



World Health  
Organization

The **GATE** Initiative



Online training in assistive products

Pilot report

Port Moresby, Papua New Guinea

June 2019

## Executive summary

### 1. Introduction to TAP

Training in assistive products (TAP) is an open access online learning platform, developed in response to the widespread shortage of personnel trained to provide assistive products (AP). TAP intends to equip primary/community health and other community-level personnel to provide a range of simple AP, selected from the World Health Organization's (WHO) Priority Assistive Products List (APL) <sup>1</sup>. The training modules teach a 'four step' approach for the safe and appropriate provision of these selected AP. During the development of TAP, modules are being piloted in different contexts around the world.

### 2. Pilot overview

The Papua New Guinea (PNG) pilot was carried out in June 2019, in collaboration with the National Department of Health (NDOH) Health Facilities Standards Branch, National Capital District Community (NCDC) Health Services, Port Moresby General Hospital (PMGH) Eye Clinic and the National Orthotics and Prosthetics Service (NOPS). The pilot focused on understanding and drawing lessons about:

- TAP effectiveness in enabling personnel to acquire knowledge and skills to provide AP
- The effectiveness of the TAP platform considering usability, accessibility, content and learning methods
- TAP implementation, including identifying relevance, feasibility and success factors.

Five modules were included in the pilot: Introduction to assistive products; Introduction to vision; Magnifying glasses and telescopes; Reading glasses, and Walking aids. A total of 19 personnel from NCDC Kaugere Health Clinic and NOPS completed modules during allocated work time over two weeks. This was followed by a number of evaluation activities including consultations, focus groups with participants and their managers, role play and supervised practice. Data collected throughout the pilot was then analysed to inform learning for both the TAP development team and PNG stakeholders.

### 3. Conclusions and lessons

The pilot provided confidence that TAP modules have good potential to increase knowledge, in preparation for learners to begin provision of simple AP. The pilot also confirmed that learners will in most instances require supervised practice to achieve safe and effective competency in AP provision. This is an important consideration in the roll out of TAP, as it requires availability of personnel with relevant skills to mentor and supervise new learners. This also highlights the importance of including guidance for supervisors in TAP.

The response to TAP from participants, their managers, and senior health personnel was positive, and reinforced findings from the first TAP pilot: that health service providers recognise a high need for AP amongst service users; and see provision of simple AP as an appropriate task for nurses, primary/community health workers and related workforce. Participants also gave valuable feedback to strengthen elements of module content, as well as to improve the platform's usability and accessibility. The pilot was also valuable in highlighting the resourcing constraints experienced by many health personnel, and the impact this may have on the implementation of TAP. Practical barriers to TAP implementation were identified including limited access to internet, tablets and printers; availability of supervisors; competing priorities; and a need for

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<sup>1</sup> World Health Organization 2016, *Priority Assistive Products List*, World Health Organization, Geneva.

dedicated time to focus on training within busy clinic schedules. These are all factors to be considered as TAP is further developed and rolled out.

This pilot activity also provided the PNG NDOH with an opportunity to build on their existing work in increasing access to AP through PNG's health system. In particular, to explore the potential to introduce basic level screening for AP, and provision of selected simple AP through health clinics. Post pilot, there has been continuation of vision screening and provision of reading glasses at Kaugere Health Clinic, as well as a collaborative initiative between the Kaugere and NOPS to provide mobility device services. The TAP team look forward to continuing to learn from these very positive initiatives as they progress.

## Summary of recommendations

### Recommendations for consideration by PNG stakeholders

- Build on the TAP pilot experience to explore the introduction of screening for AP needs at rural health posts, health clinics and health centres (potentially starting with vision screening).
- Include vision screening in secondary and tertiary level services (such as NOPS, physiotherapy, provincial hospitals) to increase identification, management and referral of people to eye care services.
- Systematically pilot the provision of selected basic AP (such as reading glasses and walking aids) through health clinics, making sure the required training and support is provided to health clinic staff.

