

ATscale: Establishing a cross-sector partnership to increase access to assistive technology

Authors

Alison End Fineberg¹, Margaret Savage², Victoria Austin³, Sara Boiten⁴, James Droop⁴, Michael Allen⁵, Phyllis Heydt⁶, Dennis Sondergaard⁷, Gopal Mitra⁸

Affiliation

1. Global Partnership for Assistive Technology, Switzerland; 2. Clinton Health Access Initiative, USA; 3. Global Disability Innovation Hub, United Kingdom; 4. Department for International Development, United Kingdom; 5. United States Agency for International Development; 6. Office of the WHO Ambassador for Global Strategies, USA; 7. UNICEF, Denmark; 8. UNICEF, USA.

Corresponding author

Alison End Fineberg (alison@atscale2030.org)

Abstract

Given existing gaps in access to Assistive Technology (AT) globally, it is important to think broadly and identify innovative approaches to overcome them. After an initial scoping in 2018, involving consultations and landscape analyses, ATscale, the Global Partnership for Assistive Technology was launched at the Global Disability Summit in July 2018 with the aim of reaching 500 million more people with life-changing AT by 2030. Applying lessons-learned from other areas of global health and development, ATscale was established with the recognition that to influence the complex systems for AT access, a broad set of stakeholders is needed to invest in and coordinate a multi-faceted, systematic approach spanning market shaping, capacity development, and political prioritisation. Already, ATscale has demonstrated how a multi-sector group can come together and develop a cohesive strategy. This strategy overview has been released and shared broadly for additional consultation and feedback to further refine ATscale's approach moving forward. ATscale has captured the attention of a diverse set of stakeholders. It now has eleven organisations within the Forming Committee and a broad community willing to inform its development. Now that it has been established, ATscale is working to move from an initial forming phase to a more formal organisation and to refine its operating model by late 2019 or early 2020. While there is significant momentum towards taking new, innovative approaches to address the gaps in access to quality, affordable AT for all, research shows that a wide range of systemic, underlying barriers and cross-cutting factors are contributing to the challenge in matching appropriate supply and demand for AT. While ATscale will address many of these, it is also going to require partnership on multiple levels with a coordinated strategic approach across a variety of stakeholders. This collective effort will enable the global community to have an impact greater than the sum of its individual parts in improving access to affordable, appropriate AT globally.

Key words

Assistive technology, cross-sector partnership, access, prioritisation, investment, markets

Introduction

Today, over 1 billion people need at least one form of assistive technology (AT), such as wheelchairs, eyeglasses, or hearing aids, but over 900 million people (90%) do not have access to the AT they require. The number of people who need AT is expected to grow to more than 2 billion people by 2050 (1).

Access to appropriate AT enables people with loss of function, disabilities, non-communicable diseases, and the aging population to participate in education, work, family, and community life. Without AT, individuals may experience isolation and exclusion from education, the labour market, and civic life. Lack of access to appropriate AT causes poorer health outcomes including premature death, deteriorating mental health, and increased risk of chronic health conditions and secondary complications. Increasing accessibility and affordability of AT unlocks unrealised economic potential and provides socioeconomic benefit for individuals, families, and countries by increasing productivity and participation in the workforce.

Despite the evidence and consensus around the huge unmet need for AT, research shows that there is a wide range of systemic, underlying challenges in the wider AT environment contributing to the challenge of matching and building appropriate supply and demand for AT, including inconsistent political will to prioritise AT, a lack of understanding of the role and function of AT in improving health, social, and economic outcomes, significant gaps in resources and investment in AT, insufficient data on impact to drive investment, a lack of global coordination for activities and investments in AT, and discrimination and stigma, particularly at the community level.

