Original Article

Audit of Ophthalmology Discharge Summaries in a Nigerian Teaching Hospital

NC Oguego, O Okoye, A Aghaji, FC Maduka-Okafor, OI Okoye, IR Ezegwui

Department of
Ophthalmology, University
of Nigeria Teaching Hospital,
Ituku Ozalla, Enugu

ABSTRACT

Background: Discharge summaries are important components of hospital-care transitions in ensuring continuity of care. **Aim:** We assessed the adequacy and accuracy of discharge summaries written by junior doctors. **Methods:** An instrument, adapted largely from the current hospital discharge summary template and recommendations regarding content from the Joint Commission International, was used to study 420 discharge summaries written in 2012 from the ophthalmology service of a Rural Teaching Hospital in Nigeria. The simple descriptive analysis was done with Statistical Package for the Social Science version 17. **Results:** Completeness of entries was relatively high in many traditional areas (biodata of patient, admission/discharge dates, name of supervising consultant, principal diagnosis, surgical procedures done, follow-up instructions, and condition on discharge) of the summaries. The portion of the paper-based template titled "summary" of the admission was most problematic; with information on medication changes and result of tests missing in 368/420 (87.6%) and 334/420 (79.5%), respectively. **Conclusion:** Educational intervention for doctors in training with the provision of oversight and feedback by their supervisors is required. Standardized discharge summary templates recognizing the peculiarities of specialized patient groups are recommended. Transition to electronic discharge summary system is imperative.

KEYWORDS: *Audit, discharge summaries, ophthalmology, teaching hospital*

INTRODUCTION

Discharge summaries are important components of hospital-care transitions in ensuring continuity of care. Typically, discharge summary is usually written by resident doctors and house officers of Nigeria's Teaching hospitals. Ideally, they should be written in duplicate; with a copy inserted within the patient's case file and in the Medical Records department and when applicable have a copy forwarded to another postdischarge doctor, especially if a referral to another center or service is required. Within the hospital system, it condenses information for ease of readmission to hospital and further consultation; allows house staff to view the hospital admission in its entirety, and eases data extraction for research,[1] audit, planning, and quality control. And, like most audits, it would afford the staff self-assessment in particular areas of patient management. Despite anecdotal evidence that the discharge summary is probably not the most ideal communication tool among practitioners,[1] it is generally accepted that provision of a discharge summary is part of good clinical practice, clinical governance, and hospital in patient documentation.[2]

In the United States of America, the Joint Commission International (JCI) acknowledges its importance and mandates that certain essential elements be included.[3] These items, when missing, can have a negative impact on continuing patient care and affect health outcomes.[4]

Address for correspondence: Dr. O Okoye,
Department of Ophthalmology, University of Nigeria Teaching Hospital, Pmb 01229, Ituku Ozalla, Enugu.
E-mail: eagleobi@yahoo.com

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This is against the backdrop that there appears to be a lack of documented evidence about the formal teaching of the preparation of discharge summaries in many of the medical schools and residency programs.[5] In addition, recent work continues to show that despite standardization, important discharge information is still insufficiently communicated, especially for specialized patient populations[6-9] psychiatric patients, visually physically challenged patients, cancer patients, geriatric patients, and dialysis patients to mention a few. At times, the "one size fits all" approach to developing discharge summaries may be problematic and inadequate for some vulnerable populations.[7]

Despite the importance accorded to the discharge summary in modern hospital practice, there is a paucity of data in Nigeria and Africa about this aspect of professional interaction and communication. In a bid to enhance patient safety and the quality of care available within our resource-constrained health-care system, we assessed the completeness and accuracy (or otherwise) of discharge summaries written by junior doctors in the ophthalmology service of a Nigerian university teaching hospital, as well as, identified the areas in which further improvement would be required.

