

NAVIGATING DIFFERING CULTURAL AND ETHICAL FRAMEWORKS DURING ORGANIZATIONAL CHANGE

A challenge for radiation protection experts

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Abstract

Organizational change is a common feature of healthcare provision today. Approaches such as New Public Management (NPM), sometimes referred to as corporatisation, have taken hold in many countries. Whilst the aims may be laudable there can be unintended consequences creating problems for Radiation Protection Experts (RPEs). Empowering senior management executives is a key theme of NPM. If this goes hand in hand with disempowering RPEs there is a risk that radiation protection (RP) can suffer. The system of radiological protection is built on three pillars: science; ethical and social values; and experience. A current ICRP consultation identifies the ethical foundations underpinning the system. Malone and Zolzer describe the ethical basis of RP in diagnostic radiology, adding prudence and honesty to traditional medical ethics. IRPA emphasize that RP professionals within an organization must take the central role in supporting management to drive and embed RP culture throughout the organization. Problems can however arise from the unfamiliarity of many managers with fundamental RP concepts such as justification, optimization and uncertainty of radiation risks. Recognition by management of the role of RPEs is crucial. This requires good communication channels, facilitating engagement between RPEs and senior management to strengthen radiation safety culture in healthcare.

1. INTRODUCTION

The Bonn Call-for-Action [1] identifies the need to strengthen safety culture in medicine. Amongst the many definitions of culture, Matsumoto has defined it as: *The set of attitudes, values, beliefs, and behaviours shared by a group of people, but different for each individual, communicated from one generation to the next* [2]. Culture can vary widely between different groups of people. Tensions can arise when different groups of people interact, particularly when there is unfamiliarity with fundamental tenets held by one group or another. Cultural awareness is important to avoid or resolve conflict which may ensue.

The global system of radiological protection has been developed over many years, notably by ICRP [3]. The system relies on the expertise of RPEs, who undertake key roles developing, interpreting and implementing radiation safety systems at international, regional, national and local levels. IRPA has identified knowledge, skills and competences required by an RPE, noting that competences of an RPE include substantial elements of radiation safety management [4]. RPEs have been instrumental in creating the systems designed to ensure the safe use of radiation in medicine, and continue to play a leading role in managing radiation safety in healthcare.

There are many different models for the provision of healthcare, with governments worldwide attempting to reconcile increasing demands for healthcare with a general insufficiency of resources to meet all demands. In a number of countries practices traditionally more associated with the private sector have been introduced into the public sector, including healthcare services. This movement is sometimes known as New Public Management (NPM). Its features include decentralization, increased managerialism and, anecdotally, creation of many new general management positions [5-7].

Individuals appointed to such posts do not for the most part have substantial scientific training, and may be uncomfortable with fundamental scientific concepts such as uncertainty which are central to the practice of radiation safety. Few general managers will have a good initial understanding of radiation dosimetry and risks, nor concepts of justification, optimization and dose limitation, even those with a clinical background in areas such as nursing, physiotherapy and medicine. The dual roles of healthcare professionals with both clinical and managerial responsibilities in their areas of expertise are sometimes acknowledged by the term 'hybrid manager', but the extent of RPE radiation safety roles and responsibilities may not be fully recognized by general managers. This can lead to managerial ambiguity and confusion.

Such problems can come to the fore at times of organizational change, particularly if those appointed to newly-created non-clinical manager posts are not well informed about existing systems of radiation protection

within their organization and beyond. This paper explores differing cultural and ethical influences which may co-exist. It relates to the topic of : *How are we strengthening radiation safety culture in healthcare?*

2. METHODS

A mixed methods approach is reported, comprising observation, literature review and qualitative research. The work has been given impetus by a single case study in which an RPE and Medical Physics Expert (MPE) encountered surprising resistance from middle managers when seeking to improve justification and optimization. The managers concerned, who had recently been appointed to newly-created positions after organizational change, were unfamiliar with basic radiation safety concepts and unwilling to accept the advice of the hospital's RPE, who raised concerns which were subsequently corroborated by regulators. Communication channels between the RPE and senior management had been substantially weakened by organizational changes, despite repeated efforts by the RPE to engage with the increasingly multi-layered management structure. Essentially the RPE's professional expert advice was over-ridden by middle managers, who provided misleading information to senior managers in misguided pursuit of a 'good news only' culture and to cut costs. Medical exposures were not optimized and the hospital subsequently incurred reputational damage.

Whilst the literature review is in no sense a systematic review, it is heartening to find readily-accessible publications from ICRP, IRPA and other authorities in the radiation protection field which address related issues. Articles in the literature casting light on NPM are further sources of reference.

3. RESULTS

European Basic Safety Standards (BSS) [8] define an RPE as a recognized individual or group having the necessary knowledge, training and experience to give radiation protection advice to ensure effective protection from dangers arising from exposure to ionising radiation (Article 4). They direct member states to require undertakings to seek advice from an RPE on relevant issues (Article 34) and matters relating to compliance with applicable legal requirements (Article 82). They require that medical exposures be justified (Article 55) and optimized (Article 56). They identify MPE responsibilities, which include taking responsibility for dosimetry of medical exposures (Article 83). IAEA Basic Safety Standards [9] require formal recognition of qualified experts (2.21), and that they be consulted as necessary in the proper observance of these Standards (2.46).

