

How Many Deaths Are Due to Medical Error? Do we have the right numbers or are we guessing?

Just over a decade ago, the patient safety movement gained strength in the United Kingdom and the United States as both countries were publically humiliated with high profile cases of medical mistakes which led to investigation and two key reports being published in 1999 (The Institute of Medicine's [To Err is Human](#)¹ in the US) and in 2000 ([An Organisation with a Memory](#)² in the UK).

The results of the US study implied that at least 44,000 and perhaps as many as 98,000 Americans die in hospitals each year as a result of medical errors³.

Here in Sweden, the majority of articles published on Patient Safety refer to a report issued by Socialstyrelsen in 2008 (**The National Board of Health and Welfare**, <http://www.socialstyrelsen.se/patientsakerhet/varuskadematningar>) based on 2000 journals collected during 2003-2004. This report suggests that approximately 3000 people die every year as a result of preventable errors and potentially another 3000 as a result of an injury by preventable error. These are alarming numbers, which brings me to my next point.

Why don't we know the exact number?

Why don't we have up to date figures on these cases and why don't we know the quality of care each hospital is providing and the classification of preventable errors occurring?

I honestly cannot comprehend how we can use one single report based on 10 year old data compiled from 2000 journals to assess our care for 9,500,000 people in Sweden. I am not a physician or a nurse; I have an engineering background and have worked in high tech business and sales for the last 25 years so some might say I have little right to argue. However, if I refer back to my previous experience from the manufacturing industry the "golden rule" was that to improve your processes you need to measure your own operations and systems as well as address each issue that arises. Lessons can be learnt from observing others but one must understand the specific complications being experienced within their own organization to provide the best product and service.

Do we do this in the health care arena? I am uncertain but feel that we have an obligation to solve these problems and place this concern on all of our immediate agendas.

Looking back at the numbers, the 1999 US report suggests that between 48 000-98 000 people die annually due to medical error yet a newer study by HealthGrades released in July 2004, "[Patient Safety in American Hospitals](#),"⁴ estimated the number of preventable deaths at 195,000 - twice as high as the previous estimate.

The HealthGrades estimate is the equivalent of THREE jumbo jets crashing every day!

This is an appalling lack of progress in addressing patient safety.

¹ <http://iom.edu/~media/Files/Report%20Files/1999/To-Err-is-Human/To%20Err%20is%20Human%201999%20%20report%20brief.pdf>

² http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4065086.pdf

³ American Hospital Association. Hospital Statistics. Chicago. 1999.

⁴ www.healthgrades.com/media/english/pdf/HG_Patient_Safety_Study_Final.pdf

If we take this ratio and apply it to the Swedish population, it translates to approximately 6000 people dead as a direct result of preventable errors, or equivalently 15 deaths per day in one year (365 days). There is no question that we need specific information on these 3000-6000 people and their cause of death for us to learn and improve.

Let's discuss cost. The report from Socialstyrelsen calculates cost as expenditure for re-admission for the injured 100 000 patients with the assumption that the average stay would be 6 days. The cost is then calculated as 600 000 health days translating to about 6 billion SEK. (874 million USD) This number is now used in various articles when cost for patient safety is being referenced. Is this number really correct? This just includes the extra stay; it does not take into account the cost for additional use of medical devices, medication, surgery, insurance costs or injuries that resulted in disabilities of various kinds. Indications actually suggest that the true cost of adverse events or preventable errors to be significantly higher!

There is already an ongoing debate regarding this on social media and in the press but I do not believe it has received the attention it truly deserves. Patient safety and obtaining real statistics are a serious global public health issue. We have a "[Vision Zero](#)" for traffic accidents as we have for aerospace and nuclear energy, shouldn't this apply to the healthcare sector as well?

At Mentice we are dedicated to the training of physicians. More specifically, we provide innovative simulation solutions to deliver the most authentic and relevant training for image-guided catheter based interventions a.k.a endovascular procedures. Structured training is a critical part of enhancing proficiency, outcome and improved patient safety but it should be noted that simulation training for endovascular procedures only addresses a small fraction of the patient safety issue. However, the principles of how we measure and manage patient safety are extremely important for Mentice and our partners, and the industry needs to redouble its efforts to promote realistic simulation training that allow us to learn from our mistakes and near misses so we don't repeat them.

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