



Training in Assistive Products

**COVID-19 Response Project
Report**

October 2020 to June 2022

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Abbreviations

AT	Assistive Technology
APL	Priority Assistive Products List
HI	Humanity and Inclusion
MEL	Monitoring, Evaluation and Learning
MI	Mobility India
NCDPHA	National Capital District Community Public Health Authority
NOPS	National Orthotics and Prosthetics Service
RDT	Rural Development Trust
TAP	Training in Assistive Products
WHO	World Health Organization

Executive summary

1. Introduction to Training in Assistive Products (TAP)

Assistive products, such as walking aids or reading glasses, are essential for health and well-being, and should be available through health systems as an integral component of Universal Health Coverage alongside medicines and other health products. Globally, an estimated 2.5 billion people require one or more assistive products, however, people's access to the assistive products they need is as low as 3% in some countries (WHO and UNICEF 2022 p.23).

Developed by the World Health Organization (WHO), Training in Assistive Products (TAP) is an open access online learning platform that can support community-level personnel to build the skills and capacity required to provide simple assistive products. This model supports task-shifting and task-sharing, reducing pressure on secondary and tertiary health services, and ultimately, increasing people's access to the assistive products they need.

TAP provides training modules covering simple assistive products under six streams; vision, hearing, mobility, communication, cognition and self-care, and is designed to be applicable in a range of contexts.

2. Project overview

In response to COVID-19, WHO worked with in-country partners in India, Iraq and Papua New Guinea (PNG) in 2020 and 2021, to implement a project to strengthen local capacity for community-level assistive technology (AT) services, at the same time developing a model of remote-support to the in-country teams. The project addressed access and distance to services as a key issue highlighted by COVID-19 disruption. Central to the remote-support model was the use of TAP, including modules in vision, mobility and self-care.

Across the three countries a total of 88 personnel took TAP modules from 18 community, primary and tertiary health care services. A total of 9,447 products, including reading glasses, magnifiers and telescopes, walking aids, toilet and shower chairs and washable absorbent products were procured and provided across all three countries.

3. Conclusions and recommendations

Through this project, the impact of TAP was clearly demonstrated for both personnel taking the modules and country partners. TAP increased skills and knowledge and raised awareness of key issues in AT that they had not encountered previously, especially around the issues of self-care and incontinence, providing simple and effective solutions.

For the future development and sustainability of simple assistive product provision, the project was successful in raising awareness of the need for such services at primary and community level. The project also exposed key barriers and enablers for development and sustainability.

The remote support model was successful and helped nurture a stronger sense of ownership by local stakeholders. Local ownership of TAP purpose and vision is vital to facilitate replication of TAP nationally and longer-term sustainability.

The learning from this project confirms that supporting countries to use TAP remotely is feasible, and successful, however, some overarching recommendations will facilitate future roll out.

Building capacity for community-level AT service provision

- Further develop remote model for building capacity for community-level AT service provision;
- Identify strong local in-country stakeholders to lead TAP implementation;
- Support the development of local plans for TAP replication and sustainability;
- Build service data systems into TAP planning and implementation.

Providing a remote-support model to build local capacity to strengthen community-level AT services

- Develop a suite of easily accessible tools to support in-country roll-out of TAP;
- Offer virtual real-time remote support for in-country stakeholders;
- Identify best practice for remote information management;
- Emphasise the importance of complementing online modules with face-to-face practice sessions and supervised clinical practice, following a blended learning approach.

As a result of the project, in-country coordinating partners are continuing to plan for the roll-out of further TAP modules with more services in the future, testament to the success of the remote-support model in enabling in-country stakeholders to take ownership of the development of community-level AT provision. At the same time, WHO continues to use the remote-support model to support countries to use TAP and strengthen AT services, valuing its effectiveness for local empowerment and capacity building.

Report

1. Background

1.1 The need and COVID-19

Assistive products are essential for health and well-being and should be available through health systems as an integral component of Universal Health Coverage, alongside medicines and other health products. Assistive technology (AT) is the umbrella term for the systems and services which are needed for safe and effective access to assistive products. People who most need AT include people living with disability, chronic conditions and older people. The World Health Organization (WHO) estimates that 2.5 billion people require one or more assistive products and this will rise to 3.5 billion by 2050 (WHO and UNICEF 2022 p.23). However, access to assistive products is as low as 3% in some countries (ibid).

Critical measures to contain the spread of COVID-19 throughout 2020 and 2021, and an increased pressure on health systems, exacerbated the difficulties experienced by people who need AT. AT users were unable to access the assistive products, spare parts and repair services they need. Users were faced with service closure, denial of access or exclusion (due to AT not being seen as an essential service), lack of information, and difficulty in travelling during the pandemic to often centralised AT services (Layton, N. et al 2021 p.10).

The COVID-19 pandemic has highlighted the urgency for the integration of AT throughout health systems and indicated that adapting AT services to include remote service provision models is needed. Remote models will reduce reliance upon centralised services, task-shifting and task-sharing. AT provision through existing community and primary level health systems can bring AT services and support closer to people's homes (Puli, L. et al 2021 p.16).

The COVID-19 pandemic has required exploration of new ways of working, including strategies for remote support and mentorship in order to localise training and health system capacity building.

1.2 Training in Assistive Products (TAP)

Training in Assistive Products (TAP), developed by WHO, is an open access online learning platform that can support community-level personnel to build the skills and capacity required to provide simple assistive products. This model supports task-shifting and task-sharing, reducing pressure on secondary and tertiary health services.

