SHORT REPORT

Template operative note, a better documentation

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Abstract

Operative notes are a valuable part of patient's medical record, and carry the medico-legal significance. One way of improving it is to introduce the template form operative notes. Only few studies have been done worldwide to compare both the forms of operative notes. This cross-sectional study was conducted in the department of General Surgery, AKUH. This included the patients who underwent Laparoscopic cholecystectomy (Complying with inclusion criteria) from August 2013 till March 2014. Out of 24 patients, 19 were females. The completeness of data in template group was significantly better than traditional group (79.2% vs. 8.3%). There was no significant difference among the residents of different level (writing the notes) and the completeness of data in both the groups. Similarly the timing of day did not affect significantly on the completeness.

Keywords: Template operative notes, Laparoscopic cholecystectomy, Completeness of data.

Introduction

Operative notes are an important source of surgical communication.[1] These document the details of procedure(s) performed and help facilitate the provision of further health care as it is a valuable part of patient's medical record.[1] Operative notes are a medico-legal document and patients have legal right to access their records, so accurate record keeping of an operation is professional, ethical as well as legal responsibility of every surgeon.[2] In addition they serve multiple other important functions related to research, quality assurance and billing.[3-5] Despite the obvious importance of operative notes, literature suggests that the quality of traditional dictated notes is poor and it is not uncommon to find the critical details omitted and unnecessary aspects of procedure mentioned in detail.[6-9]

One practical and effective way of improving this document is to incorporate template operative note, prepared by consensus of surgeons and customized to include pertinent details of the very procedure. Only a few studies have been conducted to date to compare the traditional with template operative notes. According to those, the template form operative note is superior to traditional one in documenting the key procedural findings without noncontributory information. The reported completeness of data in template operative notes is 94.7% compared to 66% in traditional note.[10] Most of those studies have considered the oncological surgeries except one conducted by Harvey et al on laparoscopic cholecystectomy (LC).[7] There is no local literature to support the reliability of template form operative note.

Objective of our study was to compare completeness of template based operative notes with those of traditional operative notes for laparoscopic cholecystectomy procedure.

Methods and Results

We conducted this cross-sectional study at Department of Surgery, Aga Khan University Hospital (AKUH) in Karachi, Pakistan. Approval from Ethical review committee of the hospital was acquired before starting the study (2657-Sur-ERC-13). All operative procedures of elective laparoscopic cholecystectomies done on adult patients of age 18 years or above from 1st August 2013 till 31st December, 2013 were included in the study whereas those which had any other procedure performed simultaneously, had intraoperative cholangiogram (IOC/POC) or converted to open were excluded to keep the homogeneity.

Sample size was calculated using the software "Sample Size Determination in Health Studies" (Version 2.0.21, K. C. Lun, World Health Organization). The reported completeness of data in Template Operative note is 94.7% compared to 66% in traditional Operative note.[3] By using this data, a sample of 24 patients in each group was calculated to have 80% power and 5% level of significance (one sided).

Data was collected on a specifically designed Performa

Table: Completeness of operative notes in traditional vs. template groups.

Type of Operative note	Complete operative notes n(%)	P-value
Traditional	06(25%)	0.007
Template	19(79.2%)	(Mc-Nemar test)

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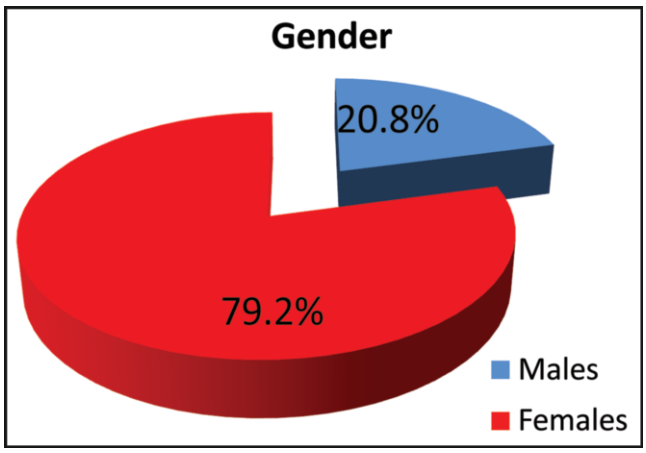

Figure: Gender distribution.

(ANNEX-II), which included procedure related key variables. Positive response to all variables in the Performa was required for operative note to be labeled as complete. At the end of procedure resident scrubbed in the surgery first wrote traditional operative notes (as routinely done), and after that the same resident filled template form operative notes (ANNEX-1) for the same procedure. Template form was made with consensus of general surgeons at our institute and from a Canadian study.[7] One resident was allowed to participate in the study only once so as to avoid the bias arising from knowing contents of the template form beforehand.

Principal investigator reviewed both operative notes i.e. traditional and template, before the patient was discharged from the hospital and filled the Performa (ANNEX-II) to find out whether the respective operative note was complete or not.

SPSS 19 was used for data entry and analysis. Categorical variables i.e. completeness of operative note, type of operative note, time of writing the notes (First half- 08:00-14:00 hours and Second half of day- 14:01-20:00 hours) and resident level (Junior-Year I & II and Senior-Year III onwards) were expressed as proportions and percentages. Completeness of operative notes between traditional and template form was analyzed using Mc-nemar test. P-value less than 0.05 was considered to be significant.