Many of these gaps in the enabling environment are intertwined with market barriers, which impact both supply and demand of AT. Obstacles to clearly articulated global demand include, but are not limited to, limited awareness, inadequate funding, fragmented procurement, and insufficient service delivery capacity. These all contribute to lack of demand across the value chain, including from users, service providers, and/or country governments. On the supply-side, limitations on AT products are related to availability, affordability, appropriate design, and assured quality, and the associated barriers are multi-faceted. As a result of varied challenges, there is insufficient participation by AT manufacturers and suppliers in low-and middle-income (LMIC) markets. Further, where they do participate, prices are usually high, and product and services are only available for more affluent segments of the population. Additional challenges include ineffective investment in innovation, complex and long processes to bring new products to market, and an absence of standards and guidelines. In order to improve upon the current challenges across supply, demand, quality, and price for AT in LMICs, a coordinated approach to overcoming identified barriers is needed to continue to build and shape the market for AT.

Given the nature of the existing gaps in access to AT globally, it is important to think broadly and identify innovative approaches to overcoming these challenges. ATscale¹, the Global Partnership for Assistive Technology, was launched in July 2018 as a multi-sector group to build a cohesive strategy to address the lack of global prioritisation, coordination, and investment in AT, as well as to tackle market challenges.

This paper describes the initiation of the partnership, the current state of the partnership, and the key components of the strategy to be implemented to support ATscale to achieve its global aim of reaching 500 million more people with life-changing AT by 2030. It articulates the ongoing work to move from an initial forming phase to a more formal organisation and discusses some of the challenges the partnership may face moving forward. It closes by highlighting opportunities and the need to build partnership on multiple levels through ongoing engagement with a diverse set of stakeholders to enable ATscale to impact the broad AT ecosystem. Text throughout this paper is pulled from and summarised from the Strategy Overview, which can be found on the website: atscale2030.org/strategy

Initiating the Partnership

Globally, while progress has been made in improving many aspects of AT delivery, the sector has been fragmented and under-resourced for some time. While a few donors have invested in this work in recent years, the required investment, attention, and implementation capacity far surpasses that which a few agencies can provide. Historically, there has been a lack of recognition of the importance of AT in the context of global agendas including Universal Health Coverage (UHC) and the Sustainable Development Goals (SDGs). Within the health sector, an area that should play a critical role in AT delivery, AT has not been prioritised, with limited to no funding allocated for it within health budgets among donors or local governments. There is limited evidence to build an investment case and to articulate the critical importance of improving access to AT to uphold human rights and to achieve related health, economic, and social outcomes.

In early 2018, the United States Agency for International Development (USAID) and the then Office of the United Nations Special Envoy for Health (UNSEO), initiated work with the Boston Consulting Group (BCG) to understand what opportunities exist to address access barriers to AT. BCG looked to consider how the market-oriented approaches that have been utilised within health to increase access and decrease the price of health commodities, known as market shaping, could be applied to the AT sector (2). Over the past decade, the global health community has deployed market shaping approaches for essential health commodities, successfully increasing availability and affordability. Successes include: halving the prices of polio and pentavalent vaccines; increasing market information through demand forecasting to increase reliable supply of antiretrovirals for HIV; and using volume guarantees to decrease time-to-market and lower prices for contraceptive implants (3-6).

¹ Pronounced as "A", "T", "scale"

Through this analysis, a hypothesis emerged that these approaches could be successfully adapted for AT, which has highly unique and fragmented markets.

Leading up to the Global Disability Summit, the Steering Committee for this work was expanded, incorporating the UK's Department for International Development (DFID), with experience in market shaping and a growing interest in AT, as well as a few other partners. It was during this time that DFID initiated further analytical work with the Global Disability Innovation (GDI) Hub and the Clinton Health Access Initiative (CHAI), who each led different components of the scoping process (7). A broad community of organisations and individuals with expertise, experience, and connections across sectors was instrumental in providing critical information around the gaps and shaping early ideas about opportunities. The report that emerged from this specific scoping contributed to the evidence base about challenges and also supported development of a fast start programme known as AT2030 (8), to implement initial activities to further inform the necessary approach.

While the analysis in the early phase focused on exploring the potential for applying market shaping approaches to AT, the work illuminated the fragmented nature of the response necessitating new, innovative approaches. Emerging from this was the need for broad political prioritisation and resource mobilisation. While some progress has been made globally in the context of political commitment, including establishment of the World Health Organization's (WHO) Global Cooperation on Assistive Technology (GATE), as well as the 71st World Health Assembly in 2018 passing a resolution on improving access to AT (9), there is still a long way to go. For example, there remains almost no domestic investment into AT among governments and there are limited international, large-scale commitments against AT from any of the traditional global health donors.