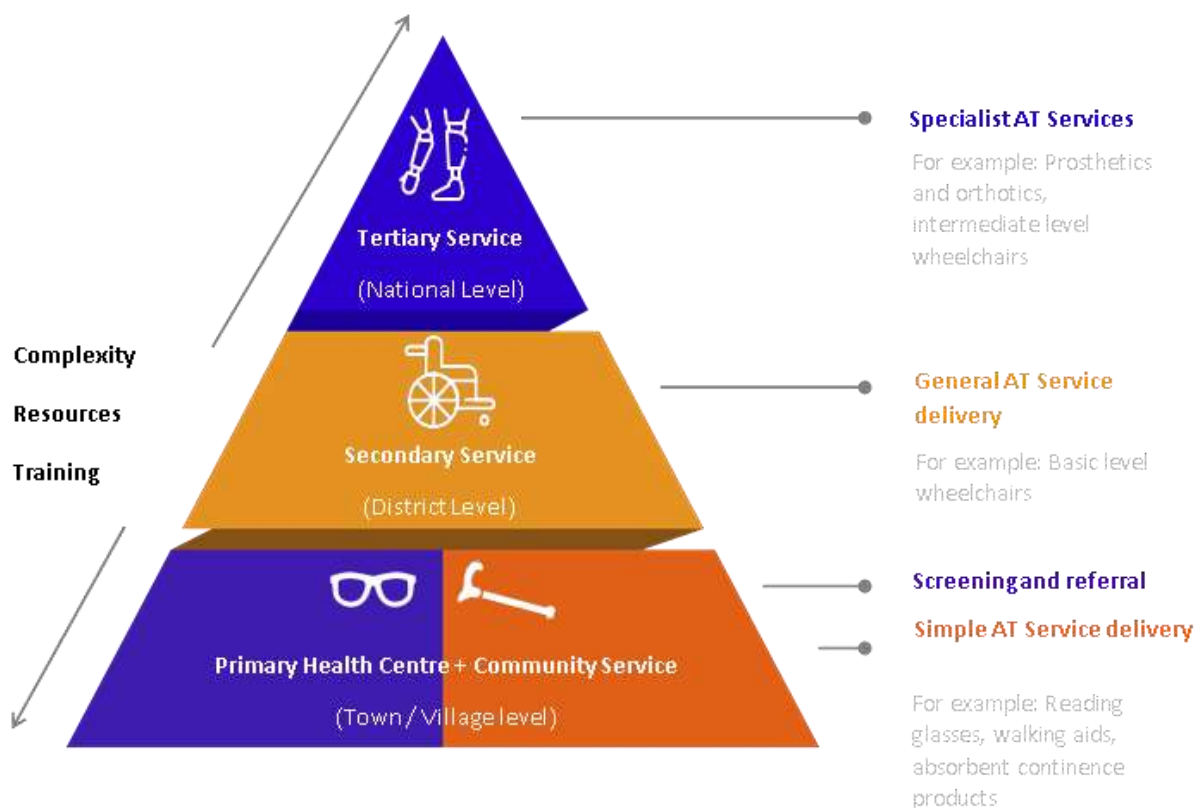
Figure 1 below shows the AT Service pyramid. Fewer tertiary level services at the top provide specialist services at a national level, and primary health and community services at the bottom reach a wide population, with the potential to provide simple AT services that do not need to be referred up to general or specialist level providers at secondary or tertiary levels. TAP focuses on developing the capacity of primary health and community services to have greater impact both in providing simple AT services and also referring people who need more complex AT services, from further up the pyramid.



Learner accessing TAP platform on tablet at PNG Eye Care training venue, PNG

TAP aims to make 25 of the 50 assistive products in the WHO Priority Assistive Products List (APL) (WHO 2016) available at community level. These 25 products can be safely and effectively provided at primary or community level by the existing workforce with some modest additional training.

Figure 1: AT Service pyramid



Prior to this project, two TAP pilots had been run in [India in 2018](#) and in [Papua New Guinea in 2019](#), including vision and mobility modules. The two pilots were facilitated by WHO in-country. These pilots provided initial lessons on the learning approach, content, and applicability of TAP in these contexts. As a result, TAP has been further developed, including addition of a coordinators' page to support in-country partners to plan and facilitate the training. More modules have also been added.

WHO launched TAP in November 2022 as an online open-source training package, readily accessible for national agencies to implement.

2. Project overview

2.1 Purpose

The purpose of this project was to implement TAP in three countries, through remotely supporting in-country partners during the COVID-19 pandemic. The project had two core aims:

Project aim one: To build capacity for community-level AT service provision in three countries. This formed a first step towards the following long-term outcomes (beyond the scope of this project):

- Simple assistive products are readily provided by everyone's nearest health provider;
- More complex assistive products are readily provided through a coordinated network of services, with clear referral pathways for people;
- The wider health workforce is aware of assistive products, actively recognising who may benefit from them and ensuring an effective referral network.

Project aim two: To develop and trial a remote-support model to build local capacity to strengthen community-level AT services, including:

- Providing online TAP modules and a coordinators' page to support partners to facilitate the training;
- Virtual workshops / technical meetings between country partners and WHO AT team.

2.2 Project locations and partners

The locations for this project were selected due to pre-existing interest and commitment to strengthening community-level AT services. In-country coordinating partners in India, Iraq and Papua New Guinea (PNG) were identified to supervise project planning and implementation (TAP coordinators).

India – A strong local partner in India, Mobility India, coordinated with implementing partner, the Rural Development Trust (RDT) to identify two rural community level services in the states of Andhra Pradesh; the Disability Inclusive Department of the RDT, Ananthapur, and Karnataka Mobility India rural project, Chamrajnagar. Mobility India had prior experience of carrying out a TAP pilot in 2018.

Iraq – Collaboration between the Department of Health, Nineveh Governorate, the WHO Country Office, and Humanity and Inclusion (HI), Iraq, who supervised the implementation of the project with selected primary health care centres. Initial project planning also involved stakeholders in AT provision and referral

systems, including the International Committee of the Red Cross (ICRC) and Cordaid. Seven primary health care centres in rural, peri-urban and urban areas were selected in the Nineveh Governorate.

PNG – A coalition of in-country coordinating partners worked in collaboration with the WHO Country Office to supervise the project roll-out in PNG. These partners had been previously involved in carrying out a TAP pilot in 2019. They also have experience of the provision of vision and mobility products, and the delivery of training and project coordination. The partners included:

- National Department of Health (NDOH) Health Facilities Standards Branch
- Port Moresby General Hospital (PMGH) Eye Clinic
- National Capital District Community Public Health Authority (NCDPHA)
- National Orthotics and Prosthetics Service (NOPS)
- PNG Eye Care

The PNG in-country coordinating partners identified six primary health care centres, and also three tertiary centres, which included the in-country coordinating partners, to participate in the TAP training and service provision. All centres were in urban and peri-urban areas of Port Moresby.

