

## Editorial

# Dying safely

It is well known that there is a high incidence of potentially avoidable deaths and serious adverse events in acute hospitals [1]. Many of these patients have shown signs of deterioration in their vital signs and observations over many hours before the event [2].

As a result, systems such as the concept of rapid response systems (RRSs) were developed to improve patient safety [3]. The RRS replaces the cardiac arrest team, which responds to patients only after they have suffered a cardiorespiratory arrest. The RRS aims to identify and respond to the seriously ill at an earlier stage and thereby improve patient outcome.

The concept has been shown to reduce serious adverse events such as unexpected admissions to the intensive care unit (ICU) [4]. In a recent meta analysis the incidence of cardiac arrests has been shown to be reduced by approximately a third in both adult and paediatric hospitals as well as a significant mortality rate reduction in paediatric hospitals but not in adult hospitals [5]. Using more recent data from the largest cluster randomized controlled trial studying RRSs, adult hospitals with such a system also had a reduction in cardiac arrests and deaths compared with the control hospitals [6]. The majority of acute hospitals in Australasia, the United Kingdom and North America now have an RRS-type system or an intensive care outreach service operating in order to identify/intervene early in at-risk patients.

Thus, a hospital-wide system, crossing all the usual boundaries can improve patient safety. Interestingly, while the RRS concept identifies seriously ill patients who have a potentially preventable condition, the system also identifies patients who are seriously ill but dying in a predictable and inevitable way, where further active intervention would be futile. In this way, the RRS often becomes a surrogate way of managing the dying in acute hospitals. The RRS concept in itself increases the rate of 'do-not-resuscitate' orders [7]. Unfortunately, many patients are still inappropriately admitted to the ICU for end-of-life care at great cost [8] and the problem will only increase as our society ages [9].

The reasons as to why the diagnosis of dying is often delayed are many and complex and include: unrealistic societal expectations of modern health care, partly related to the almost daily reporting of miracle cures and medical advances; the lack of support at a community level for the terminally ill; fear of litigation by medical practitioners if everything is not seen to be done; and increasing specialization in medicine, which focuses care on a single organ in a population of ageing patients who often have multiple organ dysfunction and many co-morbidities.

It is sometimes difficult for single organ-based clinicians to take a holistic view and make a diagnosis of dying. This is compounded by the general lack of knowledge by hospital specialists about what the specialty of intensive care can or, more importantly, cannot offer. It is often left to the intensivist to make the diagnosis of dying by saying—'there is nothing more that can be offered in terms of active life support' [10].

There is also a general reluctance by many doctors to openly and honestly discuss dying and death. This is a contributing factor to the unreliable and often deficient quality of care at the end-of-life [11]. While there is good evidence that formal involvement of palliative care at the end-of-life improves patient and carer outcomes [11–13], the work of palliative care services has, up until now, been based on colleagues referring patients and often limited to those with cancer, whereas the majority of people die from a combination of problems, usually related to aging, eventually resulting in terminal cardiorespiratory failure, probably what used to be classified as 'old age'.

This highlights a major problem in health care. While most people want to die at home, they will die in acute hospitals and other institutions [9]. Almost a quarter of those will spend their last days of life on a ventilator and nearly 40% will die in pain [14]. Even for those who survive intensive care and leave hospital alive, many will die within a short time after discharge with severe physical and psychological disabilities [15].

While the many quality and safety initiatives in health care are probably improving outcomes for those where medicine has something to offer, the quality of care for those who are dying is often neglected, both as an area of research and an area where different interventions and approaches are needed.

There is a need to develop systems similar to the hospital-wide RRS concept in order to ensure patients are also allowed to die safely. Patients at the end-of-life are identified early and an urgent palliative care response is triggered. This shifts the focus away from futile care to managing pain and other distressing symptoms as well as ensuring a dignified end-of-life.

The parallel research could involve evaluation of the sensitivity and specificity of the activation triggers as well as descriptive reports, including the number of responses; the timeliness and duration of interventions; the type of interventions carried out as well as patient and staff outcomes. Eventually more rigorous research could be undertaken, such as a cluster randomized trial. Hopefully, through different

clinical models and their evaluation, we will be able to ensure that patients die more safely.

## References

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