Original Article

Facts about compliance of surgeons "An audit study of the quality of operation notes in the department of general surgery, King Faisal Hospital, Makkah, Saudi Arabia"

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Abstract

Background: An accurate, complete, legible medical record implies accurate, complete organized assessment and management of the patient. Operation notes as one of the important patient's medical records are often produced as evidence in medico-legal cases. In a court of law, that which is not written down may be perceived as never having occurred. Poorly written and illegible notes, along with the use of confusing abbreviations, are a common source of weakness in a surgeon's defense.

Objectives: This audit was carried out mainly to assess and review the compliance and adhere of surgeon to existing operation guidelines sheet of ministry of health (form 15), and to enhance professionalism.

Methodology: In this retrospective audit, 266 operation notes were reviewed in general surgical department of King Faisal Hospital, Makkah, Kingdom of Saudi Arabia, during a period of six months (January - June 2007). Because we have no standing ethical committee in our hospital the approval and permission were given by the administration for this study. Notes were scrutinized and reviewed for the quality, accuracy of patient's personal data, details of operation and name of surgeon, operating team, details of operation, swabs, instruments counts, as well as for the inclusion of unacceptable abbreviations. The standard operation sheet (form 15) guideline of Ministry of Health, Kingdom of Saudi Arabia, attached to the patient's file was used as a reference.

Results: None of the notes were completely filled in this audit, some of important vital data of patients e.g. identification data were missed in (122 patients 45.9 %), and usage of non standardized abbreviations was found in 118 (44.4%). The types of the operation (emergency/elective) was recorded in 179 (67.3%) of all the operative notes. The time of the operation was recorded in 129 (48.5%) of the operative notes. Wound closure details were recorded in 153 (57.5%) of the notes and many other data like name of surgeon, anesthesiologists, type of anesthesia were variably missed.

Conclusion: We conclude that a simple compliance to the attached operation note sheets can significantly improve the quality of the notes, continuity of care and potentially avoid medico-legal problems. There is an urgent need for revision and modification of form No: 15 operation sheet of Ministry of Health as well as introduction of computer database in operation notes. This should be an issue for the Faculty of Medicine, making the training of future surgeons more effective.

Keywords: guidelines, abbreviations, medico-legal.

The practice of medicine depends on an accurate communication among physicians, patients, families, and allied health personnel.

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A large component of this communication is in the form of written documentation by physicians, such as operative reports, discharge summaries, and letters to referring physicians and patients. Operation notes are important part of patient's records and any one reading the note should be able to understand what has happened. Operative records can be used for a variety of reasons, including provision of additional medical

care, planning future operative procedures, research projects, quality assurance, billing, and medical-legal conflicts. Incomplete and illegible notes, along with the use of inappropriate or not standard confusing abbreviations/symbols, are a common source of weakness in a surgeon's defense[1,2]. Despite the importance of operative notes, it is not uncommon to find that the critical details of operative procedures are missing, whereas certain less useful aspects of the procedure, such as the type of suture and needle used or the type of clamps used for each step of the procedure, are described in extensive details.

The aim of our study was to review and assess the quality of operative notes and compliance of surgeons at King Faisal Hospital, Makkah, to the Ministry of Health operation sheet guidelines (form No:15) Fig1.

Fig 1(form 15)

The majority of operative notes in the Saudi kingdom are still handwritten. Operative notes can be regarded as an important source for the training process in surgery. Writing an operative note is a core skill in surgery as it is important for postoperative management as well as follow up, but the reasons for the lack of quality- to the best of our knowledge- have never been discussed. This study audited the guidelines on the quality of operative notations in Ministry of Health which were written by different surgical grades of the department of general surgery, to assess the quality, evaluate the compliance and legibility of operation notes. Notes were scrutinized for the accuracy of personal data, relevant operation details and problems, as well as for the inclusion of unacceptable abbreviations.