2.3 Project activities and timeframe

Key project activities included:

Virtual working - Setting up a digital platform with tools to facilitate virtual working, technical support and sharing between project partners.

Country-specific project plans - Using participatory methods to develop and implement country-specific project plans to integrate AT services into existing primary health care and/or community services, including identifying these services. In-country coordinating partners worked with community and primary health centres, involving managers and identifying personnel to take TAP modules (TAP learners) and also identifying local mentors, with skills and experience specific to each module, to support the training.



Learners carrying out a role play activity at the training venue, Iraq

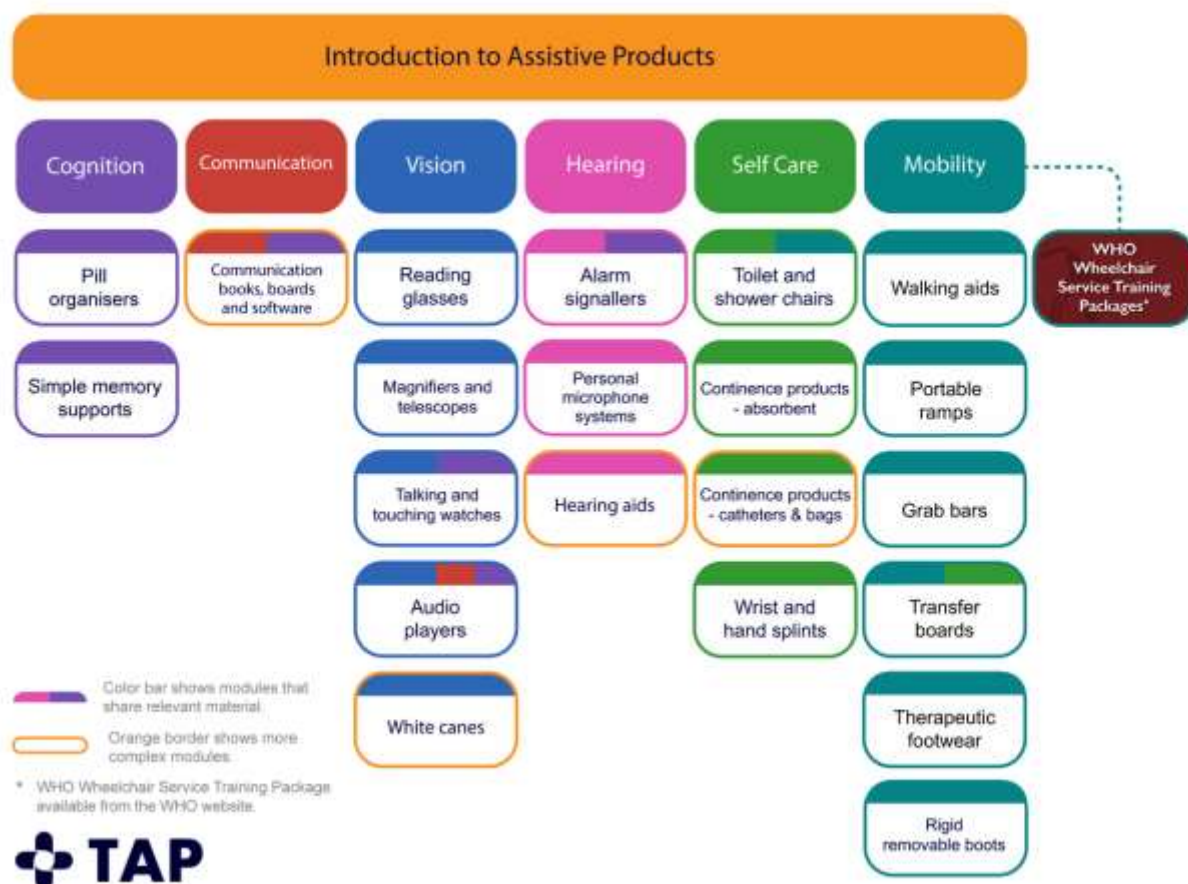
Training - Training local personnel from participating services in the provision of simple assistive products, using the TAP online learning modules.

Across the three countries, nine TAP modules were identified for service personnel (TAP learners), including the introductory module and vision, mobility and self-care streams. Selected modules included: reading glasses, magnifiers and telescopes, walking aids, toilet and shower chairs, and absorbent incontinence products. See Figure 2.

The delivery of modules to learners was planned by the in-country coordinating partners as in-person training blocks. This involved planning access to training space, internet access, computers, tablets, or smart phones, and

access to assistive products for practical demonstrations. The online modules formed part of a blended-learning approach which included practice sessions and mentoring of provision in the primary health care or community services.

Figure 2: TAP Module map



Procurement – Procuring a supply of assistive products (using WHO’s Assistive Product Specifications (WHO 2021)) to run the training and initiate services. Procurement was planned to ensure a supply for at least two months to ensure learners would have sufficient opportunity to provide products and consolidate their skills through provision to AT users.

Monitoring of service provision – An overarching monitoring, evaluation and learning (MEL) plan was designed with in-country coordinating partners to identify key objectives and activities under each project aim. As part of the project, an open-source e-Health service data system was trialled and adapted to include assistive products. The system recorded de-identified demographic data for those accessing products through the project, including age group and gender, the product(s) and size of product they received, and any referral services needed.

Planning with country partners commenced in October 2020 with the first TAP online learning module run in January 2021. Subsequent modules were run in each country throughout the year, and the project concluded in June 2022.

3. Project achievements

In total 88 local personnel from 18 participating services were trained using WHO's TAP online learning modules.

3.1 Participating service providers

Of the 18 participating services, 14 were primary health care or community level services, and 4 were tertiary level. The participating tertiary level services were, in all cases, the in-country coordinating partners, who participated in the training modules to develop knowledge and skills and to be able to take on a mentoring role in the training for primary, or community services.



Learners during TAP practical session, Absorbent products module, India

11 of the 18 participating services were located in urban areas, 3 in peri-urban, and 4 in rural. The urban centres were predominantly in PNG where 8 out of 9 services were located in the urban area of Port Moresby. In Iraq services were located urban, peri-urban and rural areas. In India, all participating services were located in rural areas.

