Artificial Intelligence in Public health

Readiness assessment toolkit

Assessing and Enhancing Preparedness for AI Integration in Public Health

Pan American Health Organization

World Health Organization
REGIONAL OFFICE FOR THE Americas

IDB

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Assessing and Enhancing Preparedness for AI Integration in Public Health

Version 2.0

This tool provides a structured approach to assess the readiness of a country to implement AI projects in public health. Each question is designed to facilitate discussions and planning by identifying strengths and areas for improvement.

ORGANIZATION, COORDINATION AND DEVELOPMENT
Information Systems and Digital Health Unit (EIH-IS), Department of Evidence and Intelligence for Action in Health (EIH), PAHO/WHO
Digital Health Team; Social Protection and Health Division (SPH), IDB

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“Artificial intelligence (AI) is rapidly transforming public health, offering powerful tools to modernize health systems and services. AI promises to improve health outcomes, enhance efficiency, and drive innovation. PAHO is deeply committed to supporting all Member States in integrating AI into their public health systems. Embracing AI in public health is a collective effort to ensure no one is left behind.”

Dr. Jarbas Barbosa
Director, PAHO/WHO

"We are promoting AI at the Inter-American Development Bank...[and] ....our vision to unravel AI’s enormous potential both at the bank as well in our region. Strengthening institutions and governance, investing in data and infrastructure and, importantly, people’s skills will be key to reap the benefits of AI in the public and private sectors."

Ilan Goldfajn
President of the Inter-American Development Bank

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Introduction

The goal of this assessment tool is to facilitate a thorough and structured evaluation of a governments' readiness for AI in public health, fostering informed decision-making, strategic planning, and targeted investments. This tool also aims to support governments in building a robust foundation for successful AI integration in their health systems, ultimately enhancing public health outcomes and operational efficiency. It provides a comprehensive structure for assessing various dimensions of AI readiness. It highlights critical aspects such as governance, infrastructure, workforce, data management, funding, public engagement, implementation, and evaluation. It was designed with a holistic approach for supporting a country's preparedness for AI integration in public health.

Key to its effectiveness is the evaluation framework that guides institutions through a series of questions, each designed to highlight strengths and areas for improvement. The assessment presents essential categories, from existing health care infrastructure and digital health landscapes to data availability and quality, health workforce readiness, and regulatory frameworks. Each question uses a rating system, allowing respondents to indicate their level of agreement or the current state on a scale from 1 to 4.

The AI Readiness Assessment Toolkit is designed to help governments evaluate and enhance their capacity for integrating AI into public health systems, driving informed decision-making, strategic planning, and improved public health outcomes

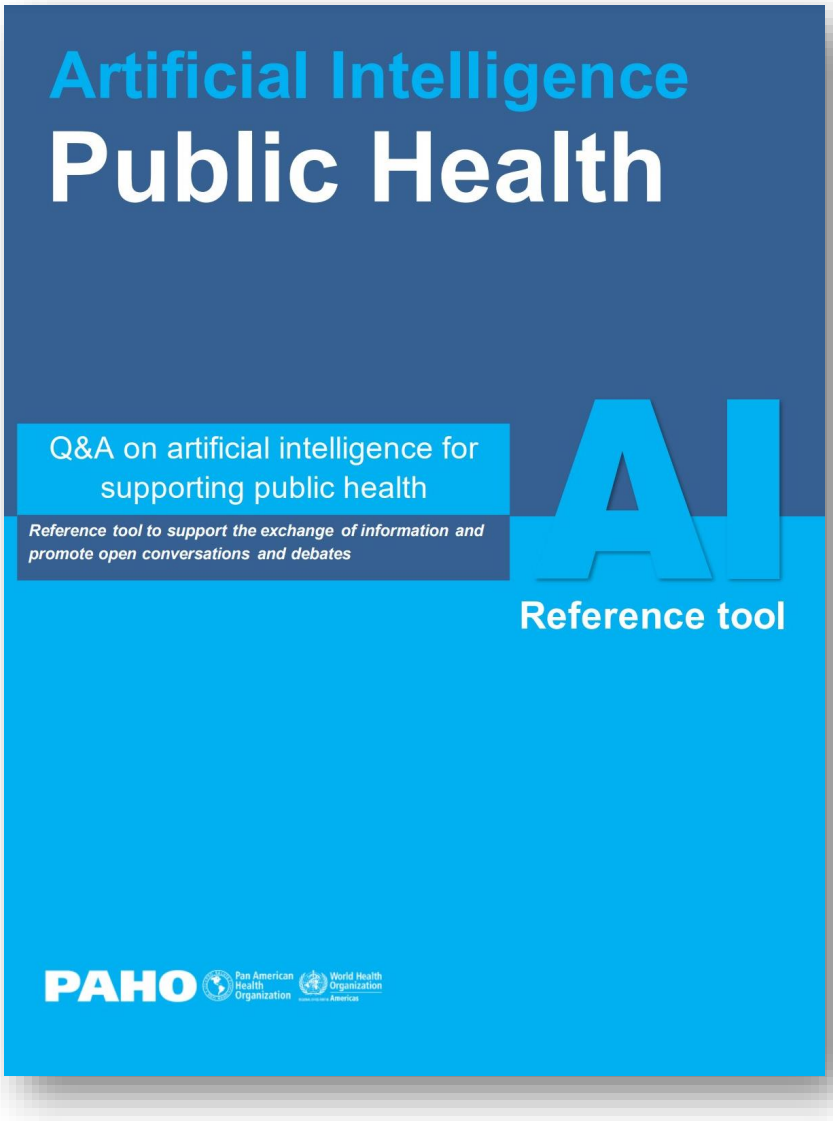
The tool begins with a series of kick-off questions focused on fundamental and foundational areas such as health care needs and priorities, the state of existing health care infrastructure, the digital health landscape, data availability, health workforce readiness, and regulatory frameworks. These questions set the stage for a deeper exploration of readiness.

Beyond these initial queries, the tool also addresses supplemental areas like public awareness and education, funding and resources, and stakeholder engagement. This comprehensive approach ensures that all critical aspects of AI readiness are covered, providing a well-rounded assessment.

PAHO and IDB are deeply committed to supporting all Member States in their journey toward integrating AI into public health systems. Recognizing the transformative potential of AI, PAHO and IDB, in collaboration with other partners, provides technical cooperation, resources, and guidance to help countries build the necessary infrastructure, develop robust regulatory frameworks, and enhance workforce

capabilities. PAHO and IDB aim to ensure that all member states can effectively harness AI to improve public health outcomes and operational efficiencies.

This tool is an integral part of PAHO's Digital Transformation Toolkit and aligns with the implementation of the Eight Guiding principles of Digital Transformation in Health. It embodies the Regional Roadmap for the Digital Transformation of the Health Sector, which has been agreed upon and approved by all Member States. These principles provide a strategic framework to ensure that digital health initiatives are equitable, sustainable, and impactful, guiding countries as they navigate the complexities of integrating advanced technologies like AI into their public health systems. Through this tool, PAHO reinforces its commitment to supporting the digital evolution of health sectors across the region, ensuring that every country can achieve improved health outcomes through innovative digital solutions.



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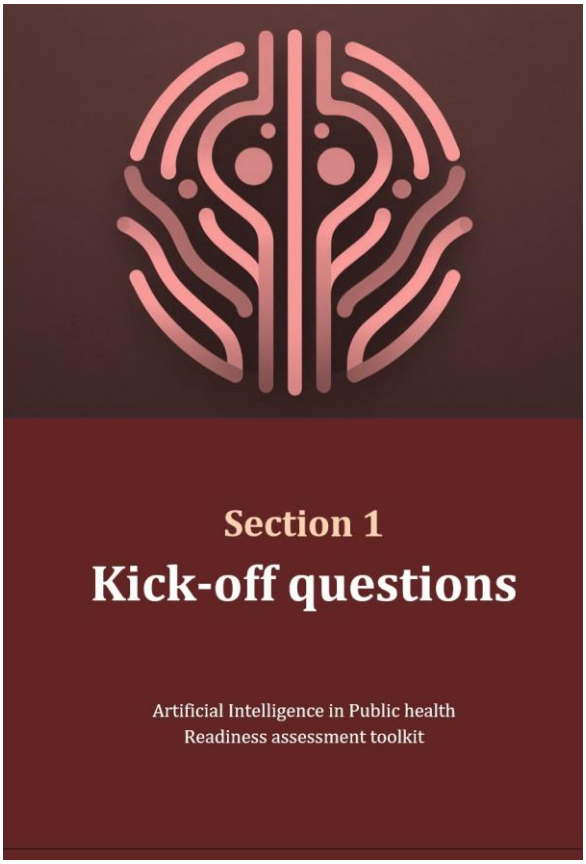
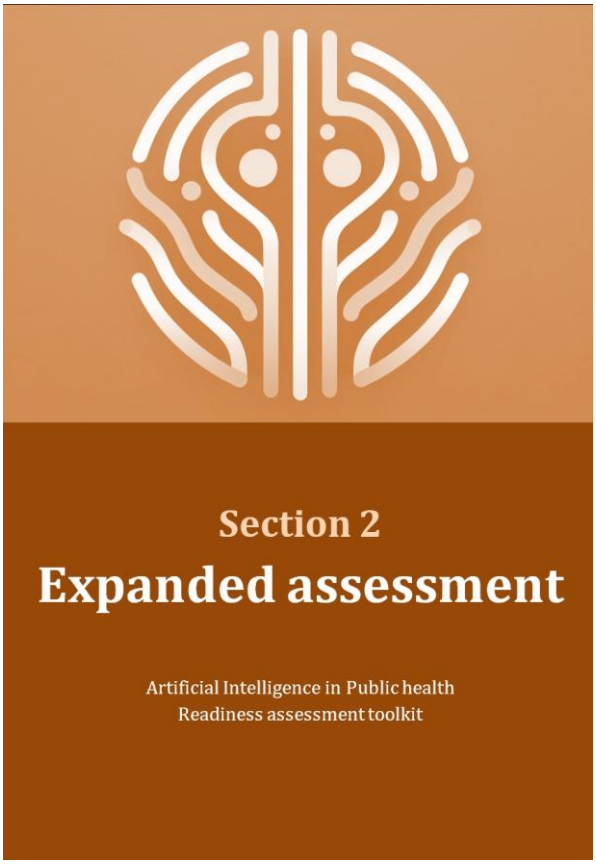
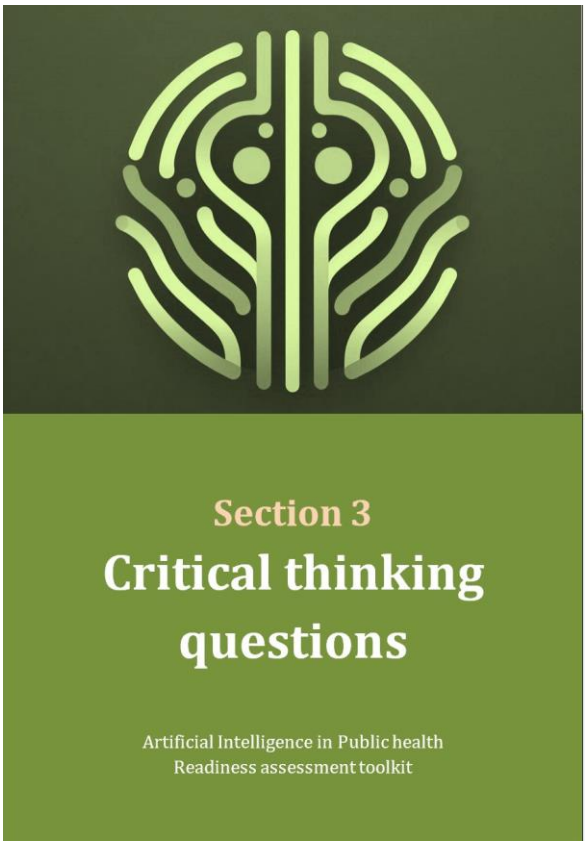
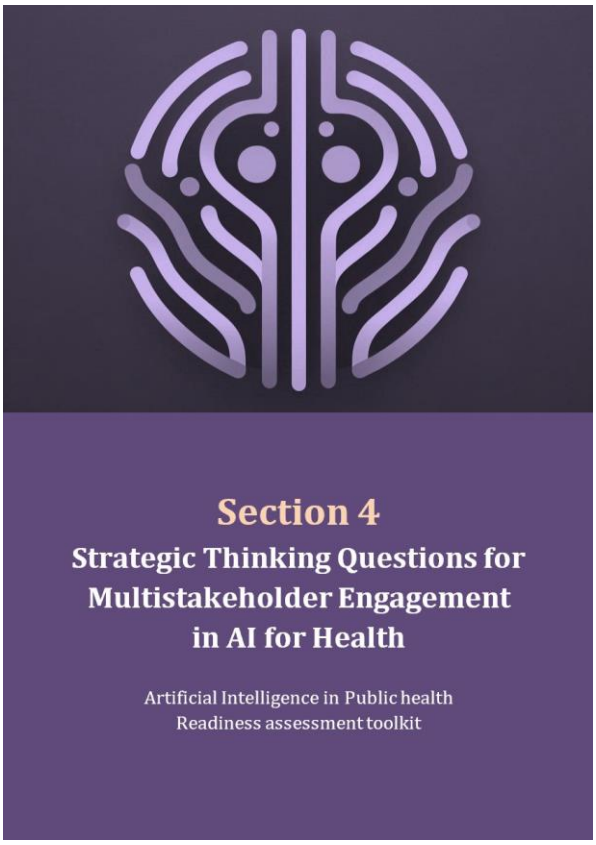
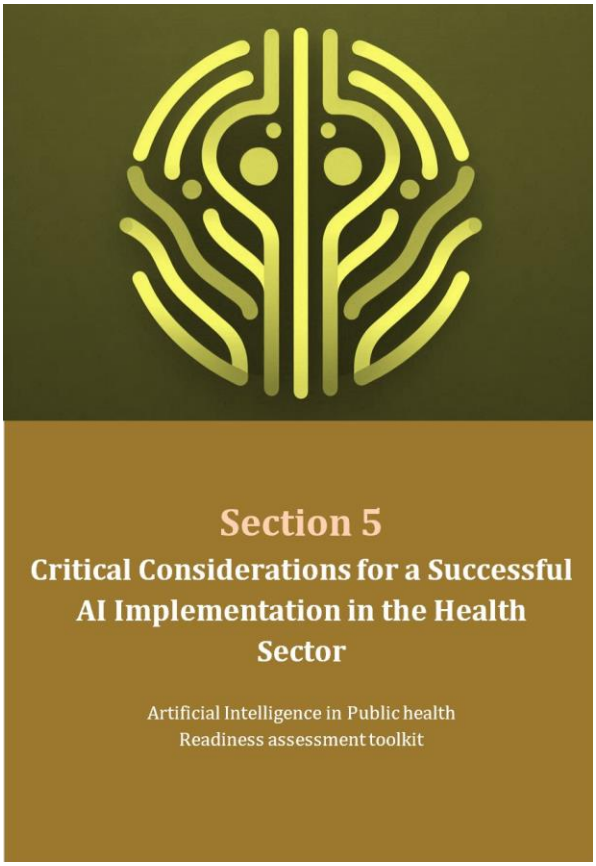
Toolkit Structure







