



World Health
Organization

Kit de herramientas para la implementación del Llamado de Bonn para la Acción



Maria del Rosario Pérez

Departamento de Salud Pública, Determinantes Ambientales y Sociales de la Salud

Simposio Iberoamericano sobre PRM, La Habana, Cuba, 16 de abril de 2018

Herramientas (“tools”): a qué nos referimos?

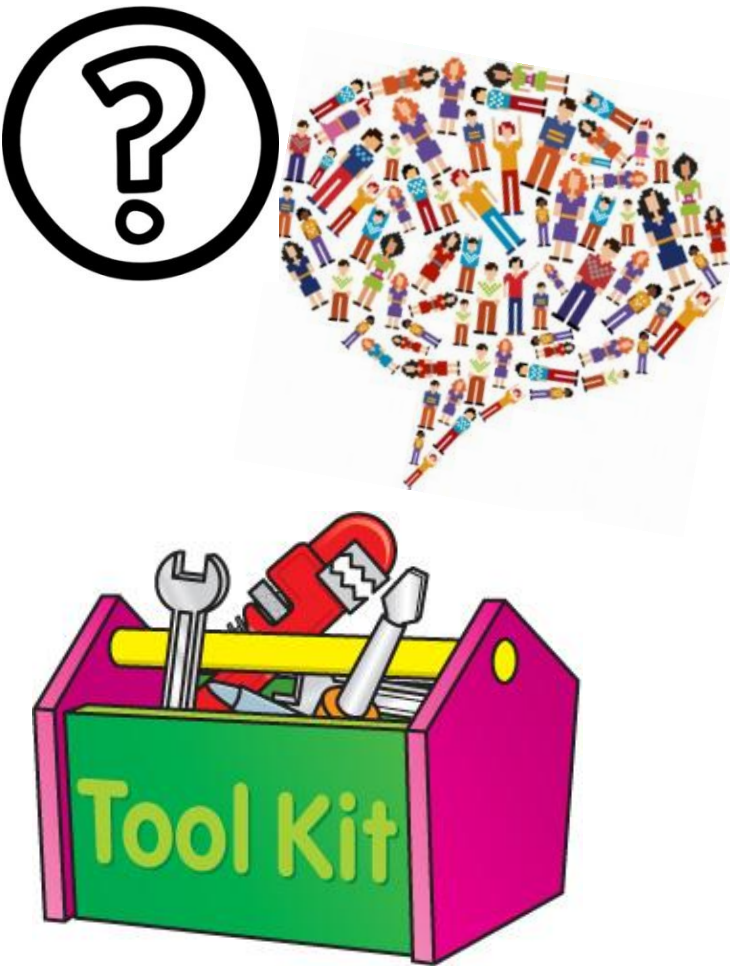


- **Herramienta (“tool”)** es un instrumento que ayuda a sus usuarios a completar una tarea específica.
- En este contexto la palabra “herramientas” se refiere a guías, manuales, módulos de educación y entrenamiento, folletos, posters, softwares, listas de chequeo, etc que contribuyan a implementar una recomendación o estándar de practica.



World Health
Organization

Kit de herramientas (“toolkit”)



- **“Toolkit:**” en general se utiliza para referirse a una colección de herramientas que, usadas en conjunto, pueden apoyar un programa de acción o facilitar la coordinación de esfuerzos para implementar recomendaciones y/o alcanzar estándares de practica.
- En el presente contexto **“BCfA Toolkit”** se refiere a una colección de herramientas para apoyar la implementación del **Llamado de Bonn para la Acción.**

Kit de herramientas (“BCfA Toolkit”)

- Como una iniciativa de seguimiento de las conclusiones y recomendaciones de la Conferencia Internacional de PRM de Viena 2017, el OIEA convoco una reunión en Viena, Austria en marzo de 2018 para acordar el concepto, formato y contenido de un conjunto de herramientas de apoyo para la implementación del Llamado de Bonn para la Acción:
 - IAEA Technical Meeting on Experiences with the Implementation of the Bonn Call for Action, Vienna, Austria, 5-7 March 2018

Algunos criterios sugeridos

- Que ayuden en forma directa a la implementación del BCfA
- Que sean gratuitas (mención de otras no debe ser promoción), consistentes con las NBS, de autor/ originador identificable
- Priorizar la validez internacional/ regional/ nacional / local; destacar las que se refieren a aspectos/ acciones que otras no cubren, alentar el multilingüismo.
- Localización primaria bajo una acción, aunque se podran asociar a mas de una, identificar tipo de herramienta.