3.2 Participating TAP learners

Of the 88 learners who participated in TAP, 53 personnel (or 60%) were from primary health care centres, and 35 (or 40%) were from tertiary health care centres supporting and running the training in-country.

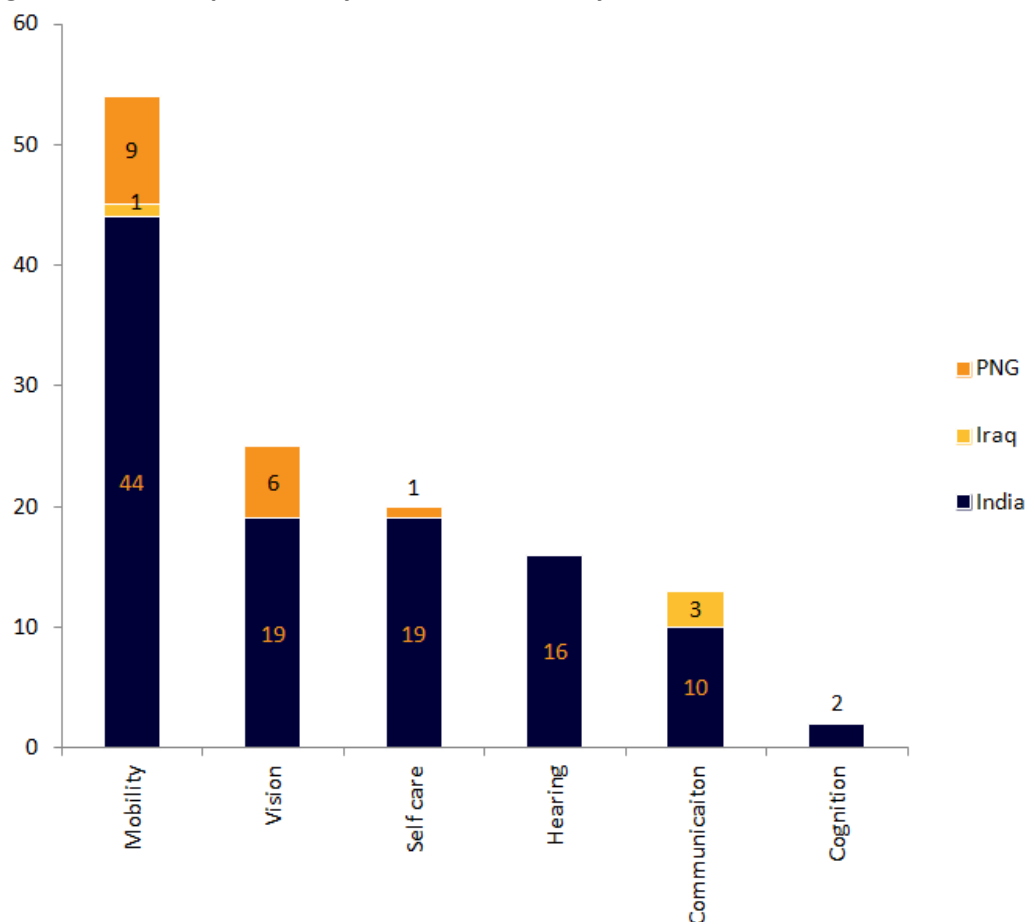
Whilst at the outset of the project a target ratio of 50:50 female to male learners was set, overall, the project achieved 39% females to 61% males, with 34 female learners and 54 males across all three countries. Notably, in PNG this trend was reversed, with 60% female learners and 40% male.

Overall, 85% of learners used a smart phone, however, when separated, this was lower for primary services (79%) than for tertiary (94%). Despite the high percentage of learners using smart phones, overall prior experience of taking an online course was lower, at 27%. Again, the percentage was lower for primary centres (11%) than for tertiary (51%). The impact of TAP training on learners IT skills and experiences was significant, and reflects the low baseline of experience, as explored in section 4.

Learners from the primary health care centres were from a range of professions, with 42% nurses or midwives, and 38% community-based rehabilitation workers, community health workers or community facilitators. The remaining 20% included rehabilitation therapists and other professions. Learners from the tertiary services included physiotherapists, prosthetists/orthotists, and ophthalmic opticians.

Overall, 75% of learners said that they had provided assistive products prior to the TAP training, this was lower for learners from primary services (64%) than for tertiary (91%). Across the six streams (mobility; vision; hearing; communication; cognition and self-care), the assistive products that learners had most experience providing were mobility products. This was followed by vision and self-care. Very few noted providing products for cognition. See Figure 3 for the breakdown by country.

Figure 3: Products provided by domain and country



3.3 Products provided to people as a result of TAP

A total of 9,447 assistive products were procured for provision by personnel completing TAP training. The breakdown of products procured by each country is shown in the Table 1. Products were procured locally where they met WHO's Assistive Product Specifications (WHO 2021), and where this was not possible, they were procured from international suppliers.

Table 1: Assistive products procured

Assistive products	India	Iraq	PNG
Reading glasses	3,704		3,668
Magnifiers & telescopes	76		
Walking aids	208	1,099	96
Toilet & shower chairs	38		2
Absorbent products	282		274
Total	4,308	1,099	4,040

An e-Health system was set up for the project. Via an app, providers recorded the products provided to AT users and any referrals made. In-country coordinating partners co-designed the data forms for each country, through a series of workshops. The data forms were entered into the e-Health app, enabling the service providers to record information offline in the field, using tablets or smart phones, which was then stored centrally on a secure server.

Across all countries service provision recorded on the system was not representative of the full services provided as a result of the TAP training, but provide a sample of people who received assistive products. See section 4.4 for discussion of learning from this trial, including the opportunities and challenges of introducing a digital service data system.

