

Strengthening medical imaging capacity

The Seventy-eighth World Health Assembly,

Having considered the report by the Director-General;¹

Recognizing that medical imaging is vital for the diagnosis and treatment of numerous communicable diseases, noncommunicable diseases, traumatic injuries and other health conditions, including gastrointestinal and gynaecological conditions;

Considering that medical imaging requires traceable, cost-effective medical technology with consumables and accessories, an associated trained health workforce, knowledge of clinical procedures, patient information, affordable access, patient management, patient preparation, interpretation and reporting;

Recognizing that medical imaging for diagnosis and treatment, both conventional as well as interventional, refers to medical devices using ionizing radiation (such as computerized tomography scanners and positron emission tomography (PET)), non-ionizing radiation (such as ultrasound and magnetic resonance imaging (MRI)) and hybrid imaging modalities (such as PET-MRI);

Noting that the optimal use of medical imaging services in many countries is affected by, inter alia, the limited availability of affordable and cost-effective medical imaging technologies, reduced access in remote and rural areas, the shortage of a trained health workforce and the lack of effective or implementable policies, plans and guidelines;

Highlighting the need to improve equitable access to safe and effective medical imaging globally, particularly to enhance detection, diagnosis, treatment, monitoring and understanding of both communicable and noncommunicable diseases;²

Noting that the burden of cancer and other noncommunicable diseases is rising and recognizing that medical imaging is essential for appropriate cancer detection and therapy, including surgery, radiotherapy and chemotherapy;

¹ Document A78/4.

² [Updated Appendix 3 of WHO's global action plan for the prevention and control of noncommunicable diseases 2013–2030](#). Technical Annex (version dated 26 December 2022) (accessed 3 March 2025).

Acknowledging that in 2021 of all neurological conditions stroke was the leading cause of disability-adjusted life years, with the largest burden on developing countries;

Confirming that medical imaging can contribute to reductions in mortality, morbidity and incidence through early detection and monitoring of many neurological conditions such as multiple sclerosis, nervous system cancers, neurodegenerative disorders³ and stroke, including through rapidly distinguishing between haemorrhagic and ischaemic stroke and determining treatment such as thrombolysis and mechanical thrombectomy;

Taking into account that equitable access to medical imaging for early diagnosis and management can reduce lifelong consequences from infectious diseases that contribute to global morbidity and mortality, with particular emphasis on individuals at risk especially among those in vulnerable situations and those that are hard to reach;

Noting that accurate medical imaging can minimize unnecessary surgical interventions and optimize complex medical interventions;

Recognizing that medical imaging is essential in emergencies, road traffic crashes and disasters, enabling emergency medical responders to quickly assess injuries, identify critical conditions and prioritize care, and can aid surgical interventions including for traumatic brain and spinal cord injuries;

Recognizing also that access to medical imaging equipment: is highly inequitable globally and limited in many developing countries; requires medical technologies, as well as specific infrastructure, health workforce training and operating costs, that might not be available or affordable; is part of effective universal health coverage; and contributes to health systems to support early diagnosis of certain diseases, trauma and injuries as well as monitor health conditions such as pregnancy and its complications, and to facilitate timely patient referrals to care;

Recognizing further the added value in using medical ultrasound in obstetric care and to diagnose multiple diseases in a safe and cost-effective manner;⁴

Acknowledging that conventional radiology (such as chest X-ray radiography) can support early and cost-effective diagnosis of pneumonia, which is the single largest infectious cause of death in children worldwide, as well as other health conditions;

Considering the level of variance and diversity in the practice of medical imaging and the lack of harmonized guidance on the selection and use of medical imaging equipment and related technology;

Considering also that research using medical imaging equipment is crucial and requires special precautions and maintenance to avoid harm related to radiation exposure;

³ [Intersectoral global action plan on epilepsy and other neurological disorders](#). Geneva: World Health Organization; 2023 (accessed 3 March 2025).

⁴ [Manual of diagnostic ultrasound. Vol. 2 – 2nd ed.](#) Geneva: World Health Organization; 2013 (accessed 3 March 2025).

Recognizing that the regulation of medical imaging radiation is fragmented or weak in some countries;⁵

Recalling resolutions WHA25.57 (1972) on development of the medical use of ionizing radiation and WHA76.5 (2023) on strengthening diagnostics capacity;

Considering the importance of recognizing the essential roles of medical imaging in the diagnosis and treatment of diseases, including interventional radiology and the emerging theranostics and integrating medical imaging in healthcare policies,

