



"Trauma Registry"- A Necessity Of Modern Clinical Practice

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The authors declare that they have no competing interests.

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Abstract

Authors along with the input from informational and technology department established a hospital based trauma database which could enable us to put data of all the trauma patients admitted to hospital electronically into a secured hard drive.

We generated a system based on Microsoft Access program which enabled us to create a main table for all admissions and in-house referral which was fed through an 'Admission Form'. From this main table there are sub tables to enter patients age, sex, date of birth, date of admission, ASA, associated medical comorbidities, diagnosis, associated injury, planned surgery, planned date of surgery and admitting consultant. Once patients are operated and date of operation and any associated intraoperative complications are entered on database it takes the patients off the system and all the information is stored in secured drive.

This system is in use for since April 2006 and has helped immensely in audits and research projects by generating a good trauma data. It has also helped in giving the real-time feedback of our work and performance for trauma patients.

Introduction

Elective orthopaedic admissions are easy to manage because it is a planned and scheduled surgery and all the hospitals or trusts have a database in place which can track the work load of the department. On the other hand trauma load is difficult to manage because of its unpredictability, complexity of management, trauma related complications and lack of database. Hence as a result of lack of database it is difficult assess the workload and performance of Trauma service in most hospitals with in U.K.

In most of the hospitals and trust manual system is used by the on-call team for trauma admissions via Accident & Trauma (Fig1). This system is based on verbal and manual communication between the on-call team, other orthopaedic teams, casualty, trauma

coordinator and theatre staff. Hence, on call junior doctor has to liaise with multiple staff members effectively to pass the necessary information from one person to other before patients goes to theatre. There are multiple steps which limit the speed of work and also increase the risk of mis-communication and can potentially compromise patient safety and management. Information generated and gathered working old style is stored in notes and there is no electronic record keeping. This greatly hampers in data collection requiring tireless effort to track the patients' records limiting the pace of any audit or research project.

Limitations of these old style has already been felt in few countries which has forced them to create a nationalised trauma registry so as to identify the referral patterns, age/demographics of injured patients, frequency and outcomes of traumatic injuries. Also, it would provide reference data for benchmarking, quality review processes, support for research projects, assistance with analyzing data for research projects and to improve the patient care by recognising strength and weakness of a particular trust or hospital.

Although the data collection in these countries are being done through validated nationalised trauma registry. Trauma registry used in our hospital is basic with further scope of improvement and is currently not validated. However, it overcomes the shortcomings of manual system which was in operation in the hospital and to enables easy extraction of data to carry any researches or audits projects (Fig2). It also gives a valuable feedback of our performances which in crucial in recognising the limitation and improvement in clinical care.

Since its inception our department has been able to successfully collect the necessary data to carry audit and research projects in a small timeframe saving precious time which has been utilised in clinical care of the patient.

Methods

VKS- Collected clinical details including photographs, summarised the case history and prepared first draft. Conducted a literature search, design and formatting

of final manuscript, preparation of final manuscript including grammar, punctuation and style. He also verified the authenticity of scientific content. AA: Helped in conducting the literature search and extracting the papers from library and internet. MA: contributed in preparation of electronic images and electronic formatting of manuscript, helped in final revision and formatting.

Discussion

1. Dick B, Establishing a clinical information system for surgical ophthalmology and orthopaedics specialties. *Klin Monatsbl Augenheilkd.* 1996 Apr;208(4):254-61
2. Deimel D, Standardized computer-based documentation system for diagnoses and medical performance in orthopaedics and traumatology. *Orthopade.* 1999 Mar;28(3):285-91
3. Jerosch J, Medical applications of electronic data processing in surgery, trauma surgery and orthopedics. *Z Orthop Ihre Grenzgeb.* 1992 Sep-Oct;130(5):390-8.
4. Vorontsov AV, Information-retrieval system in the educational practice of the Chair of Traumatology and Orthopedics. *Ortop Travmatol Protez.* 1978 Oct;(10):14-6.