In order to influence the complex systems for access to and provision of AT, and to make sustained impact, it became clear that a broad set of stakeholders across sectors would be needed to invest in and coordinate a multi-faceted, systematic approach spanning market shaping, capacity development, and political prioritisation. Additionally, the consultations highlighted that successes in market-based approaches for other health commodities relied on a comprehensive analysis of the entire value chain followed by a plan to coordinate interventions on the supply and demand side and to address how the market is organised. These analyses and action plans can then provide a framework for the entire community to guide action. Given this, the work of BCG, was amended in the lead up to the Global Disability Summit in July 2018 to also support an effort to better understand how a global partnership could evolve to address the barriers to increasing access to appropriate, affordable AT.

The scoping considered successful partnership models used in other areas of international development. Global partnerships such as Unitaaid, the Global Fund, Gavi, and others have taken leadership roles in transforming their respective sectors. This is both in terms of global commitment, as evidenced by a multitude of diverse stakeholders prioritising and financing their work, as well as in the delivery of innovative, strategic, organised market-

based solutions that have revolutionised access to their respective products and services. Since its inception in 2000, “Gavi support has contributed to immunisation of more than 700 million children”, health systems and immunisation services have been strengthened in more than 60 countries, and they have articulated the case that “for every \$1 USD spent on immunisation, \$18 USD are saved in healthcare costs, lost wages, and lost productivity due to illness” (10). Reflecting on global HIV treatment 20 years ago, there were only 0.7 million people on treatment (3% treatment coverage) and the average cost to treat someone each year was ~\$10,000 (11). It has taken partnership and strategic focus across a variety of areas including service delivery, global technical guidance, and market shaping to increase that treatment coverage to more than 60% in 2018, more than 23 million people on treatment, and an average cost per treatment of less than \$100 per person per year (12). For some reviewed partnerships including Roll-back Malaria and the END Fund, setting an agenda and convening stakeholders are a core proposition. It is critical to learn from the models of those who have come before, as their approach has enabled increased political prioritisation and coordination, a high level of sustained resources, and transformed markets, all of which are paramount for increasing access to AT.

Information gathered throughout the evaluative, consultative process was considered in a series of meetings and workshops to develop the framework for the new partnership model. The rigorous analyses conducted, including initial AT market assessments, key informant interviews, and high-level secondary research, informed ATscale’s strategic priorities, objectives, and proposed focus areas. This work culminated with the launch of ATscale, the Global Partnership for Assistive Technology, at the Global Disability Summit in July 2018 in London by former United Kingdom Prime Minister, Theresa May. This summit, hosted by the United Kingdom Government, the Government of Kenya, and the International Disability Alliance, brought together more than 1000 delegates from governments, donors, private sector organisations, charities and organisations of persons with disabilities. There was an increased focus on AT and an emphasis on making tangible commitments for change in this area (13). ATscale launched as a commitment by key actors to develop a cross-sector partnership for AT that aims to bring greater resources and strategic focus to this significant global challenge with the goal of reaching 500 million more people with life-changing AT by 2030.

Current State of the Partnership

ATscale’s vision is to enable a lifetime of potential where every person can access and afford the life-changing AT they need. To accomplish this, ATscale is guided by a set of core principles underpinning its activities and approach. In short, the work will be user-centric, equitable, catalytic, galvanising, evidence-based, entrepreneurial, and empowering. Further, ATscale’s work will be informed by six interdependent priorities, which constitute critical areas to invest in to drive transformation in availability and access to AT, including: 1) generating data and evidence; 2) sparking innovation and new solutions; 3) driving

affordability and availability; 4) strengthening policy, systems, and implementation; 5) building capacity and participation; and, 6) galvanising investment and political support.

