



# Disability and Rehabilitation: Assistive Technology

ISSN: 1748-3107 (Print) 1748-3115 (Online) Journal homepage: <https://www.tandfonline.com/loi/iidt20>

## Leaving no-one behind: using assistive technology to enhance community living for people with intellectual disability

John Owuor, Fiona Larkan & Malcolm MacLachlan

To cite this article: John Owuor, Fiona Larkan & Malcolm MacLachlan (2017) Leaving no-one behind: using assistive technology to enhance community living for people with intellectual disability, *Disability and Rehabilitation: Assistive Technology*, 12:5, 426-428, DOI: [10.1080/17483107.2017.1312572](https://doi.org/10.1080/17483107.2017.1312572)

To link to this article: <https://doi.org/10.1080/17483107.2017.1312572>



Published online: 28 Apr 2017.



Submit your article to this journal 



Article views: 2120



View related articles 



View Crossmark data 



Citing articles: 6 [View citing articles](#) 

EDITORIAL



## Leaving no-one behind: using assistive technology to enhance community living for people with intellectual disability

### Intellectual disability and community living

Many people with intellectual disability (ID) are no longer isolated in "special care" facilities. Some settings such as the Scandinavian countries, North America and the UK have long experience in community living for people with ID. Others, such as Ireland, are currently moving people into community living [1,2].

Research has shown that deinstitutionalization (relocation of individuals with ID from institutional to community settings) can enhance their inclusion and wellbeing (8–10). A review of the literature on deinstitutionalization of care and support, covering research from 1997 to 2007, found that community living enhances interpersonal relationships, access to community services and self-determination, compared to living in large institutions [1].

The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) [3], a culmination of the normalization drive, enshrines community living for people with ID; people with all types of disabilities must enjoy all human rights and fundamental freedoms; all people with disabilities, should be part of the normal societal processes such as education, employment, housing, socialization and access to all societal services. In particular Article 19 of UNCRPD highlights the right to community living by all people with disabilities, a right to choose where and with whom to live, and a right to support to ensure social inclusion [2]. The Sustainable Development Goals (SDGs) [4], which reinvigorates the Millennium Development Goals [5], aims to "leave no one" behind through inclusion of all people, including those with ID who are among the most vulnerable to social exclusion [6]. It follows that then that people should not be "left behind", either through exclusion in institutions, or through isolation in the community.

### Assistive technology and community living

Assistive technology (AT) is defined variably [7–10]. AT can refer to personal aids, assistive products [7] or assistive medical

devices [11]. AT in this commentary refers to any product or service that can be used by persons with disability to overcome challenges they may face in carrying out daily activities of their choice that would otherwise be limited by their impairments. Eye glasses, hearing aids, wheelchairs, brails and lifts are examples of AT. However, innovations such as Skype, Twitter and Facebook are currently largely inaccessible to most people with ID. Importantly, AT covers services and the environment in which they operate, and includes "mainstream" technologies and those developed specifically for people with disability [12].

AT has the potential to enhance community living and the normalization process of persons with disabilities [13,14] as illustrated in Figure 1.

Comprehensive access to AT can enable a person with ID to interact with friends and family. AT can enhance mobility and access to health and social care services. Inclusive designs can improve environmental access and safety for people with ID [12]. AT can enhance digital inclusion [15] and enable children with ID to attend regular schooling [11] instead of isolation in "special" schools. AT can also be used for skills training [16] to include people with ID in the labour market. As Tebbutt et al. [17] argue, AT can facilitate the achievement of each of the 17 SDGs. Lack of access to AT in a technologically mediated world, increases the *technological divide* between people with ID and the rest of the society; a recipe for social exclusion and isolation; a trajectory into abject poverty with detrimental impacts on the person with disability, their family members and society in general [7].