METHODS

The University of Nigeria Teaching Hospital (UNTH), Enugu, established in 1971 is one of the first generation public Tertiary Health Care Institutions in Nigeria. UNTH's eye unit is staffed with 16 consultant Ophthalmologists, five Optometrists and 14 resident doctors. It provides medical, optical, and surgical eye care services to inhabitants of Enugu State, other states in southeastern Nigeria and beyond. This was a retrospective study of discharge summaries written by residents and house officers in the ophthalmology service of UNTH, sequel to clearance from the Health Research Ethics Committee. All the case files of patients discharged from the eye ward between January 1, 2012, and December 31, 2012, were consecutively retrieved on a weekly/bi-weekly basis. Information in the case files and the enclosed discharge summaries of each discharged patient was retrospectively reviewed with the use of a semi-structured form, adapted largely from the current A-4 page size hospital discharge summary template [Appendix 1] and modified from recommendations regarding content from the JCI.

All the discharge summaries in the case files were checked simply for the presence, completeness of entries and accuracy on the domains we considered essential for the discharge summary content in our local context. For each content item checked, three possible assessment categories were determined, namely complete/accurate information (where key information provided in the discharge summary is correct and similar to that found in the case file), inaccurate/incomplete information (where key information provided in the summary is at variance to that found in the case file or where required information on a content item is found in the case file but missing in the discharge summary), and absent information (no information provided at all on the content item). For each content item, we also had provisions in the form for comments on any observed significant/peculiar feature or trend related to that item. The length of time which elapsed between the actual date the summary was written and the initial date the discharge was ordered by the supervising consultant was also determined. Data were collected by pairs of investigators who resolved discrepancies between them by consensus. As a follow-up to the audit, individualized feedback was provided to those doctors who could be identified. Case files with missing discharge summaries or summaries with illegible writing were excluded from the study. The case file of the only patient who died on the ward was also excluded from the study.

The following 12 content items were assessed for entries (i) Biodata, i.e., names, hospital number, sex, age, tribe, address, and religion; (ii) date admitted and date discharged; (iii) consultant in charge of the case; (iv) referral doctor's address (where applicable); (v) principal diagnosis; (vi) complications and associated conditions; (vii) operations/surgeries done; (viii) "summary" of the clinical course including history of presenting illness along with referrals or multiple team management, examination findings, significant investigations done, significant medication changes, main treatment given; (ix) condition of discharge; (x) discharge/follow-up instructions, especially discharge medications (i.e., dosage, duration); (xi) next clinic appointment date; and (xii) name, signature, and rank of discharging resident doctor. Frequencies and percentages of responses on these items were generated using Statistical Package for Social Sciences (SPSS), version 17, (SPSS Inc., Chicago, Illinois, USA).

RESULTS

A total of 420 discharge summaries were assessed after excluding 12 folders with missing discharge summaries and two summaries with ineligible writing. Most content items had entries in their respective fields in all the summaries; the only exception being the field where information was required on the referral doctor's address, with no entry being made in the

Table 1: Frequency of completeness and accuracy of key information provided on 11 of the content items checked in the 420 discharge summaries

Content item	Accurate/complete (%)	Inaccurate/incomplete (%)	Absent (%)
Biodata	267 (63.6)	153 (36.4)	Nil
Admission/discharge dates	412 (98.1)	8 (1.9)	Nil
Consultant in charge of the patient	418 (99.5)	2 (0.5)	Nil
Referral doctors name (if applicable, *n*=5)	Nil	Nil	5 (100)
Principal diagnosis	386 (91.9)	30 (7.1)	4 (1)
Complications/associated conditions	139 (33.1)	165 (39.3)	116 (27.6)
Surgical procedures (*n*=197)	371 (88.3)	43 (10.2)	6 (1.4)
Condition on discharge	398 (94.8)	10 (2.4)	12 (2.8)
Follow-up notes/discharge medications	322 (76.7)	44 (10.5)	54 (12.8)
Next clinic appointment date	296 (70.5)	7 (1.7)	117 (27.8)
Name/signature of doctor	144 (34.3)	273 (65)	3 (0.7)

