CLINICIAN LED AUDIT: DESIGN AND EVALUATION OF AN ONLINE PROSPECTIVE SYSTEM

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Introduction

- The Hospital Inpatient Enquiry (HIPE) is a national programme devoted to the coding and collection of data relating to hospital in-patients.

- It operates in association with the Casemix programme.

- Coded clinical data are used in a variety of areas (e.g. health services funding, epidemiology, health sciences research).
Introduction

• Inaccuracy has been reported as high as 26%

• This incorrect audit data has in the past been attributed to
  – Incomplete documentation in patient records
  – Ambiguities in diagnosis classification
  – Deficient coding of co-morbidities
Introduction

• Previous studies noted increased accuracy in data entered by healthcare professionals

• Use of an online database as well as a simple checklist have also been shown to increase accuracy of coded data by health records administration
Aim

• To develop a web-based outcome audit system which would allow collection and input of data prospectively

• To evaluate the accuracy of Patientsmate© system collected audit data against the HIPE/Casemix programme currently in use
Methods

- A web-based outcome audit system, “Patientsmate©”, was developed in a single tertiary centre comprising of two hospitals.

- The database was populated by inputting admissions and procedures based upon ICD-10 classifications.
Methods

• Following initial piloting, a prospective comparison study of the new Patientsmate© and the standard HIPE systems, was performed over a one month period and involving two general surgical teams in April 2010.

• Data from the two systems was collected and compared to the “external standard” (ES).

• In addition, a Likert-scale based questionnaire was designed and hosted within the Patientsmate© system.
Results

Comparison of Patientsmate© and HIPE systems with the external standard (ES)

• Over the one month study period, there were 108 inpatients identified by the ES. Of these, 87 (80.6%) had been registered on the HIPE system, and 90 (83%) on the Patientsmate© system.
Results

• Day case rate:
  – ES: 61%
  – HIPE: 47.1%
  – Patientsmate: 52%

• Number of procedures
  – ES: 88
  – HIPE: 60
  – Patientsmate: 75
Results
Results

Average length of stay (ALOS)

- ES: 1.77
- HIPE: 1.82
- Patientsmate: 1.4
Results

*Focus group questionnaire analysing usability of Patientsmate ©*

- Assessed by the four clinicians primarily involved in data input and data review

- Of the four, all were less than 30 years old and the male: female ratio was 1:1

- Inputting data for a single patient took 6-7 minutes

- 75% reported feeling comfortable with using the system once only and 100% were satisfied with the layout of the online interface
Discussion

• Our study confirms the accuracy of clinician derived data, with more accurate recording of:
  
  – Number of patients
  – Number of procedures
  – Hospital day case rate
Discussion

• HIPE data: outcome based

• The Patientsmate system allows a more complete overview allowing for the prospective input of procedure-related data such as complication rates

• The integration of both patient outcome data as well as procedure related data facilitates clinical research and audit
Discussion

• Transferability and ease-of-use:
  
  – Data input per patient took less than seven minutes
  
  – The programming language used in developing this audit system is the standard world wide web programming language requiring no external or commercial software
  
  – Potential for allowing remote access for patients general practitioners
Conclusion

• Patientsmate allows for increased coding accuracy with:
  – Relative ease of use
  – Instant transferability
  – More information about hospital inpatients
Thank you
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