Electronic medical record system: A critical viewpoint

Sir,

Electronic medical record (EMR) systems are replacing the conventional paper-based record-keeping in several hospitals in India. Advantages of the EMR system include easy retrieval of the past records. The transition from paper charts to digital system can last a few years[1] and can lead to serious implications in patient care. We discuss one such scenario.

A 50-year-old woman who had been earlier operated for breast cancer and had received chemotherapy and radiotherapy was posted for right axillary clearance. The pre-anaesthetic check-up (PAC) revealed American Society of Anesthesiologists Physical Status II with controlled hypothyroidism, body mass index of 32 kg/m^2 and normal airway. According to the patient, her past surgical procedures under general anaesthesia (GA) were uneventful.

The patient was administered GA after initiating monitoring and completion of the surgical safety checklist. We failed to achieve adequate ventilation with supraglottic devices, and direct laryngoscopy with a Macintosh blade was attempted. This revealed a Cormack–Lehane (CL) Grade IV view. The airway was subsequently secured using Kings Vision™ video laryngoscope. The surgery was uneventful. The patient was electively ventilated for a brief period, and the rest of the course till discharge was uneventful.

After the surgery, the previous anaesthetic records were retrieved and scrutiny of clinical notes in EMR revealed postponement of surgery 5 months back, as the epiglottis could not be visualised following administration of GA. The case was deferred with a plan for awake fibre-optic intubation. Anaesthesia notes of a surgery done eighteen months earlier also revealed a CL grade IV, and the surgery was completed using a supraglottic device.

The incidence highlights the presence of loopholes in the digital system which failed to convey important patient information. One must accept that computerisation by itself does not make healthcare safer for patients.[1] For an oncology patient, where multiple caregivers are involved, there can be an enormous volume of notes; hence, there is a need for selection tools. Although it remains the responsibility of the caregiver to meticulously go through all the clinical notes, it is essential to create useful links for critical information such as difficult airway to be flashed during all future retrievals. Patient's ignorance about previous postponement of surgery, contributed to the problem in the present case. Some argue that hard copies are a better way of archive, but existence of dual system can lead to duplication of work[2] and also errors as seen in this case.

EMR will constitute the core of a computerised healthcare system in the near future;[3] however, the potential of such a system to cause significant patient harm is a true entity and is often under-reported.[4] The software must be tailor-made to institutional needs to prevent such problems. Furthermore, the clinician must provide feedback to ensure that digital record system is not a simple processed format but a smart digital medium incorporating tools such as 'alerting systems'.[3] Following this incidence, a link between intraoperative notes and PAC has been incorporated

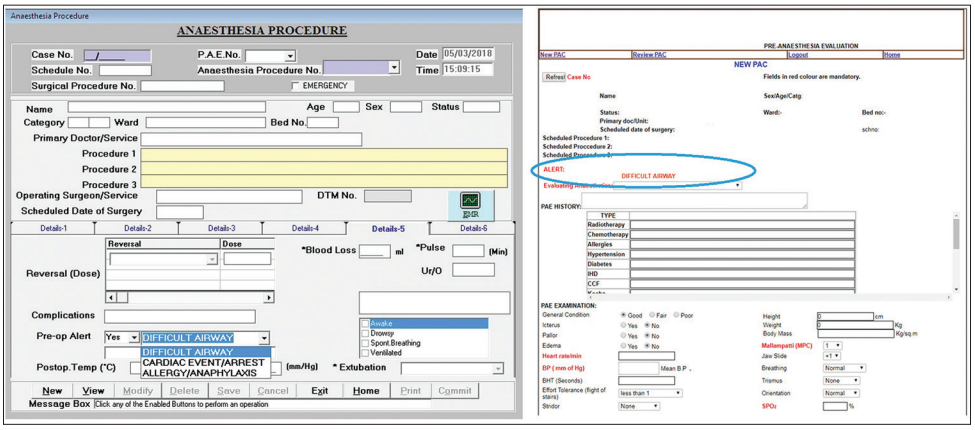

Figure 1: Picture of digital screen of operative notes (anaesthesia) module (left side) and pre-anaesthetic evaluation (right side). Selection of alert at the end of a procedure is tagged to subsequent pre-anaesthetic check-ups for the same patient (circled)

in our system which will flash important issues in all future PAC [Figure 1].

In conclusion, for EMR to work effectively, it is essential to have a user-friendly interface with the right support tools and alerts for critical information. Close interaction between the clinicians, administration and information technologists would go a long way to provide better patient care.[1]

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

The study was supported by departmental funding only.

Conflicts of interest

There are no conflicts of interest.

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Access this article online	
Quick response code	Website: www.ijaweb.org
	DOI: 10.4103/ija.IJA_178_18

How to cite this article: Bakshi SG, Trivedi B. Electronic medical record system: A critical viewpoint. Indian J Anaesth 2018;62:564-5.