### Knowledge, skills and delivery

- Revise modules to increase text, images or video to further support learning in those areas that were identified as particularly challenging for learners.
- Promote the important role of supervisors in facilitating 'knowledge into practice'; as well as dedicated time for personnel to take the modules.
- Develop a resource page on the TAP platform for supervisors, including: tips on supporting new learners, tools and resources, as well as examples of different ways TAP may be used. Additionally, explore the usefulness and potential uptake of a discussion forum thread for supervisors.
- Explore log-in options that do not need an email address; and maximise TAP platform data use efficiency

### TAP platform usability and accessibility

- Provide guidance for TAP supervisors to assess the readiness of learners to use an online platform before they begin training; and suggested strategies for preparing learners to use the hardware and platform if necessary.
- Continue to place a high priority on the accessibility of TAP; routinely test accessibility features as new modules and elements are added; build in opportunities to test accessibility with users; and provide guidance for supervisors on enabling accessibility features on different devices.

### Module content, media and other elements

- **Content:** Continue with current approach of piloting each new module in different contexts to ensure it is effective in supporting safe and effective AP provision for different learners; include information about the WHO 8 steps of wheelchair provision and how this aligns to four steps in the TAP FAQ page; and develop a downloadable summary of each module.
- **Media and other elements:** Maintain the current blend of text content and different media; continue the inclusion of prompts on the back of assessment forms; and simplify the discussion forum.

### Future TAP pilots

- Ensure the opportunity to more fully test the magnifying glasses and telescope module in future pilots.
- Include opportunities to monitor and evaluate outcomes over time, in order to increase understanding of the success and risk factors for successful AP provision.

## Report

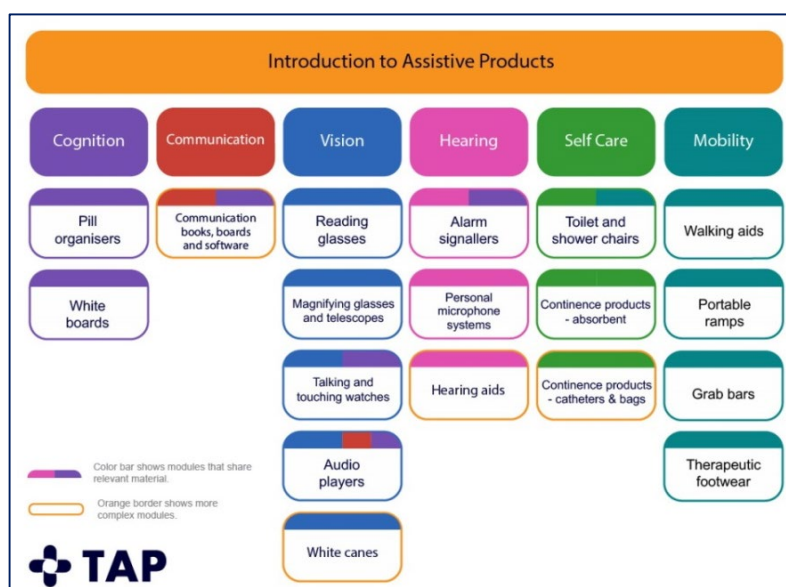
### 4. Training in assistive products (TAP)

The World Health Organization (WHO) published the first Priority Assistive Products List (APL) in 2016<sup>1</sup>. The APL includes hearing aids, wheelchairs, spectacles, artificial limbs, communication and memory devices, and other essential items needed by at least one billion people around the world in order to live a healthy, productive and dignified life<sup>2</sup>. Aligned with the WHO Model List of Essential Medicines, the APL is intended as a catalyst in promoting access to assistive products (AP).

Trained personnel are essential to effectively provide AP. Proper assessment, fitting, user training and follow-up are vital as without these four key steps AP are often of no benefit or abandoned, and may cause physical harm. In many contexts however, there is a severe shortage of trained personnel to provide AP<sup>1</sup>, or they are not accessible to the whole population.

TAP is an open access, online learning platform hosting interactive training modules (see graphic on right). Module content is delivered in a variety of ways, including: case studies, videos, illustrations and photographs, questions and activities, and quizzes. There are also downloadable/printable checklists, assessment forms and key word lists.

Intended to equip primary/community health and other community-level personnel to provide simple AP, TAP has the potential to increase the scope of practice of the existing workforce, making AP more readily accessible to more people in a wide range of contexts.



### 5. Pilot background

#### 5.1 Pilot objectives

To ensure TAP is a practical and relevant resource for stakeholders across a diverse range of global settings, modules are being piloted in different countries and contexts through the development process. The first pilot was carried out in Bangalore in February 2018, and included three modules: Walking aids, Introduction to vision and Reading glasses. The full report can be found on the [WHO website](http://apps.who.int/gb/ebwha/pdf_files/WHA71/A71_21-en.pdf). This Papua New Guinea (PNG) pilot included the following modules:

- Introduction to assistive products
- Walking aids
- Introduction to vision; Reading glasses; Magnifying glasses and telescopes.

