



The Equipping

Inclusion Studies : Assistive Technology Use and Outcomes in Victoria

2010

Key Findings and Policy Recommendations



DEAKIN
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The Equipping Inclusion Studies

Key Findings and Policy Implications

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Purpose of the research

Context

Approximately one in five of the Australian population lives with disability (AIHW 2006a; ABS 2003). Of these, almost 1.9 million rely on assistive technologies to live independently (Hobbs, Close, Downing, Reynolds & Walker 2009).

Assistive Technology (AT) is defined as,

‘any device, system or design, whether acquired commercially or off the shelf, modified or customised, that allows an individual to perform a task that they would otherwise be unable to do, or increase the ease and safety with which a task can be performed’ (Independent Living Centres Australia n.d).

‘Assistive Technology solutions’ have been defined as entailing a combination of devices (aids and equipment), environmental modifications (both in the home and outside of it), and personal care (paid and unpaid) (Assistive Technology Collaboration n.d).

Despite a large number of Australians relying on AT, there is little data available about life for these Australians, the extent of AT use, or unmet need for AT. Existing research in Australia suggests that aids and equipment provision in Australia is *‘fragmented’* across a plethora of government and non government programs (AIHW 2006a:35). In Victoria, one of the prime sources of government funding for AT is the Victorian Aids and Equipment Program (VAEP) which is a subsidy program for the purchase of aids and equipment, home and vehicle modifications for people with permanent or long term disability. Recent research suggests that waiting times for accessing equipment through the VAEP are high, as is the cost burden to applicants (Wilson, Wong & Goodridge 2006). In addition, there appears to be a substantial level of unmet need (KPMG 2007).

Additionally, there is a paucity of literature around the economic evaluation of AT interventions and solution packages, resulting in little evidence of their cost-effectiveness credentials.

Purpose of the studies

In 2008, the Victorian Aids and Equipment Alliance (AEAA) was awarded research funding from the William Buckland Foundation to undertake research into AT provision in Victoria. The AEAA commissioned two studies conducted by two teams from Deakin University.

Study 1: The Equipment Study

Study 1 focused on the experience of Victorian adults with a disability using AT and the impact of AT in their lives. In particular, the study sought to identify the range of AT used, the life domains enabled by this use, and levels of difficulty, participation and satisfaction with current use. In addition, the study sought to identify AT required by participants and the impact this provision would have on life participation, difficulty and satisfaction. The study involved survey responses from one hundred (100) Victorian adults with disabilities, and a subset of eight (8) individuals who provided detailed interview and assessment data, and underwent an expert panel review to generate optimal AT solutions. Data from this set of eight individuals was used for Study 2: The Economic Study as a basis to determine the difference between the outcomes of the current provision of AT compared with those generated from the hypothetical provision of an ‘optimal’ AT solution.

Study 2: The Economic Study

Study 2 had two components: 1) a systematic literature review of the economic evaluation of AT interventions; and 2) an economic evaluation of the cost-consequences and cost-utility of optimal AT interventions based on data from The Equipment Study collected from the sub set of eight individuals.

Key findings

THE DEMOGRAPHICS OF PARTICIPANTS (VICTORIAN ADULTS WITH A DISABILITY USING AT)

General

The study population of 100 Victorian adults with a disability represented a wide cross section of people with a disability. Participants identified nearly 60 separate diagnoses, with the majority of these classified as relating to physical disability (60%), followed by multiple (14%) and sensory (13%) disabilities. The survey respondents were 59% female and 41% male. Most respondents were aged 45-64 years (39%) and 25-44 years (20%), with 13% over the age of 65. In this respect, The Equipment Study is likely to under-report the experience of people with a disability aged 65 years and over who are the main cohort of users of the VAEP (55%: KPMG 2007).

The majority of survey respondents lived independently (62%), most with a spouse or partner, and 14% lived in the family home (with parents or relatives). Study participants evidenced a higher than average level of unemployment (74%) compared with the Australian population of persons with a disability. Despite low levels of paid employment, a significant number of respondents (21%) engaged in volunteer work and a further 4% wished to do so but lacked the enablers to make this happen.