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Critical Considerations for a Successful AI Implementation in the Health Sector
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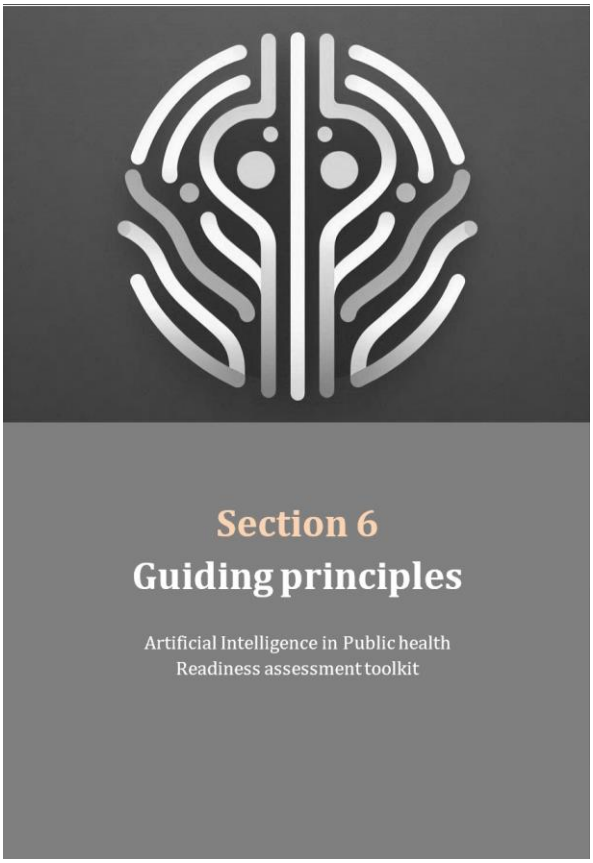
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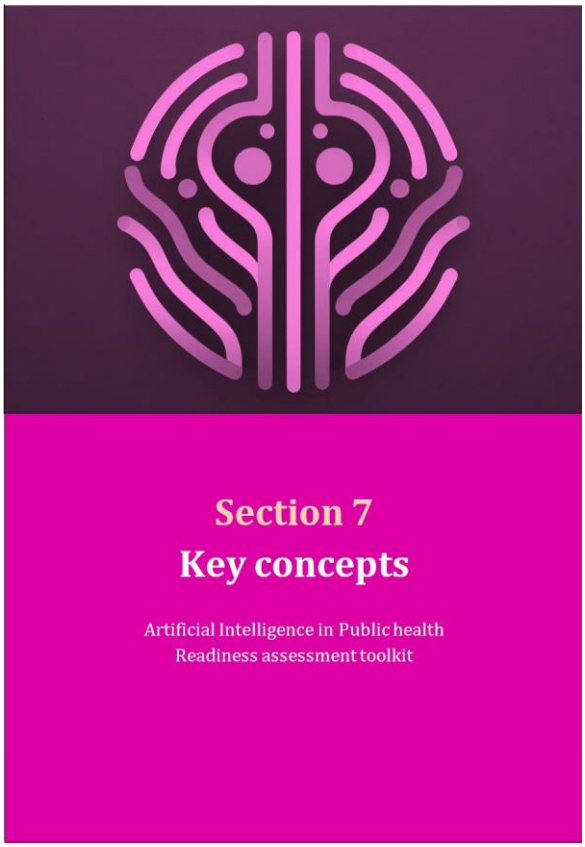
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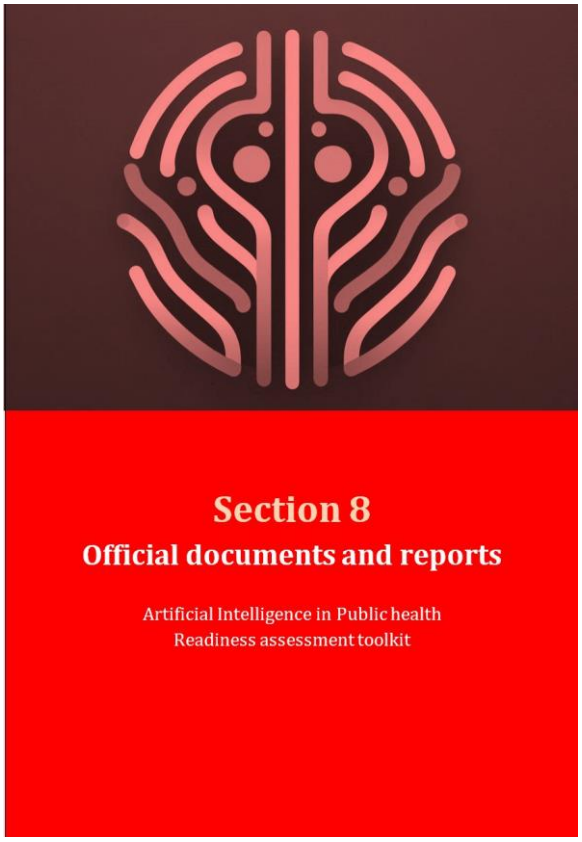
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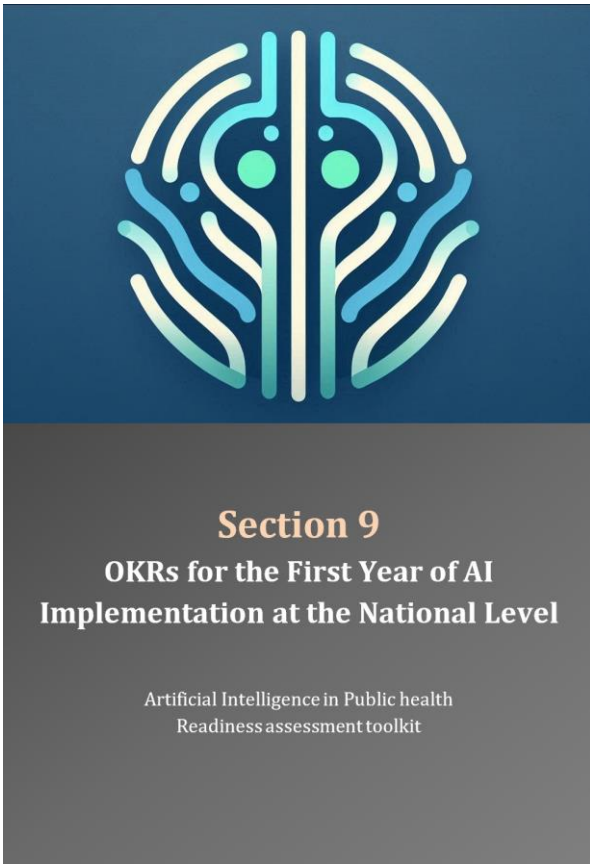
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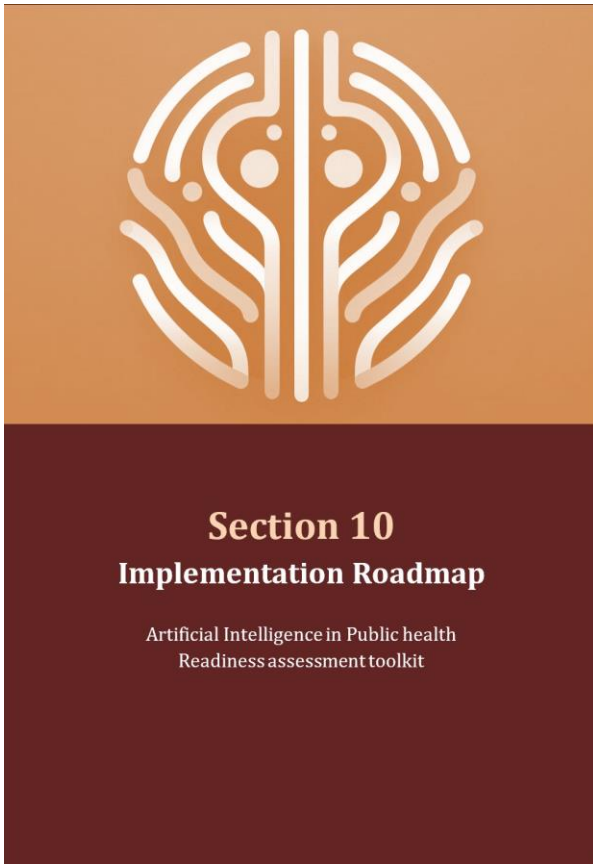
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Section 1

Kick-off questions

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Toolkit – Section 1 - Kick-off questions

Health care needs and priorities

Do you believe the most pressing public health issues and priorities in your country could be addressed using AI?