### Towards access to AT

A mere 10% of the people who need AT have access [7]. The need for AT among the most vulnerable – those with ID – is profound and their risk of exclusion much higher [6] across many

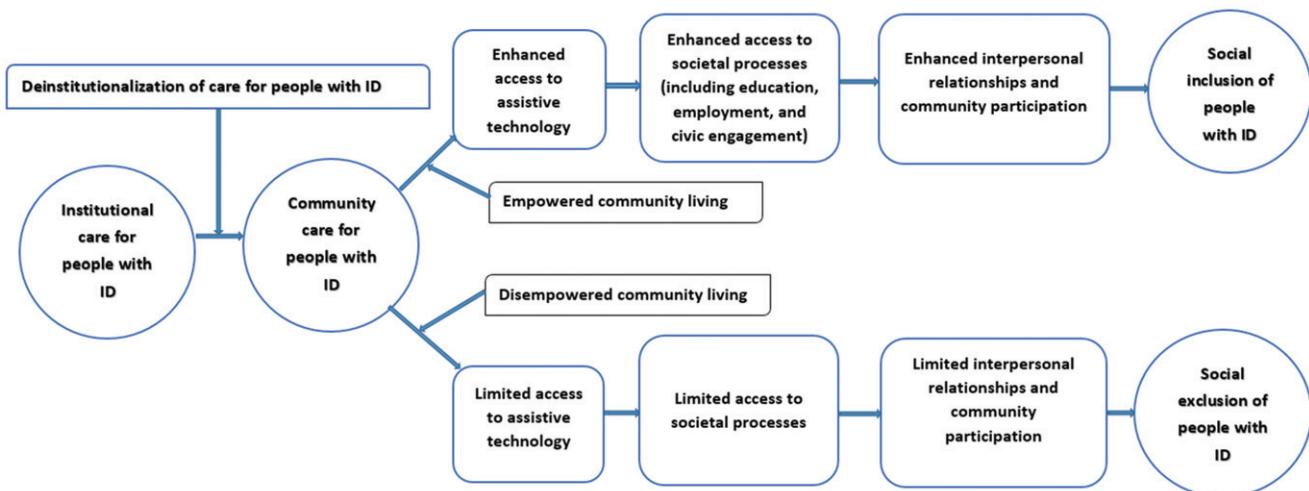


Figure 1. Transforming community care for people with intellectual disabilities (ID) through enhanced access to assistive technology.

domains, including health and rehabilitation services [18]. One of the barriers to the provision of and access to AT is the lack of, or incoherent, policy on AT [19]. The creation of the Global Cooperation on Assistive Technology is step towards aligning global action on AT [20]. As highlighted below, the UNCRPD [21] can benchmark global activity on AT through several different articles (see Figure 2) [12].

### A call to action

There is need to act now to stop the growing exclusion of people with ID. The more general *technological divide* [22] – where the most vulnerable have least access – is currently reflected in the provision and use of AT. For most people with ID, the risk of exclusion may become worsened by accessibility challenges; such

as the motivation to acquire AT, material and physical ability, and the training and skills to use AT [22], as all these are dependent on their support ecosystem.

The evidence is clear on the benefits of community living for people with ID. However, without access to assistive technologies, people with ID can be isolated in the community. They can be excluded and “left behind”; possibly with even less support and access than they would have had in institutions. AT is a mediator for people with ID to attain not just their rights but also the highest possible quality of life and sense of participation and belonging in society. Different contexts will require different approaches, addressing different barriers and facilitators [23] for the use of AT. Without systematic and context-specific planning for such provision; however, community living may become a disconnected life for many.