4. Project learning

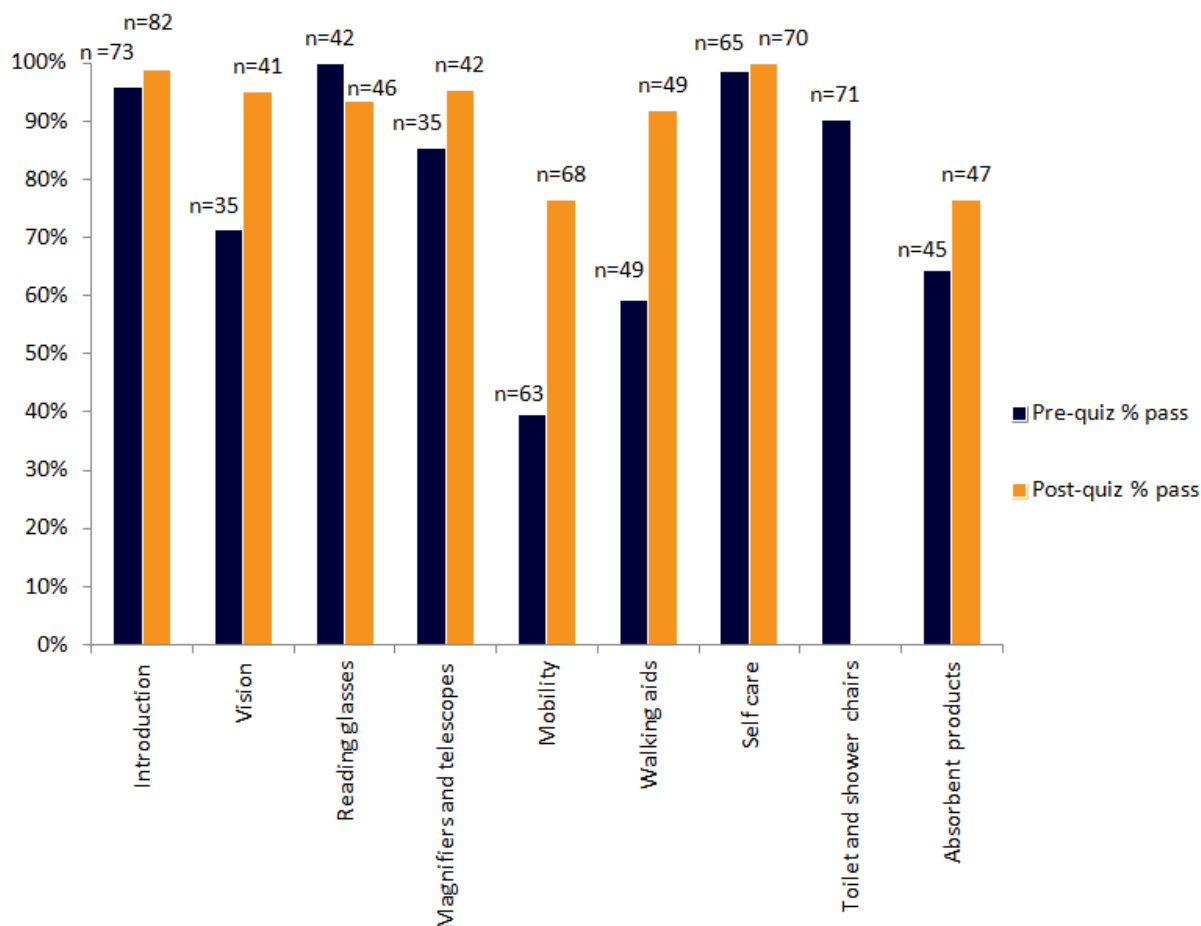
4.1 Effectiveness of TAP and the remote support model for learners

The module quizzes have been developed to measure learners' knowledge gain and can give an indication of this, although they have not yet undergone a robust validation process. Effectiveness can also be observed through learners' self-reported experience of TAP; in their confidence in taking modules and providing assistive products.

Learners' pass rates - There was an overall increase in the learners' pass rates across all countries and modules of 12%, between pre and post quiz scores. The breakdown of pre and post quiz pass rates for the learners in all countries, across the modules, is shown in Figure 5.¹

¹ Note there were no post-quiz scores for the Toilet and shower chairs module, due to a platform error.

Figure 4: Pre and post quiz pass rates across all modules and all countries



As shown in Figure 8, the modules, 'Mobility assistive products' and 'Walking aids' showed the lowest pre-quiz pass rates and highest increase in pass rates. This is an interesting outcome, when considered alongside the information from learners' registration, which showed mobility assistive products as the products most commonly provided (see section 3). Feedback from some learners also cited the mobility and walking aids modules as being longer and more complex than the other modules taken, and suggested more time was needed to complete the two modules. These factors suggest that although learners have some experience of providing mobility products, the range may be limited and provided according to a model of 'one size fits all', rather than through a service which assesses and fits the most appropriate assistive product from a small range of walking aids.

The only module where overall pass rates fall is Reading glasses, relating to a reduction from 100% to 92% in the module pass rate in India. On a country level, other modules where pass rates fall slightly are Mobility in Iraq (falling from 36% to 33%) and Absorbent products in PNG (falling from 92% to 82%). Validation of the quizzes would ensure their reliability as a measure of knowledge gained and help reduce any uncertainty over outliers in pass rates.

Learners' experience and confidence - Through feedback forms and focus group discussions, learners shared their experiences of TAP and self-reported confidence in taking modules and providing assistive products. The competence of learners in providing assistive products was not captured in mentors' skills checklists provided, due to the time constraints in using these tools – see further explanation in section 4.2.

Computing skills and utility of the TAP platform – TAP provided an important opportunity for continued professional development of service staff, and also supported the development of computing skills and familiarity with online learning. As noted above, across the participating primary services only 11% of learners had prior experience of taking online courses. Some learners from primary services specifically in India, but also elsewhere, did not have prior experience of working on computers and found that their abilities and skills developed rapidly throughout the modules.

Key issues related to difficulties setting up passwords and logging in, with many learners not using email on a regular basis. However, despite this and the low prior experience of online courses or computing skills, overall, 83% of learners agreed or strongly agreed that the TAP website was easy to use. People with very little digital literacy could successfully take TAP modules, as long as additional time was allowed for them to familiarise with the platform, especially with the login processes. As one learner stated:

“Everything [was] easy apart from login [but the] video helped with this”.

Feedback noted that the platform is clear and straightforward to use, with a “step-by-step” process and use of simple language. However, some feedback from learners in India did request the training in local language.