Disadvantage

The study population evidenced significant levels of disadvantage. Along with the low rate of paid employment, most respondents (75%) were dependent on government pensions or allowances as their main source of income. Sixty seven percent (67%) reported their income as between \$6,001-\$21,600 per annum and a further 25% identified their income as under \$58,000 per annum. This is consistent with the income poverty of people with disability in Australia generally. Though levels of social exclusion and participation poverty were not explicitly sought from respondents in The Equipment Study, available data relating to these concepts was analysed. In particular, respondents reported incidents of hardship in relation to several indices of deprivation and social exclusion, including economic hardship and lack of community participation.

Health related quality of life

The health related quality of life of the study population was less than half that of the norm for the Australian population (0.32 compared to 0.80) as measured by the Assessment of Quality of Life (AQoL-6D) tool. The study population experienced particularly low scores in relation to some quality of life domains, including those of Independent Living, (where they experienced less than a quarter of the life quality of the Australian population), and of Relationships (where the study population experienced around half the life quality of the Australian population).

WHAT AT IS CURRENTLY BEING USED BY VICTORIANS WITH A DISABILITY?

The participants in The Equipment Study reported high utilisation of three elements of an AT solution: devices (aids and equipment); environmental modifications (including both home and built community environs); and personal care. In most cases (66%), all three elements were used by participants. Only 2% of participants relied on AT devices alone. This finding affirms the need for a view of AT solutions being comprised of multiple and inter-dependent elements.

The participants in The Equipment Study currently utilise an average of 13 items or elements within their AT solution (aids and equipment, environmental modifications and personal care) to achieve outcomes across life domains. Separate analysis of the 91 participants theoretically within the VAEP decision making context (ie. excluding those funded by TAC and other insurance) found a wide range of devices (over 100 different device types) to be in use. These mapped across eleven broad classes of assistive products classified by the International Standards Organisation (ISO 9999: 2007), and evidenced that participants show demand (met and unmet) for 17% of total device categories listed in this Standard. The VAEP currently subsidises AT devices in 82 of the 650 categories of the ISO 9999, representing 13% coverage of the total AT device types available on the market.

CURRENT ROLE OF AT IN INDIVIDUALS' LIVES

Current level of participation in life areas enabled by AT

The 100 participants in The Equipment Study used AT to participate in multiple life domains. The Equipment Study utilised a life domains framework comprising 8 life areas (personal; social; recreation and leisure; economic; educational; political; cultural and spiritual life domains) (Wilson 2006). This framework maps to the WHO ICF Activity and Participation Chapters (WHO 2001) used in The Economic Study. All eight life domains were populated with examples of AT use that enabled the involvement in life activities. Most respondents (94%) reported activity supported by AT devices in Personal Life, followed by Social Life (80%), and Recreation and Leisure Life (73%). Elements of AT were repeatedly seen to be effective in more than one life domain. A number of respondents described the rationing of their participation based on insufficient AT.

Constraints on participation

Most respondents identified difficulty levels of 'moderate' to 'moderate to severe' (3-4 on a 6 point scale) across life areas. The area of Personal Life evidenced the highest level of difficulty followed by Recreation and Leisure Life, and Cultural Life.

The 100 survey respondents provided a detailed set of qualitative data that uniformly spoke to levels of dissatisfaction and frustration with current participation levels. The eight case participants were also asked to rate their level of satisfaction with their participation in the life domains of their choice. Overall, participants were dissatisfied with their participation levels in more than a third (39%) of their preferred life areas and activities, with some activities (5%) evidencing complete restriction of participation.

INCREASING OUTCOMES THROUGH INCREASED PROVISION OF AT SOLUTIONS

Identification of AT that would meet individuals' needs

Overall, 74% of the 100 survey respondents identified unmet need for AT solutions to achieve their life aspirations. These desired solutions included aids and equipment (identified by 70% of respondents and including up to nine additional / alternative devices), home modifications (46% of respondents), environmental modifications in the community (52% of respondents) and personal care (24% of respondents). The majority of respondents appear to be technically eligible for VAEP subsidy given their income and residential arrangements.

Increased participation

The eight case study participants identified an increase in participation rates between 0% and 28%, with an average increase of 12% as a result of the hypothetical provision of optimal AT. Survey respondents anticipated that the provision of desired AT would improve participation in life areas, particularly in the area of Personal Life (for 68% of respondents), in Social Life (48%), and in Recreation and Leisure Life (38%).