Table 2: Frequency of completeness and accuracy of key information provided in the 420 discharge summaries concerning the clinical course ("summary") portion of the discharge summary template currently being used at the Teaching Hospital

Content item checked	Complete/accurate (%)	Incomplete/inaccurate (%)	Absent (%)
History of presenting illness	376 (89.5)	38 (9.1)	6 (1.4)
Significant examination findings	293 (69.8)	21 (5)	106 (25.2)
Results of relevant investigations	79 (18.8)	7 (1.7)	334 (79.5)
Changes in medications	52 (12.4)	Nil	368 (87.6)
Main treatment given	281 (66.9)	15 (3.6)	124 (29.5)

five discharge summaries found applicable (in cases requiring referral to another institution, i.e., usually for specialized retinal and ocular oncology services). The section on clinical course of the admission ("summary" portion of the template) was the most problematic area (with variable numbers of incomplete and absence of information) needing improvement. Four hundred and seven summaries (96.9%) were written on the same day the instruction was given by the supervising consultant. Table 1 shows the frequency of completeness and accuracy of key information provided on 11 of the content items checked and Table 2 shows the same concerning the information provided on the clinical course of the admission in the "summary" portion of the current hospital template (content item viii above).

Other errors or observations in the methodology made on further analysis of the discharge summaries include the following: (a) widespread use of the abbreviation "ad" to represent "adult" in the age field of the discharge summary, and other abbreviations (without initially writing the words in full) such as general condition; no abnormality detected; primary open angle glaucoma; chronic simple glaucoma; small incision cataract surgery; extracapsular cataract extraction; intraocular lens; *in status quo*; to come again; both eyes/right eye/left eye; come as soon as necessary; Pro Re Nata (PRN) (as an when indicated), (b) mixing up the eyes affected in the pathology or eyes being treated, i.e., writing "right eye" erroneously instead of "left eye" and vice versa. In some cases, only an eye is specified even when the two eyes are implicated in the condition (c) Widespread use of only terms such as "satisfactory," "not satisfactory," "stable," and "not stable," when providing information in the field for "patient's condition on discharge," (d) no mention of reason for medication changes seen in any discharge summary, where applicable, (e) mixing up eye ointments with eye drops, especially in the field for discharge medications, (f) widespread use of either writing only the full name of the discharging doctor without signing or signing without writing the full name or failing to specify the doctor's rank as required, (g) prevailing practice of writing only an original copy of the summary, instead of writing in duplicate, and (h) spelling and grammatical errors.

DISCUSSION

Before the creation of performance standards for discharge summary content by the JCI, it had been demonstrated that a majority of discharge summaries were of relatively low quality.[10] The assumption that every doctor can write a good discharge summary without proper training is erroneous and must be rejected in every medical institution.[8] If there is lack of proper guidance by their supervising consultants, this with other important commitments may lead to discharge summaries being given a low priority so that

quality is suboptimal and there is little opportunity for formal feedback.[11]

The portion on the clinical course of the admission ("summary") was identified as the main problem area needing improvement, especially with respect to providing more relevant and accurate key information. Following another review in which 34 components were identified for a good quality discharge summary, the 4 most important areas were discharge diagnosis, treatment received, results of investigations, and the follow-up plans.[12] Against this backdrop, one can infer that the under-reporting of results from relevant investigations and changes in medications (as noted in our study) is a worrisome trend for the promotion of continuing care. Similar to this, almost 30% of summaries in a related study did not list medication changes.[5] In a study among psychiatric discharge summaries, it was observed that the current practice fell short of a desirable standard, particularly in the areas of blood tests.[8] In another study, of the 268 significant laboratory tests and results noted in the charts, 115 (42.9%) were not reported in the discharge summary.[1] Discharge medication lists, medication changes and the reason for such changes were found to be inaccurate in 35.7%, 29.5%, and 37.7% of summaries respectively in another study.[5] Accurate identification of these medications being used in the follow-up period is valuable in ensuring patient compliance and safety, and monitoring of possible adverse drug reactions.

