nasogastric) and # (fracture). (Table 3).

## 4. Discussion

Our study was designed to investigate how often and how widely abbreviations and other shortened forms of words are being used in surgical note keeping. We undertook this investigation by reviewing clinical inpatient notes over a fixed time period. We believe this reflects the general practice of our unit and is of relevance to many surgical units nationwide.

Over recent years clinical medicine has undergone radical changes in the way it is being provided in hospitals. Every patient being treated in the hospital has now a much greater number of clinical staff involved in their care. Doctors are now working shorter shifts as a consequence of the European Working Time Directive [3]. The need is now greater than ever for note keeping to be exemplary. The General Medical Council good practice guidelines stated that "good records do more than support good patient care; they are essential to it" [6]. Hence the need for clear, appropriate and correct usage of abbreviations. Notes must be clearly documented, with dates, signatures, and management plans easy for all to follow. The aim of these recommendations is to promote better and safer patient care, removing errors and time wasting in patient management.

It is clear from our results that abbreviations are being used regularly and often inappropriately. Only a very small proportion of notes did not have any abbreviations found. At no time was the

**Table 3**

This is a table displaying the most common abbreviations used in our review of Orthopaedic note keeping.

Abbreviations with definition used in orthopaedic note keeping	Total number of times abbreviation documented incorrectly in 107 patient notes
NOF (neck of femur)	36
NBM (nil by mouth)	38
ORIF (open reduction and internal fixation)	17
L (left)	11
R (right)	14
SOB (short of breath)	12
DVT (deep vein thrombosis)	16
GA (general anaesthesia)	31
PE (pulmonary embolism)	16
# (Fracture)	18
Total	209

abbreviation ever fully defined in any of the 107 clinical notes that we reviewed.

Various papers have clearly demonstrated that unclear clinical notes can adversely affect the patients care and lead to complications and medical errors. A US study highlighted that as high as 5% of medication errors could be avoided by eliminating inappropriate and incorrect abbreviation usage [3].

This overuse of abbreviations and the wide variety in the meaning of abbreviations, can lead to a lack of understanding and consequentially errors in patient management. A study in 2008 looking at the frequency, nature and understanding of abbreviations in note keeping concluded the “misinterpretations of the abbreviations across the specialities posing imminent clinical risk” [5].

In our study these shortened terms were found in all aspects of the patients notes. This is of particular interest as clinicians of different level of seniority tend to write in the notes at different stages on the patient journey. For example the clerking is always done by the most junior member of staff, usually the house officer. The consent form tends to be completed by a registrar and involves more patient involvement. Even in this area abbreviations were found without clarification. The operation notes then tend to be done by both the consultants and registrars depending on who was carrying the operation.

Our study highlights one aspect of clinical note keeping were improvement could be made. By the use of abbreviations, and shortened forms of words without clearly defining them, mistakes can be introduced. Mistakes can lead to lapses in patient safety, and patient safety is central to good patient care. By only using abbreviations in an appropriate manner, errors can be eliminated, clarity between team members improved and patient safety can be heightened.

## 5. Key phrases

Abbreviations are widely used in modern clinical note keeping. Abbreviations if used incorrectly can result in clinical errors. Good clinical note keeping is integral to the duties of the modern clinician.

Patient safety is central to good patient care.

Regular reviewing of clinical notes is required to maintain good standards.

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## Author contribution

B Collard – study design, writing.

A Royal – data collection, data analysis.

## Conflict of interest

None.

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None.

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