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The Role of Peer Review in Assessing the Security of Radioactive Sources used in Medical Applications

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Introduction – What is Peer Review?

A tool to find out what's wrong...?

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Peer Review – a definition

- “An evaluation of scientific, academic, or professional work by others working in the same field.”

- Peer review is seen as fundamental to the process of publishing scientific articles and papers, to ensure the validity of the methodology, results and conclusions.

- In the context of professional work it is seen as a way of benchmarking or comparing one service with that provided by another, and to maintaining standards.

Peer Review - Continued

- In medicine, peer review is part of Clinical Audit. It is a tool in the process of audit and governance of medical practice, and in the teaching/training of medical professionals.

- An essential aspect of professional peer review is that it is ***not*** part of Regulatory Inspection/Audit regime by a national Competent Authority. It is not intended to be confrontational or punitive in any way.

- However, it is used and regarded in some countries as a way to rate and if necessary censure the conduct of members by their professional society.

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Examples of Peer Review in the NHS

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Examples of Peer Review

- Peer Review is seen as a key component of the Clinical Audit and Governance process to ensure that all patients get the most appropriate care and treatment.

- Examples in the UK NHS include:

  - Radiotherapy – particularly prompted by a number of high-profile incidents involving the incorrect treatment of patients;

  - National Breast Screening Programme – established in the late 1980s with QA at it's core and requiring Clinical Audit and Peer Review;

  - Surgery – Peer Review/Audit has for a long time been fundamental to ensuring surgical standards and outcomes across the country;

  - General Practitioners – more recently subject to audit and peer review.

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WINS Pilot Study of Peer Review for Source Security in Medical Facilities

A hospital can't be as secure as Fort Knox....(?)

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WINS Pilot Project

- A Draft Best Practice Guide (BPG) was produced, designed as a companion to BPG 5.4 on Security of Sources in Medical Applications.
- The BPG recognises the very specific management and working environment in Healthcare facilities (HCF – otherwise known as hospitals!) that makes source security challenging – and that Peer review by experienced professionals in the field is extremely useful in that context.
- Two UK HCFs were approached to participate in Pilot Project.
- After a “false start”, the Peer review at each HCF went ahead in February-March 2018.
- The results of the Peer Reviews informed a final revision of the draft Guidelines prior to its publication in April/May 2018.

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Method – Initiating and Conducting a Peer Review

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Best Practice Guide 5.6 (now “Guidelines”) - Peer Review Methodology

- Initiating the Review
- Planning the Review
- Convening a Review Team
- Conducting the Review
- Producing the Report
- Post-Review Follow-up

Initiating a Review

- The proposal to carry out a Peer Review must have the agreement of senior HCF management – they must commit to the process. The proposer, who may be the local scientist or Head of Service taking responsibility for source security will want to get senior HCF management on board at a very early stage.

- The HCF should confirm with the national Regulatory Authority that they are happy for the peer review to be carried out. The Authority may require some further details of the Review before agreeing to it.

- The HCF will want to set out the scope of the review and identify possible colleagues from other HCFs who will form the review team, either directly, or through an intermediary organisation.

- The HCF or the intermediary organisation will identify the team leader.

Planning the Review

- Defining the Scope and Objectives of the Review.
- Defining the timescale for the review, report writing, and requirements for (say) a preparatory visit by the review team.
- Defining the information/documentation required by the review team in advance, and to send it to the team.
- Setting an agenda for the review team visit to the HCF (including for the preparatory visit if considered necessary).
- Identifying and notifying key staff within the HCF so that they are available to be interviewed by the review team during the visit.

Convening the Review Team

- A multi-disciplinary team will need to be identified (2 or 3 individuals).
- They will need to include members with experience of the use of radioactive sources in medical applications, radiation protection & source security legislation and best practice, and hospital management.
- The team will also need good interview techniques, and communicative and report-writing skills. They must have the time available to review all documentation sent to them prior to the visit.
- It will also be advantageous if the team are familiar with resources available for guidance such as the WINS BPG 5.1 & 5.4.
- The HCF to be reviewed must be able to have trust in the members of the review team - their expertise and experience, but also confidentiality. NDA or basic vetting procedures might be required.
- Several preparatory meetings (and/or conference calls) may need to be organised.