<sup>2</sup> World Health Organization 2018, *Improving access to assistive technology, report by the Director-General for the seventy-first world health assembly*, retrieved from [http://apps.who.int/gb/ebwha/pdf\\_files/WHA71/A71\\_21-en.pdf](http://apps.who.int/gb/ebwha/pdf_files/WHA71/A71_21-en.pdf).



The objective was to inform the development of TAP, focusing on:

- The effectiveness of TAP for health personnel to gain knowledge and skills to provide simple AP
- Effectiveness of the TAP platform considering usability, content and learning methods
- Lessons for TAP implementation, including relevance, feasibility and success factors.

The pilot was also an opportunity to continue to refine the TAP pilot methodology and evaluation tools.

## 5.2 Partners

The TAP pilot was coordinated by the National Department of Health (NDOH) Health Facilities Standards Branch and Motivation Australia, in close consultation with the National Capital District Community (NCDC) Health Services and Port Moresby General Hospital (PMGH) Eye Clinic. The National Orthotics and Prosthetics Service (NOPS), a section within the Health Facilities Standards Branch provided local logistics, a project officer and driver.

Two urban health clinics with the support of NCDC participated in the pilot, including Kaugere Health Clinic and Six Mile Clinic. The pilot team and clinic health staff visited PNG Eye Care Centre during the pilot evaluation. Members of the PNG Assembly of Disabled Persons (PNG ADP) participated in a focus group, with particular emphasis on the accessibility features of TAP. The Royal Australian New Zealand College of Ophthalmologists (RANZCO) also supported the pilot via a visiting Australian optometrist who joined the evaluation team for practice sessions.

## 5.3 Context

PNG was chosen as a pilot location in consultation with national stakeholders, the WHO Western Pacific Regional Office and WHO country office for a number of reasons. These included the country's growing interest in strengthening assistive product services, health workforce challenges common to many of the contexts for which TAP is intended, and availability of tertiary level services for vision and mobility that could support referrals that may be generated through the pilot.

The PNG **National Health Plan** (2011-2020)<sup>3</sup> prioritizes universal health coverage and equal access for the country's rural population and the urban poor. The NDOH makes and administers health policy, while implementation of the National Health Plan is decentralized to provincial, district and local level government. The central government administers the national referral hospital, PMGH, along with specialist, regional and provincial public hospitals. Health services are accessed at public hospitals and clinics, church-run health centres and aid posts staffed by community health workers. PNG experiences significant health work force constraints, and addressing this is a priority of the National Health Plan.

The Department for Community Development and Religion is the coordinating ministry for disability in PNG. The Government of PNG ratified the United Nations Convention on the Rights of Persons with Disabilities (CRPD) in 2013. The **PNG National Policy on Disability** (2015-2025)<sup>4</sup> supports implementation of the convention within the unique context of PNG. In 2015-16 PNG stakeholders worked together to prepare **National Guidelines on the Provision of Assistive Technology**<sup>5</sup>. These Guidelines are currently being operationalized through the NDOH. Driven by a multi-sector steering committee, the Guidelines offer recommendations for provision of AP for people with hearing, mobility and/or vision impairment.

<sup>3</sup> Government of Papua New Guinea 2010, *National Health Plan 2011-2020*.

<sup>4</sup> PNG Department for Community Development and Religion 2015, *National Policy on Disability 2015-2025*.

<sup>5</sup> PNG Guidelines Steering Committee 2016, *National Guidelines on the Provision of Assistive Technology in Papua New Guinea, Zero Draft*.

Despite a number of **initiatives to increase access to assistive products in PNG**, access remains limited. The NDOH is responsible for provision of mobility AP through the National Orthotics and Prosthetics service (NOPS). Callan Services National Institute (CSNI) and their networks run initiatives aimed at providing and increasing access to vision and hearing assistive products, including the opening of a new vision centre in Port Moresby in 2018. In the same year, a collaboration between PNG Eye-Care, Brien Holden Vision Institute (BHVI) and the National Prevention of Blindness Committee (PBL) saw the establishment of a National Resource Centre for Eye Health in Port Moresby. Plans to initiate paediatric and low vision services based at this centre, linked directly to the eye care health services provided through PMGH are moving ahead. There is a recognized gap in the provision of AP for people with communication and/or cognitive impairments. The scope, reach and consistency of all services is limited by available human, technical and financial resources; as well as significant geographical challenges.

