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Learning from the Nuclear Industry

There have been many publications focusing on how healthcare can learn from other industries, namely the aviation and manufacturing sectors but comparisons with the nuclear industry are not so common. Peter J. Provonost from John Hopkins University School of Medicine and Daniel W. Hudson from the US Nuclear Regulatory Commission have changed this. In an edition of BMJ Quality and Safety Journal in 2012 they published a paper entitled "Improving healthcare quality through organisational peer-to-peer assessment: learning from the nuclear power industry".

So what can hospitals learn from the nuclear industry? Well, in reality, the two industries are not so different. Safety and quality are hugely important issues in both sectors. There is a strong need for external regulation and also internally-driven efforts for improvement. It is internally that healthcare seems to be lagging behind the nuclear power industry.

After the Three Mile Island accident in Pennsylvania in 1979 the nuclear power industry set up the Institute of Nuclear Power Operators to improve safety. The institute set up a peer-to-peer assessment programme to share best practices, safety hazards and methods to improve both safety and performance. Provonost and Hudson believe healthcare needs a similar clinician-led, industry wide process to share best practices, hazards and processes to improve patient safety and work alongside the external regulatory bodies.

According to Provonost and Hudson, the key elements of peer-to-peer assessment model are as follows:

- Systems-based focus
- Horizontal learning
- Voluntary participation
- Non-punitive approach
- Multidisciplinary external peer reviewers

To set up a peer-to-peer assessment process players in the healthcare industry must work together to create and oversee the assessment process. Collaboration between clinicians, managers and technical experts is essential to develop the correct tools. A training model is the next step, along with the training of the first peer evaluators. Finally, a sustainable financial model is required. Undoubtedly this is a lot of work but considering the importance of patient safety in our hospitals and the cost of adverse incidents, such an assessment process could be an invaluable tool in our institutions' goal of better quality care for patients.

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