

INTERNATIONAL ATOMIC ENERGY AGENCY

Establishing a Sustainable Safety Culture

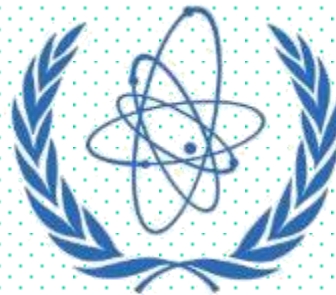
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Radiation Protection of Patients Unit

Division of Radiation, Transport and Waste Safety

30 November 2015



IAEA

The Bonn Call-for-Action

Joint position statement with WHO, highlights **ten main actions, and related sub-actions**, that were identified as being essential for the strengthening of radiation protection in medicine over the next decade

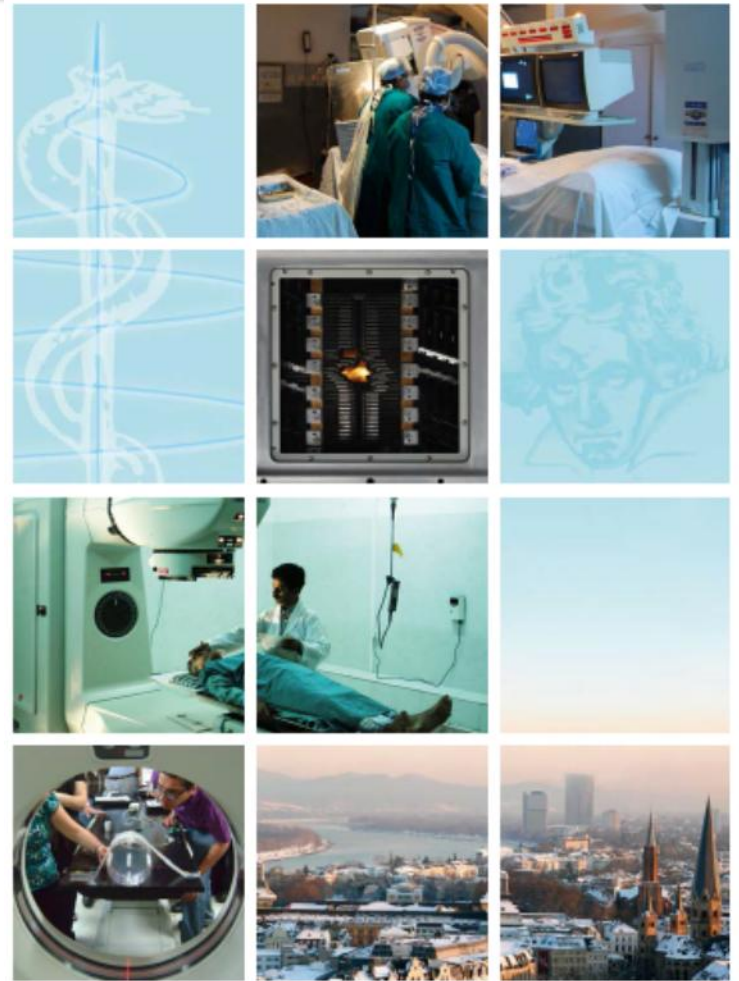


BONN CALL FOR ACTION

10 Actions to Improve Radiation Protection
in Medicine in the Next Decade

The Bonn Call-for-Action

- Enhance the implementation of the principle of justification
- Enhanced the implementation of the protection and safety
- Strengthen manufacturers' role in contributing to the overall safety regime
- Strengthen radiation protection education and training of health professionals
- Shape and promote a strategic research agenda for radiation protection in medicine
- Increase availability of improved global information on medical exposure and occupational exposure in medicine
- Improve prevention of medical radiation incidents and accidents
- **Strengthen radiation safety culture in health care**
- Foster an improved benefit-risk-dialogue
- Strengthen the implementation of safety requirements globally



BONN CALL FOR ACTION
10 Actions to Improve Radiation Protection
in Medicine in the Next Decade

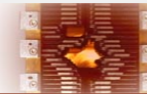
Request from Member States

Regional Coordinator's meeting 4-8 May 2015

6 member states requested national training on safety culture in order to promote radiation protection and safety of patients



SAFRON



Safer use of radiation in radiotherapy through learning and reporting

SAFRON aims to enable global shared learning from safety related events and safety analysis in order to improve the safe planning and delivery of radiotherapy.

New User?

[Request Registration](#)

Actions

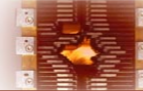
[Browse Safety Info by Process Step](#)

- Continue to see lack of safety culture in reports, contributing factors, and corrective actions
- Human error continues to be the cause of the error without consideration or investigation as to why the person behaved in such a manner
- Lack of understanding on the purpose and how to perform a root cause analysis and determine corrective action to mitigate future incidents

SAFRON

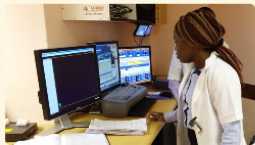


IAEA SAFRON Safety Reporting and Learning System for Radiotherapy



Select Dataset: All incident reports

Home Process Steps Incident Reports Documents and Links Registrations Statistical Reports Help



