

Audit of medical records: Use of a structured form in emergency departments

To the Editor: Medical records may be considered to be any information and documents kept in a systematic, scientific and easy way that help clinicians retrieve the required data on a patient at the time it is needed.^[1] They can cover a wide range of material including handwritten notes, computerised records, correspondence between health professionals, laboratory reports, imaging reports, videos and printouts from monitoring equipment.^[1,2]

Surgical departments in South Africa (SA) have been grossly inadequate in applying the standards set out for adequate records.^[3] Raff and James,^[4] in auditing anaesthetic records in KwaZulu-Natal, found that less than one-third of all records were complete or legible. Doctors whose records are inadequate or incomplete are placed at serious medico-legal risk. In attempting to rectify these deficiencies, studies have shown the advantage of using structured, standardised *pro forma* record forms. Rogers and Haring,^[5] in assessing how improved structure of medical records affected patient outcomes, showed that the number of days that patients were readmitted decreased as a result of using structured records.

We recently conducted a study at Charlotte Maxeke Johannesburg Academic Hospital (CMJAH) to determine whether the introduction of a new structured record form would improve the quality of patient records. The study followed a before and after intervention process with a cross-sectional review of patient files to examine the completeness of emergency department (ED) records taken by doctors, both before and after the introduction of a new record form.

The results showed a significant improvement from baseline to both 1 month ($p < 0.05$) and 3 months ($p < 0.001$) after the introduction of the structured form. The difference between results at 1 and 3 months was not significant ($p > 0.05$). At baseline, only 6 of the 16 variables included in the structured form were recorded in 90% of the records, while at 3 months, 13 of 16 were captured more than 90% of the time.

Levels of the legibility of records reached more than 90% even at baseline. This differed from results from the UK, which found records to be largely illegible and disorganised.^[6] In Australia, records showed a severe deficiency of items and were illegible, incomplete and un-integrated.^[7] Rodriguez-Vera *et al.*^[8] also found 15% of records to be illegible in Spanish records audited. In previous South African studies, at least a third of records were illegible.^[3,4]

The audit of existing records (baseline) showed that many of the essential variables such as bio-psychosocial history, medication, allergies and habits had a low frequency of being recorded (<10%). The recording of these variables improved significantly at 1 month with the introduction of the new structured record form. A further increase in their recording was apparent at 3 months post-intervention, albeit to a lesser extent; however, the difference was not statistically significant when compared with the 1-month results.

Results showed, as with studies elsewhere, that the introduction of a structured, preprinted record form significantly improved record keeping by doctors, and produces records which are more reliable from both a clinical management and a medico-legal perspective. The new record form is an attempt to fulfill the guidelines for a valid, comprehensive record form set out by the Health Professions Council of South Africa (HPCSA). Its introduction has led to a significant and sustained improvement in record keeping.

The record keeping challenges faced by CMJAH doctors are not peculiar to this institution. Therefore, future longitudinal studies of the new form, as well as testing it in other healthcare facilities, might be a precursor to creating a standardised record form for use in EDs across the SA public health sector, with implications for improved patient care.

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1. Kumar KR. Medical record and its importance. <http://www.healthnet.org.np/reports/bpkcos/mrecord.html> (accessed 6 October 2012).
2. Medical Protection Society of South Africa. Medical Records in South Africa: An MPS Guide. Johannesburg: Medical Protection Society, 2011.
3. Chamisa I, Zulu BM. Setting the records straight: A prospective audit of quality of case notes in a surgical department. *S Afr J Surg* 2007;45(3):94-95.
4. Raff M, James MFM. An audit of anaesthetic record keeping. *Southern African Journal of Anaesthesia and Analgesia*. 2003;9(3):7-9.
5. Rogers JL, Haring OM. The impact of a computerized medical record summary system on incidence and length of hospitalization. *Med Care* 1979;17(6):618-630.
6. Macaulay EM, Cooper GG, Engest J, et al. The core medical record: Seeing the wood and the trees. *J R Coll Physicians Edinb* 2004;34:85-86.
7. Wilson RM, Runciman WB, Gibberd RW, et al. The quality in Australian health care study. *Med J Aust* 1995;163(9):458-471.
8. Rodriguez-Vera FJ, Marín Y, Sánchez A, Borrachero C, Pujol E. Illegible handwriting in medical records. *J R Soc Med* 2002;95:545-546.

S Afr Med J 2013;103(7):438. DOI:10.7196/SAMJ.6900