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Authors	Zhang, Hengjia;Roberts, Anthony
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Survey of Electronic Patient Record Systems in Dental Schools

Zhang H & Roberts A

Cork University Dental School and Hospital
University College Cork, Ireland



Background

In the coming years, Cork University Dental School and Hospital (CUDSH) will move to a new building and location. At this critical planning stage, CUDSH is re-evaluating its existing processes and supports to enhance efficiency of patient care, teaching and learning and research. This review will inform the physical design and IT infrastructure of the new building. IT systems within Dental Schools and Hospitals are highly complex and yet fundamental to the success of the new building. A Currently CUDSH used a Paper-Based-Record (PBR) and would like to move to an Electronic Patient Record (EPR). Understanding the current patient record (and other IT usage) across other Dental Schools will inform CUDSH's decision making.

The objective of this study was:

To develop an online questionnaire for the worldwide distribution to Dental Schools to identify their choice of EPR with the anticipation of these data informing the EPR choice for CUDSH.

Additional data is also presented relating to overall IT offerings in key support areas for Dental Schools.

Results

In addition to the general demographics of each Dental School location, a total of 5 domains were identified as being important which are indicated in **BOLD** below. A total of 23 responses were received from Europe (n=14; 60.9%), North America (n=4; 17.4%) Asia (n=2, 8.7%) and others which included Africa, Oceania South America (n=3; 13%).

Patient Management & clinical recording/support:

The implementation of an Electronic Patient Record (EPR) was varied:

- Fully Implemented EPR (n=10, 43.5%)
- Partly Implemented – using both EPR & paper (n=6, 26.1%)
- Paper-based record only (n=7, 30.4%)

Of those Dental Schools using EPRs, the most popular software packages were Axium (all North American), Carestream R4 (all Europe) and Salud (all Europe) each used by 3 Dental Schools.

Educational Support:

Blackboard was the most commonly used VLE (n=9, 39.1%) followed by Canvass (n=5, 21.7%), Moodle (n=4, 17.4%) and Others (n=4, 17.4%) with the single response from Africa indicating no VLE provision.

Research Support:

Of the 23 responses, only 11 (47.7%) had a system that could support research activity by running queries from its central database.

Student Assessment:

Of the 23 responses, 7 (30.4%) had systems that could record clinical student grades electronically; and Axium was the most popular system that combined an EPR with student grading (n=4; 17.4%). A broad range of software was used to support student written assessment with some Schools having no software support (n=8, 34.8%) and others having multiple systems. The commonest systems described were Questionmark, LIFTUPP, Speedwell and Blackboard.

Conclusions

The usage of IT in Dentistry and Higher Education is ever increasing and the planning in a new building that supports patient care, student training and research is paramount. Based on the limited responses to this globally distributed questionnaire, the results suggest that Dental Schools and Hospitals have a broad range of IT supports present yet many remain reliant on paper-based records for clinical recording of information despite software packages being available. This was a surprising finding given the emerging importance of IT.

Of those Dental Schools who use a EPRs and other software packages to support student learning, student assessment and research, there is no clear software consensus although there are some regional differences presumably based on the availability of certain software packages across different geographical locations.

Further efforts by CUDSH will be necessary to determine its preferred IT solutions for its new building.

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