



Goal

3

Improve diagnostic safety



Rationale

An accurate and timely diagnosis is the foundation on which safe medical care rests. The diagnostic process involves many steps, including the patient's initial presentation; history-taking and examination; diagnostic testing, discussion, and communication of results; collaboration and coordination; final diagnosis and treatment plan; follow-up, re-evaluation and final outcome. Errors can occur at any of these stages.

Sick children can present very differently from adults, making paediatric diagnosis especially complex. Diagnostic errors can include missed, incorrect or delayed diagnoses, or a failure to communicate the diagnosis to the patient or family. They can worsen patient outcomes and at times lead to prolonged or severe illness, disability, or even death, as well as increased health care costs.

Suggested actions



People

1. Familiarize yourself with vital signs measurements typical of different age groups, common childhood illnesses and how they typically present.
2. Strengthen diagnostic skills with continuous education and training, to stay updated on the latest diagnostic techniques, evidence-based practices and algorithms.
3. Improve clinical reasoning skills by engaging in reflective practice and using diagnostic simulations, checklists and other tools.
4. Practice self-awareness and regularly perform self-checks to identify and address any cognitive biases or errors in diagnostic process.
5. Always bear in mind potential diagnoses that may have been missed or overlooked.
6. Consult with colleagues and seek a second opinion, particularly when dealing with complex and challenging cases.

7. Know the diagnostic equipment and tools available in the facility or location.



Tasks

1. Ensure that a comprehensive and age-appropriate history is taken for every child, covering presenting complaints, symptom details, personal and family background, feeding and developmental history, and relevant social and environmental factors, in alignment with guidelines and clinical practices.
2. Follow evidence-informed guidelines, protocols and diagnostic pathways, with clear criteria for investigations.
3. Develop and routinely use a structured approach to differential diagnosis, to ensure accurate identification of illnesses, while recognizing that a child may present with multiple conditions.
4. Always listen to the parents' and children's concerns and actively ask about the child's health and treatment progress.
5. Establish and comply with clear protocols for maintaining patient sample identities throughout pre-analytical, analytical, and post-analytical processes.
6. Provide clear protocols for questioning laboratory results or other test findings when they are not consistent with the patient's clinical history.
7. Report all diagnostic errors through reporting and learning systems, or equivalent.
8. Routinely analyse diagnostic errors through non-punitive, team-based discussions, and conduct formal root cause analyses to promote learning and improvement.



Tools and technology

1. Implement electronic health records with an integrated clinical decision support system, where possible.
2. Use checklists and cognitive aids to generate appropriate differential diagnoses.

3. Improve access, organization and display of clinical information to reduce cognitive burden, minimizing distractions.
4. Leverage technologies to strengthen diagnostic reasoning, weighing diagnostic probabilities, prepare diagnostic plans to detect errors early, and ensure timely follow-up with patients.
5. Provide tools for collaborative diagnosis, including through telemedicine and electronic consultations, especially for challenging cases.



Workplace environment

1. Design workspaces to minimize distractions and interruptions during diagnostic work.
2. Ensure easy access to point-of-care diagnostic and laboratory equipment, such as X-ray, including mobile units for sick newborns, ultrasound, and essential lab tools, and that these are available and functioning.
3. Ensure adequate infrastructure and a well-lit, well-ventilated and private environment, to support effective patient examination, assessment and consultation.
4. Design and improve the layout of patient care areas to facilitate the direct observation of patients.



Organization

1. Create a transparent and blame-free culture of safety where health practitioners, patients and parents feel free and supported when reporting diagnostic errors.
2. Ensure the availability and use of up-to-date diagnostic guidelines, protocols and standard operating procedures aligned with WHO guidelines and standards.
3. Promote teamwork and shared decision-making by engaging all stakeholders throughout the diagnostic process, including the patient and family.
4. Put into place systems of regular monitoring and reassessment for the early identification

and management of any deterioration, complication or adverse treatment outcome.

5. Make sure that health workers have a dedicated workspace and uninterrupted, adequate time to appropriately examine and assess patients.
6. Implement a standardized approach to handover communication during staff shift changes and patient transfers between care units.



Measures

- Missed or delayed diagnosis
- Proportion of all children with general danger or emergency signs or injuries who were assessed within 15 min of arrival at the facility
- Proportion of all children admitted to the health facility with fever, for whom a documented differential diagnosis was appropriately investigated.



WHO resources

- Diagnostic errors: technical series on safer primary care
- World Patient Safety Day 2024 (Campaign on diagnostic safety)
- Pocket book of hospital care for children: Second edition
- Operational guide for facility-based audit and review of paediatric mortality
- Patient safety solutions



World Health
Organization



World
Patient Safety
Day 17 September 2025