(1) Not sure, and no discussions are currently taking place.
(2) No, but plans for discussions are in place.
(3) Neutral, there is some awareness but no concrete actions or plans.
(4) Yes, but no strategy has been defined yet.
(5) Yes, but no funds or expertise are available in the country.

Existing health care infrastructure

Thinking on AI, what is the current state of health care infrastructure, including facilities, equipment, and human resources?

(1) Poor.
(2) Fair.
(3) Neutral, average with some strengths and weaknesses.
(4) Good.
(5) Excellent.

Digital health landscape

Do you consider the country to be well-equipped with effective digital health tools, systems, and related technological infrastructure to implement a National AI Strategy for the health sector?

(1) Not equipped at all.
(2) Somewhat equipped, but significant gaps remain.
(3) Neutral, equipped but with both strengths and weaknesses.
(4) Generally equipped, but some improvements are needed.
(5) Well-equipped with the necessary tools, systems, and infrastructure.

Data availability and quality

How would you rate the availability and quality of health data for AI implementation in terms of accuracy, completeness, and timeliness?

(1) Very limited data availability with poor quality.
(2) Some data is available, but accuracy, completeness, and timeliness are inconsistent.
(3) Neutral, data availability and quality are average, with notable strengths and weaknesses.

(4) Generally good data availability with acceptable quality, but improvements are needed.
(5) Widely available data with high accuracy, completeness, and timeliness.

Health workforce readiness

How prepared is your country's health workforce to integrate and utilize AI technologies in the health sector?

(1) Not prepared at all.
(2) Somewhat prepared, but significant training and development are needed.
(3) Neutral, adequately prepared in some areas but lacking in others.
(4) Generally prepared, but some gaps in skills and expertise remain.
(5) Fully prepared with the necessary skills and expertise to integrate and utilize AI technologies.

Existing regulatory frameworks

Are there regulatory frameworks in your country to regulate AI in the health sector?

(1) No regulatory frameworks exist
(2) Some regulatory frameworks exist
(3) Neutral, regulatory frameworks are in development but not fully established.
(4) Regulatory frameworks exist, but improvements are needed
(5) Effective regulatory frameworks are established

Regulatory adaptation and innovation

Can regulatory bodies in your country quickly adapt regulations to match the fast pace of AI technology changes in healthcare?

(1) No, they cannot adapt quickly.
(2) Yes, but with significant delays and challenges.
(3) Neutral, they are somewhat adaptable but face both strengths and weaknesses.
(4) Yes, generally, but with some gaps in agility and innovation
(5) Yes, they are highly responsive and innovative in adapting regulations

Ethical considerations

Are there public documents and/or white papers, and/or guidelines that address the ethical aspects of AI specifically in the healthcare sector?

(1) No documents, white papers, or guidelines available.
(2) Some documents and/or white papers, and/or guidelines exist but are incomplete
(3) Neutral, there are documents and/or white papers, and/or guidelines, but they are average with notable strengths and weaknesses.

(4) Good coverage in existing documents and/or white papers, and/or guidelines but with gaps.
(5) Complete documents and/or white papers, and/or guidelines are available.

Stakeholder engagement in regulatory processes

How involved are stakeholders such as healthcare professionals, patients, and AI developers in regulating AI in healthcare?

(1) Stakeholders are not involved at all.
(2) Some stakeholder involvement, but it is limited and not systematic.
(3) Neutral, stakeholder involvement is present but inconsistent and varies widely.
(4) Generally good stakeholder involvement, but improvements are needed.
(5) Well-established processes for systematic and meaningful stakeholder involvement in regulatory processes.

Public Awareness and Education

Public awareness and understanding of AI in health
How would you rate the general public's awareness and understanding of AI technologies and their potential applications in the health sector?

(1) Very low awareness and understanding.
(2) Some awareness, but limited understanding.
(3) Neutral, average awareness and understanding with both strengths and weaknesses.
(4) Generally good awareness and understanding, but gaps remain.
(5) High level of awareness and understanding.

Education and training initiatives

How effective are the current education and training initiatives in your country in raising awareness and building knowledge about AI in the health sector among the general public and healthcare professionals?

(1) No initiatives exist.
(2) Some initiatives exist, but they are limited and not very effective.
(3) Neutral, initiatives exist but are average with notable strengths and weaknesses.
(4) Generally effective initiatives exist, but there is room for improvement.
(5) Comprehensive and highly effective education and training initiatives are in place.

Funding and Resources

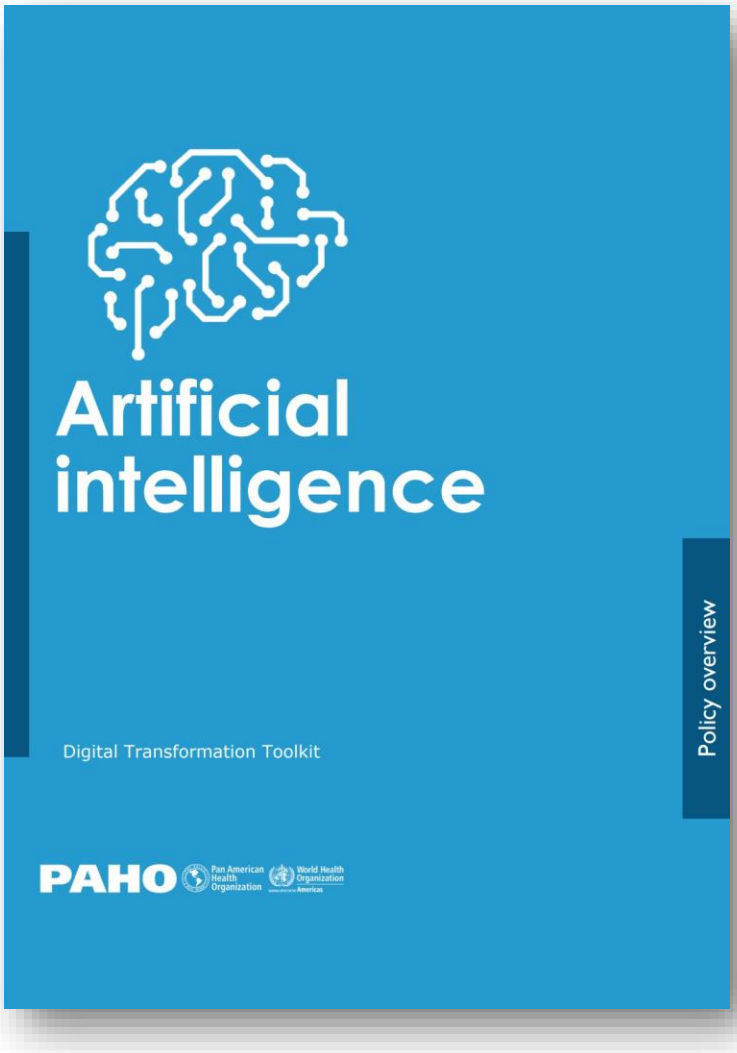
Availability of funding for AI in health
What is the current state of funding availability for the development and implementation of AI technologies in the health sector in your country?

(1) No funding is available.
(2) Limited funding is available, with significant gaps.
(3) Neutral, funding is available but with notable strengths and weaknesses.
(4) Generally good funding availability, but more is needed.
(5) Sufficient funding is available to support AI initiatives in the health sector.

Resource allocation for AI projects

How well are resources (financial, human, and technological) allocated for AI projects in the health sector in your country?

(1) Poor resource allocation.
(2) Some resources are allocated, but significant gaps exist.
(3) Neutral. Adequate resources are allocated, but there is room for optimization.
(4) Generally good resource allocation, but improvements are needed.
(5) Clear and well-implemented ethical guidelines.



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Section 2

Expanded assessment

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Toolkit – Section 2 - Expanded assessment

Governance and Leadership

National AI Strategy
Does your country have a national AI strategy specifically for healthcare?

(1) No, and no plans to develop one.
(2) No, but plans are being discussed.
(3) Neutral, a strategy exists but is not yet fully developed or implemented.
(4) Yes, but it is in the early stages of implementation.
(5) Yes, and it is well-established and operational.

National AI Policy
Does your country have a public policy specifically for AI in healthcare?

(1) No, and no plans to develop one.
(2) No, but plans are being discussed.
(3) Yes, but it is in the early stages of implementation.
(4) Yes, but it is in the early stages of implementation.
(5) Yes, and it is well-established and operational.

Leadership Commitment
How committed are national health leaders to AI initiatives in health care?

(1) No commitment or interest shown.
(2) Initial interest but no concrete actions.
(3) Neutral, some commitment shown but inconsistent or limited in scope.
(4) Commitment demonstrated through some actions and initiatives.
(5) Strong commitment with ongoing and substantial initiatives.

Regulatory Framework
Are there existing regulations for the use of AI in health care?

(1) No existing regulations
(2) Some regulations under development.
(3) Established regulations but not comprehensive.
(4) Established regulations but not comprehensive.
(5) Comprehensive and well-enforced regulations and guidelines.

Ethical Guidelines
Are there established ethical guidelines for the use of AI in health care?

(1) No ethical guidelines.
(2) Discussions on ethical guidelines are ongoing.
(3) Ethical guidelines exist but need further development.
(4) Ethical guidelines exist but need further development.
(5) Comprehensive and well-implemented ethical guidelines.

Infrastructure and Technology

Data Infrastructure

How would you rate the availability and quality of data storage, processing, and sharing systems in your country?

(1) Poor.
(2) Fair.
(3) Neutral, average with both strengths and weaknesses.
(4) Good.
(5) Excellent.

Connectivity

What is the level of broadband and internet connectivity across healthcare facilities?

(1) Very limited connectivity.
(2) Moderate connectivity in some areas.
(3) Neutral, connectivity is inconsistent with notable gaps.
(4) Good connectivity in most areas.
(5) Excellent connectivity nationwide.

Computing Resources

How accessible are high-performance computing resources for AI in health care?

(1) Not accessible.
(2) Limited access.
(3) Neutral, access is inconsistent with notable strengths and weaknesses.
(3) Generally accessible.
(4) Widely accessible and well-supported.

Interoperability Standards

Are there established standards for data exchange and interoperability in health care?

(1) No standards.
(2) Some standards under development.
(3) Neutral, standards exist but their implementation is inconsistent.
(4) Standards exist but need wider adoption.

(5) Well-established and widely adopted standards.

Workforce and Expertise

Skills and Training
What is the availability of trained professionals in AI and data science for health care?

(1) Very few trained professionals.
(2) Limited number of trained professionals.
(3) Neutral, availability is average with both strengths and weaknesses.
(4) Adequate number of trained professionals.
(5) More than sufficient trained professionals.

Capacity Building
Are there programs for continuous professional development in AI for health care?

