

Daily progress notes by surgical interns: An assessment of quality

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ABSTRACT

Objective: To evaluate the quality of daily progress notes documented by surgical interns in a tertiary care teaching hospital.

Methodology: Daily progress notes documented by interns during two months period from February to March 2008 were assessed according to the guidelines developed by the Unit. During each working day progress notes were evaluated in a specially designed proforma about documentation, which included subjective, objective, assesment and plan. Data was analysed by SPSS version 10 and Chi square test was applied between categorial data.

Results: Two hundred fifty patient's record were assessed for daily progress notes. Out of them 44 (17.6%) daily notes were not found, so a total of 206 morning follow up notes were analyzed. These included 63 (30.6%) preoperative and 143 (69.4%) postoperative patient notes. Most common documented variable was Blood Pressure reading in 194 (94.2%) notes followed by pulse rate in 193 (93.7%). The leaset documented variable was assesment of patient's current condition in 111 (53.9%) patients' notes. There was statistical significant difference between quality of notes in preoperative patients as compared to postoperative patients. Overall no significant difference was noted while comparing elective vs emergency surgery patient's notes and hepatits positive vs negative notes.

Conclusion: Our results showed that our documentation as regards daily progress notes was overall fair. Systematic audit of this type can lead to the development of improved documentation supporting the clinical process within a busy general surgical department with benefits for patient care, clinical governance and inter-specialty communication.

KEY WORDS: Audit, Daily follow up, Interns, Quality.

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INTRODUCTION

Good Documentation in the medical records facilitates diagnosis and treatment, communicates important information to other caregivers to ensure patient safety, reduce medical errors and serves an important medico-legal purpose.¹ Quality of documentation may also reflect the quality of care delivered.² Critical appraisal and constant feedback to staff plays an important part in improving case-note quality. Good Surgical Practice recommends that progress notes are sufficiently detailed to allow another doctor to assess the care of the patient at any time.³ A number of authors have demonstrated the need for constant vigilance if the highest standards of note

keeping are to be maintained.⁴⁻⁶ Clinical audit is an integral part of clinical governance processes and is an essential tool in assuring and improving quality. Daily-progress notes which were frequently completed by interns are an important source of their learning and improving quality of care provided. The daily progress note is the building block for quality care and monitoring. Good and complete documentation of Daily progress notes is not only required for ethical and legal aspects but it is an important source of information for other team members for continuity of care and also provide a future reference. Documentation in the patient's record acts as an ambassador in one's absence. The importance of accurate and high quality notes is appreciated later in a typical career of a doctor. There were different general scoring systems like CRABEL,^{6,7} ANKLEe⁸ for assessing case note quality. CRABEL score was based on The Royal College of Surgeons of England Guidelines for assessing the quality of medical note keeping. By attributing a numerical score to the assessment, comparisons can be made between the standard of note keeping.⁶ Guidelines from The Royal College of Surgeons of England (RCSE) do not address legibility. This limitation was addressed by Adjusted Note Keeping and Legibility (ANKLEe) score which was developed as an objective and quantitative method to assess both the content and legibility of case notes, incorporating the RCSE guidelines.⁸

By literature search we were unable to find any specific reference about quality of daily-progress notes. The aim of this study was to assess the overall standard of our daily progress notes as maintained by interns.

METHODOLOGY

In this audit, daily progress notes documented by interns during two months period from February to March 2008 in surgical unit III, Civil Hospital, Karachi were assessed according to the unit guidelines in subjective, objective, assessment and plan (SOUP) format (Fig-1). A brief teaching session about how to write daily progress notes was routinely done at the start of internship in our unit. During each working day progress notes were evaluated in a specially designed proforma about documentation, which included subjective, objective, assessment and plan. Progress notes documented by surgical residents were excluded from the analysis. Data was analysed by SPSS version 10. Chi square test was applied between different categorial data. Level of significance was taken at $p < 0.05$.

RESULTS

During the audit period, 250 times patients record were assessed for daily progress notes. Out of them 44 (17.6%) daily notes were not found, so a total of 206 morning follow up notes were analyzed. These included 63 (30.6%) preoperative and 143 (69.4%) postoperative notes. Different patient's factors are shown in Table-I. Most common documented variable was Blood Pressure reading in 194 (94.2%) notes followed by pulse rate in 193 (93.7%). Wound examination was documented in 127 (88.8%) of total 143 postoperative patients. The least documented variable was assesment of patients current condition in 111 (53.9%) patients notes. Results of all variables of daily progress notes are shown in Table-II.