TAP learner, supported by supervisor to navigate TAP platform, India

TAP potential to be taken as self-directed or group training – After taking the modules in organised in-person training blocks, 73% of learners felt they would be confident to take further TAP modules in their workplace, and 24% either in their workplace or at their home. However, in focus group discussions learners expressed an overall preference for learning in organised training blocks.

Learners felt they benefitted from learning as part of a group which helped ensure that they had protected time to take the modules.

Group learning also helped to overcome issues of connectivity and access to learning devices, which were potential challenges to taking modules either in the workplace or at home.

Additionally, group learning also supported the blended-learning approach of TAP, where time was dedicated to individual online learning, and also to group practice sessions. During group practice sessions meeting AT users and/or home visits prompted discussion between learners and it was felt that taking the modules at home, or in the workplace would not facilitate this important element of TAP.

Impact of TAP on learners' confidence to provide assistive products – Overall, 89% of learners agreed or strongly agreed that they are confident to provide the assistive products they have covered in the TAP modules in their day-to-day work. Learners felt most prepared for assessing, selecting and fitting an assistive product, but least prepared for follow up, and many also raised the need for more practice including home visits to increase confidence. As learners stated:

“[p]ractical sessions help give me confidence to deliver assistive products” ... “[a]ll the steps prepared me well but need to do more practical sessions.”

Concerns were also raised about maintaining skills, especially if the services do not have sustained access to appropriate assistive products. Refresher training was suggested as a way to maintain and develop skills over time.

4.2 Effectiveness of TAP and the remote support model for coordinators and mentors

The WHO TAP team provided a range of remote support to in-country coordinating partners supervising the training, including facilitating online planning meetings, briefing sessions and de-brief meetings. The TAP coordinators' page on the TAP platform provided information and tools and a number of other tools were provided directly to partners when requested.

Online meetings and support - A range of platforms were used to support in-country coordinating partners for online meetings' chat and urgent issues, email for documentation and general follow up. Partners found communication from the TAP team helpful, especially quick replies and support during training using an instant messaging service for group chat. A platform for sharing information and documentation, including filing photos alongside consent forms that is secure and easy to access for all partners, could have helped with information management across all countries.

Resources, templates and the TAP coordinators' page - In-country coordinating partners were encouraged to complete a planning template at the start of the project. This was useful in project set up, as one supervisor noted, to provide a “sense of direction” for the project. However, with the number of other documents and resources, the planning document was not reflected upon following project initiation, and building this into any future projects or pilots could make the document more relevant and ‘live’.

All partners found that the TAP coordinators' page was useful, but also that it would be beneficial to have a number of templates for preliminary preparations available. These templates were provided through the project directly to partners as per their requests, rather than using the platform. The templates included:

- TAP introductory PowerPoint presentation;
- Summary of timing and duration of modules;
- TAP timetable template;
- TAP planning checklist (including problem solving, and organizing resources and IT requirements);
- Mentors' module notes;
- Product summaries.

Additional documents that some partners requested during the project and suggested may be useful on the platform were a reporting template for mentoring visits and a referral guide template.

TAP mentors' support

Skills checklists were available through the TAP coordinators' page for mentors to assess learners' skills during the training and follow up visits. In all countries the mentors struggled to complete these forms due to time constraints during training and the difficulty to complete forms for individuals whilst learners were working in groups during practice sessions. Partners gave a number of recommendations to overcome these issues, including:

- Provide options to complete the form online, or offline (currently the form is a printable document);
- Provide mentors with reminders;
- Make the mentor role more prescriptive;
- Designate a specific section of the coordinators' page for mentors and have a "suggested visit plan" with all the associated documents.



Vision module mentoring support visit to urban clinic, PNG

4.3 Effectiveness of TAP for capacity building for community level AT service provision

Through focus group discussions with service personnel, managers, and in-country coordinating partners, it was clear that all stakeholders recognised the need for TAP. The training had had a positive impact, and in some cases, changes had been made to facilitate ongoing provision of assistive products.

The need for TAP and impact - Learners and managers both cited the overwhelming need for the assistive products covered by the TAP modules, and the positive impact of increasing awareness and knowledge of the available services in the community, on increasing demand.

“[This is a] very good initiative by the WHO as there is a huge demand for assistive products. The people in rural and urban set up were coming forward to avail the AT products.”

“Through COVID-19 project, service users with poor economic status were able to access the assistive products in unreachable areas.”

In PNG it was observed that many learners were surprised to find people needing simple assistive products living right next to their primary health centre. Awareness of the service increased among the communities surrounding the centres, subsequently people no longer went to the tertiary centres for assistive products.

In India, it was felt that the greatest impact of the TAP modules was primarily on the coordinators and mentors themselves, increasing their knowledge and awareness of the need for TAP, especially regarding self-care products; toilet and shower chairs and absorbent products. For example, through the training it was observed that for many households, toilet and shower chairs were required by more than one

member, making them an essential household item serving more than one user. The impact on learners was that they gained knowledge and awareness of a range of products and the skills to provide them. It was felt that in order to see a significant impact on AT users, more time and input was needed to raise awareness within the community. During the practice sessions for the Absorbent products module, AT users and their caregivers were keen to observe the training sessions and were invited into the training room. It became evident that the involvement of AT users in training sessions helped to raise their awareness, and in turn supported the success of the TAP training and product provision.

Future implementation of TAP - Recognising the need for TAP, learners and managers were interested in other TAP modules being developed, rolling out TAP modules to more primary health centres, and training more personnel in the services. In India, during the project period, a new cohort of learners on the Self-care modules were added from Mobility India, having recognised the need to raise awareness and increase skills amongst rehabilitation staff. At Mobility India, TAP modules have also been included in core training for new recruits. In PNG there were plans for the primary health centres to take the training in-house to ensure that other staff at the centre could access the training. There were also discussions around the need for refresher training to ensure learners maintain skills.

To enable further implementation of TAP, managers cited key recommendations:

- Provide protected time to staff to take training and/or ensure there is capacity to release staff (this issue was acute during the COVID-19 restrictions in 2020 and 2021)
- Ensure the space required is available, especially in remote primary health care centres
- Ensure availability of resources and equipment, including internet access. For example, in one country due to sharing of learning devices some learners either did not have time to complete the pre-quiz, or completed it alongside the post-quiz.