Safer use of radiation in radiotherapy through learning and reporting

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Actions

[Browse Safety Info by Process Step](#)

Suggest preventive action(s): Getting an new CT soon and new planning system which will hopefully give better DRRs

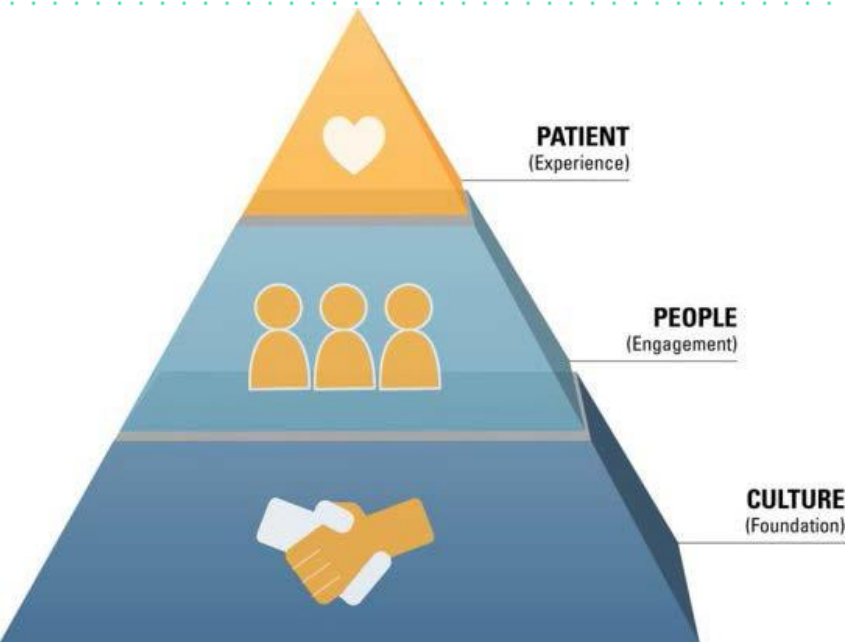
Suggest preventive action(s): No preventive actions suggested

Describe contributing factors to the incident: other issues with treatment plan - causing delays and re-set up required

Describe corrective action to take, e.g. modification of remaining treatment: A Root-Cause Analysis was performed of the incident

Suggest preventive action(s): The primary oncologist has been notified and decided that no corrective action was needed. Fractionation was to be continued at one fraction per day and end when 33 fractions were reached. User rights for therapists will be revised and future overrides of daily dose limits will require a physicists sign-off.

October 2015 Safety Culture



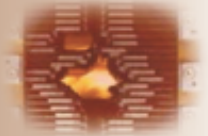
SAFRON

<https://tppop.iaea.org/SAFRON/Default.aspx>

A Newsletter on Patient Safety in Radiotherapy

October 2015

SAFETY CULTURE



Radiation Protection and Safety of the Radiotherapy Patients

Patient safety is essential to assure patient care. Patient care is a component of the treatment provided. Research has indicated that the interaction between healthcare professionals and patients contribute to improvements in the patient health in a shorter period of time. Safety is a continuous process. With every new patient, staff, or equipment acquisition there will be new safety challenges. Events reported in SAFRON provide an opportunity to discuss the needs for both radiation safety and patient safety. The IAEA has promoted the importance of safety through standards, guides, and reports. For radiotherapy facilities these standards, guides, and reports provide a baseline to build a robust safety system.

Why the Focus of Patient Safety?

As long as humans are involved in patient care, we will continue to have safety concerns. This is not always a bad situation, as research has indicated that interaction between healthcare professionals and patients contribute to improvements in patient health in a shorter period of time¹. Patients like the personal attention they receive from radiation therapists, nurses, medical physicists, and radiation oncologists. But human error is the largest contributing factor to events in radiotherapy. A strong safety culture is the foundation for improving patient safety and even treatment outcomes. Yet we tend not to focus on building a strong foundation for patient safety. (continue on page 2)



What are the Professionals saying?

"For the most part, radiation therapy is very safe. Nevertheless, there are recognized risks. Further, the interactive complexity of modern practice makes it challenging predict where problems will occur. Presently, much of the emphasis on making radiation therapy safer is in the realm of technical solutions: medical physics, computer software, etc. These initiatives are necessary and will certainly help to address the safety issues. This approach alone, however, will not bring us to the level of reliability we strive to achieve. We can and should do better, and the way to do that is to apply lessons from engineering/industry. We must consider the leadership/administrative component, the workplace and workflow component, as well as the people component, to minimize errors. We must use Lean improvement principles to motivate and enable all colleagues to be actively involved in assessing and improving their own systems -- This will increase safety mindfulness and help to create a "safety culture." It is only through this multipronged approach that we can become the highly reliable organization that our patients deserve."

Lawrence Marks, radiation oncologist
co-author of the book titled
[Engineering Patient Safety in Radiation Oncology](#),
University of North Carolina Pursuit for High
Reliability and Value Creation

1. Green, O, International Journal of Quality in Health Care, Patient centredness and quality improvement efforts in hospitals: rationale, measurement, implementation, <https://intqhc.oxfordjournals.org/content/23/5/531.full>

Thank you
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