Preparing for the Review

- The preparatory visit will be useful for several key aspects of the review visit itself:
  - To familiarise the review team with the HCF management structure, and especially to identify key posts with a responsibility for source security;
  - To confirm the agenda for the review visit;
  - To identify and confirm specific HCF members of staff that will need to be interviewed;
  - To identify and review any HCF documentation not previously forwarded to the review team;
  - To sign any confidentiality paperwork required by the HCF.

- When a preparatory visit at the HCF is not feasible/cost effective, conference calls should be organised .

Conducting the Review

- The review visit itself includes the core work of the team:
  - Conducting interviews with key staff. It is important for the team to remember that this is a peer review not a regulatory visit.
  - Interviewees should never be made to feel that they are being interrogated. They should be encouraged to be honest in their answers.
  - Undertaking observations – watching the work practices. This may be restricted by the presence of patients.
  - Feeding back immediate and initial observations during the day as well as at the closing meeting.

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Post Review Reporting & Feedback

Jim Thurston as Charlie "the Duck" gives some peer review feedback on source security….

from the play "One Man, Two Guvnors"
by Richard Bean

(with apologies!)

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Reporting on the Review

- It is vital that the review team identify best practice already present in the HCF and include it in the report.
- Benchmarking is useful – comparing solutions to the same legislative requirements. Can the review team share their own best practice to offer to the HCF in the report?
- The team may be expected to write a draft report and present it to the HCF and a closing meeting before leaving the premises. The HCF may insist that no materials – documentation etc. – can be taken away after the review visit.
- The team leader may then be expected to complete a final report after feedback from the HCF with 5-7 working days.
- Any confidentiality matters related to the drafting and finalisation of the report must be addressed before the start of the review

Reporting on the Review

- The Peer Review report findings should cover the following areas:
  - Governance Arrangements (roles and responsibilities for radioactive source security);
  - Radioactive Source Security as part of an Integrated Risk Management framework;
  - Implementation of Security Arrangements;
  - Attitudes towards Security throughout the Organisation (Security Culture);
  - Required security skills and competencies for individuals involved in the management of sources;

Reporting on the Review

- The report will structure the key findings into different levels: Strategic for executive level actions, Tactical for local senior management, and Operational for those directly supervising the day to day work.
- The report should include both recommendations and suggestions, and indicate an overall assessment rating of the standard of source security within the HCF.
- Recommendations will be given in response to matters which are considered to be more significant. Suggestions are merely where there is perhaps alternative solutions that may be more practicable or appropriate.
- An overall rating assessment should reference the maturity scale provided in the Guidelines (Level 1 – Resilient – through to Level 5 – Vulnerable).

Post-Review Follow-up

- The HCF is solely responsible for following up on the actions – the recommendations and suggestions – raised in the review report. HCF management can choose to accept or reject any or all of the proposed actions, but should follow up to ensure that those agreed are indeed implemented.

- The review team has no responsibility for following up to confirm that the recommendations and suggestions have been implemented.

- However, it may be decided that this peer review will be the first of a series, and the review team may be expected to return at a later date (perhaps after months or indeed years) to consider whether standards nave been maintained and what improvements have been made.

- It may also be considered appropriate for the review team to have a debriefing session to review lessons learnt and to help with their work on future peer reviews.

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Conclusions

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Conclusions

- The Pilot Project demonstrated the feasibility and potential added value of conducting peer reviews of the security of radioactive sources used in medical applications (including as a continuous improvement tool).
- Ideally a (national) lead body would need to be identified and/or established to co-ordinate the process to ensure the sustainability and consistency of the results.
- Periodic peer reviews would help to ensure the implementation of the findings.
- To prove worthwhile to HCF management the process must be demonstrated to be practical and cost effective.