Future provision of assistive products and sustainability - All managers and in-country coordinating partners expressed a desire to continue providing assistive products, but cited key barriers to this, primarily:

- **Products** – The lack of sufficient and sustained stock, including the budget to support this.
- **Personnel** - The lack of availability of staff to support provision and already overstretched health workers in primary health care. Significantly in PNG it was felt that task-shifting the provision of simple assistive products, without increasing the workforce, was not realistic in the long run.
- **Provision/Place** - A lack of dedicated space for either storage of products or provision of services. In many cases provision was happening in corridors or communal spaces at the primary health care centres.

The following enablers to service provision were also cited:

- **Policy** - Collaboration with Government departments to implement a larger scale project to reach more primary health care centres and integrate AT provision more widely.
- **People** - Addressing the lack of awareness amongst AT users, their families and communities, as well as amongst primary health care service staff. This could include making available information, education and communication materials on AT products such as posters, pamphlets, case story videos, and user guides. Suggestions at one service centre included making a space in the service centre to show the products for both service users and personnel.
- **Products** - Working with primary health care centres to support management to set up annual budgeting mechanisms to include assistive products (this was specifically raised in PNG)
- **Personnel** - Establishing specific roles at primary health care level to focus on assistive products to reduce the workload of primary health care workers. Alternatively, facilitating ‘clinics’, for example an ‘eye clinic’, at the primary health care centres to ring fence time to provide assistive products and arrange for mentoring support during these clinics. Also bringing professionals from tertiary health services onboard to provide ongoing mentoring of staff, including supervisory visits and refresher training.
- **Provision** - Integration of assessments for assistive products into existing systems. For example, a service in India service now includes a question on incontinence issues when gathering mandatory health information on service users as mandatory, recognising that this is an issue which is predominantly overlooked and avoided, and with the intention of opening up dialogue on this issue. This can also be strengthened by developing referral networks.

The overall future of assistive product provision, and sustainability, is dependent upon raising the awareness of the need for and potential of the provision of these basic assistive products at primary health care level. This awareness will help leverage the support required at policy level (including financial support to provision, personnel and products).

Having in-country stakeholders with strong coordination, to advocate for TAP, is essential. As an in-country coordinating partner, supervisor and mentor in PNG stated:

“PNG Eye care is happy to facilitate this invaluable training which I am confident will go a long way in providing these services for the people of PNG, given that [the team] is now well versed with these training and services. Of course, there is more to learn and do but the important thing is I see sustainability guaranteed through the involvement of NOPS.”

The remote support model encouraged in-country coordinating partners to take ownership of TAP and its goals and purpose, as the statement above demonstrates, this was essential for TAP replication and sustainability at a national level.

4.4 Learning from introduction of digital service data system

It was clear that a digital service data system using a simple, user-friendly app can facilitate recording information by primary health care workers in remote areas, without having to have either hard copies of paper forms, or internet access. In-country coordinating partners and service partners understood that this data could support planning future service provision, including leveraging future resources.

Overall, partners enjoyed the process of setting up the system, but time constraints and the challenges of integrating the system into existing structures limited its uptake in all countries during the project period. Challenges included: timing of the project and delays in introducing the system, access to

devices in the field (smart phones or tablets), and the training and awareness raising needed to establish a system for recording service data. For many learners the introduction of systems for recording service data was new and they were not used to integrating it into their routine, in addition to their existing workload.

The experiences of setting up a digital service data system under the TAP project exposed the level of effectiveness of collection of service data for the project as a significant weakness. Key learning for future projects is that primary level services need more support in data collection, including planning, setting-up, infrastructure, training and ongoing support to enable services to integrate data collection into their day-to-day activities.

In PNG, the project provided the in-country coordinating partner with experience and knowledge to advocate for a new electronic National Health Information System (e-NHIS), which is currently being set up, to include rehabilitation and assistive technology services.

4.5 Stories of impact

Accessing basic assistive products, through services provided by TAP learners, has impacted the lives of AT users. Being provided with reading glasses, walking aids or toilet and shower chairs, that they would otherwise not have access to, has increased AT users' **health, confidence, independence and safety**.

This has supported them in their employment, education and participation in society. Accessing these basic products and the impact upon their interaction with work, education and society, has, in turn, impacted their overall health and happiness.

Vision

Ms Nagamani works as a cook in the High School for Inclusive Education in India. Due to her eyesight, she found her work difficult, especially hand-picking small pieces of grit from rice before cooking. TAP learners screened and provided her with a pair of reading glasses.

Ms Nagamani is now able to see and remove grit in the rice, as well as read the labels of the food packets she uses. She said that she feels very happy as now nobody has complained about small pieces of grit in the rice she cooks.



Mobility

As a result of an accident whilst working in a coconut plantation in India, Mr Seshanna found it difficult to walk independently. He used a stick but felt unsafe, worried he might fall. Receiving a walking frame provided by a TAP learner has enabled him to confidently travel independently to his work in the small shop he runs.

With his walking frame, Mr Seshanna says he now feels “fearless”.



Mobility

Abdulahdi Ali Sulaiman lives in Ninawa Governorate in Iraq with his wife and four children. He has a drop foot as a result of a gunshot injury in 1986. Elbow crutches are essential for Abdulhadi to get about, to work and to support his family. Over the years, he has often had to purchase crutches himself at the local market. Abdulhadi highly valued being able to access elbow crutches from his local primary health care centre through the project, describing them as “an extremely valuable gift”.



Self-care

Kerry Kewowo is a wheelchair user living in PNG. She found it unsafe using a plastic chair to wash on unbalanced terrain so TAP learners provided her with a shower chair.

She said: "I find that shower time is safe and more comfortable. Because [the shower chair] is light weight, I am able to move it into the shower area by myself, and since it has a backrest and is of appropriate height, I feel more comfortable in it, whereby I can easily transfer myself from my wheelchair into it, without difficulty."



Self-care

In PNG, Homoka Koae had been reliant on his wife for daily activities since having a stroke. He felt embarrassed that his wife had to take care of him and help him with washing and toileting. TAP learners provided Homoka with a toilet and shower chair.