METHODOLOGY:

A retrospective audit survey was carried out to trace all the written operation notes by all grades of the department of surgery at King Faisal Hospital, Makkah, Saudi Arabia, over a period of 6 months (January –June 2007). This audit comprised all elective and emergency operations .The operation notes were assessed and reviewed by two members of the surgical team (one specialist and one consultant) and graded in a quantitative scale for the compliance and completion of the items stated in the guidelines of the operation sheet stipulated by the Ministry of Health (form 15) Fig 1, with regard to the following: patient's identifications, date and time of surgery, also it includes the type of surgery, narrative description and details of procedure, the final diagnosis type of closure and surgeon's signature. Complications or uneventful procedure must be mentioned, swabs and pathology, (whenever possible), any uncommon / not understandable abbreviations. Each one of these items was given score, whether it was done, not done or incompletely done. All operation notes were evaluated against these standards. Statistical analysis was carried out using SPSS for Windows version 11.0.

RESULTS:

266 operation notes were audited during the period (January - June 2007), revealing a variable quality when compared to the ministry of health guideline (form15) Fig. 1. None of the notes were completely filled in this audit and only 16 (6 %) notes include diagrams. We noted considerable variations in

the quality of the hand written notes as well as the deficiencies in some important items which revealed in the operation notes in this study. Table 1 summaries the results.

Table (1): Variability of the frequency and % of compliance of surgeons to the items and headings of operation form No: 15

Items / Criteria	not done		Incom. done		done		Total	
	Freq.	%	Freq.	%	Freq.	%	freq	%
Personnel data (name, age, sex, ..)	54	20.3	68	25.6	144	54.1	266	100
Date, time commence and time completed of op. scrubbed nurse.	44	16.5	93	35.0	129	48.5	266	100
Category(emergency/elective)	87	32.7	-	-	179	67.3	266	100
surgeon name	30	13.2	-	-	236	88.7	266	100
assisstant name	30	13.2	-	-	236	88.7	266	100
Anaesthetist	82	30.8	-	-	184	69.2	266	100
type of anaesthesia	55	20.7	-	-	211	79.3	266	100
Diagnosis	41	15.4	-	-	225	84.6	266	100
Incision	32	12	60	22.6	174	65.4	266	100
Findings	45	16.9	63	23.7	162	60.9	266	100
Procedure done	38	16.9	63	24.8	158	59.4	266	100
Closure	55	20.7	58	21.8	153	57.5	266	100
Specimen / pathology	57	21.4	-	-	209	78.6	266	100
Blood loss and drains	74	27.8	70	26.3	122	45.9	266	100
Instruments count and swabs	115	43.2	-	-	151	56.8	266	100
Abbreviations	118	44.4	-	-	148	55.6	266	100
Surgeons name / signature	161	60.5			105	39.5	266	100

Incom. done= incompletely done

Some of the records missed vital points such as patient's identification (122 patients 45.9 %). Definite diagnosis were mentioned in 226 (84.5%) of the notes. The types (emergency/elective) and time of the operation were recorded in 179 (67.3%) and 129 (48.5%) respectively of all the operative notes. Wound closure details were recorded in 153 (57.5%). Blood loss, swabs and instruments count were not specified in 115 (43.2%). There were 161 (60.5%) of the operation notes missing signature. There were many of subjective description and unusual abbreviations e.g. PNS (pilonidal sinus), PAA (perianal abscess, EH (epigastric hernia) FIA (for both pathology fistula in ano/and fissure in ano) found in 118 (44.4%). Still there was a fair percentage of the operative notes that contained satisfactory information in many areas such as name of surgeon and assistants in 236 (88.7%) and type of anesthesia in 211 (79.3%) of them.

The results of this audit were discussed at a departmental meeting. It was evident that some of the criteria were not wholly applicable to general surgical operations and that there were some deficiencies in the recording of data especially after popularity of minimally access surgery within the department. It was determined that an intervention was required to improve the quality of the operative note data set.

