First do not harm limited by systems

While the human factor is causative in about 80% of avoidable adverse events and patient accidents, naming, blaming and shaming reduces patient safety to the mere avoidance of human error.

Professor Michael Marx, Heidelberg Institute of Global Health, University of Heidelberg

Speaking at the Hospital Association of South Africa (Hasa) conference, Professor Michael Marx, of the Heidelberg Institute of Global Health at the University of Heidelberg said research showed that one-sided emphasis on errors and the behaviour of individuals seems to prevail in medicine, and that substituting the words human factors for human error is interpreted more positively. This reduces the significance of human factors to wrong behaviour and its avoidance, but reducing the human factor to behavioural aspects prevents clinicians from exploiting their potential in the direction of system changes for greater patient safety.

"It is deeply disturbing for clinicians to realise how much their performance was shaped by the equipment, tasks, environment and organization around them," Marx said.

He cited research by Badke-Schaub, which says: "Human factors are all physical, psychological and social characteristics of human beings insofar as they influence or are influenced by socio-technical systems. It is about individuals, groups and organisations. Human factors are often shortened to the prevention of errors, but human beings are seen not only as risk factors with regard to errors, but also as security resources with regard to their capabilities."

Goals of human factors

Therefore, according to research by Russ, the goals of human factors in healthcare are twofold:

- support the cognitive and physical work of healthcare professionals and
- promote high quality, safe care for patients.

He said that in addition to having strong foundations and functional funding, health systems need to develop the capacity to measure and use data to learn. Powerful measures for improving healthcare existed, and methods for improving patient safety were tried and tested. These included work processes in hospital design, introducing meaningful standards, and ongoing training. Workplaces should be designed according to human factor aspects.

The strongest interventions he cited included eliminating technical obstacles and solutions, simplifying and standardising processes and equipment, and making vital equipment and apparatus available. This included perfusors, ventilators, infusion equipment and blood pressure monitors, (many of which a significant number of district hospital in South Africa do not have).

A management that participated "noticeably," and supported staff also made a big difference, he said. Research as long ago as 1940 by quality management pioneer, Dr Joseph Juran, recognised a universal principle of the "vital few and the trivial many," when it came to healthcare staffing.

This was why a framework of sound quality of care indicators, "might help us focus on that 20% which influence 80% of the effects," he added.

The foundation of quality improvement, which always took time, included precise measurement, participation and ownership, choosing the most relevant intervention for any particular facility or setting, and "making friends with your implementation researcher".