PNG carried out a **Rapid Assessment of Avoidable Blindness (RAAB)** in 2017<sup>6</sup>. 4,818 adults across 100 randomly selected communities across the country were surveyed. The RAAB results indicate that PNG has the highest rate of blindness in the region, at 5.6% in adults older than 50 years. For 66% of those with a vision impairment, the primary cause was untreated cataract. High rates of diabetes and associated eye health conditions were also identified, coupled with low rates of eye health and vision screening of known diabetic clients. These findings emphasize the importance of increasing the coverage of cataract surgery as well as ensuring referral pathways from community level screening through to tertiary level services for appropriate medical intervention.

The study also highlighted challenges in accessing vision AP, with 67% of people identified with distance refractive error not having appropriate prescription glasses. The need to strengthen eye care services in PNG is well recognized by all local stakeholders, in particular outside of Port Moresby, where eye health care services are limited, and under-resourced in terms of facilities, equipment, stock (glasses) and personnel.

The first PNG National Eye Plan (2013-2016)<sup>7</sup> identified a tiered structure of eye health services, from tertiary through to district hospitals and health centres. The emphasis of this plan was on strengthening eye health care and provision of glasses (inclusive of reading glasses and prescription glasses). Stakeholders are currently reviewing and updating this plan, which will include greater consideration of low vision AP. A study carried out in PNG in 2016 identified barriers to low vision services including low vision not being a priority area; limited availability of low vision services, trained personnel and low vision devices; low vision not included in training programs of eye-care practitioners and lack of awareness of available referral services among mainstream health service providers. Barriers at community level were identified as being a lack of awareness of services, distance, costs and limited transport to access services and negative community attitudes<sup>8</sup>.

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<sup>6</sup> Brien Holden Vision Institute 2017, *Rapid Assessment of Avoidable Blindness and Diabetic Papua New Guinea*, retrieved from <https://www.iapb.org/resources/rapid-assessment-of-avoidable-blindness-and-diabetic-retinopathy-report-papua-new-guinea-2017/>.

<sup>7</sup> National Prevention of Blindness Committee 2013, *National Eye Plan Papua New Guinea 2013-2016*.

<sup>8</sup> Marella M et al. 2017, *The situation of low vision services in Papua New Guinea: an exploratory study*, Clinical and experimental optometry, 100 (1) pp54-60.

## 6. Pilot description

### 6.1 Overview

Phase	Key activities
<b>One: Preparation</b>	<ul style="list-style-type: none"> <li>In-country consultation with pilot partners to confirm detailed pilot arrangements and development of terms of reference.</li> <li>Preparation of evaluation tools.</li> <li>Research and implementation of third-party software to manage internet access on tablets during the pilot period.</li> </ul>
<b>Two: Learners take the modules</b>	<ul style="list-style-type: none"> <li>The 5 pilot modules were made available to learners over a two week period.</li> <li>Learners accessed the modules for a period of time (agreed with service managers) during their working day.</li> <li>In-country support was provided to learners by the NOPS team.</li> <li>Remote support was provided to the NOPS team via instant messaging; and to learners via the TAP discussion forum.</li> </ul>
<b>Three: Evaluation</b>	<p>In-country activities:</p> <ul style="list-style-type: none"> <li>De-brief feedback re logistics with NOPS team.</li> <li>Focus groups with each learner group.</li> <li>Vision screen role play, carried out in small groups, with coaching as required.</li> <li>Supervised practice of vision screen with clients.</li> <li>Consultation workshop with PNG Assembly of Disabled Persons members.</li> <li>De-brief meetings with the Manager of the National Capital District Community (NCDC) Health Services, Chief Ophthalmologist and WHO PNG Country Office.</li> </ul> <p>Analysis of data including:</p> <ul style="list-style-type: none"> <li>Participant registration forms.</li> <li>Results of participant's pre and post module quizzes and skills checklists.</li> <li>Discussion forum responses posted by participants while taking the modules.</li> <li>Completed participant questionnaires re usability and content relevance.</li> <li>Focus groups transcripts.</li> </ul>



*Vision screen role play at NOPS (left)  
and Kaugere Health Clinic (right)*

## 6.2 Resources

**Tablets and data:** Tablets were chosen as the hardware for learners to access the modules, due to a lack of availability of computers at learners' place of work. Data was pre-loaded onto each tablet, and internet access controlled as noted above.