Overall, ATscale's path to its 2030 goal will likely fall into three phases. The initial phase (2019-2021) will involve demonstrating that ATscale, as a global partnership, can accelerate change leading to increased access to AT, as well as establishing a long-term organisational model. In the second phase (2022-2026), ATscale will expand its activities and seek additional investments as programmatic needs accelerate. The third phase (2027-2030) will emphasise taking what works across strategic priorities and geographies to scale.

Current Operational Model

Currently, ATscale is governed by a Forming Committee, comprised of 11 organisations,² which oversees ATscale's development, guided by an internal Statement of Principles collectively developed by the partner organisations. The Forming Committee is advising on strategy, coordinating stakeholders, mobilising resources, identifying and considering potential interventions and investments, and will shepherd ATscale to its permanent structure. ATscale has a small staff facilitating its daily operations including a Director who reports to the Forming Committee. By the end of 2019 or early 2020, ATscale will move to a more formalised structure.

Current Strategy Overview

To facilitate the direction of its initial work, ATscale developed a Strategy Overview. The document was developed by the Forming Committee through a series of consultations and incorporates ATscale's vision and mission, goal, approach, and near-term objectives. The strategic approach proposed by ATscale includes lessons-learned from other areas of global health and development, including market shaping approaches, as well as increasing political prioritisation, galvanising investment, and strengthening critical, cross-cutting systems. The Strategy Overview was released in February 2019 and shared broadly for additional consultation and feedback to further refine ATscale's approach moving forward. ATscale has proactively engaged with interested stakeholders via networks such as WHO's online GATE community and at key global events and forums.

ATscale proposes a twin-track approach that will seek to (1) develop an enabling environment across all AT on global, regional, and national levels and (2) identify targeted, catalytic interventions to address both supply and demand barriers to access for priority products. This twin-track approach will kick-start ATscale's work and inform both its coordinated investment strategy and activities in the long-term. These two tracks, defined by the objectives summarised below, are mutually reinforcing:

²ATscale Forming Committee: China Disabled Persons' Federation, Clinton Health Access Initiative, Global Disability Innovation Hub, Government of Kenya, International Disability Alliance, Norwegian Agency for Development Cooperation, Office of the UN Secretary-General's Special Envoy for Financing the Health Millennium Development Goals and for Malaria, United Kingdom's Department for International Development, UNICEF, United States Agency for International Development, World Health Organization.

Objective I: Develop an enabling environment for increased access to high-quality, affordable AT by growing political will, advocating for and informing policy reform, mobilising investment, and strengthening systems and service delivery at global, regional, and country levels

Political commitment at the global, national, and sub-national levels is critical for translating need into increased, funded demand for AT, and this is true for governments, donors, and civil society across all levels. Further, there are policy, financing, service delivery, and system changes required to create an enabling environment that supports appropriate provision of AT for existing and potential users. This space requires new investment, new incentives for a variety of stakeholders to engage, and the channelling of existing funding into the most catalytic interventions. ATscale will identify and develop interventions to address the enabling environment at all levels, including within specific countries, and will evaluate opportunities across contexts, including emergency settings.

To support this first objective, ATscale will evaluate existing information about challenges and opportunities and conduct select additional analyses to inform the development of targeted activities. The initial work will take shape in the form of raising political will and inspiring action by developing an investment case and advocacy plan, identifying key opportunities for influencing political prioritisation of AT on global and country levels, and mobilising resources from new sources. Further, ATscale will identify investable, targeted, cross-cutting interventions to increase accessibility and affordability of appropriate AT. These analyses and identified subsequent interventions will likely span a variety of focus areas at the global and country levels, particularly for LMICs.

In the context of increasing political prioritisation and galvanising resources, ATscale is already engaging with different stakeholders on a variety of platforms to both understand the need, to begin to increase visibility around the importance of AT, and to advocate for additional partners to come on board. ATscale has had an opportunity to speak at several engagements to share the work and plans for the future, which has opened up discussion about future partnership and has provided a platform for engaging on new ideas. ATscale has presented at international forums including the Global Action on Disability Network Annual Meeting and it will contribute to sessions at conferences including the AAATE 2019 Conference and the International Agency for the Prevention of Blindness Council for Members. Later this year, ATscale will speak on a panel at the World Health Summit in Berlin, Germany and ATscale is co-designing sessions for the Global AT Conference in Beijing, China, bringing together governments, AT users, and private sector. Conversations are occurring across fora including the Global Rehabilitation Alliance, Rehabilitation 2030, the World Hearing Forum, ISPO, and on individual partner organisation levels. ATscale has also been invited to engage with private sector partners involved in AT both to jointly advocate for AT to be included on the global stage, as well as to further inform the work of objective II.