Conclusion(s)

Trauma registry is useful tool to aid in managing trauma load in a hospital or trust. It is an indispensable study tool which is of immense value to run an audit or research project. Although it's a new concept but its benefits are many. A validated nationalised trauma registry is a necessity of modern clinical practice should be formulated and implemented soon for betterment of clinical practice.

Authors Contribution(s)

VKS- Collected clinical details including photographs, summarised the case history and prepared first draft. Conducted a literature search, design and formatting of final manuscript, preparation of final manuscript including grammar, punctuation and style. He also verified the authenticity of scientific content. AA: Helped in conducting the literature search and extracting the papers from library and internet. MA: contributed in preparation of electronic images and electronic formatting of manuscript, helped in final revision and formatting.

Reference(s)

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Illustrations

Illustration 1

Fig1: Figure showing manual system of work in most of the U.K hospitals

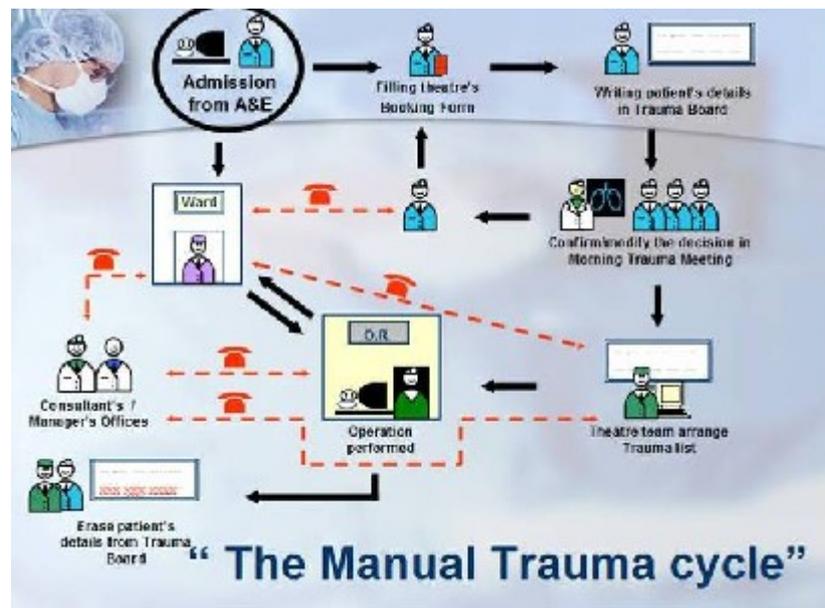
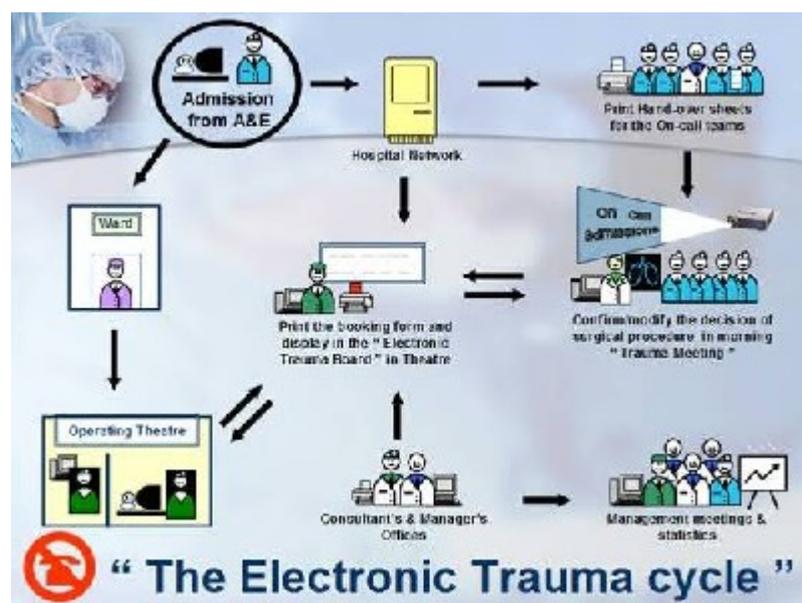


Illustration 2

Fig2: Figure showing working of Electronic trauma database



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