**Other:** Learners were provided with a pack consisting of a notebook, vision charts and forms and documents. The vision charts, forms and documents were also available on the platform and could be downloaded and printed.

## 6.3 Target learners

The pilot aimed to identify up to 18 health personnel without previous experience of AP provision to take the introduction to AP and vision modules, and up to nine personnel from the NOPS service with previous experience in provision of mobility AP to take the introduction to assistive products and walking aids modules. Selection criteria:

- Confident in reading, writing and speaking English
- Willing to commit to completing the modules and taking part in the evaluation
- Confirmed support from service managers to participate.

Eighteen nurses and community health workers from two urban health clinics were recruited to participate as learners, along with nine NOPS personnel. However, personnel from one of the urban health clinics did not complete the modules; and instead a number of NOPS personnel completed the vision modules as well as the walking aid modules. See table below.

	Kaugere clinic personnel		NOPS personnel		Total
	Men	Women	Men	Women	
<b>Pilot learners (total):</b>	2	8	6	3	19
<b>Modules completed:</b>					
• Introduction to AP	2	8	6	3	19
• Walking aids	-	-	6	3	9
• Introduction to vision	2	8	3	2	15
• Reading glasses	2	8	3	2	15
• Magnifying glasses	2	8	3	2	15



## 6.4 Evaluation and consultation statistics

The table below provides an overview of the number of people who participated in the different evaluation and consultation activities.

Consultation / evaluation activity	Men	Women	With a disability		Total
			Men	Women	
Focus groups:					
• NOPS participants	5	3	-	-	8
• Kaugere participants	1	4	-	-	5
TAP workshop with PNG Assembly of Disabled Persons	2	0	5	2	9
De-brief and/or consultations	10	24	-	1	35



*Kaugere Health Clinic participants with their supervisor, NOPS and WHO team members.*



*NOPS participants with their manager and WHO team members.*

## 7. Findings, conclusions and recommendations

### 7.1 Effectiveness of TAP in knowledge and skills acquisition

#### Knowledge and skills gained

Findings	Conclusions and recommendations
<p><b>Knowledge gained</b></p> <p>Comparison of the pre and post module quiz scores across the four modules showed an average increase in scores of 20%, 22%, 28% and 31%.</p> <p>Learners reported an increase in knowledge, and felt prepared to begin providing AP.</p> <p>Observations of participants practicing the vision screen in initial role play activities indicated that participants had gained an overall understanding of the competencies they are required to perform. The role play also highlighted some skills that required prompts to be carried out correctly (see below, knowledge into practice).</p> <p>NOPS personnel, all of whom have prior training and experience in provision of walking aids, reported the modules reinforced and increased their knowledge.</p> <p><b>Knowledge into practice (skills)</b></p> <p>Participants shared during focus groups that they need supervised practice after taking the modules to gain sufficient confidence to provide AP. <i>"We've done the theory and we haven't done the practice... we want the practice as well... it will give us more confidence"</i></p> <p>This was reinforced during the first vision screen role play exercises, with most participants needing support to correct techniques. For example, correct use of a pen torch and how to hold the vision chart. Participants were positive about role play and practice, which they felt prepared them to carry out required competencies. <i>"We learn a lot by just practicing"</i></p> <p><i>"After the module I might be able to deal with some of the problems, and not refer to doctor for everything"</i></p> <p>Provision of reading glasses (practiced by six participants only) was observed to require only minimum prompting.</p>	<p><b>Conclusions:</b></p> <p>TAP modules have strong potential to increase AP knowledge, in preparation for learners to begin basic AP provision. Learners will often require supervised practice to achieve safe and effective competency in AP provision. The amount of practice might depend on:</p> <ul style="list-style-type: none"> <li>• The person's prior learning and practice</li> <li>• The complexity of the AP and/or skills required to provide that AP.</li> </ul> <p>This requires the availability of personnel with relevant skills to mentor and supervise new learners.</p> <p>Where achieving clinical competencies is less important, findings suggest TAP will be useful as a stand-alone tool for increasing awareness and general understanding of AP amongst a wide group of learners.</p> <p><b>Recommendations:</b></p> <ul style="list-style-type: none"> <li>• <b>Increase content in the modules where prompts were needed to help participants achieve competency. Content may be in the form of additional text, illustrations or other graphics and video for key techniques;</b></li> <li>• <b>Include face to face mentoring and supervised practice when using TAP to train service providers;</b></li> <li>• <b>Proceed with development of a supervisors' resource page on the TAP platform, including tips on supporting new learners, and tools such as the skills checklist;</b></li> <li>• <b>Continue to communicate the importance of supervisors to support 'knowledge into practice' as a core component of TAP rollout.</b></li> </ul>