(1) No programs available.
(2) Few programs available.
(3) Neutral, programs exist but are not widely accessible or comprehensive.
(4) Adequate programs available.
(5) Comprehensive and well-supported programs.

Collaborations
Are there partnerships with academic and research institutions for AI development in health care?

(1) No partnerships.
(2) Limited partnerships.
(3) Neutral, partnerships exist but are inconsistent or limited in scope.
(4) Adequate partnerships.
(5) Strong and active partnerships.

Data Management and Quality

Data Availability
How available is health data for AI applications in your country?

(1) Not available.
(2) Limited availability.
(3) Neutral, availability is inconsistent with both strengths and weaknesses.
(4) Generally available.
(5) Widely available.

Data Quality

What measures are in place to ensure the accuracy, completeness, and timeliness of health data?

(1) No measures in place.
(2) Limited measures in place.
(3) Neutral, some measures exist but are not fully effective or comprehensive.
(4) Adequate measures in place.
(5) Comprehensive measures in place.

Data Privacy and Security

What systems are in place to protect patient data and privacy?

(1) No systems.
(2) Limited systems.
(3) Neutral, systems exist but are inconsistent or not fully comprehensive.
(4) Adequate systems.
(5) Comprehensive systems

Is there a regulatory framework for data protection?

(1) No regulatory framework
(2) Limited regulatory framework
(3) Neutral, a framework exists but has notable gaps or inconsistencies.
(4) Adequate regulatory framework
(5) Strong regulatory framework

Handling of Sensitive Data

Are there policies for handling sensitive health data?

(1) No policies.
(2) Initial discussions on developing policies.
(3) Neutral, policies exist but are incomplete or not fully implemented.
(4) Policies exist but need further development.
(5) Comprehensive policies exist.

Data Anonymization

Do existing regulatory frameworks include measures for the anonymization and de-identification of health data?

(1) No measures in place.
(2) Initial measures being developed.

(3) Neutral, measures exist but are not fully comprehensive or implemented.
(4) Adequate measures in place.
(5) Comprehensive measures in place.

Do existing procedures include measures for the anonymization and de-identification of health data?
(1) No measures in place.
(2) Initial measures being developed.
(3) Neutral, procedures exist but are not fully comprehensive or implemented.
(4) Adequate measures in place.
(5) Comprehensive measures in place.

Funding and Sustainability

Funding Availability
What are the sources and availability of funding for AI projects in health care?

(1) No funding sources.
(2) Limited funding sources.
(3) Neutral, funding sources exist but are inconsistent or insufficient.
(4) Adequate funding sources.
(5) Extensive and reliable funding sources.

Financial Sustainability
Are there plans for the long-term financial sustainability of AI initiatives in health care?

(1) No plans in place.
(2) Initial plans being discussed.
(3) Neutral, plans exist but are incomplete or not fully detailed.
(4) Adequate plans in place.
(5) Comprehensive and well-developed plans.

Cost-Benefit Analysis
Has there been an evaluation of the economic impact and benefits of AI projects?

(1) No evaluation conducted.
(2) Initial evaluations conducted.
(3) Neutral, evaluations exist but are not fully comprehensive.
(4) Adequate evaluations conducted.
(5) Comprehensive evaluations with clear outcomes.

Public and Stakeholder Engagement

Public Awareness
What is the level of public awareness and acceptance of AI in health care?

(1) Very low awareness and acceptance.
(2) Moderate awareness and acceptance.
(3) Neutral, awareness and acceptance exist but are inconsistent.
(4) Good awareness and acceptance.
(5) High awareness and acceptance.

Stakeholder Involvement
How engaged are key stakeholders (patients, health care providers, policymakers) in AI initiatives?

(1) Not engaged.
(2) Limited engagement.
(3) Neutral, engagement exists but is inconsistent or limited in scope.
(4) Adequate engagement.
(5) Strong and active engagement.

Feedback Mechanisms
Are there systems for collecting and addressing feedback from stakeholders on AI initiatives?

(1) No systems in place.
(2) Limited systems in place.
(3) Neutral, systems exist but are not fully effective or comprehensive.
(4) Adequate systems in place.
(5) Comprehensive and well-implemented systems.

Implementation and Integration

Pilot Projects
Are there any existing pilot projects for AI in health care, and what are their outcomes?

(1) No pilot projects.
(2) Initial pilot projects with limited outcomes.
(3) Pilot projects are ongoing, but it's too early to assess their outcomes.
(4) Adequate pilot projects with positive outcomes.
(5) Numerous successful pilot projects with significant outcomes.

Scalability
What is the potential for scaling successful AI projects to a national level?

(1) No potential for scaling.
(2) Limited potential for scaling.
(3) Some potential for scaling, but substantial effort and resources are required.
(4) Adequate potential for scaling.
(5) High potential for scaling.

Integration with Health Systems
How well can AI solutions be integrated with existing health systems and workflows?

(1) No integration potential.
(2) Limited integration potential.
(3) Integration potential is moderate but requires considerable customization and training.
(4) Adequate integration potential.
(5) High integration potential.

Integration in Emergency Response
How prepared is your country to integrate AI solutions in emergency response systems for public health crises?

(1) No integration potential.
(2) Limited integration potential.
(3) Some preparedness, but coordination and infrastructure improvements are needed.
(4) Adequate integration potential.
(5) High integration potential.

Integration in Epidemiological Surveillance
How effectively can AI be integrated into existing epidemiological surveillance systems to monitor and predict disease outbreaks?

(1) No integration potential.
(2) Limited integration potential.
(3) Integration is possible but requires significant data harmonization and system upgrades.
(4) Adequate integration potential.
(5) High integration potential.

Integration in Immunization Programs
How capable is your country of integrating AI into immunization programs to optimize vaccine distribution and coverage?

(1) No integration potential.
(2) Limited integration potential.
(3) Capable but will need extensive logistical support and stakeholder engagement.
(4) Adequate integration potential.
(5) High integration potential.

Integration in Mental Health Services

How well can AI be integrated into mental health services to improve diagnosis, treatment, and patient management?

(1) No integration potential.
(2) Limited integration potential.
(3) Integration is possible but requires addressing privacy concerns and training for mental health professionals.
(4) Adequate integration potential.
(5) High integration potential.

Integration in Chronic Disease Management

How prepared is your country to integrate AI into chronic disease management systems for conditions like diabetes, cardiovascular diseases, and cancer?

(1) No integration potential.
(2) Limited integration potential.
(3) Preparedness is moderate but needs better data infrastructure and patient engagement strategies.
(4) Adequate integration potential.
(5) High integration potential.

Integration in Health Education and Promotion

How effectively can AI be used to enhance health education and promotion efforts in your country?

(1) No integration potential.
(2) Limited integration potential.
(3) Integration is feasible but requires significant investment in digital literacy and content customization.
(4) Adequate integration potential.
(5) High integration potential.

Integration in Health Resource Management

How well can AI be integrated into health resource management systems to improve the allocation and utilization of healthcare resources?

(1) No integration potential.
(2) Limited integration potential.
(3) Integration is possible but needs robust data analytics and change management strategies.
(4) Adequate integration potential.
(5) High integration potential.

Integration in Health Policy and Decision-Making
How prepared is your country to use AI to inform health policy and decision-making processes?

(1) No integration potential.
(2) Limited integration potential.
(3) Preparedness exists but requires stronger data governance and stakeholder collaboration.
(4) Adequate integration potential.
(5) High integration potential.

Monitoring and Evaluation

Performance Metrics
Are there established metrics for monitoring the performance of AI projects?

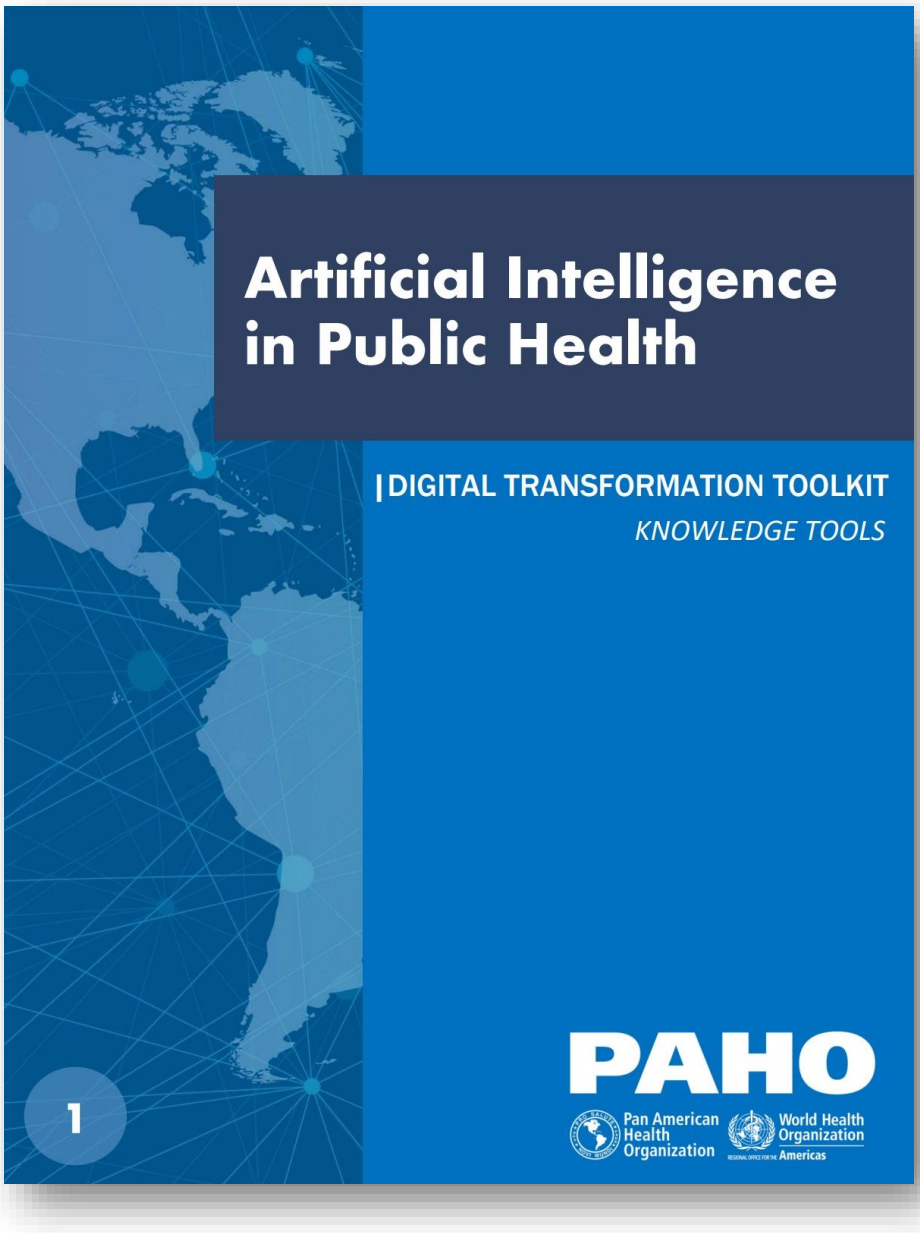
(1) No metrics established.
(2) Limited metrics established.
(3) Metrics exist but need refinement and broader application.
(4) Adequate metrics established.
(5) Comprehensive and well-implemented metrics.

Evaluation Frameworks
Are there frameworks for evaluating the impact and effectiveness of AI solutions in health care?

(1) No frameworks in place.
(2) Initial frameworks being developed.
(3) Frameworks exist but need further refinement and validation.
(4) Adequate frameworks in place.
(5) Comprehensive and well-implemented frameworks.