Sugerencias para cada herramienta

- Acción primaria, otras acciones
- Tipo de herramienta (Ej: información general, material de educación / entrenamiento, guía, estándar, base de datos, etc
- Audiencia primaria: Ej: organizaciones sanitarias, médicos prescriptores, radiólogos, técnicos, físicos médicos, expertos en PR, pacientes, todos, ...etc
- Especialidad: radiología médica y dental, intervencionismo, medicina nuclear, radioterapia
- Idioma, palabras clave (texto de 20-30 palabras?)



IAEA

GNSSN

Global Nuclear Safety
and Security Network

Search this site



Bonn Call for Action Implementation Toolkit

Action 1: Justification

Action 2: Optimization

Action 3: Manufacturers

Action 4: Education and training

Action 5: Research

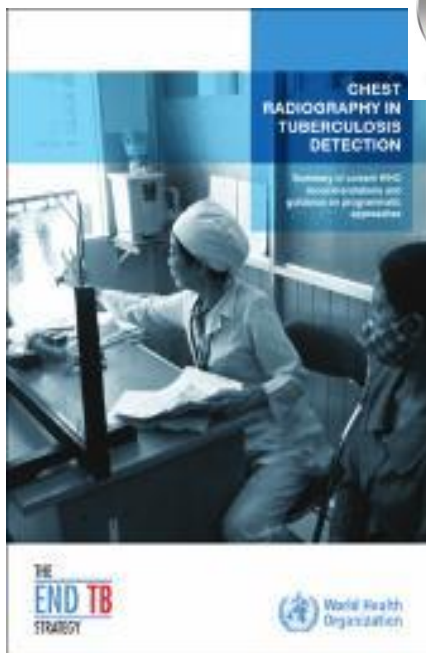
Action 6: Data availability

Action 7: Incidents and accidents

Action 8: Safety culture

Action 9: Benefits and risks

Action 10: Global guidance



01

WHO guidance on the use of chest radiography on tuberculosis detection

Action 1: Enhance the implementation of the principle of justification



Tools

- WHO document: Chest radiography in tuberculosis detection – Summary of current WHO recommendations and guidance on programmatic approach

- Introduce and apply the 3A's (awareness, appropriateness and audit), which are seen as tools that are likely to facilitate and enhance justification in practice;
- Develop harmonized evidence-based criteria to strengthen the appropriateness of clinical imaging, including diagnostic nuclear medicine and non-ionizing radiation procedures, and involve all stakeholders in this development;
- Implement clinical imaging referral guidelines globally, keeping local and

World Health
Organization



Enhance the implementation of the principle of justification

- Introduce and apply the 3A's (awareness, appropriateness and audit), which are seen as tools that are likely to facilitate and enhance justification in practice;
- Develop harmonized evidence-based criteria to strengthen the appropriateness of clinical imaging, including diagnostic nuclear medicine and non-ionizing radiation procedures, and involve all stakeholders in this development;
- Implement clinical imaging referral guidelines globally, keeping local and regional variations in mind, and ensure regular updating, sustainability and availability of these guidelines;
- Strengthen the application of clinical audit in relation to justification, ensuring that justification becomes an effective, transparent and accountable part of normal radiological practice;
- Introduce information technology solutions, such as decision support tools in clinical imaging, and ensure that these are available and freely accessible at the point-of-care;
- Further develop criteria for justification of health screening programmes for asymptomatic populations (e.g. mammography screening) and for medical imaging of asymptomatic individuals who are not participating in approved health screening programmes (e.g. use of CT for individual health surveillance).



Enhance the implementation of the principle of optimization of protection and safety

- Ensure establishment, use of, and regular update of diagnostic reference levels for radiological procedures, including interventional procedures, in particular for children;
- Strengthen the establishment of quality assurance programmes for medical exposures, as part of the application of comprehensive quality management systems;
- Implement harmonized criteria for release of patients after radionuclide therapy, and develop further detailed guidance as necessary;
- Develop and apply technological solutions for patient exposure records, harmonize the dose data formats provided by imaging equipment, and increase utilization of electronic health records.





