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## ‘First, do no harm’: shifting the paradigm towards a culture of health

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### Abstract

Over the past 17 years since the release of the Institute of Medicine report ‘To Err is Human’,<sup>1</sup> health services and agencies around the world have increasingly focused on improving the safety and quality of health care. Historically, the commitment by health care professionals to ‘first do no harm’ has produced a focus on the absence of interventions that may cause adverse outcomes. This clinical approach links to the Hippocratic Oath which includes the promise “to abstain from doing harm”. The Oath reminds clinicians to first consider the possible harm that any intervention might do. This approach to interactions with patients leads to an emphasis on the ‘absence of harm’ rather than a focus on the ‘creation of health’. To improve the care of patients, a paradigm shift is required in the health care services from a ‘disease-based intervention’ model to a supportive ‘health’ model. Just as ‘health’ is not the absence of illness, preventing patient harm is not simply avoiding interventions. To ‘first do no harm’ health services need to actively improve their focus on health and the entire patient experience.

### Keywords

Quality, safety, patient experience, culture of health

### Note

Reflections based on the central theme of creating a ‘culture of health’ within health services at the 24<sup>th</sup> International Conference on Health Promoting Hospitals and Health Services, Yale University, New Haven, June 2016.

Over the past 17 years since the release of the Institute of Medicine report ‘To Err is Human’,<sup>1</sup> health services and agencies around the world have increasingly focused on improving the safety and quality of health care.

However, nearly a decade after the IOM report with health services using a variety of quality improvement strategies, preventable medical errors including facility-acquired conditions were estimated to cost the United States \$19.5 billion.<sup>2</sup> In a 2016 paper, Makary and Daniel estimated that medical error is the third biggest cause of death in the US (after heart disease and cancer) accounting for 251,454 deaths per year.<sup>3</sup>

Historically, the commitment by health care professionals to ‘first do no harm’ has produced a focus on the absence of interventions that may cause adverse outcomes. This clinical approach links to the Hippocratic Oath which includes the promise “to abstain from doing harm”. The Oath reminds clinicians to first consider the possible harm that any intervention might do. This approach to interactions with patients leads to an emphasis on the ‘absence of harm’ rather than a focus on the ‘creation of health’.

To improve the care of patients, a paradigm shift is required in the health care services from a ‘disease-based

intervention’ model to a supportive ‘health’ model. Such a shift from a focus on ‘absence’ to a focus on ‘presence’ parallels the changes in definitions of health as ‘whole well-being’ and not just the absence of illness. WHO defines health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”<sup>4</sup> This definition was extended further in 2011 by Huber et al. to “Health as the ability to adapt and to self-manage, in the face of social, physical and emotional challenges”.<sup>5</sup> This definition addresses people as more than their illness and focuses on strengths rather than weaknesses.<sup>5</sup>

In a study published in 2016, Huber and colleagues<sup>6</sup> identified six dimensions of health: bodily functions, mental functions and perception, spiritual/existential dimension, quality of life, social and societal participation, and daily functioning. The study showed that for patients all six dimensions were almost equally important and that patients preferred a broad concept of health, whereas physicians defined health “more narrowly and biomedically.”<sup>6</sup>

It could also be argued that strategies traditionally used in ‘safety and quality improvement’ in health care to reduce harm have often taken an equally narrow approach to improving care provision. In line with the disease-focussed

model, improvement strategies have focussed on hospital-acquired infections, wrong surgical procedures, patient deterioration, pressure injuries and hand hygiene – frequently considered as safety issues in isolation. To realign approaches to quality and to ensure that health services ‘do no harm’ to patients requires consideration of a broader definition of ‘health’ in the context of service provision.

In recent years, studies have found that even the act of receiving care from a health care service can itself ‘decondition’ patients. This means that at post-discharge, patients “physiological systems are impaired, reserves are depleted, and the body cannot effectively defend against health threats.”<sup>7</sup> Krumholz (2013) noted that ‘post hospital syndrome’ may explain the high rate of re-admission for an acute medical problem within 30 days for one fifth of Medicare patients discharged from a US hospital.<sup>7</sup> Rather than comprehensively improving health, it was suggested that the “allostatic and physiological stress that patients experience in the hospital” contributed to longer term harm. Krumholz noted that: “During hospitalization, patients are commonly deprived of sleep, experience disruption of normal circadian rhythms, are nourished poorly, have pain and discomfort, confront a baffling array of mentally challenging situations, receive medications that can alter cognition and physical function, and become deconditioned by bed rest or inactivity.”<sup>7</sup> This study indicates that while focussed on ‘treating disease’, hospitals are concurrently ‘doing harm’ to patients. This evidence has led Krumholtz and colleagues to suggest that perhaps there is no such thing as an ‘unrelated re-admission’.

The current design of health services and health care delivery processes results in patients experiencing care as a series of disjointed events often including physical movement between locations. The underlying causes of poor patient experience typically relate to deficiencies in this disjointed experience – poor team work amongst health care professionals, communication errors and poor patient and family engagement.

When addressing the whole of patient well-being in the future, consideration needs to be given to optimising the care delivery experience including decreasing the stressors associated with the hospital environment. Health care services that have taken a comprehensive approach to patient health have a significant focus on a broad range of factors contributing to well-being including the environment in which care is delivered.

Sleep disturbance in the hospital environment has come under increasing scrutiny, leading hospitals to review approaches to medication intervals, health status checks and ambient noise levels. A 2012 study found that peak noise levels in a hospital room could approach that of a chainsaw,<sup>8</sup> easily exceeding the 30 decibels (just above a

whisper) recommended by the World Health Organization.<sup>9</sup> The researchers found that this disturbance lead to clinically significant sleep loss among hospitalized patients. The authors noted that much of the noise was attributable to preventable sources such as staff conversation and that efforts to reduce noise levels could improve patient sleep and health outcomes.