Continuous Improvement
Are there mechanisms for continuous improvement based on evaluation results of AI initiatives?

(1) No mechanisms in place.
(2) Limited mechanisms in place.
(3) Mechanisms exist but require better integration and feedback loops.
(4) Adequate mechanisms in place.
(5) Comprehensive and well-implemented mechanisms.



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Analysis of the results

Analyzing the results of the AI for Public Health Readiness Assessment Tool is a crucial step in understanding countries preparedness to integrate AI into the public health sector. PAHO and IDB, in collaboration with key partners and stakeholders, will work closely with each member state on the analysis of the assessment data, ensuring a collaborative and tailored approach to interpreting the findings, identifying strengths and areas for improvement, and guiding strategic planning and decision-making. The analysis process will consider the following steps:

Step 1: Data Collection and Organization

PAHO and IDB, in collaboration with key partners and stakeholders, will assist in collecting all responses from the assessment tool, ensuring that the data is organized in a structured format, preferably a spreadsheet or database, where each question's responses are clearly recorded. This organized format will facilitate easier analysis and comparison.

Step 2: Quantitative Analysis

Scoring System: Each response in the tool is rated on a scale from 1 to 4. PAHO and IDB, in collaboration with key partners and stakeholders, will help calculate the average score for each category to get an overall picture of readiness in that area. For instance, if the category "Health Workforce Readiness" consists of multiple questions, PAHO and IDB, in collaboration with key partners and stakeholders, will assist in averaging the scores of these questions to determine the overall readiness in this category.

Distribution of Scores: PAHO and IDB, in collaboration with key partners and stakeholders, will help examine the distribution of scores to identify patterns and outliers. High scores indicate areas of strength, while low scores highlight areas needing attention. Visual aids such as bar charts or heat maps may be used to visualize the distribution of scores across different categories.

Step 3: Qualitative Analysis

Identify Common Themes: PAHO and IDB, in collaboration with key partners and stakeholders, will support the review of qualitative responses to identify common themes and insights. Recurring mentions of specific challenges or strengths, such as lack of funding, inadequate infrastructure, or strong regulatory frameworks, will be highlighted.

Contextual Factors: The analysis will consider contextual factors that might influence the scores. For example, a low score in "Digital Health Landscape" might be due to recent disruptions or ongoing infrastructure projects.

Step 4: Gap Analysis

Benchmarking: PAHO and IDB, in collaboration with key partners and stakeholders, will help compare your scores against benchmarks or standards set by other countries or international guidelines. This comparison will provide a clearer understanding of where your country stands in relation to others and identify specific areas that require improvement.

Priority Areas: Priority areas for action will be identified based on the gap analysis. Focus will be on categories with the lowest scores and those critical for the successful implementation of AI in public health, such as data quality and workforce readiness.

Step 5: Strategic Recommendations

Action Plans: PAHO and IDB, in collaboration with key partners and stakeholders, will assist in developing action plans to address identified gaps. Each plan will include specific, measurable, achievable, relevant, and time-bound (SMART) objectives. For example, if data quality is identified as a weakness, an action plan might include steps to standardize data collection processes and improve data governance.

Resource Allocation: PAHO and IDB, in collaboration with key partners and stakeholders, will guide efficient resource allocation to address the prioritized areas. Ensuring that funding, human resources, and technological investments are aligned with the strategic goals identified in the analysis.

Stakeholder Engagement: PAHO and IDB, in collaboration with key partners and stakeholders, will facilitate engagement with relevant stakeholders, including government agencies, healthcare providers, and technology partners, to support the implementation of the action plans. Collaborative efforts will be key to addressing complex challenges and achieving desired outcomes.

Step 6: Monitoring and Evaluation

Performance Metrics: PAHO and IDB, in collaboration with key partners and stakeholders, will help establish performance metrics to monitor the progress of action plans. These metrics will be aligned with the goals set out in the strategic recommendations.

Continuous Improvement: PAHO and IDB, in collaboration with key partners and stakeholders, will assist in implementing a continuous improvement process where

feedback from monitoring and evaluation activities is used to refine and adjust action plans. This iterative process will ensure that the strategies remain effective and relevant.

Section 3

Critical thinking questions

Artificial Intelligence in Public health
Readiness assessment toolkit

Toolkit – Section 3 - Critical thinking questions

Vision for 2030

- If you think about the year 2030, what positive changes do you envision in the health sector as a result of adopting AI?
- How do you expect AI to improve patient outcomes and health care delivery?
- What advancements in disease prevention and management do you foresee?
- How might AI enhance the efficiency and effectiveness of health systems?
- What new capabilities or services do you hope AI will enable in public health?
- How do you anticipate AI will address current health disparities and promote equity in healthcare access and quality?

Patient Outcomes

- How do you expect AI to improve patient outcomes and health care delivery by 2030?
- What specific improvements in diagnosis and treatment do you foresee?
- How might AI contribute to personalized and precision medicine?

Patient Experience

- How do you envision AI transforming the patient experience in the healthcare system?
- What improvements in patient engagement and satisfaction do you foresee?
- How might AI facilitate more personalized and proactive healthcare interactions?

Healthcare Efficiency

- How might AI enhance the efficiency and effectiveness of health systems by 2030?
- In what ways could AI streamline administrative processes and reduce healthcare costs?
- How do you see AI improving resource allocation and management in healthcare facilities?
- What measures are being taken to assess and mitigate the environmental impact of AI projects in healthcare?

Public Health Capabilities

- What new capabilities or services do you hope AI will enable in public health?
- How could AI support large-scale health monitoring and epidemiological studies?
- What innovations in telehealth and remote care do you anticipate?

Ethical Considerations

- What ethical concerns might arise from the implementation of AI in public health, and how can they be addressed to ensure patient safety and data privacy?
- How will we ensure that AI systems are transparent and accountable?
- What measures can be put in place to prevent biases in AI algorithms?
- How are informed consent and the duty to inform being addressed in the integration of AI technologies in healthcare?

Equity and Accessibility

- How can we ensure that AI technologies benefit all segments of the population, including underserved and rural communities?
- What strategies can be employed to address the digital divide?
- How can we make AI tools accessible and user-friendly for healthcare providers at all levels?

Sustainability

- What long-term strategies should be implemented to maintain and update AI systems in healthcare?
- How can we secure continuous funding and resources for AI projects?
- What plans are needed to ensure ongoing training and capacity building for healthcare professionals?

Interoperability

- How can we ensure that AI systems can seamlessly integrate with existing health information systems and electronic health records?
- What standards and protocols are necessary for data exchange and system interoperability?
- How can we manage the transition period when integrating new AI technologies with existing systems?

Data Governance

- How should we manage and govern health data to maximize the benefits of AI while protecting patient privacy?
- What policies need to be established for data sharing and usage?
- How can we ensure compliance with national and international data protection regulations?

Change Management

- How can we effectively manage the change process when introducing AI technologies into the healthcare system?
- What steps can be taken to ensure buy-in and support from all stakeholders?
- How can we address potential resistance from healthcare providers and patients?

Impact Assessment

- How can we measure the impact of AI implementation on healthcare outcomes and system efficiency?
- What key performance indicators (KPIs) should be established?
- How can we conduct regular evaluations to assess the effectiveness of AI tools?

Public Trust

- How can we build and maintain public trust in AI technologies used in healthcare?
- What communication strategies can be employed to educate the public about the benefits and risks of AI?
- How can we involve patients and the public in the development and evaluation of AI solutions?

Future-Proofing

- How can you design AI strategies that are adaptable to future technological advancements and changing healthcare needs?
- What flexible frameworks can be put in place to accommodate new AI developments?
- How can we anticipate and plan for emerging trends and challenges in AI technology?

Section 4

Strategic Thinking Questions for Multistakeholder Engagement in AI for Health

Artificial Intelligence in Public health
Readiness assessment toolkit

Toolkit – Section 4 - Strategic Thinking Questions for Multistakeholder Engagement in AI for Health

Financial Resources and Investment

- What specific funding mechanisms can the Ministry of Finance and international development banks provide to ensure long-term financial support for AI initiatives in healthcare?
  Engagement with: Ministry of Finance, International Development Banks

- How can private sector investors be incentivized to contribute to AI-driven healthcare projects, and what partnerships can be formed to leverage their resources and expertise?
  Engagement with: Private Sector Investors, Venture Capital Firms, Healthcare Technology Companies

Educational Programs and Training

- What curriculum changes are necessary in medical and healthcare education to incorporate AI and data science, and how can universities and technical institutes collaborate to implement these changes?
  Engagement with: Ministry of Education, Universities, Technical Institutes

- How can NGOs specializing in education support continuous professional development in AI for current healthcare workers, and what programs should be prioritized?
  Engagement with: Educational NGOs, Professional Healthcare Associations, Continuing Education Providers

Digital Infrastructure

- What are the current gaps in digital infrastructure within the healthcare sector, and how can the Ministry of ICT and telecommunication companies address these gaps to support AI implementation?
  Engagement with: Ministry of Information and Communication Technology (ICT), Telecommunication Companies

- How can international tech organizations assist in the development of scalable and resilient digital health systems in our country?
  Engagement with: International Tech Organizations (e.g., IEEE, ITU)

Regulatory and Ethical Frameworks

- What specific regulatory challenges do we face in implementing AI in healthcare, and how can we work with the Ministry of Justice and national ethics committees to overcome them?
  Engagement with: Ministry of Justice, National Ethics Committees, Legal Experts

- What best practices from international health organizations can be adapted to develop robust ethical guidelines for AI use in our healthcare system?
  Engagement with: World Health Organization (WHO), Pan American Health Organization (PAHO), IDB, and International Bioethics Organizations

Workforce Development

- What key skills and competencies are needed for healthcare professionals to effectively use AI technologies, and how can the Ministry of Labor facilitate training programs to develop these skills?
  Engagement with: Ministry of Labor, Professional Healthcare Associations, Vocational Training Institutions

- How can professional healthcare associations contribute to setting standards and providing certifications for AI-related competencies in healthcare?
  Engagement with: Medical Boards, Nursing Councils, AI Certification Bodies

Equitable Access and Inclusion

- What are the primary barriers to equitable access to AI-driven healthcare services in underserved and rural areas, and how can the Ministry of Social Welfare and community health organizations work together to address these barriers?
  Engagement with: Ministry of Social Welfare, Community Health Organizations, Rural Health NGOs

- How can NGOs focusing on health equity collaborate to design and implement AI solutions that specifically target the needs of vulnerable populations?
  Engagement with: Health Equity NGOs, Public Health Institutes, Social Justice Organizations

Healthcare Facility Modernization

- What infrastructure upgrades are essential for healthcare facilities to support AI technologies, and how can the Ministry of Public Works and Infrastructure prioritize these upgrades?