DISCUSSION:
Accurate medical record keeping is an important skill that should be mastered by all physicians. Operative notes are particularly important to surgeons who perform procedures. Although medical records contain multiple important elements, including operative notes, written notes in the chart, and letters to referring physicians and patients, we focused on operative notes in this study because of their importance to our and other procedural specialties.

Operative note teaching has rarely been investigated and mentioned in the medical literature[3, 4], and it is even more rarely expressed as a surgical core skill which needs to be trained.

Very little has been published concerning the quality of operative notes and no studies were found in the literature studying or auditing the compliance or quality of the operation notes in Makkah Hospitals or other Saudi Arabia Hospitals. The use of standardized forms for operative notes has both been shown to be effective and safe[5-7]. For more than 15 years in spite of real need for the new techniques and procedures especially after spreading of minimal invasive surgery, there were no revisions of the form 15 operative notes of ministry of health K.S.A.

Insufficient or poorly written surgical notes can spell disaster for both patients and surgeon. On top of that the use of confusing abbreviations, which was found in 44.4% of our notes, is a common source of weakness for a surgeon's defenses[8, 9]. On the other hand an accurate and complete operation notes, reflect the good care, enhance the team work, allow continuity of medical care, satisfy regulatory requirement, legal concern and provide data for quality control.

In our study, although none of the audited surgical note was completely filled and had showed considerable variation in the quality of audited notes, yet some percentage of the operative notes contained satisfactory information in many areas like name of operation 224 (84.7%), name of surgeon and assistants 236 (88.7%) type of anaesthesia 211 (79.3%).

Still we noted considerable variations in the quality of the hand written notes as well as the deficiencies in some important items in this study. Some of the records missed vital points such as patient's identification (122 patients 45.9 %). This assumes importance as there are chances of operative notes getting lost /misplaced due to lack of patient identification details[5]. Legibility did not pose considerable problem in understanding the content of the notes (Fig.2).
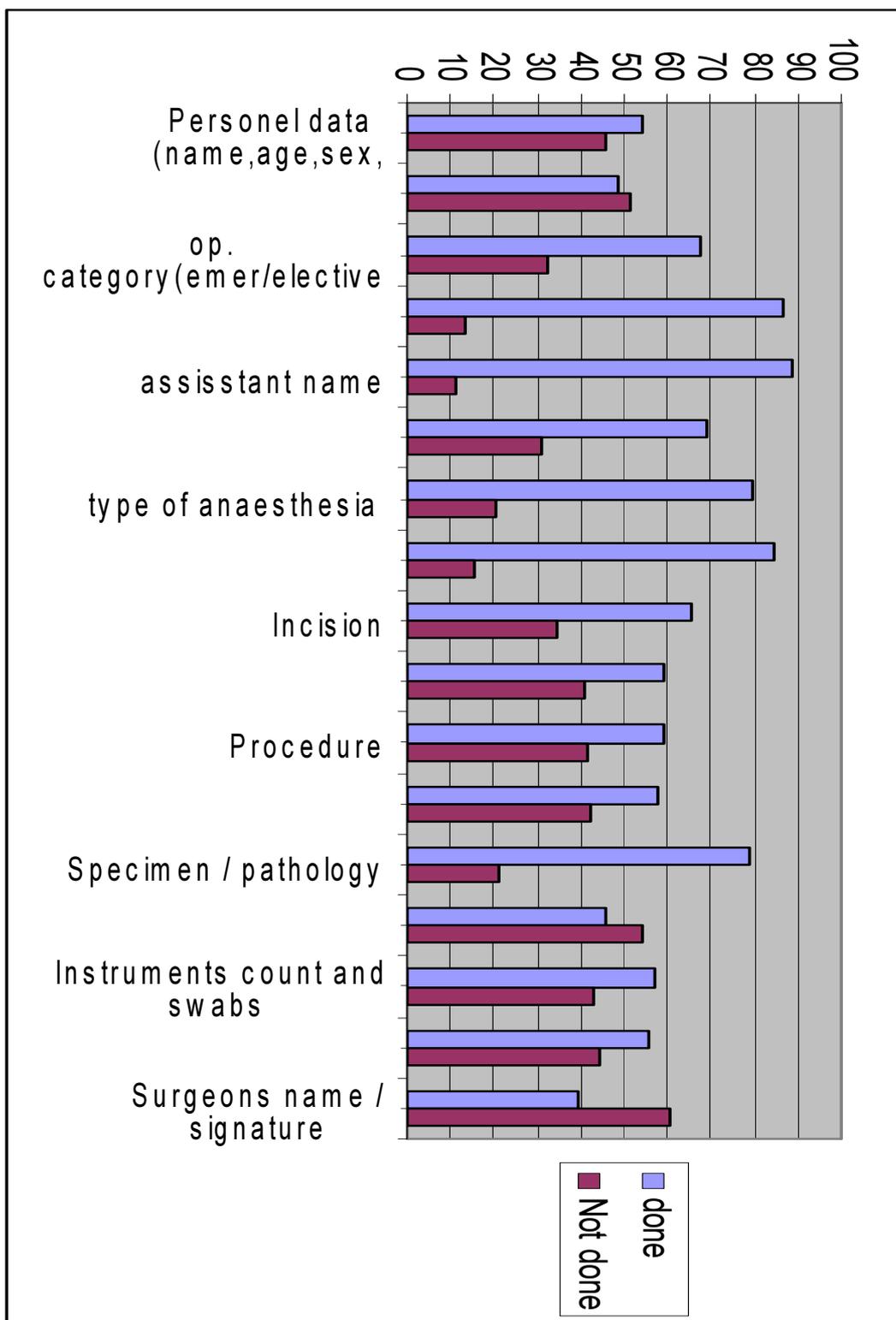
Fig (2): Bar chart showing how the three scoring criteria (done, incompletely done and not done) almost resembling each other and reflecting loose adherence