Objective II: Identify interventions required to shape markets and overcome supply and demand-side barriers for priority AT

Building on the market landscape analyses conducted leading up to ATscale's formation, ATscale is conducting more in-depth analyses across five priority product areas. These five product areas and their associated services and systems for focus over the next few years (wheelchairs, hearing aids, prosthetics, eyeglasses, and digital devices with appropriate software) were selected through an analysis and assessment of the WHO Top 50 Priority Assistive Product List (14). The selection considered the level of unmet need and the potential for impact through new market shaping approaches.

The work to assess these product areas identifies key barriers and promising market interventions across the value-chain, stretching from research and development to production and procurement, all the way through to supporting service delivery at the user and healthcare worker levels. The result is the development of *product narratives*, which are comprehensive strategies that define a sustainable approach to increasing access to affordable, appropriate AT. Each product narrative incorporates not only the strategic objectives that will guide progress in building and shaping these markets, but also articulates potential investable opportunities and actions that could have a significant impact. Outputs from this work will inform ATscale's action plan for further programmatic interventions and investments and will also provide data and evidence to inform implementation and investments beyond ATscale. The product narratives will provide the analytical and coordinating framework not just for ATscale, but for other funders, implementers, and the wider community, which is central to guide action and deliver change.

A public-facing product narrative for wheelchairs launches at the GReAT Consultation in August 2019 and will be available on the ATscale website (www.atscale2030.org). ATscale will evaluate the opportunities articulated within this document and develop an investment plan that it can follow in the coming months and years to enable the sector to collaboratively expand and grow the value of the market and unlock potential to reach those most in need. The product narrative for hearing aids is in progress and should be available in October 2019. Further, there is initial consultation commencing for the prosthetics market analysis and this product narrative should be complete in December 2019. Initial efforts are starting in the context of eyeglasses in the coming months. Market analysis for the fifth product, digital devices with appropriate and accessible software, will commence in early 2020. CHAI is delivering these product narratives under the United Kingdom's aid-funded AT2030 programme in support of the ATscale Strategy.

ATscale's activities and investments will focus on LMICs; however, broad engagement will be critical to achieve global impact. While country-specific work will be important in overcoming barriers, leveraging opportunities, and mobilising resources, there will also be an emphasis on establishing strong global markets and growing an overall enabling environment, which will require global engagement. Across both strategic objectives,

ATscale will continue to refine its understanding of the greatest challenges and most critical interventions required and will utilise the collective strength of committed organisations to address these barriers and achieve its overarching goals. Further, as lessons are learned, and evidence is established, new objectives in line with ATscale's strategic priorities will be developed or expanded and interventions will be scaled up.

Continuing to Build the Partnership

Next Steps

Challenges to access to affordable, appropriate AT exist across the entire ecosystem. It is essential that ATscale is strategic about its investments and activities so that it can make a direct impact, but also catalyse impact more broadly to lift the overall sector. ATscale will be ambitious, but will also be focused, and it will require coordination and complementary initiatives so that expertise is harnessed across a variety of areas. ATscale has established a framework for its plans for the coming years and now needs to build out detailed action and investment plans. Building on the existing and ongoing analyses, as well as future planned assessments, ATscale will prioritise interventions, identify the most impactful and effective way to carry these out, and then execute and monitor the resulting investment and action plans.