IAEA RS-G-1.5 [10] notes that *there may be a dual management system in hospitals* (clinical and administrative). It also notes that *qualified experts* (and others) *have roles and responsibilities for the application of the relevant radiation protection regulations and rules in their particular fields of activity*.

The term 'Radiation Protection Expert' is included in the ILO International Standard Classification of Occupations (ISCO-08) [11]. IRPA Guidance on certification of an RPE lists the following competences: *Manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts; take responsibility for managing professional development of individuals and groups* [4]. These competences underline managerial aspects of an RPE's role.

Many publications describe New Public Management, a term which has been described as an attempt to make the public sector more businesslike using ideas and management models borrowed from the private sector. Its core themes include command and control, targets, a strong focus on financial control, new forms of corporate governance, performance monitoring, use of protocols to ameliorate professional behaviour, handing power from individuals to management and concentrating power to the strategic core of organizations [12-13]. The NPM approach in healthcare has always been controversial, and its effectiveness questioned [14-17].

Iles and Sutherland have studied organizational change in healthcare [18], drawing on the work of Ackerman comparing developmental change with transformational change [19]. Developmental change (Fig 1) is incremental change that enhances or corrects existing aspects, often focusing on improvement of a skill or process. By contrast transformational change (Fig 2) is radical, requiring a shift in assumptions made by the organisation and its members. Transformation can result in an organisation that differs significantly in terms of structure, processes, culture and strategy. In practice organization change is chaotic, often involving shifting goals, discontinuous activities, surprising events and unexpected combinations of changes and outcomes [20-21]. The time period during which various phases of transformational change take place is not easily controlled.

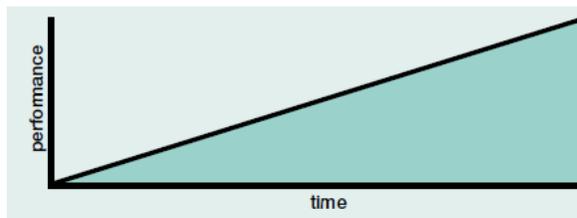


FIG. 1. Developmental change: Improvement on existing situation

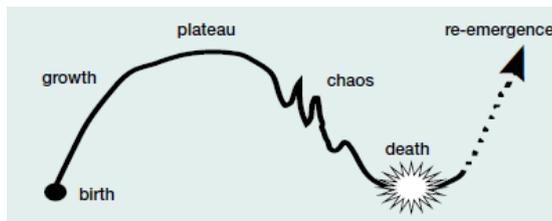


FIG. 2. Transformational change: Emergence of a new state, unknown until it takes shape

In line with the Bonn Call-for-Action to strengthen radiation safety culture in health care [1], Berwick has written *In the end culture will trump rules, strategies and control standards every single time, and achieving a vastly safer NHS will depend far more on major cultural change than on a new regulatory regime* [22]. Hudson refers to the evolutionary model of safety culture: Pathological → Reactive → Calculative → Proactive → Generative [23]. IRPA recognizes the importance of a sound radiation protection culture, noting that RP professionals must take the central role in supporting management to drive and embed radiation protection culture throughout the organization, whilst noting that they have *the most difficult of leadership roles – that of indirect leadership of their non-RP colleagues, who in many cases may be their business leaders or managers* [24]. The IRPA report notes that radiation protection culture improvement is heavily dependent on the support and leadership behaviours of managers at the highest level within an organisation. Chapple et al have proposed a ‘ten point assessment’ framework to assess radiation safety culture in the medical sector, ranging from ‘Engagement of Management’ to ‘Effective communication’ [25].

ICRP have recently undertaken a consultation on a draft report on the ethical foundations of the system of radiological protection, noting that the system is built on three pillars: the science of radiological protection combining knowledge from different disciplines, a set of ethical and social values, and the experience accumulated from the day-to-day practice of radiological protection professionals [26].

4. DISCUSSIONS

The global radiation safety system is a result of developmental change, with steady improvements built on a platform of existing knowledge created and refined by scientific methodology over more than a century. RPEs are central to this system, which is based on science, social and ethical values, and experience. RPEs have a significant role in the management and leadership of radiation safety and it is important that organizations understand and support this management role. There is a risk that organizational change, perhaps associated with NPM/corporatisation, can result in the disempowerment of RPEs, which can have profound adverse consequences for organizations, patients and staff. There is a need for greater awareness of radiation safety culture issues, including the need for organizations who use radiation to ensure effective communication channels to enable RPEs to undertake their roles efficiently, and to provide and create a positive work environment based on mutual respect and shared understanding [24]. If transformational change is undertaken, how it is implemented is crucial.

5. CONCLUSIONS

Recognition by management of the role of RPEs is crucial. This requires good communication channels, facilitating engagement between RPEs and senior management to strengthen radiation safety culture in healthcare.

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