

Medical records and population health

The recording process needs to become more efficient, more useful to clinicians and multipurpose

MEDICAL RECORDS SERVE a variety of purposes: they reflect the care process, provide a line of communication between clinicians and health services, and constitute legal evidence of referral, presentation, assessment and care given. If it is not in the medical record, it did not happen! They are also used for quality assurance, casemix funding, deriving statistics on diseases and procedures, and research. However, many clinicians seem to regard record-keeping as a chore. Why is it important and how can it be made more efficient and exciting?

In this issue of the Journal, the report by Lee and colleagues (*page 289*) demonstrates an important use of medical records.¹ Their study of survival of patients after stroke in Western Australia was made possible by linking morbidity data derived from hospital medical records with death reports using unique patient identifiers. This data linkage project and associated efforts to improve the quality

of hospital data are well known in Australia and internationally for their contributions to understanding outcomes of care. Moves to introduce data linking over time and place using probabilistic matching or unique patient identifiers are gathering momentum throughout Australia.²⁻⁴

Studies such as that of Lee and colleagues depend on accurate, consistent coding of information on diseases and procedures from patient medical records. The coding process is multifaceted, involving:

- abstracting from the patient record the diagnoses and procedures to be coded;
- choosing codes for each diagnosis and procedure; and
- “sequencing” (ranking) of codes to identify the principal diagnosis, which determines the diagnosis-related group⁵ for that episode of care.

In Australia, considerable effort has gone into developing standards for the coding process. The National Centre for

Classification in Health (NCCH), with input from clinicians and clinical coders in all states and territories, has developed an Australian modification of the World Health Organization's classification of diseases, *The international statistical classification of diseases and related health problems*, and an accompanying Australian classification of procedures, originally based on the items in the Medicare Benefits Schedule — together making up the ICD-10-AM.⁶ This publication also includes the *Australian coding standards*, the “rules” for applying and interpreting the ICD codes. The NCCH maintains these systems, updating not only the categories within the ICD-10-AM, but also colloquial clinical terms, so that coders can match the language in patient records with that in the classification. The NCCH also produces the ICD-10-AM chronicle,⁷ which maps categories and terms from one ICD-10-AM edition to another, so that coded data can be used for longitudinal studies.

Use of the morbidity coding process as the foundation for casemix grouping, and in turn casemix funding or contracting, has turned the spotlight on the accuracy of the coding process. While the emphasis has been on obtaining the “correct” diagnosis-related group, this is possible only if the coding is a true reflection of patient characteristics and care.

However, coders can only work with what they are given. To produce quality data, they require accurate, comprehensive medical records that are clearly and concisely expressed and in predictable format. Yet, the quality of many medical records leaves much to be desired, with little change in format or content in the past 40 years. In 1995, the Quality in Australian Health Care study found that over half the medical records reviewed were missing one or more key elements, such as assessment, progress notes, discharge summary, or diagnostic and therapeutic procedures, and that adverse events are less likely to be detected if documentation is missing.⁸

All this points to the need for revolution rather than evolution. There have been many attempts to improve the quality of medical records, such as the development of problem-oriented medical records⁹ and, more recently, the move towards electronic medical records. The Clinical Casemix Committee of Australia recently commissioned the NCCH to produce the *Good clinical documentation guide*¹⁰ to help clinicians understand the process of coding and to enhance the quality of coded data. This guide reflects the change in focus from coding for casemix to reinforcing the conjunction between good clinical care, good recording and good morbidity data.

To promote a uniform approach to information and communication technologies in the health sector, the federal government has initiated *Health Online*, a national strategic plan for health information management.¹¹ One *Health Online* project, *HealthConnect*, proposes a national approach to electronic health records, with patient “event summaries” collected in standard electronic format at the point of care (eg, hospital or general practice) for retrieval and exchange with other healthcare providers.¹² Although this project holds out hope, so far health information has not seen the technological advances that have occurred in other information intensive industries.

Much clinical time is devoted to recording the care provided to patients. It is our challenge to make that recording as efficient as possible, to free as much time as possible for clinical rather than administrative functions, and to make the data work for clinical care and for research. Clinicians need to feel that the recording process is useful to them, tied to decision support and the literature, including information about drug interactions and evidence of treatment outcomes. Data extraction should not be an after-the-event exercise but a continuous, real-time process and an intrinsic part of care, occurring at the bedside and integrated with ordering of investigations and prescribing.

While electronic health records will impose more discipline on how information is recorded, they will not be a panacea for poor recording practices. We must get our collective act together to promote the goal of recording information once at the point of care for the many subsequent uses, with research a by-product of clinical care. While techniques of data linkage, such as those used in Western Australia, already make a major contribution to this, there is still a long way to go in rationalising record-keeping by clinical staff within and between health services.

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