Although there is no universal consensus on the ideal contents of a discharge summary, we propose that the major deficiency noted in the "summary" portion of the current template can be mitigated, if subheadings as outlined in Table 2, are clearly provided to serve as a guide for the narrative desired. If this portion of the template is structured along those lines, it makes it easier for the junior doctor to follow the case files and diminishes the risk of omitting important components such as medications and laboratory investigations.[13]

Regarding the content item "condition on discharge," for instance, we propose that more specific information related to the ocular health status of the patient be provided; information that is representative of the postdischarge visual or functional outcome rather than the perfunctory use of terms such as "satisfactory," "not satisfactory," "stable," and "not stable." Furthermore, the form should be specialty specific and not generic. In a related study, "patient's discharge condition" was included in the least among the six JCI recommended components.[14] The import of this content item cannot be overemphasized, especially in relation to prognostication for continuing care.

Providing accurate information on the affected eye may help prevent or minimize the risk of erroneously treating the wrong eye in the postdischarge period, and possibly inflicting damage to an otherwise normal eye. Emphasis should also be laid on providing accurate clinic appointment dates in these summaries; the only probable reason for failing to do so should really be in cases of discharge against medical advice,[15] and not in cases where you expect the patient to continue with postdischarge care.

Discharge summaries should be mandatorily written in duplicate/triplicate (and not just one copy) and a copy sent along with the referral letter to the referral doctor to ensure optimal continuity of care. Because referred patients are often not fully informed about or are unable to remember details of their hospitalization, patient recall remains an unreliable substitute for discharge summaries.[16]

To achieve an improvement in our discharge summary system, interventions which may be required include the following: intensive and regular physician education on discharge summary with provision for periodic group/individualized audit and feedback; need for the supervising consultants to oversee the preparing of these summaries on a regular basis; development of a standard curriculum for teaching medical students and junior doctors how to prepare discharge summaries; and development of validated standardized discharge summary templates which will recognize the peculiarities of specialized patient groups and suit our local context, as using such templates carry greater chances of achieving a completion rate close to 100%[17] and in line with global practices, transition to a computer-based electronic discharge summary system.[18]

The Nigerian discharge summary system in many public hospitals is still basically part of a paper-based health information system;[19,20] which is the traditional format for writing discharge reports. Even in South Africa where appreciable efforts have been made to computerize the medical records system in many centers, the National Health Care Act still provides a broad scope of content and format for a discharge report as there is no universally adopted template or format.[18] We appreciate the global differential adoption of regulations and guidelines defining the content of an ideal discharge summary, resulting in individual health-care institutions, organizations and few countries creating their own recommendations.

Limitation of study

Since our study involved only discharge summaries from the ophthalmology service of one of Nigeria's premier

Teaching hospital, the results may not be generalizable to other services or hospitals. Files without discharge summaries were excluded. The audit also did not set out to determine the views of these junior doctors and their supervising consultants on the current discharge summary system.

CONCLUSION

Against the backdrop of global health-care reforms, it is therefore imperative at our level of national development that the health policymakers and health-care providers in Nigeria make and implement recommendations in providing an appropriate framework and format for creating and writing hospital discharge reports, being a very fundamental and hitherto often under-appreciated component practice in our country.

Conflicts of interest

There are no conflicts of interest.

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APPENDIX 1

UNIVERSITY OF NIGERIA TEACHING HOSPITAL,
ITUKU - OZALLA, ENUGU.

Original

Discharge summary

Referral Doctor's Address:

Name: .... Hosp. No. ....
(Surname)

Others: .... Sex ....

Date Admitted: .... Age ....

Date Discharged .... Consultant: ....

DIAGNOSIS   OPERATIONS

Principal .... i ....

Complication .... ii ....

Associated Conditions .... iii ....

Summary

Condition on Discharge

Discharge to:-

MR 35

Original copy to referring Doctor
Duplicate in Patients Casenote

Registrar/Date