There was statistically significant difference (chi square test; $p < 0.05$) between quality of notes in preoperative patients as compared to postoperative patients. Interns are generally more careful in their daily progress in postoperative patients apart from consistently poor performance in documenting assesment in both groups. Overall no significant difference was noted while comparing elective vs emergency surgery patients notes and hepatitis positive vs negative notes (Table-III).

DISCUSSION

The significance of the patient health record is often taken for granted. Many physicians are not fully aware of the regulations governing the completion of the patient health record or that it is a legal document that must be able to withstand scrutiny in court. It is a reality of the human nature that we always like to believe our own clinical notes are better than they actually are, and it is clinical audit that settles the matter once and for all. Clinical audit is an

Table-I: Different patient's factors

Variable	(%)
Type of Surgery	
Elective	156 (75.7)
Emergency	50 (24.3)
Operative Status of patients	
Preoperative	63 (30.6)
Postoperative	143 (69.4)
Hepatitis Status of patients	
Positive	39 (18.9)
Negative	167 (81.1)

Table-II: Morning follow up results

Variable	Frequency	Percentage
Subjective Complains	176	85.4
Objective	122	54.4
Vitals		
Blood Pressure	194	94.2
Pulse Rate	193	93.7
Respiratory Rate	188	91.3
Temperature	183	88.8
Wound Examination	127/143	88.8
Abdominal Examination	169	82.0
Respiratory System	171	83.0
Cardiovascular System	130	63.1
Nervous System	120	58.3
Over all assessment	111	53.9
Plan	169	82.0

essential part of clinical governance processes in practice and is an indispensable tool in assuring and improving quality. Our results points out that our documentation as regards daily progress was fair.

The primary purpose of medical records is to support patient care; improving the quality of entries may elevate both patient outcomes and doctors' performance.⁹ Good records do not necessarily guarantee the quality of treatment provided, but they do exhibit a methodical approach to patient care that is of great benefit if a patient complains or makes a claim in negligence. Its our routine policy that during departmental induction of interns, format of daily progress notes were explained to them and all interns while documenting these notes were under direct supervision of residents. This helps in maintaining good record keeping, training of interns which translate into good patient care.

Quality assurance of medical record keeping is facilitated by use of the CRABEL Score.⁶⁻⁷ Though daily progress do get audited in CRABEL Score under the section of subsequent entries section, but specifically this didn't audit daily notes adequately in all standards. A prospective audit of the quality of case notes in a surgical department at Prince Mshyeni Hospital, South Africa showed that medical records are grossly inadequate in many respects.¹⁰ There was an 80% compliance rate for 16/35 standards. An Audit of the quality of documentation in an eye casualty department showed that good note keeping in the unpredictable setting of the casualty clinic was difficult, which impacts on patient care.¹¹

Subjective:	Patient's perception of his/her condition
Objective:	Doctor's perception of patient's condition
Assessment:	Vitals: Blood Pressure Pulse Temperature Respiratory Rate General Examination: Abdominal Examination: Respiratory System: Cardiovascular System: Nervous System: Local Examination: wound
	Overall assessment (improved/same/unsatisfactory etc)
Plan:	Today's plan like investigation and change of treatment for next stage of management

Figure-1: Daily-Progress in SOAP format.

Our results point out that quality of postoperative patients notes was significantly good as compared to preoperative patients, which showed that interns were comparatively more careful in documenting postoperative patients course (Table-III). Before starting this audit we had a feeling that may be interns were reluctant to be more close to the hepatitis positive patients but interestingly no significant difference was noted in this regard.

One of the areas, where interns consistently perform poorly is in documenting overall assessment of the patients which was done in only 53.9% notes. May be this is because this requires some decision making about how to interpret their objective assessment. Different studies have proved that use of preformatted templates for medical notes improve their standards. Hobson JC, et al.¹² evaluated the accuracy of notes in an ENT urgent referral clinic, based on a standard of note keeping established within the trust. The results initially failed to meet the set standard and a change of practice was initiated by introduction of a computerized template that allowed for easier and more accurate data entry. After re-evaluation, the notes were found to be accurate and contained relevant demographic data in more than 90 per cent of cases. Another study by Diver AJ, et al.¹³ showed that in order to ensure that important data was not being omitted from medical notes, an admission proforma was formulated. This was designed to be easily and quickly completed. The

Table-III: Comparison of daily progress notes documentation between different groups

