

Preventing EMR adoption failures using DRUIDs

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Abstract

Terms used

EMR: Electronic Medical Record

DRUID: Data Recording Using Interfaced Devices* 1

POC: Point of Care

COW: Computer on Wheels, a mobile trolley with a desktop

Motivation:

Healthcare remains a laggard in adoption of modern Information Technology. In spite of availability of cutting edge EMRs, and ample money being spent by hospitals to implement them, the adoption rate is extremely poor by clinical staff. In contrast, administrative and inventory related staff adopt better to automation.

Problem statement:

One major problem responsible for failure of EMR adoption in wards and OPDs is that the doctors and nurses are unable to record the high amount of data needed to be put on record, using computers. Computer usage decreases their efficiency, takes more time than writing on paper and has a steep learning curve. Some clinical staff even harbour a fear of using computers. Added to this is the unavailability of user-friendly data input devices and POC data recording systems. Even the most modern hospitals use COWs which are heavy, cumbersome and do not create user-friendly, quick data recording systems at POC.

Approach:

To overcome the barriers of less computers, less POC devices and steep learning curves, we devised the usage of tDRUID which is a battery operated, handheld wi-fi device, with pre-programmed two or few click data recording and ordering facility. It is cost effective enough to be issued one per personnel, is available at POC, can record most nursing activities, lab and pharmacy orders, and other objective data entries.

In addition it also authenticates the user and has encrypted, safe data transferred wirelessly. It can be interfaced with any EMR using HL7 protocols and does not change the way the existing systems are working. With buttons to be pressed for each task, it has a simple learning curve and also removes the fear of computer usage.

1 * DRUID is an original concept ideated, marketed and implemented by the Author as tDRUID

Results:

A DRUID will achieve the following in clinical setting

1. A tablet like mobile device at a fraction of cost, available at POC for every doctor & nurse
2. Time saving of about 20% used in data entry using desktops or COWs
3. Over 80% applied usage at POC, obviating the need of double entry on paper first and then computers
4. Eliminate most 'chinese whisper' errors since orders are recorded immediately in systems
5. Overcoming computer usage barrier in less tech-savvy staff
6. 100% elimination of EMR rejection due to less no of data entry terminals

Conclusions:

While technology brings the possibility of excellence in healthcare, its optimal adoption is crucial to sustain that excellence over long term. tDRUID overcomes the barriers of not having a quick, mobile, easy and authentic POC data recording systems. Most EMRs, left unused and rejected in over 2/3rd of implementation, can thus be brought into optimal usage. In addition, the authentic data build-up of patient care using such technology will help in long run in research and analysis, not to mention the continuum of care.

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