Strengthen manufacturers' role in contributing to the overall safety regime

- ☐ Ensure improved safety of medical devices by enhancing the radiation protection features in the design of both physical equipment and software and to make these available as default features rather than optional extra features;
- ☐ Support development of technical solutions for reduction of radiation exposure of patients, while maintaining clinical outcome, as well as of health workers;
- ☐ Enhance the provision of tools and support in order to give training for users that is specific to the particular medical devices, taking into account radiation protection and safety aspects;
- ☐ Reinforce the conformance to applicable standards of equipment with regard to performance, safety and dose parameters;
- ☐ Address the special needs of health care settings with limited infrastructure, such as sustainability and performance of equipment, whether new or refurbished;
- ☐ Strengthen cooperation and communication between manufacturers and other stakeholders, such as health professionals and professional societies;
- ☐ Support usage of platforms for interaction between manufacturers and health and radiation regulatory authorities and their representative organizations.



Strengthen radiation protection education and training of health professionals

- ☐ Prioritize radiation protection education and training for health professionals globally, targeting professionals using radiation in all medical and dental areas;
- ☐ Further develop the use of newer platforms such as specific training applications on the Internet for reaching larger groups for training purposes;
- ☐ Integrate radiation protection into the curricula of medical and dental schools, ensuring the establishment of a core competency in these areas;
- ☐ Strengthen collaboration in relation to education and training among education providers in health care settings with limited infrastructure as well as among these providers and international organizations and professional societies;
- ☐ Pay particular attention to the training of health professionals in situations of implementing new technology.





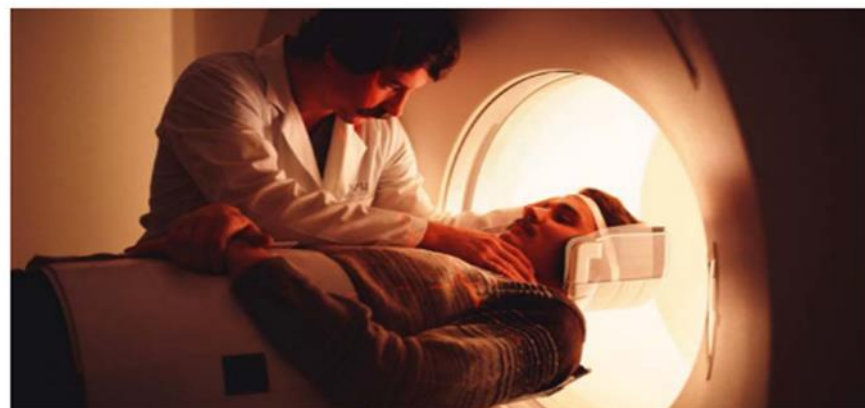
Shape and promote a strategic research agenda for radiation protection in medicine

- Explore the re-balancing of radiation research budgets in recognition of the fact that an overwhelming percentage of human exposure to man-made sources is medical;
- Strengthen investigations in low-dose health effects and radiological risks from external and internal exposures, especially in children and pregnant women, with an aim to reduce uncertainties in risk estimates at low doses;
- Study the occurrence of and mechanisms for individual differences in radiosensitivity and hyper-sensitivity to ionizing radiation, and their potential impact on the radiation protection system and practices;
- Explore the possibilities of identifying biological markers specific to ionizing radiation;
- Advance research in specialized areas of radiation effects, such as characterization of deterministic health effects, cardiovascular effects, and post-accident treatment of overexposed individuals;
- Promote research to improve methods for organ dose assessment, including patient dosimetry when using unsealed radioactive sources, as well as external beam small-field dosimetry.