Decreased difficulty

Survey respondents forecast that the provision of AT improvements would lessen difficulty across life domains by around 19%. In addition, the eight case participants identified that difficulty levels may decrease between 4% and 20%, with an average reduction of 14% in the level of difficulty, resulting from optimal AT provision.

Many respondents identified problems with rating life in terms of 'difficulty' and argued that this did not capture their aspiration or experience. For some, the provision of suitable AT would enable them to achieve a range of life outcomes though difficulty in doing so would increase and this was seen as a desirable outcome. This suggests that aspiring to reduce difficulty levels as an outcome of AT provision is not a suitable outcome measure.

Increased satisfaction in participation

The eight case study participants rated their anticipated satisfaction with participation levels following the hypothetical provision of optimal AT. Ratings evidenced a significant increase in satisfaction ranging from 8% to 33%, with an average of 19% satisfaction improvement. Not only did satisfaction levels improve, but participants rated more of their life activities as achieving moderate to high levels of satisfaction in regard to participation levels (74% compared with only 47% of life activities prior to optimal AT solution).

Increased health related quality of life

Seven of the eight case study participants re-rated their quality of life following the hypothetical provision of their optimal AT solution. All except one participant evidenced increases in AQoL score with four showing gains of 10% or more, in a range between 4 - 33% improvement. This suggests that investment in AT will return gains in quality of life.

Cost of change

The Economic Study demonstrated that these improvements can be achieved at modest cost for many AT clients. The incremental cost of moving to an optimal package of care was small for half of the participants (less than \$6,200); moderate for two (\$11,116; \$14,370); and high for one

participant (\$29,534). In other words, from a government affordability perspective, the change to an optimal package of AT for these participants did not entail an unrealistic amount of additional expenditure.

EVALUATIVE COMMENTS ON THE VAEP AND OTHER GOVERNMENT AT FUNDING PROGRAMS

Though neither study explicitly sought data of an evaluative nature in relation to the VAEP, with the exception of data about sources of AT funding accessed, a large amount of data was volunteered by respondents.

What works well currently in the VAEP

Forty one percent (41%) of survey respondents identified the VAEP as their main source of funding to purchase AT. Respondents reported that their AT (provided both by VAEP and other sources) enabled them to achieve results in thirteen of the sixteen 'life areas' identified in the Victorian Department of Human Services Quality Framework (2007) (the accountability framework for government investment in disability services). This suggests that the VAEP is an important source of support for people with a disability and contributes to their life outcomes.

Problem areas with the VAEP

Of the 100 survey respondents, 91% are theoretically eligible for the VAEP program, yet 30% self funded their AT. Further, 73% of the items identified as required, (but remaining unprovided), by participants are eligible for VAEP funding, ie. the items are on the VAEP Aids and Equipment List. This suggests that people with disabilities are not using the VAEP to the full extent of their eligibility. Qualitative data provides a range of reasons for this. Some participants described opting out of the VAEP system on the grounds that procedural hurdles, waiting times and uncertain outcomes render it an ineffective option, despite then experiencing substantial hardship and compromised participation.

Compared to current market costs, VAEP subsidy rates on average cover 66% or less of AT purchase costs. VAEP subsidy gaps include shortfalls of 27% for walking frames; 42% for manual wheelchairs; 31% for beds, 35% for portable ramps; 17% for mobile hoists; 49% for pressure care equipment; and up to 78% for home modifications. Respondents report significant financial stress resulting from this level of co-contribution (ie self funding the 'gap'), given their low income status.

Respondents identified that they used and required a wide range of equipment, around a third of which is not currently eligible for VAEP funding. Overall, respondents reported currently using 386 devices that are not eligible for VAEP subsidies, 32% being information and communication technologies and 9% being mobility devices.

In terms of the VAEP, respondents reported high levels of co-payment and financial stress, long wait times for equipment, lack of maintenance and repair of funded AT, and funding guidelines that prohibited updating AT requirements based on changing needs.

The lack of provision of AT resulted in respondents reporting 114 incidents of failure to achieve results in the sixteen 'life areas' of the Quality Framework (Department of Human Services 2007). Of these, most were related to the area of 'moving around', followed by 'having fun', 'paying for

things’, ‘exercising rights and responsibilities’ and ‘expressing culture’. This suggests that the lack of provision of AT (related to inadequate funding) results in failure to attain life outcomes matched to the Victorian Government policy goals.