**Note:** Knowledge into practice for the magnifying glasses and telescopes, and walking aid modules was not specifically tested during this pilot.

## TAP delivery

TAP is designed as self-paced, online learning. It can be delivered in a number of different ways, with individuals taking the learning independently, as part of a learning cohort, with or without supervision, supervised mentoring and practice. For this pilot, participants took the modules in their work place during the working day. Technical support was available to assist with navigating the platform as needed; and clinical supervision was provided after participants had taken the modules as part of the evaluation activity.

Findings	Conclusions and recommendations
<p><b>Feedback to inform the delivery method</b></p> <p>Participants who completed the modules reported the learning experience as largely positive. However, they highlighted some important learning preferences:</p> <ul style="list-style-type: none"> <li>• More time to take the modules</li> <li>• Opportunity to access the modules outside of assigned periods. <i>"Online training is good but... if I could have taken the tablet home, I would have spent more time"</i></li> <li>• Complete training away from their work place, highlighting their busy work environment <i>'...at the clinic we will not escape from the people who are coming... if we escape it will be better'</i>.</li> </ul> <p>NOPS reported interest in TAP as a tool to support the induction and continuous professional development of their personnel. NOPS manager noted that TAP would save time for in-country trainers and/or supervisors, preparing participants ahead of supervised clinical practice.</p> <p><b>Factors that impact delivery and use of TAP</b></p> <p>Practical barriers that could impact on the future, independent use of TAP, were identified including: access to and cost of internet; staff not having email addresses to be able to sign in (log ins were prepared and assigned to participants); lack of access to and familiarity with smart phones, tablets or computers; access to a printer and paper to use forms.</p> <p>Participants from Six Mile Clinic who were unable to complete the modules identified barriers to their participation as: their manager being unavoidably absent during the pilot; stretched resources due to their role in supporting the second national polio campaign; and administrative issues diverting staff time and attention during the pilot.</p> <p>Participants reported low awareness of AP amongst the people using their services, and saw this as an overall barrier to successfully introducing AP services.</p>	<p><b>Conclusions:</b></p> <p>TAP targets primary/community health and other community-level personnel, who in many health contexts face resourcing constraints. Successfully providing training within this environment presents challenges that need to be well considered in the design and roll out of TAP.</p> <p><b>Recommendations:</b></p> <ul style="list-style-type: none"> <li>• <b>Continue to ensure TAP is offered as a flexible platform that enables managers, supervisors and learners to use TAP modules and resources in a manner that suits their context and service capacity planning;</b></li> <li>• <b>Explore options for log-in that do not require an email address;</b></li> <li>• <b>Ensure the platform is as efficient in data use as possible;</b></li> <li>• <b>Provide a list of minimum resources required to use TAP on the supervisor's page;</b></li> <li>• <b>Offer examples of different ways that TAP can be implemented and share stories (as TAP is rolled out) on the supervisor's page;</b></li> <li>• <b>Explore usefulness and uptake of a discussion forum thread for managers or supervisors, to be able to ask questions of each other and share stories;</b></li> <li>• <b>Alongside TAP, advocacy is needed on the importance of health workforce personnel being given protected time for training.</b></li> </ul>