Engagement with: Ministry of Public Works and Infrastructure, Health Facility Administrators

- How can health facility administrators be involved in planning and implementing modernization projects to ensure that new technologies are effectively integrated into clinical workflows?
  Engagement with: Hospital Boards, Healthcare Management Associations, Infrastructure Development NGOs

Research and Innovation

- What are the most critical research gaps in AI applications for healthcare, and how can academic institutions and research funding agencies be mobilized to address these gaps?
  Engagement with: Ministry of Research and Innovation, Academic Institutions, Research Funding Agencies

- How can international research collaborations be leveraged to accelerate innovation and share best practices in AI for healthcare?
  Engagement with: International Research Collaborations, Global Health Research Networks, Bilateral Research Partnerships

Cybersecurity Measures

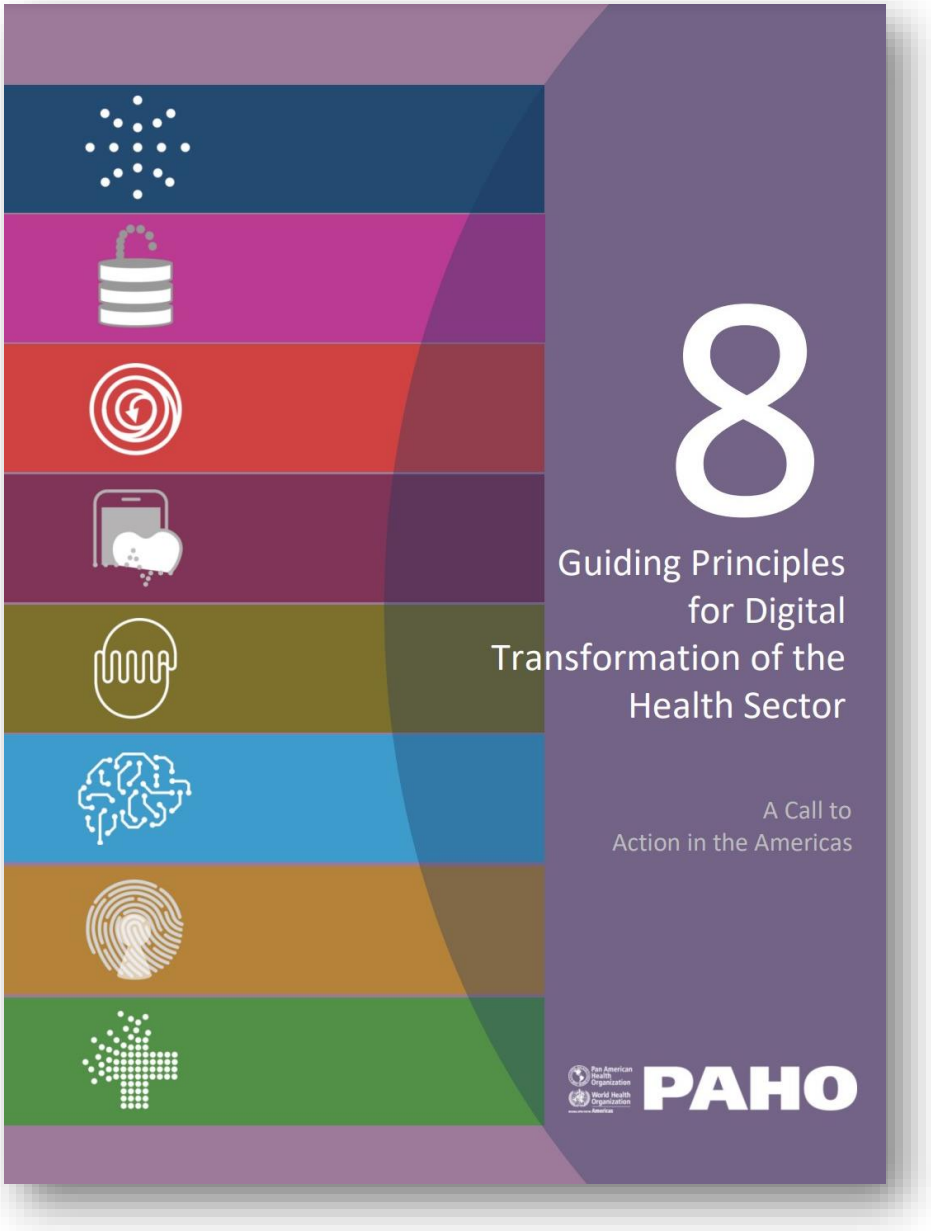
- What specific cybersecurity threats are most relevant to AI systems in healthcare, and how can the Ministry of Internal Affairs and cybersecurity firms develop targeted strategies to mitigate these threats?
  Engagement with: Ministry of Internal Affairs, Cybersecurity Firms, National Cybersecurity Agencies

- How can healthcare institutions' IT departments be trained and equipped to implement and maintain robust cybersecurity protocols?
  Engagement with: Healthcare IT Departments, Cybersecurity Training Institutes, Professional IT Associations

International Collaboration and Partnerships

- What opportunities exist for bilateral and multilateral health initiatives to support AI development in our country, and how can the Ministry of Foreign Affairs facilitate these partnerships?
  Engagement with: Ministry of Foreign Affairs, Bilateral Health Agreements, Multilateral Health Organizations

- How can we engage with global AI consortiums and international health organizations to share knowledge, resources, and technologies that advance AI in healthcare?
  Engagement with: Global AI Consortiums, International Health Organization and International Development Partners



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Section 5

Critical Considerations for a Successful AI Implementation in the Health Sector

Artificial Intelligence in Public health
Readiness assessment toolkit

Toolkit – Section 5 - Critical Considerations for a Successful AI Implementation in the Health Sector

Health Care Needs and Priorities

- **Identifying Key Health Challenges:** Understanding the most pressing public health issues and priorities is crucial. AI should be leveraged to address these challenges effectively, ensuring that the technology is aligned with national health goals and priorities.
- **Facilitating Strategic Discussions:** Engage stakeholders in meaningful discussions to explore the potential of AI in addressing health challenges. Strategic dialogues are essential for aligning AI initiatives with public health needs.
- Existing Health Care Infrastructure
- **Assessing Current Infrastructure:** A thorough evaluation of the existing health care infrastructure, including facilities, equipment, and human resources, is imperative. Identifying strengths and weaknesses will guide necessary upgrades and optimizations for AI integration.
- **Planning for Infrastructure Enhancements:** Investing in the enhancement of health care infrastructure is vital to support the successful deployment of AI technologies. This includes upgrading digital health systems, improving data storage, and ensuring robust connectivity.

Digital Health Landscape

- **Evaluating Digital Readiness:** Assess the readiness of digital health tools, systems, and technological infrastructure. A well-equipped digital health landscape is foundational for implementing a National AI Strategy in the health sector.
- **Closing Technological Gaps:** Identify and address significant gaps in digital health infrastructure. Ensuring that the necessary tools, systems, and technologies are in place is essential for seamless AI integration.
- Data Availability and Quality
- **Ensuring Data Accuracy and Completeness:** High-quality health data is the backbone of effective AI implementation. Ensuring the accuracy, completeness, and timeliness of health data is crucial for AI applications to deliver meaningful insights and outcomes.
- **Improving Data Management Practices:** Implement robust data management practices to enhance data quality. This includes standardizing data collection processes, ensuring secure data storage, and promoting data interoperability.

Health Workforce Readiness

- **Building AI Competencies:** Invest in training and development programs to build AI competencies among health professionals. A well-prepared health workforce is essential for the successful integration and utilization of AI technologies.
- **Addressing Skills Gaps:** Identify and address gaps in skills and expertise within the health workforce. Continuous professional development is necessary to keep pace with advancements in AI and ensure effective implementation.

Existing Regulatory Frameworks

- **Establishing Robust Regulations:** Develop and enforce comprehensive regulatory frameworks to govern the use of AI in healthcare. Effective regulations are crucial for ensuring the safe and ethical deployment of AI technologies.
- **Adapting to Technological Changes:** Regulatory bodies must be agile and responsive to the fast pace of AI technology changes. Establish mechanisms to quickly adapt regulations, addressing new challenges and opportunities as they arise.

Ethical Considerations

- **Upholding Ethical Standards:** Develop and implement ethical guidelines to govern AI applications in healthcare. Address concerns such as bias, transparency, accountability, and data privacy to ensure ethical use of AI.
- **Promoting Public Trust:** Foster public awareness and understanding of the ethical implications of AI in healthcare. Engaging with the public and ensuring transparency in AI initiatives is key to building trust and acceptance.

Stakeholder Engagement

- **Fostering Inclusive Participation:** Engage a wide range of stakeholders, including healthcare professionals, patients, policymakers, and AI developers, in the planning and implementation process. Inclusive participation ensures diverse perspectives and enhances the relevance of AI initiatives.
- **Establishing Feedback Mechanisms:** Implement systems for collecting and addressing feedback from stakeholders. Continuous stakeholder engagement and feedback are essential for refining and improving AI projects.
- Public Awareness and Education

- **Raising Public Awareness:** Increase public awareness and understanding of AI technologies and their potential benefits in healthcare. Public education initiatives are critical for fostering acceptance and support for AI integration.
- **Enhancing Education and Training Programs:** Develop comprehensive education and training programs to build AI knowledge and skills among the general public and healthcare professionals. Effective training initiatives are foundational for successful AI implementation.

Funding and Resources

- **Securing Adequate Funding:** Identify and secure funding sources for AI projects. Sustainable financial support from government budgets, international aid, and private sector investments is crucial for the long-term success of AI initiatives.
- **Optimizing Resource Allocation:** Ensure efficient allocation of financial, human, and technological resources for AI projects. Strategic resource management is essential for maximizing the impact and sustainability of AI initiatives.

Section 6
Guiding principles

Artificial Intelligence in Public health
Readiness assessment toolkit

Toolkit – Section 6 – Guiding Principles

PAHO's guiding principles for the use of artificial intelligence for public health (AI4PH) interventions

The use of AI in public health must be guided by superior technical and ethical considerations aimed to mitigate ethical risk in public health and related policy interventions, reflected in the following eight guiding principles:

- People-centered. Actions and solutions must be people-centered and not be used solely by itself. As one of many technologies to aid public health, AI should respect the rights of the individual.
- Ethically grounded. Discussions, developments, and implementation must be grounded in the globally recognized ethical principles of human dignity, beneficence, nonmaleficence, and justice.
- Transparent. Transparent approaches must always be used and communicated when developing AI algorithms.
- Data-protected. Privacy, confidentiality, and security of data use must be foundational to every AI development.
- Demonstrates scientific integrity. AI interventions should follow scientific best practice, including being reliable, reproducible, fair, honest, and accountable.
- Open and shareable. Everything must be as open and shareable as possible. Tools and underlying concepts of openness must be a feature and a critical success factor of any AI development.
- Nondiscriminatory. Fairness, equality, and inclusiveness in impact and design should always form the foundation of any AI for public health initiative.
- Human-controlled technology. Formal processes for human control and review of automated decisions are mandatory

WHO six principles to ensure AI works for the public interest in all Countries

To limit the risks and maximize the opportunities intrinsic to the use of AI for health, WHO provides the following principles as the basis for AI regulation and governance:

- Protecting human autonomy. In the context of health care, this means that humans should remain in control of healthcare systems and medical decisions; privacy and confidentiality should be protected, and patients must give valid informed consent through appropriate legal frameworks for data protection.

- Promoting human well-being and safety and the public interest. The designers of AI technologies should satisfy regulatory requirements for safety, accuracy, and efficacy for well defined use cases or indications. Measures of quality control in practice and quality improvement in the use of AI must be available.
- Ensuring transparency, explainability, and intelligibility. Transparency requires that sufficient information be published or documented before the design or deployment of an AI technology. Such information must be easily accessible and facilitate meaningful public consultation and debate on how the technology is designed and how it should or should not be used.
- Fostering responsibility and accountability. Although AI technologies perform specific tasks, it is the responsibility of stakeholders to ensure that they are used under appropriate conditions and by appropriately trained people. Effective mechanisms should be available for questioning and for redress for individuals and groups that are adversely affected by decisions based on algorithms.
- Ensuring inclusiveness and equity. Inclusiveness requires that AI for health be designed to encourage the widest possible equitable use and access, irrespective of age, sex, gender, income, race, ethnicity, sexual orientation, ability, or other characteristics protected under human rights codes.
- Promoting AI that is responsive and sustainable. Designers, developers, and users should continuously and transparently assess AI applications during actual use to determine whether AI responds adequately and appropriately to expectations and requirements. AI systems should also be designed to minimize their environmental consequences and increase energy efficiency.