Other funding support for AT

The Victorian Aids and Equipment Program is the primary focus of this report. However, evidence from The Equipment Study shows that it is used repeatedly in combination with other sources of funding support, both within the Victorian State Government (and the Department of Human Services, responsible for managing the VAEP), and other jurisdictions (Commonwealth, local government, non government and other). The need to navigate these multiple sources in order to gain sufficient funding to purchase needed AT causes both significant stress for respondents, as well as resulting in the failure of equipment provision where the process is too burdensome or other factors produce this failure. There is a need to co-ordinate or streamline these multiple funding programs and to ensure individuals are supported to access their full entitlements.

Policy implications

THE POLICY MANDATE

There is a strong concordance between the policy goals at international (UN Convention on the Rights of Persons with Disabilities - UN CRPD), national (National Disability Strategy) and state (Victorian State Disability Plan) levels and the aspirations identified by the Victorians with disabilities using AT in these studies. Increasingly, policies and legislation at all levels focus on the goal of inclusion of people with disabilities in all aspects of society with equal rights, responsibilities and opportunities as all citizens. Frameworks such as the UN CRPD also explicitly identify the responsibility of government to act to overcome barriers to equal participation through the provision of legislation, programs and actual supports.

The Equipment Study found substantial limitations in AT provision, which act as a barrier to the achievement of participation as detailed in international, national and state disability policies. Some 138 instances of failure to achieve rights as explicated in the articles of UN CRPD were identified. Similarly, 114 incidents were classified as policy failures in relation to the Victorian State Disability Plan and its Quality Framework.

In short, governments have obligations to overcome barriers to the equal citizenship of people with a disability. The inadequate provision of AT results in failure to attain equal citizenship, reduced achievement of State Government policy goals, and potential breaches of the UN Convention on the Rights of Persons with Disabilities.

DOES AT WORK

Governments internationally acknowledge the positive impact of AT provision. There is a body of published work that evidences the effectiveness of assistive technology in terms of a range of life outcomes. Within the literature, outcomes of AT have been demonstrated in the areas of:

1. Preserved independence, decreased functional decline and reduced hospital admission rates;
2. Prevention of secondary medical complications;
3. Prevention of falls; maintenance of occupational roles via enabling environments;
4. Alleviating carer burden;
5. Reduced residential care placement;
6. Enabled activity and participation in specific life domains;
7. Overall health and community life outcomes;
8. Improved quality of life.

The Equipping Inclusion Studies present evidence to suggest that the provision of AT is critical to the achievement of a range of outcomes consistent with the aspirations of individuals with disability, and with stated government policy. There is a clear expression of need for AT by persons with a disability, and a strong social justice argument underpinning its provision.

IS THE PROVISION OF AT COST EFFECTIVE?

The economic literature review findings

The current body of peer-reviewed economic literature on AT provision is limited in both extent and quality. The literature predominantly covers methodological issues associated with the conduct of the economic evaluation of AT; with very few actual studies. Whilst there are some examples of partial economic evaluations, there is only one example of a full economic evaluation (Brodtkorb, Henriksson, Johannesen & Thidell 2008). Further, all the available studies focus on the economic credentials of a single AT device. No studies address the economic merits of providing optimal AT solution packages that address individual needs across all relevant domains or the cost-effectiveness of timely provision.

The gaps identified by the literature review only serve to highlight the importance of the economic evaluation work undertaken in Study 2: The Economic Study. Although exploratory in nature, Study 2 provides a full economic evaluation of optimal packages of AT provision measured against current provision for eight case study participants. It is the first time that total packages of care for persons with a disability have been subjected to full economic evaluation taking into account benefits across life domains.

The Economic Study findings

Study 2 determined the cost-effectiveness from a health sector perspective, for each of eight individual case studies, of a move from the AT solutions they currently have in place to an 'optimal' AT solution determined by a panel of experts and approved by the person with a disability.

The analysis yielded some interesting and useful results. It showed that the outcomes of a move to an optimal AT solution varied between the case studies; from being highly cost-effective for some study participants, to cost-ineffective for others. AT users, however, are clearly a special needs group where considerations of equity and social justice should come to the fore. For four of the

participants, the estimated quality of life improvement would need to be weighted by a 2-3 fold equity factor in order for the proposed changes to be 'cost-effective' against the nominated yardstick of \$50,000 per Quality Adjusted Life Year.

