IAPB eye health technology guide: Technology for access framework

This framework is designed to help you consider whether technology will be appropriate in eye health services in a specific setting, and how to appropriately introduce new technology.
## Technology readiness

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<th>Area</th>
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<th>Essential criteria</th>
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<tr>
<td><strong>Efficacy</strong></td>
<td>How likely the technology is to improve eye health outcomes, including whether the technology is based on the latest scientific knowledge and evidence-based guidelines.</td>
<td>1. The technology consistently achieves or surpasses minimum accepted standards, validated against currently available methods.</td>
<td>2. Published evidence on the efficacy of the technology available in the scientific literature and/or from results of other local evaluations/pilots/trials of the intervention. 3. Efficacy of the technology can be measured and monitored.</td>
<td>• What evidence or research is available that shows the product does it what it claims?  • How does the efficacy of the technology compare to the current standard of care or to other competitive products?</td>
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<td><strong>Safety</strong></td>
<td>Patient safety is a key consideration in the delivery of any health services. It aims to prevent and reduce risks, errors and harm that occur to patients during provision of health care.</td>
<td>1. The technology and services enabled by the device meet local regulatory standards. 2. Personnel to use the technology are trained and assessed as competent. 3. Risk assessments and management protocols for patient safety are in place to reduce, eliminate and manage any adverse outcomes. 4. Obtain informed consent from patients before using the technology on them. 5. Regularly monitor and document the technology’s safety and efficacy once it’s in use. 6. Any service involving children must have safeguarding protocols in place and activated.</td>
<td>7. Review the technology’s safety record, including any reported adverse events or complications, including in clinical trials.</td>
<td>• How can we be sure the technology is safe?  • Does the technology meet all local regulatory standards?  • How are any risks to patient safety managed?  • How can we be sure services enabled by the technology are child safe?</td>
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| **Policy and regulation**    | The introduction and scale-up of technology needs to be within the context of relevant policies, legal and regulatory frameworks. | 1. The technology and services enabled by the device meet local regulatory standards.  
2. Government and regulatory bodies, professional bodies and/or civil society have been consulted around the introduction of the technology.  
3. Proposed solution aligns with existing in-country digital strategies and platforms and data standards.  
4. Patient information, data and associated financial systems are secure and aligned with national regulations. | 5. Technology will be introduced by a well-led organization open to change and with good managerial relations where risks are managed and supported.  
6. Government and regulatory bodies, professional bodies and/or civil society are supportive of the introduction of the technology.  
7. The technology meets any existing regulatory, security or policy framework, or this is planned.  
8. Technology and/or digital platform is compatible with existing health systems or data can be regularly shared with government in a format easily integrated into their system. | • Does the technology meet local regulatory standards?  
• Do other stakeholders support the introduction of this technology?  
• Does the solution align with existing digital strategies and platforms?  
• How can we be sure that patient information is secure? |
| **Human resources**          | Personnel need to be trained to competently use the technology.            | 1. The technology is being distributed under the guidance of a suitably trained health worker who has met recognised competencies (WHO) and who fits within existing public or private sector HR systems.  
2. The technology is user-friendly and acceptable for health workers.  
3. Personnel to use the technology can be trained and assessed as competent.  
4. The device operator can use the technology to identify patients that need to be referred for further treatment. | 5. Mechanisms are in place to regularly assess the competency and effectiveness of the device operators and provide refresher training.  
6. A plan is in place to address any change to professional identity, values, or scope of practice produced by the technology. | • What type of health worker should use this technology in our context?  
• How is this technology more user friendly than current or similar options?  
• How are personnel trained to use the technology?  
• How can the device operator use the technology to identify patients that need to be referred for further treatment? |
| **Continuum of care & referrals** | Technology exists within a broader eye health and health context, so well-defined referral criteria and pathways are critical. | 1. There are clearly defined accessible, permanent and verified referral pathways for patients targeted by the technology.  
2. The device operator conveys basic eye health information to the patients and encourages appropriate use of referral pathways.  
3. For digital referral and tracking systems, patient data is protected. | 4. Referral pathways are aligned to the public health referral system. | • If a patient needs referral, what is the pathway and process?  
• How and when should device operators convey eye health information to patients?  
• How is referred patient data protected? |
## Operating environment

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| Local suitability       | The technology needs to function correctly specifically in the country of introduction or a similar country context or population. | 1. The outcomes delivered by the technology address user needs.  
2. The technology has been tested and validated in country of introduction or a similar country context.  
3. The technology is robust enough to be used in rural and remote locations.  
4. Existing internet and mobile infrastructure support consistent access to the technology.  
5. Device maintenance, repair and replacement options are available locally or regionally. | 6. Data from in-country trial is published in a peer reviewed journal.  
7. Acceptability of services provided by the technology is measured.  
8. The technology improves upon the balance between cost-effectiveness, patient safety and environmental impacts of current service provision. | • How does the technology improve the user experience compared to current or similar technologies?  
• Has the technology been tested, validated and used in this country or a similar country?  
• Can you give examples of where the technology has been used in demanding conditions or rural and remote locations?  
• What internet and mobile infrastructure is required to run the technology?  
• Will the technology be consistently available?  
• If the technology requires maintenance, repair or replacement, how would this be handled? What is the turn-around time? |
| Service accessibility   | Health care is considered ‘accessible’ when it is available at the right place and time, considering population needs and the affordability of care. | 1. The technology leads to improved availability, affordability and/or reach of services and products. | 2. Services enabled by the technology are affordable to most groups or individuals.  
3. Groups or individuals who may not be able to access the service benefit from an equity plan.  
4. There is a data-driven understanding of how the technology will bring down the cost of eye care services over time, with metrics that track progress towards this goal.  
5. Relevant disaggregated monitoring indicators are in place to determine level and type of coverage. | • How will the technology improve availability, affordability and/or reach of eye care services?  
• How will the technology affect the overall burden of care for each patient? |
| Economic sustainability | A technology needs to be worth introducing. Consider direct and indirect costs involved in the assessment, implementation, and ongoing use of the technology. | 1. Cost-benefit balance of the technology being considered is favourable for service providers.  
2. Budget is available for direct and indirect costs involved in assessment, implementation, ongoing service delivery and maintenance. | 3. Cost-benefit balance of the technology being considered is favourable compared to alternate options. | • What are the costs and work involved in implementation of this technology?  
• What are the costs and work involved in ongoing service delivery and maintenance?  
• How might the technology affect costs for the patient? |