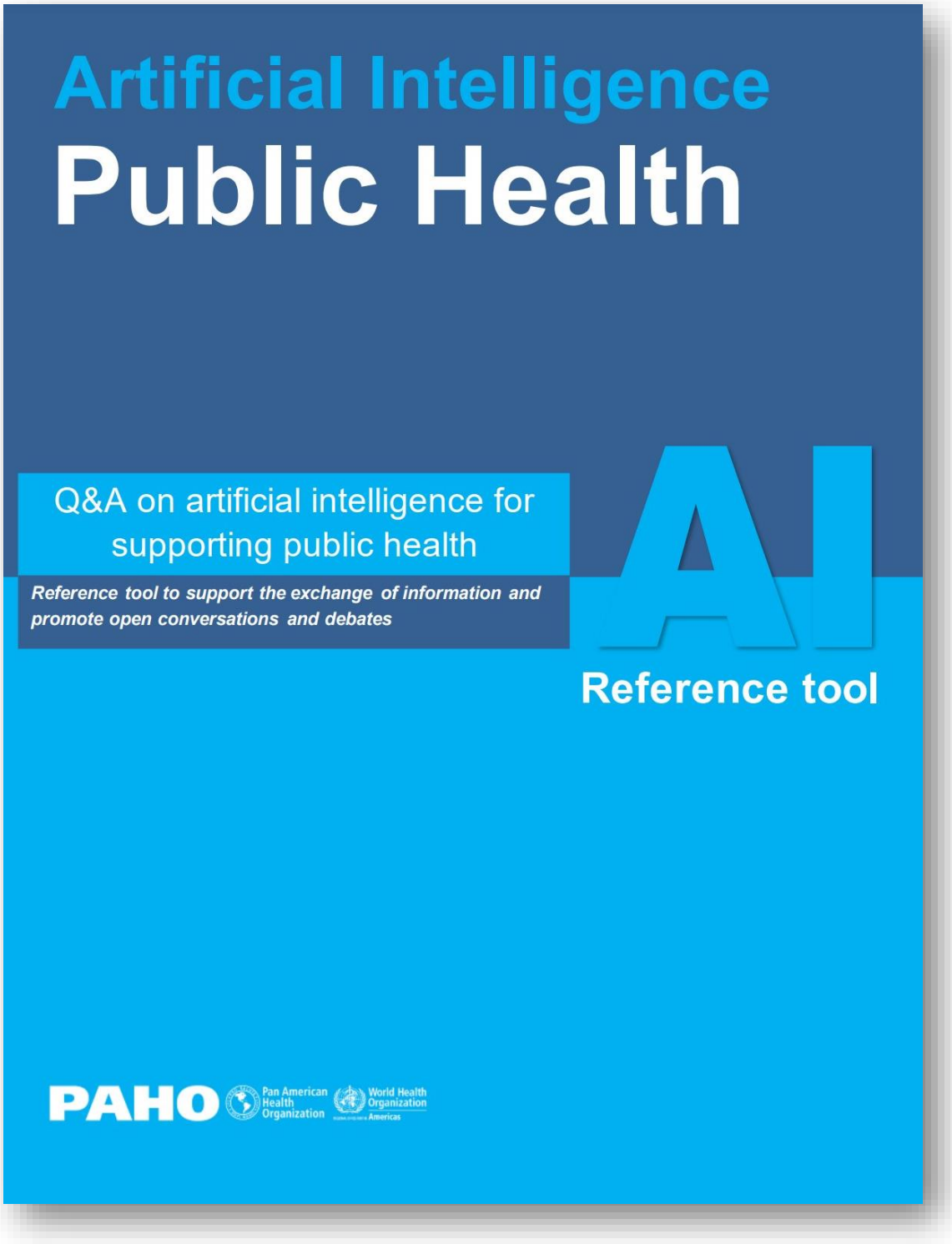
Governments and companies should address anticipated disruptions in the workplace, including training for healthcare workers to adapt to the use of AI systems, and potential job losses due to use of automated systems.

Section 7
Key concepts

Artificial Intelligence in Public health
Readiness assessment toolkit

Toolkit – Section 7 – key concepts

In light of the rapid proliferation of artificial intelligence-driven applications and the heightened levels of anticipation, questions, and uncertainties surrounding their implementation within the public health domain, PAHO is proud to introduce this publication entitled Reference tool to support the exchange of information and promote open conversations and debates.



The primary aim is to foster a deeper comprehension of the genuine capabilities of artificial intelligence (AI) in Public Health, alongside an exploration of potential risks stemming from its inappropriate utilization.

In this document, you will encounter a symphony of insights – where technology harmoniously blends with human expertise to shape the future of public health. Each question invites you to enhance your knowledge and understanding of the potential of AI in Public Health.

The method used was as follows: A group of experts together with internationally renowned figures, convened to discuss the document's scope, question formulation, prompt definition, and scientific sources to support the Q&A processes, and ultimately to edit and curate some responses generated through an interactive “virtual” dialogue between them and generative and other AI tools. In formulating prompts, a “standard” style was adopted, instructing AI platforms to act as experts in AI and Public Health, serving as scientific writers and professional editors. After agreeing on questions, generative AI tools and scientific literature searches in peer-reviewed sources were employed for the analysis, curation, production and editing of responses. After agreeing on the initial answers and reviewing information sources through expert discussions, some questions were reformulated, repeating the cycle of building responses. This document serves as a reference tool for debates on the potential of generative AI tools.

This document does not aim to be an exhaustive guide on AI for public health. Instead, it provides complementary references for readers to further explore the topic.

Document available at: https://iris.paho.org/handle/10665.2/59315

Section 8

Official documents and reports

Artificial Intelligence in Public health
Readiness assessment toolkit

Toolkit – Section 8 – Official documents and reports

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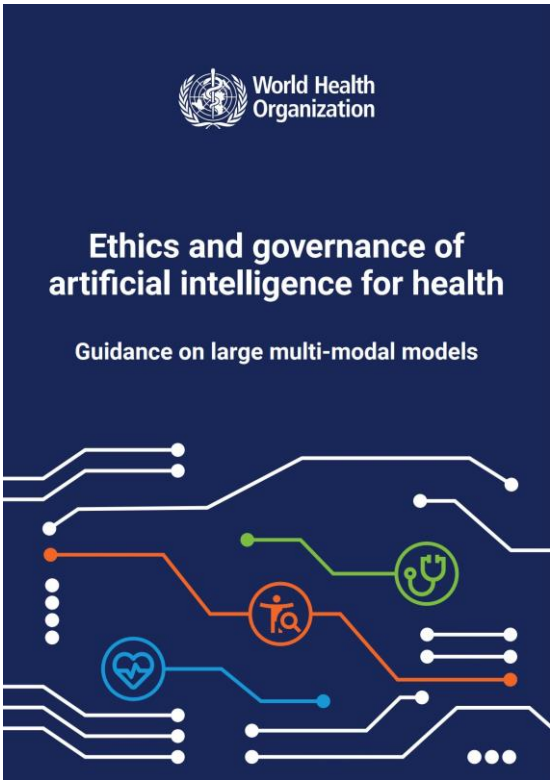

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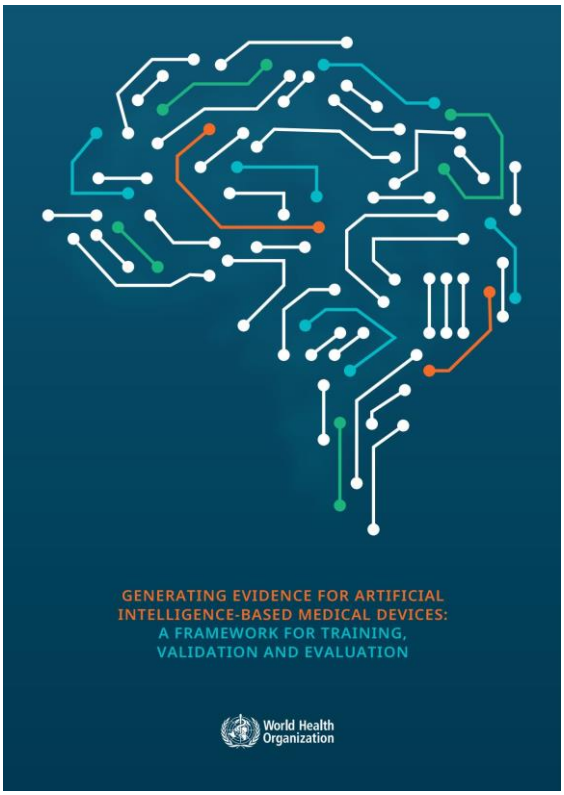

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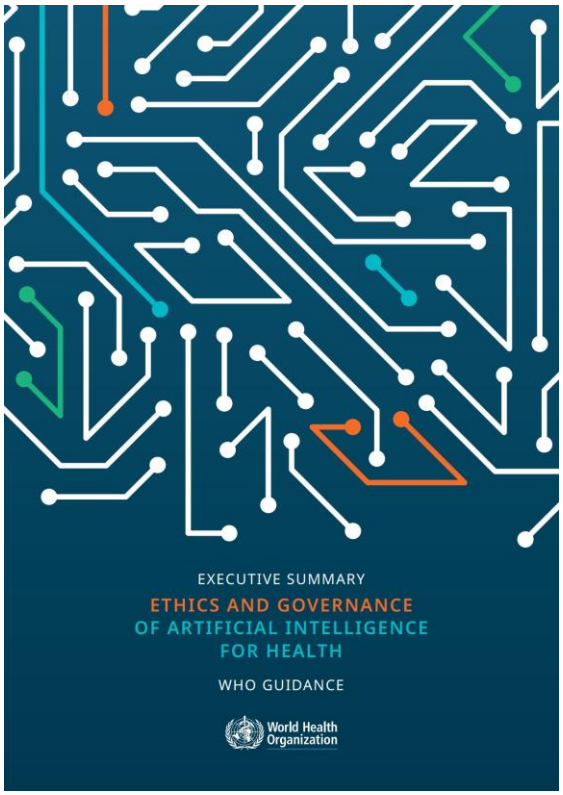