The use of such equity weighting is a matter for political judgement, reflecting community values of fairness and social justice. A relevant consideration is the notion of 'double jeopardy' that special needs groups often face. This is because groups like the case study participants already have lower health status due to their disability; and yet it is this very disability that prevents them from scoring highly in generic quality of life instruments. Lower quality of life results, in response to possible improved services, will in turn yield poorer cost-effectiveness results vis-a-vis other client groups who have the full QoL response range available to them. This in turn may bias resource allocation decisions against them, where such decisions are influenced by cost-effectiveness results.

There are two other findings of interest from The Economic Study. The health sector perspective utilised in the study has demonstrated that substantial elements of AT cost are carried by funders (including AT users) other than the Victorian Aids and Equipment Program; and that further, for nearly all the case studies, key elements of AT were not covered at all. This results in those in need being at risk of going without needed AT and the outcomes it enables. On criteria of both efficiency and equity, this finding has policy implications for the extent of subsidy support deemed appropriate for this low income and special needs group.

Turning to a government affordability perspective, important improvements can be achieved at modest cost for many AT clients. As noted earlier, the annualized cost of the moves from a current AT package to an 'optimal' AT package was small for half of the eight case studies (less than \$6,200); moderate for two participants (\$11,116; \$14,370); and high for only one participant (\$29,534). It needs to be noted here, however, that the current package was costed as current market equivalents, not in historic time of purchase terms.

Finally, it is important to note that the cost-effectiveness results were reported as individual case study results. Given the small sample, it was simply not meaningful to report a summary cost-effectiveness ratio, as this may be misinterpreted to imply that this single cost-effectiveness ratio is representative of the AT user population. Rather, when data is limited to a small sample, it is more meaningful to report the individual results and then to consider how representative these individual results may be for various cohorts of the AT user population. The study sample shared several characteristics with the general Victorian population of adults with a disability. Particularly, disability type was broad, levels of income were low, and there is a reliance on government income support as the main source of income. However, the study sample also appears to be comprised of individuals who evidence a greater degree of unemployment and general income deprivation than the broader Victorian cohort.

Whilst the results of the economic evaluation are thus informative and useful for policy discussion, they should be considered as indicative and exploratory in nature. This reflects a range of considerations, including the absence of a control group in The Equipment Study, the qualitative assessment of optimal AT packages by an expert group, the small number of participants in the case study series, and the set of assumptions required to undertake the economic analysis.

In conclusion, existing evidence (limited in scope) suggests that the government funding of AT may be cost-effective especially if an equity weighting is applied to special needs groups, but these conclusions should be applied cautiously.

IS THE AT FUNDING SYSTEM EFFECTIVE?

Combining the evidence from *The Equipping Inclusion Studies* suggests that the effectiveness of the current system of AT funding provision is burdened with the following issues:

1. The VAEP, and most other sources of AT funding across jurisdictions, is a subsidy program. Subsidy programs require a level of co-payment from recipients. Compared to current market costs, subsidy rates on average cover less than 66% of device costs. In most subsidy programs, the level of subsidy is set relative to the affordability and feasibility of the level of co-payment in relation to the characteristics of the recipient group (level of need, ability to pay etc). In many instances, subsidy programs include a ‘safety net’ provision for those who cannot meet the level of co-payment, or for whom frequency of need and use of the program makes the cumulative co-payment level too onerous or unreachable.

In this instance, the population requiring AT provision is the population of people with a disability. *The Equipping Inclusion Studies* specifically focus on adults with a disability in Victoria requiring AT. This population is disadvantaged on several indices: most depend on government income support as their main source of income; most have low annual incomes; many are unemployed; there is a high proportion of participation poverty amongst this group. The capacity of this group to make co-payments for AT is severely limited. Their need for AT is substantial, with most requiring up to 13 devices and other modifications as part of their AT solution. This suggests co-payments would be repeated. Thus the VAEP, and other programs, are operating in a way incompatible with their target recipient group to the extent that the group cannot afford to participate in the program.

