Organisational Safety in Health-Care Setting – Literature Review

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Abstract: In the Unied Kingdom, safety culture, and organisational safety is not only important in theory, but is at the forefront of regulatory intent as well. Since organisational safety is the product of individual and group values, attitudes, competencies and patterns of behaviour that determine the commitment to, and the style and proficiency of an organisation's safety programmes, it is of utmost relevanc to take a closer look at the human factor of organisational safety Present paper endeavours to give an overview of the literature on organisational safety in healtthcare institutions and identify the major points, where the overloaded staff would/could have more role in building awareness and attending to organisational hazards.

Keywords: organisational safety, healthcare, human factor

1 Introduction

Organisational safety is the product of individual and group values, attitudes, competencies and patterns of behaviour that determine the commitment to, and the style and proficiency of an organisation's safety programmes (UK Health and Safety Commission, 1993). In the past decades the theorists of organisational safety have radically changed their focus from assessing and responding to incidents of damage to considering the occurrence of circumstances that create safety issues. Hence the time-orientation of organisational safety has also changed from counting past harms after safety events, to looking at possible future hazards that might give rise to error.

What is more, in some western countries, safety culture, and organisational safety is not only important in theory, but is at the forefront of regulatory intent as well. In 1999, the HSE (the UK industrial safety regulator) has recommended that organisations operating in high risk industries should regularly assess their organisational safety (HSE, 1999). Accordingly, organisational safety surveys - assessing workforce perceptions of procedures and expected behaviours and the

relative importance of safety to other organisational goals - are well-known and widely applied in the industry (Cox, Cox, 1991; Clarke, 1998; Lee, 1998; Mearns, Whitaker, Flin, 2003).

2 Organisational safety in healthcare setting

After Sir Liam Donaldson's report (2000) on the actual state of safety in healthcare general safety measures have fast been adapted to healthcare setting (Nieva, Sorra, 2003; Sorra, Nieva, 2004; Modak et al., 2007). Even a definition specific of health care has been created describing organisational safety as the evasion, prevention and amelioration of adverse outcomes or injuries stemming from the process of healthcare (Vincent, 2010). Hence safety in healthcare setting refers to the need for quick (medical) intervention to handle the crisis at hand. However, safety does not only mean avoiding or minimising damage but aims at reducing errors of all kind. Safety in this sense includes the well-being and processes of those working for healthcare institutions. Health and safety are often treated together with environmental management or environment protection (Tóth 2001-2007).

Yet, health care is a special industry[1], where to avoid potential harm to patients is more important than compliance with systems and protocols.[2] In line with this saving one's life is superior to SOPs (Standard Operating Protocols), if the courses of actions to be followed are different. In industries that have a higher degree of standardisation, safety is generally maintained by the meticulous, disciplined adherence to rules. However, in health care there are only three such areas (that require a protocol approach); namely hand washing, medication and intravenous drug administration. Every other process is up to, or at least to a certain extent involves human deliberation and resolution.

What is more, many of the assessments made for safety purposes are made in response to external demands from different organisations (HSE, HHS, NPSA, …) and therefore tend to be viewed as unnecessarry obligations rather than important parts of vital safety procedures. With the lack of understanding the whys and hows

1 The economic crisis had a deep impact on healthcare systems as well. In 2008 and 2009 people reduced their health-spendings, which caused further difficulties (Csiszárik-Kocsir – Medve, 2012a, 2012b).

2 Indeed, health care is a special industry which requires a special approach from any intervening parts. It is worth starting the intervention at the causes of the changes in the investment approach to which the current researches - dealing with changes in investment customs, the analysis of the investment risks detected and determined and the process as a whole - will make a good starting point (Csiszárik-Kocsir, Á., Szilágyi T. P. 2011, Szilágyi et al., 2013).

of such procedures individuals might fail to comply and hence increase the safety hazards. Even the definition of hazard can be confusing, and might be interpreted by some as deviation from a standard process or rule, while others regard it as intentional variations, responses to local context that may, in fact, increase safety.