Based on the results of our work and other published studies, the key components of operative notes should include basic information, such as the identity of the patient and medical personnel involved, date of the procedure, specific pre- and postoperative diagnoses, procedure(s) performed, type of anesthesia, indications for surgery, estimated blood loss, type and volume of fluid replacement, types and location of catheters and drains, any complications, and the condition of the patient during and at the end of the procedure. All abnormal operative findings, as well as pertinent normal findings, should be described (for example, normal appearance of appendix or liver during diagnostic laparoscopy). The specimens removed during surgery should be listed in the operative note[10, 11].

To record all the vital information, a format of the operation sheet (form 15 put forward by the Ministry of Health) should be followed carefully and surgeon must show compliance to the criteria stipulated. Nevertheless, there is a need to replace and revise existing traditional ways of recording operative notes with the use of computer and database. Such Databases can also be used at regional and national levels to assess workload, training and even planning human resources[4,5,9].

CONCLUSION:
Maintaining a full and proper record of the operative notes is a professional responsibility of a surgeon.

This audit suggests that handwritten surgical notes generate several errors that could lead to confusion when notes are reviewed for further follow up or are produced as evidence in medico-legal disputes and also demonstrated that the Ministry of Health operation sheet guidelines (Fig1 form No:15), was not universally applied. There is a need to replace and revise existing traditional ways of dictating and recording operative notes with the use of a database. Intervention is required to improve the quality of the operative note items and sub-headings to accommodate the new advances in surgery e.g. minimal invasive surgery. We would recommend such practice of audit to be implemented in other units and departments to enhance the quality control concept, and consideration should be taken into account for future audits of notes in surgical specialties[14].

Continuous improvement also implies that quality assurance systems themselves are subject to review and where necessary to change.

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