He described the impact on his life, and his wife's: "Now that I have been using the toilet and shower chairs, I feel so much relief for my wife and [I am] healthy. I now am able to...bath as often as I want so the sores on my feet have all healed up well".



5. Conclusions

The COVID-19 Response Assistive Technology project was successful in meeting the two core project aims; to build capacity for community-level AT services through a remote support model.

Project aim one: To build capacity for community-level AT service provision in three countries

Increasing awareness, knowledge and confidence – In India, Iraq and PNG, personnel from primary level services in rural, peri-urban and urban areas, gained knowledge and skills to provide simple assistive products and to refer people to secondary or tertiary level services for more complex assistive products as required.

Increased knowledge and skills were most notable in the area of self-care which was a new area for learners, especially the module on Absorbent products. Learners embraced this new topic, which is testament to the success of these new TAP modules, trialled for the first time remotely, as one stated:

“Now we are in a position to think much wider while assessing for any user who would come to us.”

Recognising the need, barriers and enablers – For the future development and sustainability of simple assistive product provision, the project was successful in raising awareness of the need for such services at primary and community level. The project exposed the key barriers and enablers for development and sustainability, including raising awareness amongst **People**; ensuring available budget for **Products**; ensuring capacity of **Personnel** and sufficient infrastructure for **Provision**, and engaging at a **Policy** level, with national governments to facilitate future roll out.

Acknowledging challenges – The implementation of a digital service data system as part of the project faced challenges and demonstrated that primary level services need more support in data collection, including planning, setting-up, infrastructure, training and ongoing support to enable services to integrate data collection into their day-to-day activities. It is recognised that robust data is critical to service planning, but also for making a case for investment in the provision of simple assistive products through primary and community level services.

The overall success of the project has underlined that investing in the development and roll out of TAP to strengthen AT provision through primary health care centres is essential to increase peoples access to AT and relieve pressure on tertiary services, generally, and acutely, during a pandemic.

Project aim two: To develop and trial a remote-support model to build local capacity to strengthen community-level AT services

Effective remote support – In contrast to the previous TAP pilots, TAP modules were rolled out with remote-support and no in-country face-to-face support. Virtual meetings, workshops and technical support guided in-country coordinating partners to implement the modules.

Online support tools (including planning templates and mentors' checklists) accessed via platform or otherwise provided in-country coordinating partners with key support. Instant messaging services were

invaluable for remote support, troubleshooting and sharing learning in real time. Further development of the coordinators' page as a platform with necessary resources will help future roll out. An effective platform for information management and sharing between partners will need to be explored further.

Local responsibility and ownership – In-country coordinating partners successfully identified service partners, and prepared and implemented training, mentoring and follow up activities. This involved familiarising themselves with the modules, and stepping into the role of coordinators and mentors to run the modules. Key to this success was the in-country coordinating partners collaborating well, with understanding and experience of the local situation, equipped to take ownership of, and champion, TAP locally.

Remote support helped nurture a stronger sense of ownership by local stakeholders, as an in-country coordinating partner commented:



TAP learners and mentors in PNG carry out a home visit

“[The] TAP project gave the opportunity to the local team to take lead as appropriate. This is a positive thing as it gave some room for flexibility in implementing the project amidst other commitments and COVID19 interruptions itself.”

Local ownership of TAP purpose and vision is vital to facilitate replication of TAP nationally and longer-term sustainability, as another country coordinating partner stated:

“I am confident more will be done in this area and seeing the enthusiasm and participation here, our PNG team is not just capable but also passionate to carry on this vital service as long as the products are available.”

Acknowledging challenges – Implementation of the project during the COVID-19 pandemic also faced some inherent challenges. Delays in all countries arose due to the changing situation of the COVID pandemic, with COVID-related lockdowns and restrictions imposed at different times during the project caused delays in all countries, in addition to identifying and procuring appropriate products, significantly washable absorbent products.

Despite the remote model that this TAP project piloted during the COVID-19 pandemic, the importance of face to face, peer support for learners, and practical experience of service provision, including mentoring and home visits, is essential, as expressed by learners and coordinating partners, as one supervisor commented:

“Visiting clients and seeing how PHC staff have skills and knowledge that they did not before was highlight of the project”.

6. Recommendations

The learning from this project confirms that running TAP remotely is feasible, and successful, however, some overarching recommendations will facilitate future roll out.

Building capacity for community-level AT service provision

- **Continue to develop remote model for building capacity for community-level AT service provision**
Build on learning to strengthen and replicate the model, acknowledging that it has the potential to empower stakeholders to take ownership of TAP purpose.
- **Identify strong local in-country stakeholders to lead TAP implementation**
This helps to ensure local stakeholders are able to take ownership of TAP purpose, enabling replication of TAP at a national level and longer-term sustainability.
- **Support the development of local plans for TAP replication and sustainability**
This involves addressing the five P's: People's awareness of products (including AT users and service personnel); ensuring available appropriate Products; ensuring Personnel have capacity, including protected time; ensuring there is space and facilities for Provision and support to Policy development for the future, including budgeting.
- **Build service data systems into TAP planning and implementation**
This involves ensuring that adequate time and resources is provided to build capacity, train and implement an appropriate system at primary or community level, ensuring that the system is congruent with any other existing, secondary or tertiary level systems.

Providing a remote-support model to build local capacity to strengthen community-level AT services

- **Develop suite of easily accessible tools that support in-country roll out of TAP**
This includes developing templates for training timetables, planning checklists, mentors' module notes and reporting template for mentoring visits, planning document and referral guide. These must be easily accessed via the coordinators' page on the TAP platform and/or be readily available.
- **Offer virtual real-time remote support for in country stakeholders and identify best practice**
This involves identifying appropriate instant messaging services to support during training and mentoring visits. It also involves scheduling online meetings and workshops to work through planning, specifically stakeholder mapping and planning for longer term sustainability of service provision. Some 'best practice' guidelines for remote support can also be identified.
- **Identify best practice for remote information management**
Identification of platforms for information sharing, and guidelines on sharing and managing data between partners should be developed.

- **Emphasise the importance of complementing online modules with practice sessions and home visits utilising a blended learning approach**

This involves ensuring that coordinators and mentors timetable sufficient time for practice sessions, including with AT users and potentially also home visits where possible, in addition to mentoring support.

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