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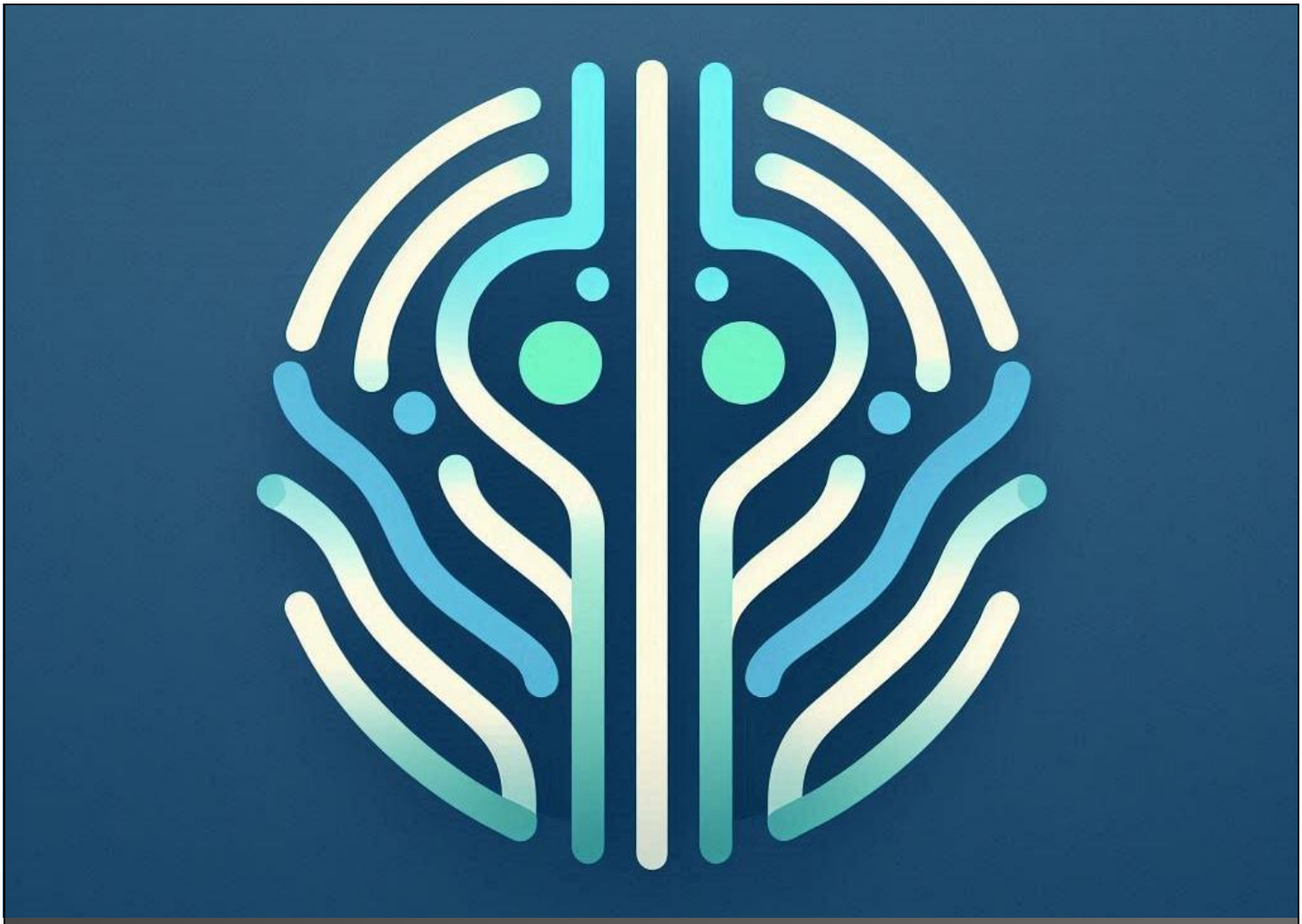

Section 9

OKRs for the First Year of AI Implementation at the National Level

Artificial Intelligence in Public health
Readiness assessment toolkit

Toolkit – Section 9 - OKRs for the First Year of Implementation at the National Level

The following **Objectives and Key Results (OKRs)** are initial suggestions intended to guide the first year of implementing a National AI for Public Health Strategy and Roadmap. These OKRs provide a framework for measuring progress and ensuring successful integration of AI technologies in the health sector. However, it is important to note that these are preliminary recommendations. The final version of the OKRs should be defined by each country, tailored to their unique local realities, available resources, and specific needs. This customized approach will ensure that the AI implementation is both relevant and achievable within the context of each nation's healthcare system.

Objective 1: Establish Digital Health Infrastructure

- Key Result 1.1: Develop and establish a Digital Health Infrastructure Score (See Section 10), measuring the availability, quality, and integration of digital health tools, systems, and technological infrastructure in 50% of health facilities.
- Key Result 1.2: Establish a robust IT infrastructure capable of securely storing and processing large volumes of health-related datasets for use by large language models (LLMs), AI algorithms, and data science techniques in 50% of health facilities.
- Key Result 1.3: Implement electronic health records (EHR) systems in at least 25% of health facilities.
- Key Result 1.4: Set up telemedicine platforms in 30% of health facilities.
- Key Result 1.5: Ensure broadband internet connectivity in 50% of health facilities.

Objective 2: Develop Governance and Regulatory Frameworks

- Key Result 2.1: Draft, propose, and begin implementation of 5 key regulatory frameworks for AI in healthcare, including updates to existing regulations and the development of new ones.
- Key Result 2.2: Engage 80% of identified stakeholders (health professionals, patients, AI developers) in regulatory processes and discussions.
- Key Result 2.3: Conduct 6 workshops to train regulatory bodies on AI principles and regulatory needs.
- Key Result 2.4: Engage with parliamentarians dedicated to public health law or regulations through 4 dedicated sessions.

Objective 3: Build AI Competencies in the Health Workforce

- Key Result 3.1: Develop and launch 6 AI competency training programs for health professionals.
- Key Result 3.2: Complete AI competency training for 50% of targeted health professionals.
- Key Result 3.3: Achieve a 30% improvement in the Health Workforce Readiness Score.

Objective 4: Increase Public Awareness and Engagement

- Key Result 4.1: Develop and distribute 10 educational materials on AI in health to the public.
- Key Result 4.2: Conduct 12 public engagement activities to raise awareness about AI in healthcare.
- Key Result 4.3: Achieve a 40% increase in public trust levels based on surveys and feedback.

Objective 5: Ensure Ethical Compliance and Societal Acceptance

- Key Result 5.1: Finalize and implement comprehensive ethical guidelines for AI use in healthcare.
- Key Result 5.2: Publish 3 public documents addressing the ethical aspects of AI.
- Key Result 5.3: Increase public participation in ethical discussions by 50%.

Objective 6: Improve Data Quality and Accessibility

- Key Result 6.1: Implement advanced data management protocols in 50% of health institutions.
- Key Result 6.2: Ensure 50% of health data meets high standards of accuracy, completeness, and timeliness.
- Key Result 6.3: Establish full data accessibility in 30% of health institutions.

Objective 7: Secure Funding and Optimize Resource Allocation

- Key Result 7.1: Secure long-term funding from 5 major sources for AI projects.
- Key Result 7.2: Utilize 85% of allocated funds for AI projects within the first year.
- Key Result 7.3: Optimize Resource Allocation Plan to cover all AI initiatives effectively.

Objective 8: Implement Initial AI Projects and Integration

- Key Result 8.1: Launch 8 pilot AI projects in health facilities.
- Key Result 8.2: Achieve a 90% success rate for initial pilot projects.
- Key Result 8.3: Fully integrate AI solutions in 25% of existing health systems workflows.

Objective 9: Establish Monitoring and Evaluation Mechanisms

- Key Result 9.1: Develop and finalize comprehensive performance metrics for AI projects.
- Key Result 9.2: Conduct quarterly evaluations of AI project performance based on established metrics.
- Key Result 9.3: Implement continuous improvement processes in 75% of AI initiatives.

Objective 10: Achieve Significant Impact on Health Outcomes

- Key Result 10.1: Document significant improvements in patient outcomes in 25% of targeted areas.
- Key Result 10.2: Measure and report a 30% increase in health system efficiency due to AI integration.
- Key Result 10.3: Publish 5 case studies showcasing the impact of AI on health outcomes.

Section 10

Implementation Roadmap

Artificial Intelligence in Public health
Readiness assessment toolkit

Toolkit – Section 10: Implementation Roadmap

The Implementation Roadmap is a crucial section designed to provide a step-by-step guide for countries embarking on the journey of implementing a National AI for Public Health Strategy. This roadmap suggests practical steps, proposing a structured and systematic approach. It is tailored for countries starting from a basic level, offering guidance from the initial stages of planning through to the full implementation and evaluation of AI initiatives in the health sector. It is essential that each country customizes the roadmap to align with their unique local realities, available resources, and specific needs, ensuring relevance and achievability within the context of their health systems. Importantly, the steps outlined are not necessarily sequential and can be implemented in parallel or in different orders based on local context, availability of resources, political priorities, and other relevant factors.

Initial Assessment and Planning

- **Conduct a comprehensive needs assessment** to identify the most pressing public health issues and determine how AI can address these challenges.
- **Form an AI Task Force** comprising key stakeholders from the government, healthcare sector, academia, and private industry.
- **Develop a strategic vision and objectives** for the National AI for Public Health Strategy.
- **Secure initial funding** and resources for the planning phase.
- **Involve key stakeholders** to gather insights and build consensus.
- **Determine the budget, human resources, and technological infrastructure** required for the implementation.

2. Building Infrastructure

- **Develop a Digital Health Infrastructure Plan**, including the implementation of EHR systems, telemedicine platforms, and broadband connectivity.
- **Establish a robust IT infrastructure** for secure data storage and processing.
- **Launch pilot projects to test infrastructure** components and gather feedback for improvements.
- **Create a robust data infrastructure** that integrates data from various sources.
- **Implement data quality assurance processes and data management practices** to ensure the reliability and accuracy of data.

3. Governance and Regulatory Frameworks

- **Draft and propose key regulatory frameworks**, including data privacy, ethical use, system validation, interoperability, and governance.
- **Engage with parliamentarians and regulatory bodies** to finalize and adopt these frameworks.
- **Develop new regulatory instruments** and update existing ones to support AI implementation.
- **Establish a governance body** to oversee the implementation, including an AI Council and an Ethics Committee.
- **Develop or adopt standards for data interoperability**, AI model validation, and ethical guidelines for AI use in public health.

4. Capacity Building and Training

- **Develop and launch AI competency training programs** for healthcare professionals.
- **Establish partnerships with academic and training institutions** to support ongoing education.
- **Conduct regular training sessions and workshops** to ensure continuous skill development.
- **Enhance understanding and skills** in AI for healthcare professionals and public health officials.

5. Public Awareness and Engagement

- **Develop and distribute educational materials** to raise public awareness about AI in healthcare.
- **Organize public engagement activities**, including forums, workshops, and media campaigns.
- **Gather and incorporate public feedback** into the AI strategy to ensure transparency and trust.
- **Conduct public awareness campaigns** to educate citizens about the benefits and risks of AI in public health.

6. Implementation of AI Projects

- **Identify and prioritize initial AI projects** based on the needs assessment.
- **Launch pilot AI projects** in selected healthcare facilities and monitor their progress.

- **Scale successful pilot projects to a national level**, ensuring integration with existing health systems.
- **Test AI applications in specific areas** like disease prediction, outbreak detection, and patient management.
- **Develop scalable AI solutions** that can be expanded to cover broader public health needs.
- **Partner with tech companies and research institutions** to leverage their expertise in AI development.

7. Monitoring, Evaluation, and Continuous Improvement

- **Establish a comprehensive performance metrics system** to monitor AI project outcomes.
- **Conduct regular evaluations** of AI initiatives based on established metrics.
- **Implement mechanisms for continuous improvement** and incorporate lessons learned into future projects.
- **Define key performance indicators (KPIs) and Objectives and Key Results OKRs** to measure the effectiveness of AI applications.
- **Establish a feedback loop to continuously monitor**, evaluate, and improve AI systems.

8. Securing Long-term Sustainability

- **Develop a sustainability plan** that includes securing long-term funding sources.
- **Foster partnerships** with international organizations, private sector, and academia.
- **Ensure continuous stakeholder engagement** to maintain support and momentum for AI initiatives.
- **Develop a long-term strategy** for the sustainable use of AI in public health.
- **Secure ongoing funding and investment** to support the continuous development and maintenance of AI systems.

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