Hence, it is difficult to know whether patients are safe in any health care organisation. While there are a range of factors, such as mortality rate or the perceived quality of healthcare services, measuring preventable harm is pretty challenging. Measuring organisational hazards, in order to be able to identify the most prevalent risk factors or provide a common ground for comparing institutions on the basis of their organisational safety is a heavily argued territory. Measuring hard to capture harms such as infections is almost impossible, since the feasible level of such safety measures is strongly correlated with the technical and social setting of a given institution. However, there is an immense and ever growing demand on improving the safety of healthcare.

At present, owing to tragic cases of healthcare failure and the increasing awareness of and expectations on QoL and along with it the niveau of accessible healthcare services, there is an extensive alertness of medical safety issues. This awareness however is not generated by a better organisational safety system but by knowledge of how untrustworthy these systems in the past have been. Researches dedicated to investigating the safety climate of health care institutions have been initiated examining the following six types of harm:

- "Treatment-specific harms, such as adverse drug reactions or complications of treatment.
- Harm due to overtreatment, such as falls resulting from excessive use of sedatives.
- General harm from healthcare, such as hospital acquired infection.
- Harm due to failure to provide appropriate treatment, such as failure to provide prophylactic antibiotics before surgery.
- Harm resulting from delayed or inadequate diagnosis, such as a slow diagnosis or misdiagnosis of cancer symptoms.
- Psychological harm and feeling unsafe, such as clinical depression following mastectomy." (Vincent, Burnett, Carthey, 2013)

On the basis of such survey (NPSA: 2006-2011; NHS: 2012-2014) researchers discovered a much greater frequency of error and harm than they previously have supposed.

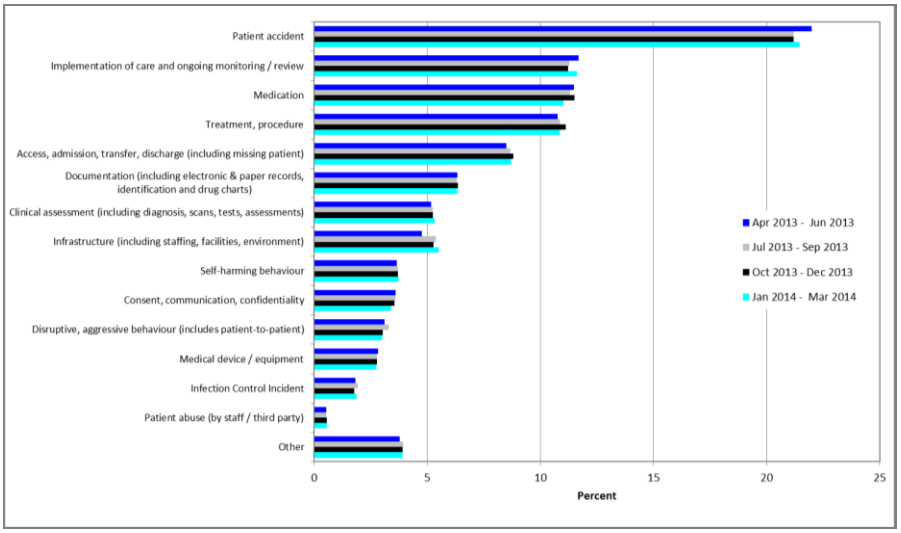

Figure 1

Proportion of incidents by incident type and quarter (04.2013-03.2014)

Source: NHS (2014): NRLS Quarterly Data Workbook up to June 2014

Over the past 10 years there has been a huge volume of data collected on medical errors and harms to patients in the UK (Vincent, C., Burnett, S., Carthey, J., 2013). According to their findings the number of safety issues has not been decreasing over the past decade. The main group of hazards the patients are facing in healthcare organisations are: patient accidents, poor implementation and failed revision of care and monitoring, deficient medication.