<p>The Convention on the Rights of Persons with Disabilities (CRPD) entitles beneficiaries to Assistive Technology through the provisions in some of its articles as outlined below (United Nations, 2006).</p>	
<b>CRPD</b> <b>Article 4 - General Obligations</b>	<p>‘States Parties undertake to ensure and promote the full realization of all human rights and fundamental freedoms for all persons with disabilities without discrimination of any kind on the basis of disability’. To this end, States Parties undertake;</p> <ul style="list-style-type: none"> <li>• g. ‘To undertake or promote research and development of, and to promote the availability and use of new technologies, including information and communications technologies, mobility aids, devices and assistive technologies, suitable for persons with disabilities, giving priority to technologies at an affordable cost’</li> <li>• h. ‘To provide accessible information to persons with disabilities about mobility aids, devices and assistive technologies, including new technologies, as well as other forms of assistance, support services and facilities’</li> </ul>
<b>CRPD</b> <b>Article 20 - Personal Mobility</b>	<p>‘States Parties shall take effective measures to ensure personal mobility with the greatest possible independence for persons with disabilities, including by;</p> <ul style="list-style-type: none"> <li>• b. ‘Facilitating access by persons with disabilities to quality mobility aids, devices, assistive technologies and forms of live assistance and intermediaries, including by making them available at affordable cost’</li> <li>• d. ‘Encouraging entities that produce mobility aids, devices and assistive technologies to take into account all aspects of mobility for persons with disabilities’</li> </ul>
<b>CPRPD</b> <b>Article 32 - International Cooperation</b>	<p>States Parties recognize the importance of international cooperation and its promotion, in support of national efforts for the realization of the purpose and objectives of the present Convention, and will undertake appropriate and effective measures in this regard, between and among States and, as appropriate, in partnership with relevant international and regional organizations and civil society, in particular organizations of persons with disabilities. Such measures could include;</p> <ul style="list-style-type: none"> <li>• Providing, as appropriate, technical and economic assistance, including by facilitating access to and sharing of accessible and assistive technologies, and through the transfer of technologies.</li> </ul>

Figure 2. Sections of the UNCRPD concerned with AT.

## Disclosure statement

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this article.

## Funding

This research was supported by funding from the charity RESPECT and the People Programme (Marie Curie Actions) of the European Union's Seventh Framework Programme (FP7/2007-2013) under REA grant agreement no. PCOFUND-GA-2013-608728.