1. URGES Member States,⁶ considering their national context and circumstances:

- (1) to promote appropriate and continued access to quality, safe, affordable and cost-effective medical imaging capacity, by implementing appropriate policies, strategies, programmes, norms and standards;
- (2) to promote sustainable investment in imaging equipment and infrastructure, maintenance and quality management systems;
- (3) to commit to adequate education and continuous training of the health workforce involved in medical imaging, including through the WHO Academy and WHO's other technical platforms, as well as training of referring physicians on justification and appropriate use in accordance with up-to-date evidence-based recommendations;
- (4) to develop strategies to improve medical imaging capacity and promote the inclusion of medical imaging services in national health sector strategic plans to achieve universal health coverage;
- (5) to improve affordable and equitable access to medical imaging services, including through the application of digital health, to reach rural and remote areas for early detection of communicable and noncommunicable diseases;
- (6) to consider the inclusion of medical imaging technologies, which appear on the WHO lists of priority medical devices and are made available electronically through WHO's Priority Medical Devices Information System (MeDevIS), in national lists of medical devices for diagnosis or treatment, for benefit packages or reimbursement, and, if needed, perform health technology assessments for their incorporation, taking into account internationally accepted standards;
- (7) to perform needs assessments, feasibility studies and investment cases regarding the operating costs of medical imaging equipment and maintenance before procurement (including donation, acquisition or leasing) and budget decisions are made, and if needed, to increase the availability of medical imaging equipment, as appropriate, to manage multiple diseases;
- (8) to promote the use of health technology management practices, with the support of biomedical engineers, medical physicists and trained related professionals, in all phases of

⁵ [Global atlas of medical devices 2022](#). Geneva: World Health Organization; 2022 (accessed 3 March 2025).

⁶ And, where applicable, regional economic integration organizations.

the life cycle of technologies, including procurement, installation, maintenance, calibration and safe use, with the aim of optimizing medical imaging capacity;

(9) to consider the incorporation of new medical imaging technologies that are cost-effective, safe and affordable, easy to use and sustainable for operation, maintenance and disposal, with sound management of waste and prevention of pollution with respect to the environment;

(10) to include medical imaging in national diagnostics and treatment lists, as appropriate, taking into account the fact that many medical imaging technologies can be used for diagnostics and treatment purposes;

(11) to commit to the safe and secure use of diagnostic imaging technologies by applying basic safety standards to protect against the dangers arising from exposure to ionizing and non-ionizing radiation, ensuring the safety of patients, health workers and the public;

(12) to improve coordination between national regulatory bodies on the authorization of medical imaging services;

(13) to facilitate adaptation of best available practices on imaging services to the national context, including training of the health workforce by health authorities and professional societies, based on international norms and standards;

(14) to promote quality-improvement programmes in medical imaging services, with the ultimate aim of making quality of care transparent and visible;

(15) to raise awareness of risk mitigation and management in medical imaging, including contrast media side-effects and magnetic field safety;

(16) to promote proper disposal of imaging devices and radioactive materials in accordance with international guidelines on traceability;

(17) to work towards increasing efficiency, affordability, safety and cost-effectiveness of imaging technologies use, including through collecting and integrating data on appropriate use, availability and functionality of medical imaging equipment and services, as appropriate;

(18) to consider integrating technological advances, such as telehealth, teleradiology, clinical decision support, artificial intelligence and specific software applications, into radiology information systems for patient records, in compliance with applicable international standards and protocols for medical imaging, including ethical aspects, security and confidentiality data;

2. REQUESTS the Director-General:

(1) to provide technical assistance to Member States in order to improve access to safe, affordable and effective medical imaging globally, especially in developing countries, and to enhance detection and treatment of diseases and health conditions in respect of universal health coverage and response to emergencies, including, as appropriate:

(a) guidance on selecting, incorporating and procuring medical imaging equipment;

(b) promotion of the safe use of medical imaging equipment;

- (c) development of comprehensive strategies and policies to strengthen medical imaging capacity, in line with national health sector strategic plans;
- (2) to continuously update the WHO lists of priority medical devices available through WHO's Priority Medical Devices Information System (MeDevIS), including in respect of medical imaging equipment, related nomenclature, consumables, calibration, technical specifications, traceability, preventive maintenance and training material, level of healthcare use and relation to clinical guidelines, to serve as a reference for Member States and relevant stakeholders, in accordance with decision WHA75(25) (2022) on standardization of medical devices nomenclature, and for consideration by Member States when national lists of medical devices or essential diagnostics are developed;
- (3) to provide technical guidance on continuous quality improvement for medical imaging services delivery, including the health workforce required to deliver medical imaging services;
- (4) to coordinate collection and integration of data on availability and functionality of medical imaging equipment and services, to be presented in WHO's Global Health Observatory and Global atlas of medical devices or related databases, as appropriate, in alignment with the International Atomic Energy Agency, the United Nations Scientific Committee on the Effects of Atomic Radiation and other related agencies;
- (5) to promote affordability and sustainability of cost-effective medical imaging capacity and interventions;
- (6) to evaluate innovative medical imaging technologies to be included in the WHO compendium of innovative health technologies for low-resource settings;⁷
- (7) to perform horizon scanning to identify emerging and innovative medical imaging technologies;
- (8) to promote mutual support, assistance and cooperation among all stakeholders, in line with the Framework of Engagement with Non-State Actors, as applicable, to increase access to medical imaging capacity, particularly in developing countries;
- (9) to ensure medical imaging technologies are included in global diagnostic initiatives;
- (10) to support education and continuous training of the health workforce involved in medical imaging, including through the WHO Academy and WHO's other technical platforms;
- (11) to report on progress in the implementation of this resolution to the Eightieth World Health Assembly in 2027, the Eighty-second World Health Assembly in 2029 and the Eighty-fourth World Health Assembly in 2031.

Seventh plenary meeting, 27 May 2025
A78/VR/7

⁷ [WHO compendium of innovative health technologies for low-resource settings 2024](#). Geneva: World Health Organization; 2024 (accessed 3 March 2025).