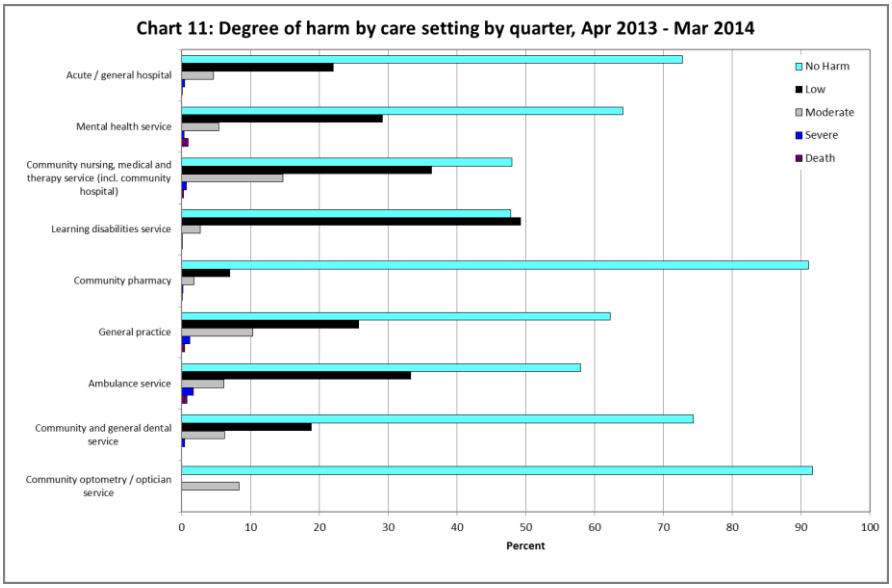

Figure 2
Degree of harm by care setting by quarter (04.2013 – 032014)
Source: NHS (2014): NRLS Quarterly Data Workbook up to June 2014

With the help of data in Figure 2 it is easily observable that safety issues are present in every kind of healthcare institutions. While death or severe damage is only in a small proportion of the cases the result of such failure, if we regard the total population of 1.549.587 reported cases, the number of those with serious consequences adds to almost 1% (10.631 incidents). This means that every 130th patient in healthcare treatment ended up far worse, as a consequence of the care, than he/she had been beforehand.

3 Factors influencing organisational safety in healthcare

On the basis of the data presented in the previous part, it is important to investigate the factors affecting the safety and quality of care delivered to patients. Teamwork, individual routine, niveau and use of technology, working conditions, and organisational ethos and culture may all be relevant. Relevant international literature enumerates the following factors:

- physical structures such as buildings and equipment (Donabedian, 2003),
- basic institutional characteristics such as number and qualifications of staff (Aiken, Sloane, Sochalski, 1998),
- staffing levels and the organisation of care (Pronovost, et al., 1999; Main et al. 2007),
- staff morale and working environment (West et al. 2002, Winter 1997),
- motivation, attitudes and behaviour of staff (Lilford et al. 2004),
- employees' attitude towards safety (Hofmann, Stezer, 1996; Barling, Loughlin, Kelloway, 2002).

As it is visible from the list above, the majority of factors influencing organisational safety are connected to healthcare personnel. However, according to a comprehensive survey of health care workers' workload the amount of work – both in mental-intellectual and physical terms - is so high that healthcare workers are often unable to perform even their primary caregiving tasks faultlessly (Bán, 1989). "Logistic mentality could be also used in case of extending the 7R definition of logistics to human capital and formulating a definition regarding for human capital, placing the human in the centre. Placing that in the centre we could claim that the right employee, with the right competences, in the right condition, at the right place, at the right time, at the right cost, being in service at the right employer, could mean competitiveness for the company." (Pató, 2014) When it comes to the statutory regulation of worktime-to-rest time ratios, the medical profession is usually an exception to the rule (Weinger and Ebden, 2002). In health care, physicians and nurses spend time at work well in excess of respective statutory requirements (especially due to the hospital night duty system). Practitioners of most medical trades shall do their share at weekends, during bank holidays, in the afternoons, and at nights as well. The multiple-shift rule of work and (night) duty system affect health care workers' physical and emotional loads considerably. Efforts made to cope with variations in the rythm of work consume extra energy. These findings are extremely alarming as physical overload may lead to inattention, forgetfulness, low spirits, and inadequate attendance on patients and/or safety legislations, and, ultimately, fatigue. Fatigue, is more than a feeling of weariness or drowsiness. It is an acute ongoing state of mental and/or physical exhaustion that prevents people from functioning within normal boundaries. This obvious has implications for workplace and public safety (WorkSafe Victoria, 2008).

