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Setting up a quality assurance programme at the medical emergency department of a university hospital: promises and limitations

Emergency departments are special targets for the multiple influences dwelling in health care systems. Their services are highly visible and commented upon by all partners[1]. They must face a continuously increasing activity and growing expectations from the population, leading to complaints[2] and incidents reports such as readmissions[3]. Budget cuts hit them directly and indirectly in their interactions with the other health care providers[4]. In this context, it is an imperative need to set up a quality assurance programme, to assess the consequences of new health care policies and face these contradictory constraints without affecting the quality of care[5].

Our institution is no exception: city hospital for Lausanne (250000 inhabitants), secondary care centre for a population of 650000 inhabitants, and one of the two university hospitals in the French speaking Switzerland (2.5 Mio inhabitants), the activity of its medical emergency department has progressively increased from 11573 patients in 1993 to 13239 in 1997 (+ 14%), while medical beds decreased from 385 to 263 (–32%), and nursing staff by 15%. Since 1993, the emergency department has progressively set up a series of structure, process, and outcome indicators[6]. At the beginning of 1998, a structured assessment was carried out.

Four structure indicators were available (Tab. 1):

- A functional chart, describing the structures, missions, and goals of the medical emergency department, as well as the duties and responsibilities of its different employees;
- A job description for registrars, to be used as an evaluation form and as a basis for stepwise improvements;
- Statistics about patient flows, with type of referral and discharge destination, designed as monthly and annual charts comparing the present year with the past one. Sent to the heads of the emergency and functionally related departments, they allowed identifying areas for improvements.
- Statistics about length of stay, with medians, 90 percentile and maximal values for the outpatient, admission and observation zones. These figures allowed the correction of existing problems, setting up standards, looking for trends, identifying outlays, and early interventions in case of a new problem arising.

Five process indicators were available (Tab. 1):

- Primary triage, requiring a staff increase to run the system over 24 hours, a special training, and the development of triage criteria between the medical and surgical emergency departments. This system allowed a marked decrease in inappropriate orientations, waiting time, and an improvement in the quality of access to care.
- Secondary triage, with public health nurses joining the medical rounds in the observation zone, resulted in a clear improvement in patient orientation, decreasing inappropriate admissions, and inefficient use of health care system resources (home visits, home care, rehabilitation centres, and acute care hospitals).
- A medical discharge note, automatically edited and sent by fax within 24 hours for all stays longer than three hours and at request for shorter stays, markedly improved information exchange with private practitioners, who use the same document when addressing patients.
- Implementation of practice guidelines to improve clinical practice and efficiency[7]. Through consensus development or local adaptation of foreign guidelines, along with evidence based medicine, subjects were selected and treated by senior registrars, and focused on frequent diseases, for which a diagnostic or therapeutic strategy was not clearly defined: deep vein thrombosis[8], home acquired pneumonia[9]. Effective on patient handling, they are still under study for outcome results and compliance.

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Intervention	Introduction	Indicator
Structures		
Emergency functional descriptive	1994	(11%) Errors in rules application
Job description and evaluation procedure for the registrars	1994	(11%) Evaluations carried out per rotation period of six months
Statistics of patients flows	1994	(11%) Patients from other services staying in the observation zone, of patients directed towards other internal or external structures, death, ...
Statistics of length of stay (LOS)	1994	(11%) Medium and extreme values of LOS in different units of the medical emergency
Processes		
Primary triage	1998	(11%) False orientations between medical and surgery emergency departments
Secondary triage	1992	(11%) False utilisation of the medical emergency department
Medical discharge facsimile	1995	(11%) Facsimile not sent within the prescribed delay
Implantation of clinical practice guidelines	1997	(11%) Inappropriate admissions
Focussed studies	1995	(11%) Inappropriate admissions
Outcomes		
Centralised management of complaints	1997	(11) Complaints, response delay. Preventive and corrective measures adopted
Morbidity-mortality meetings	1997	(11) Meetings, preventive and corrective measures adopted

Table 1 List of the interventions and quality indicators put in place in the medical emergency (1992–1998)

- Specific studies on process quality: treatment of patients with chest pain, in comparison with the university hospital of Geneva[10–11], treatment of drug overdoses[12]. These studies allowed measuring differences between daily practice and existing guidelines, and the ability to set up patient treatment plans, but needed too many resources to be used systematically.

Given the very limited length of stay in the department, outcome indicators were scarce (Tab. 1):

- Centralised complaints management, excellent tool for identifying mismanagements and assessing patients' expectations[2]. This system reduced delays in providing an answer to the patients, and allowed correction or prevention of identified mismanagements. Without systematic rerouting of all information addressed to other hospital structures, exhaustivity is unknown.
- Morbidity/mortality meetings allowed discussing diagnostic or therapeutic mismanagements, improving triage procedures and identifying gaps in management protocols in need for new guidelines.

This assessment of the quality assurance programme in our medical emergency department was rich in lessons. It showed that such a programme was feasible, but required energy, time, and resources to overcome resistances and be comprehensive[13]. An institutional support is needed, as is co-workers implication.

It showed a real effectiveness on structures and to a lesser extent on processes, easy to watch and assess. Modifications improving quality and efficiency of care and bringing sizeable savings were offset by the necessity of running the structure over 24 hours. In order to maintain quality of care, staffing must follow the evolution in activity and hence workload. As such an evaluation tool does not yet exist for emergency departments, this goal is more difficult to achieve.

The adequacy of the indicator must be well assessed, otherwise statistics are taken care of and not necessarily quality of care[14]. Our major problem was related to the computer information system. A specific tool had to be created. Outpatient diagnoses are not recorded yet. It is therefore impossible to evaluate cost of care by type of disease, although all other elements such as laboratory tests and drug use are available. The hospital direction needs understanding its underlying impact and naming it a strategic goal in a near future.

Moreover, all health care facilities delivering only short-term care face difficulty using reliable middle and long term outcome indicators, because patients are no longer available for assessment. A network with other health care partners, accessing a shared confidential database, would solve this problem.

Finally, an institutional quality assurance policy is absolutely necessary to allow each department reaching meaningful results not only for itself but also for the whole system. Without it, limitations of quality assurance might overcome its promises.

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