## 7.2 Performance of the TAP platform

### TAP platform usability

Findings	Conclusions and recommendations
<p><b>Navigation</b></p> <p>A number of participants reported needing assistance to use the tablets and navigate the TAP platform, due to lack of familiarity with the tablet and online learning. They appreciated assistance from the project officer, preferring this to the navigation video tutorial.</p> <p>All reported that with guidance it was not difficult to learn how to use the platform and it quickly became easier with practice.</p> <p>Overall the platform was reported as being reasonably easy to navigate, with some specific navigation challenges highlighted including finding it difficult to go back to previous lessons or topics; and having to repeat the quiz. In particular some participants requested the opportunity to leave the post-quiz to review content and then come back to it.</p> <p>Participants noted that they would be happy to take more modules, and their managers fed back that staff enjoyed taking the modules, and were engaged.</p>	<p><b>Conclusions:</b></p> <p>Participant experience of navigating the platform has improved since the first pilot. However, accessing online learning successfully requires either existing skills in using technology (smart phone, tablet or computer) and familiarity with online learning, or the opportunity to learn these skills, preferably with face to face support.</p> <p><b>Recommendations:</b></p> <ul style="list-style-type: none"> <li>• <b>Continue streamlining the navigation;</b></li> <li>• <b>Shorten the online navigation video tutorial;</b></li> <li>• <b>Include in the planned guidance for TAP supervisors the importance of assessing the readiness of learners to use an online platform and being prepared to provide support as required.</b></li> </ul>
<p><b>Accessibility</b></p> <p>Five of the eight PNGADP members who attended an introductory TAP consultation have low vision or are blind. Their access to TAP using the tablets was constrained by a lack of familiarity (for both PNGADP members and the TAP team) with using a tablet, the tablet accessibility features, and some issues with the accessibility of the platform.</p> <p>This was a valuable experience for everyone and highlighted the interaction between hardware, software and training to enable successful access.</p>	<p><b>Conclusions:</b></p> <p>TAP has been designed and tested for accessibility. However, the opportunity to further test the vision accessibility features with PNGADP members was invaluable. This highlighted the importance of testing accessibility on different devices, with different users and in different contexts.</p> <p><b>Recommendations:</b></p> <ul style="list-style-type: none"> <li>• <b>Continue to place a high priority on the accessibility of TAP;</b></li> <li>• <b>Train a member of the TAP team to routinely test accessibility features as new modules and elements are added to the platform;</b></li> <li>• <b>Build in more opportunities to test accessibility features with users of these features during pilots and/or other activities;</b></li> <li>• <b>Include in the planned guidance for TAP supervisors tips enabling accessibility features on different devices.</b></li> </ul>



## Module content, media and other elements

Findings	Conclusions and recommendations
<p><b>Content (amount of information provided)</b></p> <p>Participants were positive about the module content. NOPS staff, experienced in providing mobility AP, appreciated broadening their knowledge of other types of AP through the <b>introduction to AP</b> module.</p> <p>Only a minimal amount of additional information was provided during role play and practice sessions to gain the required competencies in <b>vision screening and provision of reading glasses</b>.</p> <p>NOPS personnel are familiar with the eight steps of service delivery, introduced into PNG through the WHO Wheelchair Service Training Packages, and included in National Guidelines on the Provision of AT in PNG. NOPS participants queried TAP's 4-step service model.</p>	<p><b>Conclusions:</b></p> <p>The amount and level of content was sufficient to get key messages across. Further tips for improving vision screening techniques were identified for inclusion in the module.</p> <p><b>Recommendations:</b></p> <ul style="list-style-type: none"> <li>• <b>As new TAP new modules are introduced, monitor content to ensure it provides sufficient information and guidance to support safe and effective AP provision for a range of different learners in different contexts;</b></li> <li>• <b>Include information about eight steps and how this aligns to four steps in the TAP frequently asked questions page.</b></li> </ul>
<p><b>Media and other elements</b></p> <p>Participants were positive about all media elements, in particular the plain English text, video, and illustrations. <i>"I didn't know the names of the AP. The illustrations helped me to understand the terminology"</i> <i>"The video was self-explanatory, there was nothing negative for the whole module"</i></p> <p>A number of participants highlighted the <b>case studies</b>. <i>"After going through one topic, then the case studies really made it clear"</i></p> <p>The <b>discussion forum</b> was used by 7 out of 19 participants, and only when prompted to do so. No-one independently asked a question or posted on the forum. In the focus group some participants suggested that they did not have time to use the discussion forum.</p> <p>The <b>assessment forms</b> were considered useful, and participants reported they would use these in practice. The provision of summary information and prompts on the back of the assessment form was appreciated.</p> <p>A number of participants requested a printable <b>summary of key points</b> of the whole module.</p> <p>Participants valued the quiz, however a number said they did not like to choose 'not sure' (one of the answer options) when answering the <b>quiz</b>.</p>	<p><b>Conclusions:</b></p> <p>TAP aims to provide learning content in different ways to suit different learning styles. None of the current media elements were identified as unhelpful, with illustrations, video, case-studies all highlighted as positive. Participants did request a module key points summary as an additional learning support.</p> <p>The discussion forum did not add value to this group of participants. However, participants did not receive notification when moderators responded (due to lack of email). In addition, the number of discussion threads may have impacted on their response to the forum.</p> <p><b>Recommendations:</b></p> <ul style="list-style-type: none"> <li>• <b>Maintain the current blend of text content and different media;</b></li> <li>• <b>Continue the current approach to assessment forms, including prompts on the back;</b></li> <li>• <b>Introduce a downloadable pdf key points summary for each module;</b></li> <li>• <b>Simplify the discussion forum and re-test at the next pilot;</b></li> <li>• <b>Maintain the 'not sure' quiz answer and pilot again to see if this finding remains consistent.</b></li> </ul>