One of ATscale's priorities now that the Forming Committee has come together and begun to move the initiative forward, is to establish a more formal operating model and governance structure that harnesses the depth and breadth of the technical and operational expertise in the AT community to support effective performance. ATscale is in the process of evaluating the most appropriate legal structure for the partnership to provide a robust, yet flexible backbone for its work going forward; this includes the design of its governance structure. The future structure will likely include a small secretariat responsible for driving the goals of ATscale and implementation of its strategy, as well as a funding mechanism that supports coordinated investment. This work to develop this steady state will not only provide the foundation from which to effectively deliver ATscale's strategy, but it will also more explicitly define how ATscale will effectively engage with stakeholders across sectors. It will be important to consider a variety of platforms and opportunities for strengthening access to AT, including health as well as other sectors such as education. In this stage of development and refinement, ATscale endeavours to build on the experiences and strengths that exist within this space, as well utilise its position to bring partners, resources, and expertise to a space that has been under-resourced and fragmented for a long time.

ATscale anticipates not only being a catalyst for change, but also acting as a body that can amplify existing work and coordinate and mobilise global stakeholders along a unified, focused, strategy to increase the availability of and access to affordable, appropriate, quality AT. While ATscale is already comprised of a diverse set of organisations guiding its development, it will require partnership on multiple levels with an even broader group, including stakeholders who have not been engaged in this space previously. Within the

context of this work, everyone will have a role to play. All stakeholders are going to be required to increase awareness and raise the profile of AT work. Country governments will need to take a leadership role in prioritising AT, carving out space within national plans and budgets, and partnering with ATscale to overcome barriers both nationally and globally. AT users are needed to inform the design and implementation of interventions to ensure they are more user centric. Funders of all types are needed both to join ATscale to invest in the catalytic work and to align AT investments within the overall strategy. All stakeholder voices are needed to share experiences, contribute expertise, and to inform ATscale's strategic approach. Further, there will be room and a need for implementers to align with and accelerate programming to ATscale's strategic objectives.

Challenges

This partnership brings varied perspectives and backgrounds, meaning there is going to be broader reach and the possibility to take the best from other areas and apply it here. That said, varied perspectives also require work to achieve consensus and alignment around what is most critical and how best to implement it. Thus far, this structure has worked effectively to bring different voices to the table to ensure that a broad perspective is incorporated in the focus as well as the approach to addressing the core needs within this space. Strengthening this current engagement will be important. ATscale plans to define a more specific approach to actively and meaningfully engage with partners, including disabled persons organisations and AT user groups, in the coming months.

As highlighted above, while many stakeholders within the AT sector recognise the challenges and required initiatives to achieve ATscale's goals, a significant amount of advocacy and new evidence is necessary to bring new partners and resources to the table to enable this work to take shape. Accessing high quality data and evidence of the impact of investment in this space will require time and it will be critical to prioritise this to ensure sustainable data-driven policies and interventions are adopted and the right groups are investing now.

Further, as highlighted within this paper, as well as ATscale's Strategy Overview, addressing access to affordable, appropriate, high quality AT is complex. This speaks to the scope of what ATscale takes on; it will remain imperative to address the most critical enablers and remain strategic and focused. ATscale will need to identify ways to scope work so that it can be most successful, leveraging expertise across the Partnership and more broadly within the community. ATscale needs to continue to refine its greatest value add and focus on impact. At the same time, action is critical to ensure that the work moves forward.

Finally, while much of what has been illuminated here addresses the global level, solutions will require tailoring to individual country contexts. Even within countries, fragmented approaches often exist. The needs and solutions must be well understood on a national level to enable governments to make decisions and adopt appropriate changes. Additionally, there are pressing and competing priorities for budgets both nationally and

globally; stakeholders will need to continue to identify opportunities for efficiency and integration, including taking opportunities to encourage countries embrace the importance of increased AT coverage as fundamental to realising commitments to the SDGs, UHC, and the UN CRPD.

Conclusion

The launch of ATscale marks a new, coordinated, global response to the challenge of increasing access to AT and already, the formation of the partnership is showing promise. Current Forming Committee organisations have brought together a large network of stakeholders to consult with and learn from and have provided the prospect for potential collaboration moving forward. The members of the Forming Committee themselves have also brought new, fresh perspectives to AT from other areas, including health. As ATscale expands, it will further evolve with contributions from stakeholders who are aligned with its vision, mission, and goal. It is imperative that ATscale learns from what has come before and that it builds on the successes, while also applying a new and innovative, strategic approach. This collective effort will enable the global community to have an enhanced impact, far beyond what any one group could achieve alone. In this moment, there is a unique opportunity to think big and act together in order to reach 500 million individuals with the life-changing AT they need by 2030.