Variable	Operative Status		p value	Type of Surgery		p value	Hepatitis Profile		p value
	Preoperative (n = 63)	Postoperative (n = 143)		Elective (n = 156)	Emergency (n = 50)		Positive (n = 39)	Negative (n = 167)	
Subjective	44 (69.8)	132 (92.3)	<0.001*	132 (84.6)	44 (88.0)	0.555	32 (82.1)	144 (86.2)	0.506
Objective	18 (29.0)	94 (65.7)	<0.001*	83 (63.5)	29 (58.0)	0.582	26 (66.7)	86 (51.8)	0.093
Blood Pressure	56 (88.9)	138 (96.5)	0.032*	145 (92.9)	49 (98.0)	0.184	38 (97.4)	156 (93.4)	0.334
Pulse	55 (87.3)	138 (96.5)	0.012*	144 (92.3)	49 (98.0)	0.150	38 (97.4)	155 (92.8)	0.285
Respiratory Rate	52 (82.5)	136 (95.1)	0.003*	141 (90.4)	47 (94.0)	0.431	37 (94.9)	151 (90.4)	0.375
Temperature	51 (81.0%)	132 (92.3)	0.017*	139 (89.1)	44 (88.0)	0.829	36 (92.3)	147 (88.0)	0.444
Wound Exam	-	127 (88.8)	-	84 (86.6) [#]	43 (93.5) [#]	0.223	22 (95.7) [#]	105 (87.5) [#]	0.256
Abdominal Exam	44 (69.8)	125 (87.4)	0.002*	125 (80.1)	44 (88.0)	0.207	35 (89.7)	134 (80.2)	0.164
Respiratory Exam	45 (71.4)	126 (88.1)	0.003*	128 (82.1)	43 (86.0)	0.518	35 (89.7)	136 (81.4)	0.214
CVS Exam	32 (50.8)	98 (68.5)	0.015*	98 (62.8)	32 (64.0)	0.880	31 (79.5)	99 (59.3)	0.019*
CNS Exam	24 (38.7)	96 (67.1)	<0.001*	90 (58.1)	30 (60.0)	0.809	28 (71.8)	92 (55.4)	0.062
Assessment	29 (46.0)	85 (59.4)	0.074	87 (55.8)	27 (54.0)	0.837	23 (59.0)	91 (54.5)	0.612
Plan	39 (61.9)	130 (90.9)	<0.001*	125 (80.1)	44 (88.0)	0.207	32 (82.1)	137 (82.0)	0.998

* Statistically Significant = $p < 0.05$ (chi square test); [#] Only in postoperative patients

CVS = Cardiovascular System; CNS = Central Nervous System

overall results demonstrate statistically significant improvements in documentation with a proforma. Another study¹⁴ about preformatted patient record charts demonstrated that overall, there was a significant improvement in the number of the standards documented. It was concluded that a structured proforma does improve medical records quality. One of the reasons why most of the notes were not 100% accurate is un-availability of any printed template and more so, sometimes even absence of blank papers for writing of daily progress notes. The main reason is the casual attitude about medical record keeping in routine cases; however it was observed that quality of notes in medicolegal cases was good, because doctors were concerned that may be record of these patients will be provided as evidence in court.

Review by the seniors and their feedback improves how well house staff document patients care.¹⁵ Martin, et al.¹⁶ demonstrated that chart review with feedback to internal medicine residents on an inpatient, medical ward service can produce dramatic and sustained reductions (47%) in laboratory test ordering for patients. Harchelroad, et al.¹⁷ utilized daily record review of resident physicians during a two month emergency department rotation to document deficiencies in patient care and physician documen-

tation. The mean percentage decrease in total errors was 10.4% when feedback was given. Accurate and legible medical records are essential to good quality patient care and the introduction of a proforma alongwith advice on handwriting significantly increased the quality of case note entries in terms of content, legibility and overall ANKLe score.⁸

We would recommend this format (SOUP) of daily progress to our colleagues to conduct such clinical audits as a useful tool for case-note audit combined with the use of preformatted templates and regular feedback by senior members of the team to the junior staff to improve the quality of notes. Systematic audit of this type can lead to the development of improved documentation supporting the clinical process within a busy general surgical department with benefits for patient care, clinical governance and inter-specialty communication.

This is the first cycle of this clinical audit, we have presented this in our departmental meeting and after incorporating suggestions and feedback, we are planning to re-audit documenting daily progress practice in order to observe the change and improvement in practice.

Recommendations: In view of our results and literature search, in order to improve the quality of daily progress notes, we would like to recommend that:

1. Every institute and unit have their clear guidelines in writing daily progress notes.
2. All doctors should be taught in documenting good quality of notes.
3. Preformatted proforma should be available at all times for daily progress notes.
4. Seniors should regularly check notes of junior team members and give feedback.
5. Regular audit of progress notes should be routinely done in each unit every three or six months interval to improve and sustain change.

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