## References

- [1] Kozma A, Mansell J, Beadle-Brown J. Outcomes in different residential settings for people with intellectual disability: a systematic review. *Am J Intellect Dev Disabil.* 2009;114:193–222.
- [2] Tatlow-Golden M, Linehan C, O'Doherty S, et al. Living arrangement options for people with intellectual disability: a scoping review [Internet]. Dublin: School of Social Work and Social Policy, Trinity College Dublin; 2014. p. 80. [cited 2016 Dec 6]. Available from: <http://socialwork-socialpolicy.tcd.ie/moving-ahead/>
- [3] United Nations. United Nations convention [Internet]; 2006. [cited 2016 Dec 6]. Available from: <http://www.un.org/disabilities/convention/conventionfull.shtml>
- [4] United Nations. Sustainable development goals [Internet]. Sustainable Development Knowledge Platform; 2015 [cited 2015 Dec 16]. Available from: <https://sustainabledevelopment.un.org/?menu=1300>
- [5] United Nations. Millennium development goals (MDGs) [Internet]. 2009 [cited 2017 Mar 30]. Available from: <http://www.un.org/millenniumgoals/aids.shtml>
- [6] World Health Organization. WHO global disability action plan, 2014–2021: better health for all people with disability [Internet]. 2015. [cited 2017 Apr 20]. Available from: [http://apps.who.int/iris/bitstream/10665/199544/1/9789241509619\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/199544/1/9789241509619_eng.pdf?ua=1)
- [7] GATE. Assistive technology; fact sheet [Internet]. Media Cent.; 2016 [cited 2016 Jul 28]. Available from: <http://www.who.int/mediacentre/fact-sheets/assistive-technology/en/>
- [8] ISO 9999:2011(en). ISO 9999:2011(en) assistive products for persons with disability – classification and terminology [Internet]. ISO Online Brows. Platf. OBP; 2016. Available from: <https://www.iso.org/obp/ui/#iso:std:iso:9999:ed-5:v1:en>
- [9] Seelman KD. Assistive technology policy: a road to independence for individuals with disabilities. *J Soc Issues.* 1993;49:115–136.
- [10] Scherer MJ. The change in emphasis from people to person: introduction to the special issue on assistive technology. *Disabil Rehabil.* 2002;24:1–4.
- [11] Sarkar R. Assistive technology and devices: a boon to promote quality education among children with mild intellectual disability in inclusive set up. Coimbatore: Ramakrishna Mission Vivekananda University; 2015.
- [12] Cook AM, Polgar JM. Assistive technologies: principles and practice [Internet]. Elsevier Health Sciences; 2014. [cited 2017 Apr 19]. Available from: [https://books.google.ie/books?hl=en&lr=&id=ODWaBQAAQBAJ&oi=fnd&pg=PP1&dq=assistive+technology+social+inclusion&ots=IE89XsvPY7&sig=98ilVd2V\\_1jUOA6h34qHqcdR46M&redir\\_esc=true&#v=onepage&q=assistive%20technology%20social%20inclusion&f=false](https://books.google.ie/books?hl=en&lr=&id=ODWaBQAAQBAJ&oi=fnd&pg=PP1&dq=assistive+technology+social+inclusion&ots=IE89XsvPY7&sig=98ilVd2V_1jUOA6h34qHqcdR46M&redir_esc=true&#v=onepage&q=assistive%20technology%20social%20inclusion&f=false)
- [13] Scherer MJ. Assistive technologies and other supports for people with brain impairment. New York (NY): Springer Publishing Company; 2011.
- [14] Scherer MJ. Living in the state of stuck: how assistive technology impacts the lives of people with disabilities. 4th ed. Cambridge (MA): Brookline Books; 2005.
- [15] Guha S. Role of educational technology in making normalization through digital inclusion a reality for children with disabilities. *Indian J Appl Res [Internet].* 2016;5. [cited 2016 Nov 8]. Available from: <https://worldwidejournals.in/ojs/index.php/ijar/article/view/8491>
- [16] Walsh E, Holloway J, McCoy A, et al. Technology-aided interventions for employment skills in adults with autism spectrum disorder: a systematic review. *Rev J Autism Dev Disord.* 2017;47:12–25.
- [17] Tebbutt E, Brodmann R, Borg J, et al. Assistive products and the sustainable development goals (SDGs). *Global Health.* 2016;12:79.
- [18] Boot FH, Dinsmore J, Khasnabis C, et al. Intellectual disability and assistive technology: opening the GATE wider. *Front Public Health.* 2017;5:10.
- [19] Cullen K, McAneney D, Dolphin C, et al. Research on the provision of assistive technology in Ireland and other countries to support independent living across the life cycle [Internet]. Dublin: National Disability Authority (NDA); 2012. p. 175. [cited 2017 Apr 19]. Available from: <http://nda.ie/File-upload/Research-on-the-provision-of-Assistive-Technology1.pdf>
- [20] Khasnabis C, MacLachlan M, Mirza Z. Opening the GATE to inclusion for people with disabilities. *Lancet.* 2015;386:2229–230.
- [21] United Nations. Convention the rights of persons with disabilities [Internet]. Conv Rights Pers Disabil; 2006 [cited 2016 Oct 6]. Available from: <http://www.un.org/disabilities/convention/conventionfull.shtml>
- [22] Sung W. A study of the digital divide in the current phase of the information age: the moderating effect of smartphones. *IP.* 2016;21:291–306.
- [23] McVeigh J, MacLachlan M, Gilmore B, et al. Promoting good policy for leadership and governance of health related rehabilitation: a realist synthesis. *Global Health.* 2016;12:49.

John Owuor  
Centre for Global Health, Trinity College  
Dublin, Ireland  
 [owuorj@tcd.ie](mailto:owuorj@tcd.ie)

Fiona Larkan  
Centre for Global Health, Trinity College  
Dublin, Ireland

Malcolm MacLachlan  
Trinity College Dublin, Dublin, Ireland