We included 24 patients who underwent Elective Laparoscopic cholecystectomy and met the inclusion criteria. Out of those, five (20.8%) were males while 19(79.2%) were females as shown in Figure. Mean age of the patients was 42.54±11.6 years.

Regarding completeness of the data, only 6/24 (25%) in traditional group were found to be complete according to our pre-set criteria, whereas in template group 19/24 (79.2%) were found to be complete with the p-value: <0.007 (Mc-nemar test) as shown in the table.

When we compared timing of the day (1st/2nd half of day) with the completeness of operative notes, we found that 14/24(58.3%) patients had surgery in the first half of the day while 10/24 (41.7%) had surgery in 2nd half of day. In the traditional group, completeness of operative notes was 3/14 (21.4%) during first half of day, whereas during 2nd half of day it was 03/10 (30%), with p-value of 0.66 (Fischer's exact test). Regarding template group 11/14 (78.5%) were found to be complete in first half and 8/10 (80%) operative notes were complete in 2nd half with the p-value was 1.00 (Fischer's exact test).

We also compared the relationship of residency year (RY) of trainee (writing the operative notes) and the completeness of operative notes. We found that 09/24 (37.5%) operative notes were written by junior residents (RY- I & II) & 15/24 (62.5%) were written by senior residents (RY-III onwards). Among the traditional operative notes written by junior residents only 1/9 (11.1%) was found to be complete, whereas 5/15 (33.3%) traditional notes, written by senior residents, were found to be complete with a p-value of 0.35 (Fischer's exact test).

In the template operative notes group 8/9 (written by junior residents) and 11/15 (written by senior residents) were found to be complete with a p-value of 0.61 (Fischer's exact test).

Discussion

In this cross-sectional study we compared template vs. traditional operative notes for Laparoscopic cholecystectomy. We found that the completeness is significantly better in template form compared to traditional one, whereas there was no significant difference between completeness and both the timing of day as well as level of trainee writing the notes.

The main reason behind better completeness of template operative notes is that it is less likely to miss anything since all the steps are already mentioned in this form. Writer just needs to fill in the blanks or tick mark the items.

The completeness of both the traditional and template notes was greater in senior group than junior but statistically insignificant. The possible explanation to this is the limited knowledge about important steps of procedure during earlier part of training.

Strength of this study is that all the operative notes were reviewed by primary investigator only to keep the homogeneity.

Since this study only considered Elective Laparoscopic cholecystectomy so this template can't be generalized to all laparoscopic cholecystectomies which include POC, conversion to open or any other procedure simultaneously.

Gur I. et al in 2012[10] compared the computerized synoptic operative report with dictated operative reports. They included 60 consecutive breast cancer operative reports and found that completeness was 94.7% in synoptic group and 66% in dictated group, and it was found to be statistically significant as shown by our study.[10]

We chose Laparoscopic cholecystectomy because it is one of the most frequent procedures done and there is minimal variability in the surgical approach between surgeons.

To the best of our knowledge, this study is first of its kind in the country.

Conclusion

Based on the results of our study, we conclude that template form operative notes should be preferred over traditional one, however multicenter studies with larger sample size and various operative procedures should be conducted.

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Conflict of Interest: None.

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References

1. Gillman LM, Vergis A, Park J, Minor S, Taylor M. Structured operative reporting: a randomized trial using dictation templates to improve operative reporting. Am JSurg. 2010;199:846-50.
2. Mathew J, Baylis C, Saklani AP, Al-Dabbagh AR. Quality of operative notes in a district general hospital: a time for change. Int J Surg. 2003;5:1-5.
3. Novitsky YW, Sing RF, Kercher KW, Griffo ML, Matthews BD, Heniford BT. Prospective, blinded evaluation of accuracy of operative reports dictated by surgical residents.Am Surg.2005;71:627-32.
4. Mack LA, Bathe OF, Hebert MA, Tamano E, Buie WD, Fields T, et al. Opening the black box of cancer surgery quality: WebSMR and the Alberta experience. J Surg oncol. 2009;99:525-30.
5. Park J, Pillarisetty VG, Brennan MF, Jarnagin WR, D'Angelica MI, DeMatteo RP, et al. Electronic synoptic operative reporting: assessing the reliability and completeness of synoptic reports for pancreatic resection.J Am Coll Surg.2010;211:308-15.
6. Lefter LP, Walker SR, Dewhurst F, Turner RWL. An Audit Of Operative Notes: Facts And Ways To Improve. Aust NZ J Surg. 2008;78:800-2.
7. Harvey A, Zhang H, Nixon J, Brown CJ. Comparison of data extraction from standardized versus traditional narrative operative reports for database-related research and quality control. Surgery. 2007;141:708-14.
8. Laflamme MR, Dexter PR, Graham MF, Hui SL, McDonald CJ. Efficiency, comprehensiveness and cost-effectiveness when comparing dictation and electronic templates for operative reports. AMIA Annu Symp Proc. 2005:425-9.
9. Eichholz AC, Van Voorhis BJ, Sorosky JI, Smith BJ, Sood AK. Operative note dictation: Should it be taught routinely in residency programs? Obstet Gynecol.2004;103:342-6.
10. Gur I, Gur D, Recabaren JA. The Computerized Synoptic Operative Report: A Novel Tool in Surgical Residency Education. Arch Surg.2012;147:71-4.