2. The VAEP operates within strict eligibility criteria in relation to the items of AT deemed to be eligible (ie a list of approved items along with policy excluding, or severely restricting, repeat provision even if needs change). *The Equipping Inclusion Studies* found that respondents each utilised a ‘suite’ of AT that was inter-related and co-dependent in terms of effectiveness. That is, items functioned as a package and were required to be used together. The elements of an AT solution comprised equipment devices, environmental modifications and personal care. Compounding this issue is the focus of the VAEP, and other programs, upon the device or piece of equipment, with limited attention to environmental modifications or personal care. There is currently no focus on the overall context of AT in the person’s life across these three dimensions of an AT solution. The effectiveness of AT is dependent on the suite of AT being provided together though no attention is paid to this.

Further, there was a high demand for AT that was not currently eligible for VAEP funding. This included ‘generic’ items such as mobile phones and computer applications. In all instances, the generic item was an essential part of a highly customised AT solution that produced desired life outcomes. Currently, only those items deemed eligible are subsidised. This problem is underlined by the narrow scope of AT included in the VAEP. The 2010 Aids and Equipment List of VAEP was found to hold eligible only 13% of the AT device types listed in ISO 9999 (2007), an internationally accepted classification system for assistive products for persons with disability. This

narrow eligibility appears to exclude, ad hoc, many device types that support mobility, communication, and other categories within the VAEP funding scope, as well as other needed items. This program response is unlikely to achieve effective outcomes from such ad hoc and piecemeal investment.

3. Limited or partial eligibility for funding schemes and the high burden of co-payment propels applicants into a search for 'fit' into multiple other funding programs. In this environment, the onus is on disadvantaged individuals (case by case) to seek out other funding sources for AT (including those also managed by the Department in charge of the VAEP). There are significant negative impacts of this both for the individual and for the service system. As a result of this complex system, paid disability, welfare and medical staff are spending significant time away from other core service delivery to seek out funding sources for clients (Pate & Horn 2006).

Respondents in The Equipment Study also report significant difficulty and time spent undertaking this search for alternate sources. Time delays resulting from the search for 'gap' funds means that there are lengthy delays of AT being approved, ordered, delivered and installed or used. These delays affect the appropriateness of AT actually delivered, as the intervening time period (in some cases more than a year: Wilson, Wong, Goodridge 2006), has led to changes in individual need, as well as increased social and health deterioration (and the flow on effects and costs of these).

Further, the requirement to meet multiple (and sometimes conflicting) conditions of various funding sources from different jurisdictions, can place unnecessary limits on the allowed use of AT across life domains (eg. funding guidelines prohibit use of AT in different venues or for different activities). Finally, multiple sources of funding result in a lack of clear responsibility for repairs and maintenance with the individual often left with this burden. Respondents in The Equipment Study report that repairs and maintenance are unaffordable to them; are not carried out by funding bodies; and that AT becomes dysfunctional or unsafe.

INGREDIENTS OF AN EFFECTIVE AT FUNDING SYSTEM

A focus on Assistive Technology solutions

The Equipping Inclusion Studies provide repeated and consistent evidence that individuals require multiple elements of an AT solution (ie multiple aids and equipment, multiple environmental modifications, and episodes of care), and that the effectiveness of these is achieved or maximised when used together. In this context, a piece-by-piece approach to the assessment and funding of AT makes little sense. Government funding of AT would be more effective if it moved to a focus on the provision of an 'AT solution' as:

'an individually tailored combination of hard (actual devices) and soft (assessment, trial and other human factors) assistive technologies, environmental interventions and paid and/or unpaid care' (Assistive Technology Collaboration n.d).

Such a focus allows solutions to be tailored to individual needs, aspirations and context, and the co-dependency of each element of AT to be planned for and provided.

'Fit for purpose' and 'fit for time'

An understanding of the dynamic and evolving nature of AT solutions for those living with disability is also essential to attain solutions that are both 'fit for purpose' and 'fit for time'. Substantial data from these studies spoke to the incremental nature of change related to age, to adjustment, to impairment or disease progression, life stage, and changing roles and responsibilities within the family and community. Life changes require responsive AT funding which offers more than once-per-lifetime home modifications, or seven-yearly device replacement.

The 'best fit' or most effective solution is shown to include a diverse range of customised and generic devices used inter-dependently. The VAEP funds only a very small proportion of needed items based on an extremely narrow listing of eligible devices. The mix of mainstream and disability-specific AT devices in use, and the virtually complete lack of funding for mainstream devices even when 'fit for purpose', points to major potential cost efficiencies as well as support for mass market industries to continue investment in inclusive design solutions with wide applications.