Increase availability of improved global information on medical exposures and occupational exposures in medicine

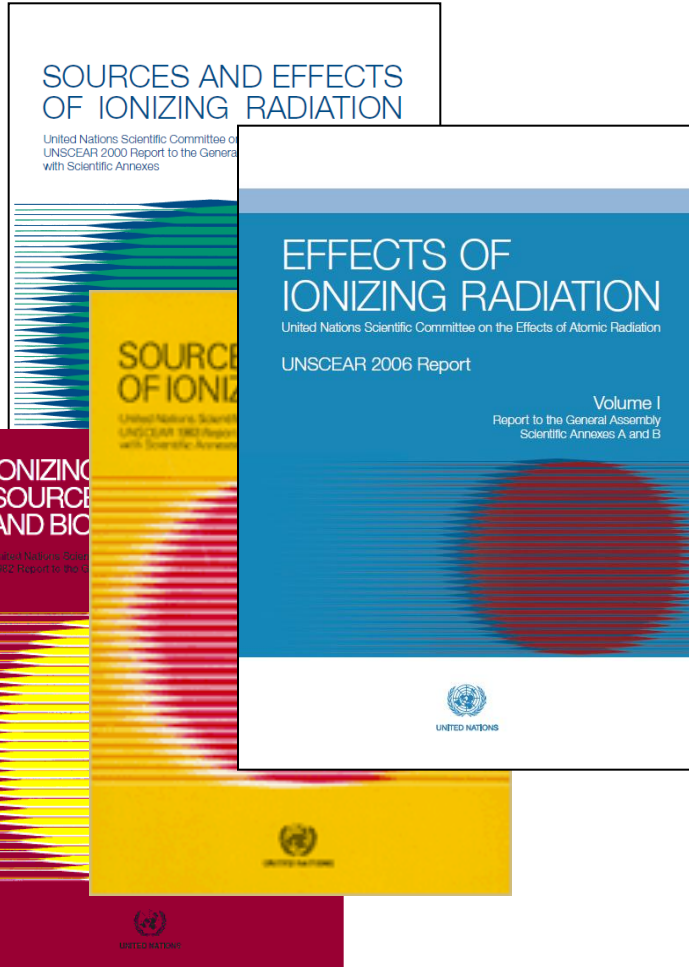
- Improve collection of dose data and trends on medical exposures globally, and especially in low- and middle-income countries, by fostering international co-operation;
- Improve data collection on occupational exposures in medicine globally, also focussing on corresponding radiation protection measures taken in practice;
- Make the data available as a tool for quality management and for trend analysis, decision making and resource allocation.



Encuesta global sobre exposiciones médicas: *diapositivas preparadas por Ferid Shannoun (UNSCEAR)*

UNSCEAR's surveys

- global estimates of level of exposure and frequency, with breakdowns by medical procedure, age, sex, health care level, and country;
- trends in practice (including those relatively fast-changing);
- supporting related information on equipment and staffing levels.



Personas de Contacto Nacional (National Contact Persons/ NCPs)

Roles and responsibilities:

- Coordinating the data collection at the country level and with the UNSCEAR secretariat;
- Cooperating with technical experts to fill in questionnaires;
- Submitting data officially via the UNSCEAR online platform;
- Providing valued supporting information;
- Fostering involvement from Member States by raising awareness of UNSCEAR's Global Survey;
- Additional experts can be registered to online platform but NCP remains responsible for submitting the data.

NCPs and all other experts will be acknowledged in relevant UNSCEAR Reports to the General Assembly.

Ejemplo de la pagina de acceso a la encuesta en el sitio web del UNSCEAR



United Nations Scientific Committee
on the Effects of Atomic Radiation
survey.unscear.org

[Register](#) [Log In](#)

Search

Search

[Sitemap](#)

You are here: [UNSCEAR's Global Survey of Radiation Exposure](#)

- [Home](#)
- [News](#)
- [Background](#)
- [Instructions](#)
- [Help](#)
- [Contact Us](#)

UNSCEAR's Global Survey of Radiation Exposure

The United Nations Scientific Committee on the Effects of Atomic Radiation ([UNSCEAR](#)), established by the United Nations General Assembly in 1955 to assess and report levels and effects of all sources of ionizing radiation conducts regular surveys of radiation exposure worldwide.

The UNSCEAR online platform is to support governments and international organizations to provide national and regional data on the use of radiation in medical diagnosis and treatment for the Global Survey of Medical Radiation Usage and Exposure and the Global Survey of Occupational Exposure.

National Contact Persons (NCPs) are invited to [register here](#) to be able to access the protected area before they can download the questionnaires for official data submission. Additional national experts can be registered to support the NCPs. All contributions will be acknowledged by UNSCEAR in the relevant report to the UN General Assembly.