What is more, the lengthening of worktime and chronological reorganisation of work performance may induce various physical and psychic disorders. Close correlation of cardiovascular diseases and mortality with low control over the work schedule has already been demonstrated by early medical-sociological studies (Karasek et al., 1981). Based on literary data, physicians accomplishing a lot of night and weekend duties are particularly at risk of burnout (Firth and Cozens, 1987). Higher level of fluctuation resulting from the lower level of stamina and wellbeing also invites safety hazards stemming from lack of adequate

level of field relevant or organisationally prescribed knowledge (Nahrgang, Morgenson, Hofmann, 2011).

The level of stress at work health care workers are exposed to is significantly higher than workers in other professions are (Wall et al., 1997). Unfortunately it also affects the safety of the health care organisations adversely. International studies show a significant incidence of psychic disorders, dependency on alcohol and drugs among physicians, all of which are (capable of) altering the perception of safety hazards and the functioning of the cognitive system (Tyssen et al., 2001; Lambert, Lambert, Ito, 2004; Zammuner and Galli, 2005). However, it is a thumb rule of organisational safety that if we want to be safe we have to maintain alertness and safety awareness. Where staff is too tired to think about organisational safety issues, they do not report or challenge problems.

4 Summary and recommendations

As it has been demonstrated in this paper, the organisational safety of healthcare organisations is far from optimal. What is more, healthcare is an industry, where the classical approach of standardisation cannot really be applied, since in healthcare to avoid potential harm to patients is more important than compliance with systems and protocols. Hence most processes involve human deliberation and resolution. A safe organisation is therefore established on the attitudes and values of the members of the organisation.

Employees in healthcare institutions, however, are overloaded. The excessive workload, and working in shifts, in addition to the constant responsibility for others' life may induce various physical and psychic disorders, burnout and fatigue[3]. Hence staff is often tired to think about organisational safety issues. Consequently, in order to create a safer organisation, employees and their circumstances have to be addressed.

While the change in physical structures and basic institutional characteristics, such as number and qualifications of or the organisation of care is most often a question of money, motivation, attitudes and behaviour of staff and the employees' attitude towards safety might be altered by a switch of organisational culture to that of safety culture.

[3] In addition they tend to earn less money then the workers with the same level of qualification and responsibility in manufacturing (furthermore the type of responsibility cannot be compared). In Hungary there is a trend that while more and more jobs are created in sectors with better payed industrial working positions (Bereczk, 2014), the rate of real wages in public service remains relatively constant over time.

Organisations with a positive safety culture are able to develop a sensitivity to operational hazards; to identify problems early, so that actions can be taken before they threaten safety. Such organisations are characterised by shared perceptions of the importance of safety and by confidence in the efficacy of preventive measures.

In a safety culture, the role of the management is of high importance in implying that safety needs to be taken seriously at every level of the organisation. Managers need to prove that they are dedicated in creating and operating an organisation that gives the safety of patients and staff a priority. Clarity of purpose is also needed when developing safety measures and procedures.

Every organisation will, if they look, discover numerous incidents and deviations from practices deemed to be safe. Hence safety monitoring is critical and should also be regarded as such. Although healthcare organisations use a wide variety of formal and informal methods to understand how individuals and processes are connected to sagety hazards or the prevention thereof. However, it is important to keep in mind that staff needs time, freedom and authority to not only just monitor but intervene when necessary.

Improved working conditions, health and safety measures taken have significantly contributed to the growth and life expectancy of population for many centuries (Szigeti-Tóth 2013, 2014; Borzán 2004, 2014). Nevertheless, safe organisations do not only try to stick to the best practices of the industry, but actively seek out safety incidents, and respond by attempting to harness the learning to influence their future functioning (Vincent, 2010). Hence, anticipation - thinking ahead and envisioning possible problems and hazards - is a key element of organisational safety. In line with this, safety culture is a system, where questioning is encouraged and those willing and eager to be involved in making plans preparing for safety incidents are empowered.

To sum it up, healthcare organisations are in a tricky situation, when it comes to organisational safety, since the awareness and wilingness of the already overloaded staff would be a key elemet of safety culture. Managers, by creating clear measures and procedures and by setting personal example are able to foster an increased awareness, however structural changes are inevitable for addressing the issue of organisational safety in its entirety.

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