In order to achieve maximum effectiveness, eligibility of subsidised AT needs to: relate to individual needs; recognise the interdependency of suites of elements of AT; and enable wide selection of elements and devices from generic and customised options. This set of criteria is best met by mechanisms other than a 'list' of approved equipment, such as via funding guidelines based on the above criteria, and/or through annual individual budget allocations (that can be used to purchase self-prioritised suites of items).

Efficient systems

The government budget for AT needs to be sufficient to achieve government policy directed outcomes. The means of improving the current system may include a high level of co-ordination within VAEP to gain funds from appropriate parts of the overall health, aged care and disability systems. Substantial elements of AT cost have been shown to be carried by funders other than the VAEP, therefore a health sector perspective is required to realign funding across and beyond current funding silos, maximise efficient delivery of AT solutions and minimise downstream costs.

An efficient funding program would ensure a co-ordinated and streamlined response, able to integrate 'pieces' of AT solutions and their funding. This kind of coordination requires a single point of entry to 'case co-ordinators', who are able to access pockets of funds (for example work-based and education-based AT funding, or funding via personal care packages), track outcomes to a range of funding schemes, and undertake 'back of house' transfer of funds between programs or to individuals. Additionally, this kind of coordination requires leadership to work with different jurisdictions to achieve funding contributions to be merged for the purchase of AT solutions that can be used in different life domains (related to different jurisdictional boundaries) - for example the approved use of a wheelchair for work and home.

Affordability

AT is the corner-stone to efficient use of government spending on disability, and has been demonstrated to underpin the achievement of life outcomes. The provision of AT is critical if government policy in regard to the inclusion of people with a disability is to be achieved. The VAEP is established as a subsidy program to facilitate this.

However, currently the VAEP is ineffective in this goal as a result of several critical misalignments of policy and need. As discussed above, the levels of subsidy set within the VAEP are significantly

lower than the actual cost of the items subsidised. This significant 'gap' is too great in many cases to enable the recipient to find funds to purchase the item. In addition, recipients usually require multiple items and elements to produce an effective solution. This multiplies the burden of cost to individuals. Finally, the recipient cohort of the VAEP, in particular people with disabilities, experiences extreme financial disadvantage and is least able to afford a co-payment contribution to meet the 'gap' between subsidy and actual cost of item or to self fund multiple items.

As a result, the VAEP is currently not meeting the level of demand for AT from Victorians with a disability. Individuals remain without needed items and life outcomes are restricted or denied as a result. In short, demand exceeds the program's capacity.

Given the level and nature of multiple disadvantage experienced by many people with a disability, this population can be considered a special needs or 'equity' group requiring additional support to equalise the life chances of this group in relation to other Australians. To achieve this, governments must increase their guaranteed share in the cost of provision of AT to this disadvantaged group. This suggests that other mechanisms are required to achieve guaranteed funding where eligibility is established.

Where an equity argument exists, there is a clear mandate for guaranteed government funding via mechanisms such as safety net provisions or tax deductibility. Based on equity criteria, a safety net system can effectively cap co-payments for identified groups (eg by source of main income, level of annual income, or various equity characteristics including existing participation restrictions) or in identified situations (eg by total extent of co-payment per annum).

Overall, there is a strong case for increasing the budget for AT subsidy for people with a disability. An increase in budget appears necessary to the achievement of a wide range of policy goals for people with disabilities. An increased budget recognises the nature and extent of economic and social disadvantage of this group. Expenditure is justified in order to reduce the equity gap across a range of outcome areas.

Conclusion

The Equipping Inclusion Studies show that the provision of assistive technology results in a wide range of impacts on people's lives and enables them to participate in varied life areas. On the other hand, inadequate access to AT acts as a significant barrier to participation. Given people with disabilities experience significant levels of financial and social disadvantage, it falls to governments to adequately support them to overcome barriers to their full participation in and contribution to society. This support includes the provision of AT solutions. The provision of AT solutions to people with disabilities is of critical importance in making a difference to the lives of individuals, as well as to the record of achievement of Australian governments in upholding the rights of persons with disabilities.

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