UNSCEAR is grateful to the ([World Health Organization](#)) for establishing arrangements for cooperation which resulted in developing a common medical radiation questionnaire for the survey and to the ([European Commission](#)) for permitting the use of the outcomes of the ([DoseDataMed II project](#)). Further, UNSCEAR thanks the ([International Atomic Energy Agency](#)) and the ([International Labour Organization](#)) for its cooperation on the occupational radiation survey.

Please read further [instructions](#), [background](#) information and [help](#) if you are interested in using this platform.

start.txt · Last modified: 2017/05/09 09:00 by Shannoun

© UNSCEAR 2002 - 2016 - All Rights Reserved



World Health
Organization

Ejemplo de las instrucciones y manuales disponibles en el sitio web del UNSCEAR



United Nations Scientific Committee
on the Effects of Atomic Radiation
survey.unscear.org

Logged in as: Andreas Jahnen (admin) [Admin](#) [Update Profile](#) [Log Out](#)

[Sitemap](#) [Recent Changes](#) [Media Manager](#)

You are here: [UNSCEAR's Global Survey of Radiation Exposure](#) » [Instructions](#)

- [Home](#)
- [News](#)
- [Background](#)
- [Instructions](#)
- [Help](#)
- [Contact Us](#)

My Surveys

- [Medical 2014](#)
- [Occupational 2016](#)

Expert Area

- [Expert page RD](#)
- [Expert page NM](#)
- [Expert page RT](#)
- [Expert page OE](#)

Instructions

This platform manages the official submissions to
available in dedicated User Manuals:

- [PDF User Manual for Medical Exposure](#)
- [PDF User Manual for Occupational Exposure](#)

1. Registration

To be able to access the protected area, it is necessary for
those responsible for providing data to UNSCEAR to register
about your institution and profession. Also, you have to be a
Person (NCP), who needs to be nominated by UNSCEAR
to be nominated but should provide their contact details.

If you have any questions in this regard, please contact us.

Once you have registered, you will receive a confirmation email.

2. User validation

The UNSCEAR secretariat will validate user information by
phone or email. The validation process includes a check of the
provided data.

Once the account is validated, you will receive an email with
the login details.

3. Login



United Nations Scientific Committee
on the Effects of Atomic Radiation
survey.unscear.org

UNSCEAR'S GLOBAL SURVEY OF RADIATION EXPOSURE

Medical Exposure

A USER
MANUAL

(version October 2017)



United Nations Scientific Committee
on the Effects of Atomic Radiation
survey.unscear.org

UNSCEAR'S GLOBAL SURVEY OF RADIATION EXPOSURE

Occupational Exposure

A USER
MANUAL

(version November 2017)



World Health
Organization

Ejemplo de como se presenta la informacion en el sitio web del UNSCEAR

General information		Information on frequency of radiological examinations (simplified)		
* required field		* required field		
Country information		Modality category	Number of examinations	Uncertainty (%)
Country code	036	All radiological examinations*	15620544	30%
Date of submission		Radiography and <u>fluoroscopy</u> (without Dental)	664121	30%
Year (period)*	2014	Dental radiography	1468631	30%
Population [inhabitants]*	23742472	Computed Tomography (CT)	3564796	25%
Coverage of total population*	23742472	Image-guided <u>interventional procedures</u> (IGIP)	174477	30%
Contact information		Information on staffing (simplified)		
* required field		* required field		
Contact information		Profession	Number of persons	
Name*	Anthony Wallace	All physicians*	9143	
Institution*	Australian Radiation Protection and Nuclear Safety Agency	Dentists	20749	
Phone*	+61 3 9433 2296	Radiologists	1916	
Email*	<u>anthony.wallace@arpansa.gov.au</u>			
Function				
		Information on radiology devices (simplified)		
		* required field		
		Radiological system	Number of devices	
Name	Peter Thomas	All radiographic systems*	22588	
Institution	Australian Radiation Protection and Nuclear Safety Agency	Dental X-ray systems	15200	
Phone	+61 3 9433 2295	Computed Tomography (CT)*	1028	
Email	<u>peter.thomas@arpansa.gov.au</u>			
Function				