### 7.3 Lessons for TAP

Findings	Conclusions and recommendations
<p>PNG stakeholders were positive about TAP as a tool to increase access to AP by training primary/community health and other community-level personnel.</p> <p><b>Use of vision screen</b></p> <p>Health clinic managers saw carrying out the TAP basic vision screen at primary/community level as an appropriate activity to incorporate into their services. Their personnel reported they felt that they could carry out this task within their current duties.</p> <p>For NOPS, carrying out vision screening was also seen as relevant, as eye health and/or vision problems can affect a large section of their client group (for example those with diabetes and older people). However, introducing this into their current services would require discussion within the DOH as it would extend their scope of practice.</p> <p>There was agreement amongst health service personnel that vision screening by primary/community health services could reduce the current overload on the tertiary level eye clinic in Port Moresby, as well as by providing appropriate referrals to the tertiary eye clinic.</p> <p><b>Basic AP at primary health level</b></p> <p>Kaugere Health Clinic were interested in providing simple AP (for example reading glasses) as part of their services, and exploring other AP that they could readily provide within the constraints of a busy clinic.</p> <p>It was not clear whether provision of magnifying glasses and telescopes at health clinics would be feasible due to the need for refraction and eye health assessment, which is not available at most clinics.</p> <p><b>Post pilot activities</b></p> <p>Kaugere Health Clinic has continued carrying out simple vision screening and provision of reading glasses. As of August 2019, this was ongoing, with 28 pairs of reading glasses provided to date. Their manager reported they are seeking funds to procure further stock.</p> <p>As a direct result of the pilot, NOPS and Kaugere Health Clinic have initiated a collaboration, whereby NOPS runs a weekly outreach service for walking aids at the clinic. All of the NDOH stakeholders involved plan to review and learn from this initiative, with a view to wider rollout at other community health clinics.</p>	<p><b>Conclusions:</b></p> <p>The post pilot activities, with provision of reading glasses and walking aids at Kaugere Health Clinic, are a positive sign of TAP relevance in PNG.</p> <p>This success was facilitated by a number of factors including mentoring during the pilot, management support, provision of a stock of reading glasses and screening equipment. A risk to this continuing is the availability of affordable products to replenish stock.</p> <p><b>Recommendations for consideration by PNG Stakeholders:</b></p> <ul style="list-style-type: none"> <li>• <b>Build on the TAP pilot experience to explore providing basic level screening for AP (starting with vision screening) at rural health posts, health clinics and health centres;</b></li> <li>• <b>Include similar screening in secondary and tertiary level services (such as NOPS, physiotherapy departments, provincial and district hospitals) to increase the identification, management and referral of people at risk to eye care services;</b></li> <li>• <b>Systematically pilot the provision of selected basic AP (such as reading glasses and walking aids) through community health clinics, making sure that the required training and support is provided to community health clinic staff.</b></li> </ul> <p><b>Recommendations for future TAP pilots:</b></p> <ul style="list-style-type: none"> <li>• <b>Ensure opportunity to test the magnifying glasses and telescope module, inclusive of knowledge gained, knowledge into practice and relevance;</b></li> <li>• <b>Ensure opportunities to monitor and evaluate outcomes over time, in order to increase understanding of the success and risk factors for successful AP provision.</b></li> </ul>

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