Acknowledgement

Individuals from the following organisations of the Forming Committee have contributed significantly to all of the material included here, as well as to the formation and initial phase of ATscale, the Global Partnership for Assistive Technology: China Disabled Persons' Federation, Clinton Health Access Initiative, Global Disability Innovation Hub, Government of Kenya, International Disability Alliance, Norwegian Agency for Development Cooperation, Office of the UN Secretary-General's Special Envoy for Financing the Health Millennium Development Goals and for Malaria, United Kingdom's Department for International Development, UNICEF, United States Agency for International Development, World Health Organization.

References

1. Assistive technology [Internet]. World Health Organization. World Health Organization; [cited 2019Sep26]. Available from: <https://www.who.int/news-room/fact-sheets/detail/assistive-technology>
2. Boston Consulting Group. AT Market Shaping General Handover v1. 2018. Internal: Unpublished.
3. GPEI-Availability and price of inactivated polio vaccine [Internet]. Polioeradication.org. 2014 [cited 2019Jul31]. Available from: <http://polioeradication.org/news-post/availability-and-price-of-inactivated-polio-vaccine/>

4. Supply and Procurement Roadmap Pentavalent (DTwP-hepB-Hib) Vaccine [Internet]. GAVI The Vaccine Alliance, 2016 [cited 2019Jul31]. Available from: <https://www.gavi.org/support/nvs/pentavalent/>
5. The state of the HIV treatment, testing, and prevention markets in low-and middle-income countries, 2017-2022 [Internet]. Clinton Health Access Initiative, CHAI, 2018 [cited 2019Jul31]. Available from: https://clintonhealthaccess.org/content/uploads/2018/09/2018-HIV-Market-Report_FINAL.pdf
6. Expanding global access to contraceptive implants [Internet]. Clinton Health Access Initiative, CHAI, 2015 [cited 2019Jul31]. Available from: https://clintonhealthaccess.org/content/uploads/2015/08/Case-Study_LARC.pdf
7. Assistive Technology Scoping Research Executive Summary [Internet]. Global Disability Innovation Hub, 2018 [cited 2019Jul31]. Available from: <https://www.disabilityinnovation.com/uploads/images/GDI-Hub-Assistive-Technology-Scoping-Research.compressed.pdf>
8. AT2030 Our Programme [Internet]. At2030.org [cited 2019Jul31]. Available from: <https://at2030.org/programme/>
9. World Health Organization. Seventy-First World Health Assembly A71/21. Provisional agenda item 12.5 Improving Access to Assistive Technology. Geneva: WHO, 2018. Available from: http://apps.who.int/gb/ebwha/pdf_files/WHA71/A71_21-en.pdf
10. Facts and Figures [Internet]. Gavi The Vaccine Alliance. [cited 2019Jul31]. Available from: <https://www.gavi.org/about/mission/facts-and-figures/>
11. ARV Market Report: The State of the Antiretroviral Drug Market in Low- and Middle-Income Countries, 2015-2020 [Internet]. Clinton Health Access Initiative, CHAI, 2016 [cited 2019Jul1]. Available from: <https://clintonhealthaccess.org/content/uploads/2016/10/CHAI-ARV-Market-Report-2016-.pdf>
12. Global HIV & AIDS statistics: 2019 fact sheet [Internet]. Unaids.org. 2019 [cited 2019Jul31]. Available from: <https://www.unaids.org/en/resources/fact-sheet>
13. The Global Disability Summit 2018. Charter for Change [Internet]. Publishing Service UK, 2018 [cited 2019Jul31]. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/721701/GDS_Charter_for_Change.pdf
14. World Health Organization. Priority Assistive Products List (APL). Geneva: WHO, 2016. Available from: https://www.who.int/phi/implementation/assistive_technology/low_res_english.pdf