Fecha límite para el envío de datos de la encuesta: 30 June 2018

Fecha límite para el envío de datos de la encuesta: 30 June 2018

Mas información

www.survey.unscear.org

Ferid.Shannoun@un.org



**World Health
Organization**



Improve prevention of medical radiation incidents and accidents

- ❑ Implement and support voluntary educational safety reporting systems for the purpose of learning from the return of experience of safety related events in medical uses of radiation;
- ❑ Harmonize taxonomy in relation to medical radiation incidents and accidents, as well as related communication tools such as severity scales, and consider harmonization with safety taxonomy in other medical areas;
- ❑ Work towards inclusion of all modalities of medical usage of ionizing radiation in voluntary safety reporting, with an emphasis on brachytherapy, interventional radiology, and therapeutic nuclear medicine in addition to external beam radiotherapy;
- ❑ Implement prospective risk analysis methods to enhance safety in clinical practice;
- ❑ Ensure prioritization of independent verification of safety at critical steps, as an essential component of safety measures in medical uses of radiation.



Strengthen radiation safety culture in health care

- ❑ Establish patient safety as a strategic priority in medical uses of ionizing radiation, and recognize leadership as a critical element of strengthening radiation safety culture;
- ❑ Foster closer co-operation between radiation regulatory authorities, health authorities and professional societies;
- ❑ Foster closer co-operation on radiation protection between different disciplines of medical radiation applications as well as between different areas of radiation protection overall, including professional societies and patient associations;
- ❑ Learn about best practices for instilling a safety culture from other areas, such as the nuclear power industry and the aviation industry;
- ❑ Support integration of radiation protection aspects in health technology assessment;
- ❑ Work towards recognition of medical physics as an independent profession in health care, with radiation protection responsibilities;
- ❑ Enhance information exchange among peers on radiation protection and safety-related issues, utilizing advances in information technology.



**IAEA****GNSSN**Global Nuclear Safety
and Security Network

Search this site

Bonn Call for Action Implementation Toolkit

Action 1: Justification

Action 2: Optimization

Action 3: Manufacturers

Action 4: Education and training

Action 5: Research

Action 6: Data availability

Action 7: Incidents and accidents

Action 8: Safety culture

Action 9: Benefits and risks

Action 10: Global guidance

**COMMUNICATING RADIATION
RISKS IN PAEDIATRIC IMAGING**Information to support healthcare discussions
about benefit and risk

09



Action 9: Foster an improved radiation benefit-risk-dialogue



Tools

- WHO publication - Communicating radiation risks in paediatric imaging
- WHO factsheet on chest-X ray in TB detection

- Increase awareness about radiation benefits and risks among health professionals, patients and the public;
- Support improvement of risk communication skills of health care providers and radiation protection professionals – involve both technical and communication experts, in collaboration with patient associations, in a concerted action to develop clear messages tailored to specific target groups;
- Work towards an active informed decision making process for patients.

**World Health
Organization**



IAEA

GNSSN

Global Nuclear Safety
and Security Network

Search this site



Bonn Call for Action Implementation Toolkit

Action 1: Justification

Action 2: Optimization

Action 3: Manufacturers

Action 4: Education and training

Action 5: Research

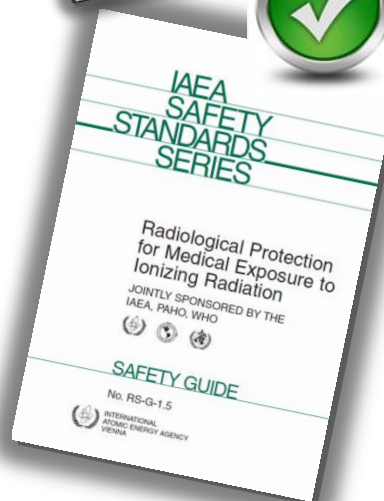
Action 6: Data availability

Action 7: Incidents and accidents

Action 8: Safety culture

Action 9: Benefits and risks

Action 10: Global guidance



10



Action 10:

Strengthen the implementation of safety requirements globally



Tools

- IAEA Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards
- IAEA Safety Guide: Radiological Protection for Medical Exposure to Ionizing Radiation

- Develop practical guidance to provide for the implementation of the International Basic Safety Standards in health care globally;
- Further the establishment of sufficient legislative and administrative framework for the protection of patients, workers and the public at national level, including enforcing requirements for radiation protection education and training of health professionals, and performing on-site inspections to identify deficits in the application of the requirements of this framework.



World Health
Organization