A study published in 2013 highlighted that about half of all patients woken up for vitals checks probably do not need to be woken<sup>10</sup> despite this routine practice of collecting vital signs every 4 hours on hospitalized ward patients dating back to 1893.<sup>11</sup> In 2010, Bartick et al. investigated efforts to encourage patient sleep through rescheduling activities, overnight medication doses and night time checking of vital signs so as not to disrupt patient sleep.<sup>12</sup> Significantly, the study found a 49 percent drop in the number of patients who were administered sedatives following the introduction of an 8 hour ‘quiet time’ protocol.<sup>12</sup> The authors noted that this small change to hospital routines has the potential to improve patient outcomes, since sedatives are associated with increased risk to patients through falling, delirium or confusion.

To decrease unnecessary risk to patients, health services are putting in place new approaches to improving sleep through ‘Sleep Menus’ (e.g. VA New Jersey Health Care System, USA) and ‘Quiet at Night’ policies (e.g. Massachusetts General Hospital, Boston, USA). The inclusion of questions relating to the hospital environment in patient feedback surveys has also driven a focus on noise reduction particularly in countries where health service funding is linked to improved patient experience scores. The H-CAHPS survey used in the USA asks patients about their experience of night time quietness in hospital. With the link between hospital re-imburement and patient feedback, this has resulted in hospitals reviewing their efforts to ensure that patients have slept.

Other strategies focusing on health that are being introduced by health services include a focus on nutrition and healthy patient meal options and prescribing exercise.<sup>13,14</sup> Patient nutrition and hydration are increasingly receiving attention with dehydration in particular linked to patient safety issues such as pressure ulcers, falls, urinary tract infections, kidney Injury, sepsis, confusion and medication toxicity.<sup>15</sup> Further evidence that we need to revise our view of ‘harm’ has been produced by the National Patient Safety Agency (NPSA) following their collection and analysis of reports of patient safety incidents received from staff in England and Wales. The NPSA found an association between patient safety and poor nutrition, and identified the following themes: dehydration; hydration and mobilisation related to risk of venous thromboembolism (VTE); inappropriate diet for patient; missed meals; prolonged nil by mouth; parental nutrition and excessive complications for central venous

devices; harm from misplaced nasogastric feeding tubes; lack of patient opportunity to wash hands at meal time; development of pressure ulcers; and lack of information about nutrition requirements accompanying patients in transfers of care.<sup>16</sup>

Having a focus on ‘health’ applies not only to patients as ‘customers’ of the health service but also to the staff and health care providers.<sup>17</sup> Evidence shows that improving the staff work environment is also linked to improvements in the patient experience. Research demonstrates that positive staff experience is associated with positive patient experience. The association is negative, however, for staff working extra hours and stress.<sup>18</sup>

The physical design of health care services also impacts on the health of patients. Increasingly evidence provides insight into the best environments for care delivery and for patient recovery. In 2004, Ulrich and colleagues<sup>19</sup> undertook a review of over 600 studies that identified that the improving the physical environment was linked to patient and staff outcomes in four areas:

1. Reduce staff stress and fatigue and increase effectiveness in delivering care
2. Improve patient safety
3. Reduce stress and improve outcomes
4. Improve overall healthcare quality

Leading services are pathing the way for reducing risk to patients through creating a more ‘hospitable’ environment. For example, Griffin Hospital (Derby, CT, USA) - as a flagship Planetree hospital - has adopted a comprehensive ‘health’ focus to patient care including introducing ‘Griffin Health’ and the ‘Live Well Program’ focussed on health promotion and exercise. With a focus on partnering with patients for wellness, Griffin Hospital has established a Center for Prevention & Lifestyle Management. Over 20 years, Griffin Hospital has introduced a range of strategies to create a ‘healing environment’ including patient-centred facility design, focus on nutrition choice, patient friendly information and non-restrictive visiting for families and carers. Fundamental to the approach of this health service is that patient-centered care is the foundation for the delivery of safe, high-quality health care. The recent safety record of Griffin Hospital appears to support this association. Over the 12 month period of 2015/2016, Griffin Hospital reported zero safety incidents with no pressure injuries, surgical site infections, central line infections, catheter associated UTIs or ventilator-associated pneumonia.<sup>20</sup>

Taking a comprehensive approach to reducing harm and supporting health within health care services requires examining the broader patient experience of care and the impact of the military legacy of hospitals on patient experience. To shift the paradigm from where we are now to where we want health care services to be in the future it

is salient to reflect on the history of hospitals. Modern hospitals can be traced back to 100 BC when the Romans established ‘*valetudinaria*’ for the gladiators, slaves and sick and injured soldiers. Archaeological excavations of *valetudinaria* indicate that the design of these early hospitals are not dissimilar to our modern day ‘ward’ arrangement.<sup>21</sup> Indeed, terminology attributable to a military model of healthcare delivery is still with us today in common clinical language (e.g. “discharge” and “triage”).<sup>21</sup>

Historically, the term “hospital” means “a place of hospitality”. The challenge for hospitals in the face of increasing numbers of patients with chronic conditions is to create hospitable environments focused on health. Mounting evidence points towards the need to shift from an acute disease-based care delivery model to model centred around improving health. Redefining ‘harm’ is an essential step in the journey towards creating a culture of health.

Just as ‘health’ is not the absence of illness, preventing patient harm is not simply avoiding interventions. To ‘first do no harm’ health services need to actively improve their focus on health and the entire patient experience.

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