EDITORIAL

Towards a hospital-wide integrated system for quality and safety of health care

M. Levi

Department of Medicine, Academic Medical Center, University of Amsterdam, Amsterdam, the Netherlands, e-mail: m.m.levi@amc.uva.nl

Quality of health care has obviously always been a concern of health care professionals. However, while in the past this was mostly viewed as the discretionary responsibility of the individual doctor or nurse, over the last decades a more integrated view on health care quality has been developed and implemented in most health care institutions. Modern medicine has rapidly evolved into a highly complex system in which various professionals take part and have to collaborate to achieve an optimal outcome.[1] Hence, just being a very good doctor or nurse is not good enough anymore and attention should be given to the entire process of health care delivery surrounding the patient.[2] In the discussion on quality of health care, patient safety has received special attention. To put it simply, patient safety means that a patient in the process of his or her treatment and care will not be damaged by the treatment itself or the circumstances adjoining this treatment or associated care. Moreover, to prevent this damage, specific measures should be installed to guarantee that patients are not exposed to potentially harmful situations.

Integrated safety systems in health care settings are generally based on three pillars: (1) (standardised) organisation of health care processes; (2) education and training of health care workers; and (3) reporting and analysis of (near) mistakes, incidents, or complications.

Organisation of health care processes encompasses an institution-wide implementation of a standardised set of rules and agreements according to which health care is delivered. Obviously, many procedures in our hospitals have implicitly been established but a critical appraisal of processes in health care shows a clear lack of standardised delivery of care in many places. Do you know precisely how your colleague handles a patient with abdominal complaints in his outpatient clinic or exactly how your resident manages a patient with sudden dyspnoea at night? Are you sure that you all check for potential allergies in each patient before prescribing antibiotics and are you certain that, without exception, all bedridden patients receive adequate thrombosis prophylaxis in your ward? For surgical and other invasive procedures check lists have been developed and evaluated and strict implementation has been shown to reduce harmful complications and even mortality to a significant extent.[3]

Another focus area in improving health care outcome is the critically ill patient. Early recognition and aggressive treatment of patients with compromised vital functions has proven to be crucial for better outcome of care.[4] For patients in general wards, often with less sophisticated continuous monitoring of vital functions, Early Warning Scores have been developed, which can trigger attention to patients at risk and guide physicians and nurses in the management of these patients, for example by deciding to transfer them to a facility with closer monitoring and more intensive care.[5-7] In this issue of the *Netherlands Journal of Medicine,* Van Rooijen *et al.* report on the optimal threshold of such an Early Warning Score in a general medical and surgical department of a large teaching hospital.[8] On the basis of more than 70,000 scores, they were able to define which scoring threshold had the optimal sensitivity and specificity for the Early Warning Score for necessary interventions. It is clear that systems such as checklists and Early Warning Scores could be helpful tools in avoiding harmful complications to patients in our hospitals.

Education and training of doctors, residents, nurses and other health care workers is another issue that may contribute to quality of care and patient safety. Continuous attention to proper education and rigid documentation of who is competent (or not) to perform procedures, to work with certain equipment, to prescribe and administer potentially dangerous drugs, and to deliver specific care is required to guarantee that hospital workers are up-to-date with the problem they are faced with and tools they have

to work with. Too often knowledge and skills are taken for granted, whereas it is clear that many gaps may exist in actual competency.[9]

Lastly, and importantly, reporting of incidents and analysis of their causes is of paramount importance. Often, meticulous examination of a complication or incident is very helpful to avoid similar situations in the future.[10,11] A prerequisite of adequate reporting and analysing unwanted situations is the willingness of staff to report (near) incidents and mistakes and an environment in which blameless discussion of errors has been created.[12]

The setting in which complications are registered may also be of importance. At present, most institutions focus on incidents occurring during hospitalisation; however, many complications may occur after discharge or in the outpatient setting. In this issue of the *Netherlands Journal of Medicine,* Magdelijns *et al.* report on their investigation whether the emergency department may be the right place to get a better inventory of these incidents.[13] They demonstrate that a considerable number of complications were indeed detected by this registration. Of note, most complications were related to medication (in particular anticoagulants), which is similar to previous studies,[14] but also complications related to chemotherapy or interventions were markedly prevalent. Remarkably, the authors estimated that up to 28% of complications were potentially preventable.

Taken together, our patients and we as health care workers have much to gain from improved quality and safety measures in our institutions and integrated institution-wide systems related to quality and safety seem to be of great importance to achieve our goal of better health care outcomes.

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