SaxInstitute

Evidence Snapshot

The effectiveness of comprehensive health assessments for people with disability

An Evidence Snapshot brokered by the Sax Institute for the Australian Commission on Safety and Quality in Health Care. March 2021.

This report was prepared by: Moore G, Du Toit A, Hutchinson J, Thompson S, Gordon R, Knight A, Graham E, and Davenport D. March 2021

Enquiries regarding this report may be directed to the:

Manager
Knowledge Exchange Program
The Sax Institute
www.saxinstitute.org.au
knowledge.exchange@saxinstitute.org.au
Phone: +61 2 9188 9500

Suggested Citation:

Moore G, Du Toit A, Hutchinson J, Thompson S, Gordon R, Knight A, Graham E, Davenport D. The effectiveness of comprehensive health assessments for people with a disability: an Evidence Snapshot brokered by the Sax Institute (www.saxinstitute.org.au) for the Australian Commission on Safety and Quality in Health Care, 2021.

doi:10.57022/zjtf4123

Disclaimer:

This Evidence Snapshot was produced using the Evidence Snapshot methodology in response to specific questions from the commissioning agency.

It is not necessarily a comprehensive review of all literature relating to the topic area. It was current at the time of production (but not necessarily at the time of publication). It is reproduced for general information and third parties rely upon it at their own risk.

Introduction

This Evidence Snapshot review was commissioned by the Australian Commission on Safety and Quality in Health Care (the Commission) and prepared by the Sax Institute. It summarises the evidence for the effectiveness of comprehensive health assessments for people with disability. The Evidence Snapshot does not consider health assessments of the nature or extent of a person's disability or functionality. Note that it was completed within 15 working days, so while a rigorous process for searching was followed it is possible that some peer reviewed or grey literature may have been missed.

An Evidence Snapshot is a rapid review of existing evidence tailored to the needs of an agency. An Evidence Snapshot answers one specific policy or program question and is presented as a short brief of 3-4 pages summarising existing evidence. Evidence Snapshots examine up to 20 peer reviewed and up to 20 websites or grey literature reports, focusing on literature published in the last five years identified using limited search terms, databases, and table headings. A detailed analysis, synthesis and quality assessment of the included studies are not provided. Additional information is provided in Appendix 6.

The Commission was funded by the NDIS Quality and Safeguards Commission to undertake three rapid reviews regarding effective strategies to address comprehensive health assessment, oral health and lifestyle issues for people with disability. The Sax Institute brokered the three Evidence Snapshots, see also: *The effectiveness of oral health Interventions for people with disability* and *Interventions to reduce or prevent lifestyle risks for people with disability*.

Review question

What is known about the effectiveness of comprehensive health assessments in the early detection and management of health issues for adults with disability?

Methods

We searched Medline, Scopus, CINAHL, and Google Scholar as well as an extensive grey literature search including jurisdictions and major international organisations from Australia, New Zealand, UK, US and Canada.

We included combinations of the following key words: disability, delay, health assessment, health check, effective, outcome, diagnosis, impact, prevention or management. We included comprehensive health assessments for adults. We **excluded** studies: of disabilities not covered under

the NDIS; examining the nature or extent of an individual's disability; focusing on a single disease or condition; or targeting children. The full search strategy is reported in Appendix 2.

We initially reviewed the title and abstracts of 431 peer reviewed papers. Because we found few relevant papers, we conducted an additional search covering a 5-year period (2015 to 2020). This yielded an additional 701 papers. The first searches were undertaken on 25 September 2020, and peer-reviewed and grey literature was sourced by 1pm on 3 October 2020. The second search was undertaken on 28 September 2020 and the literature was sourced on the same day. We reviewed a combined total of 1,132 titles and abstracts. Two systematic reviews contained a combined total of 34 studies, including two that had been identified in the search. The selection of papers for inclusion was reviewed by a content expert.

We report the peer reviewed literature in Table 1 and Appendix 1, the search strategy and results in Appendices 2 and 3, the peer reviewed data extraction in Appendix 4.1. We report the grey literature in Table 2 and Appendix 4.2.

Summary of findings

Findings

- This review identified eight peer reviewed studies, seven peer reviewed commentaries and six agency reports examining the use of comprehensive health assessments in the early detection and management of health issues for adults with disability. In addition, we identified seven peer reviewed commentaries and six agency reports.
- While few, the peer reviewed studies were of relatively high quality against NHMRC designations(1), with three level I studies (a systematic review and meta-analysis(2), a systematic review and an RCT(3), and an RCT(4); three level III studies (two retrospective cohort studies(5, 6) and a retrospective case control study(7); and two level IV studies (cross-sectional studies(8, 9). However, there was considerable heterogeneity in the interventions and outcomes measured; and the long term effectiveness of most studies is unknown.
- In terms of populations targeted, comprehensive health assessments were used to identify and monitor the health needs of people with functional disability(8), intellectual disability or developmental delay(2-7, 9). One study targeted physicians and nurses comfort, knowledge and skills working with people with intellectual developmental delay.(10)
- Seven of the 8 studies were conducted in primary care settings and one in a village setting.(8)
- The comprehensive health assessments targeted activities such as baseline testing (e.g. blood pressure), identifying new health needs, managing existing needs and delivering health promotion or preventive care, including screening. In terms of delivery, the comprehensive health assessments were delivered mostly by general practitioners(3, 11) or nurse practitioners.(4)
- While most studies reported on a single intervention, one study examined the three types of primary healthcare interventions intended to increase health actions in people with intellectual disability.

Key messages

The eight peer reviewed studies examining comprehensive health assessments found them effective in one or more outcome of interest, including identifying new health needs(3, 4, 8, 9), managing existing needs(2, 6, 8), and providing health promotion or preventive care(4, 7, 9, 11).

Peer reviewed literature

- People with disability who had a comprehensive health assessment were more likely to receive recommended screening(9) or preventive care(2, 3, 7), to receive significantly more clinical activities(2), or to have significant problems identified which required an intervention.(8) Receiving a comprehensive health assessment also appeared to improve general health(4) and continuity of care(5), reduce serious adverse events(4) and preventable emergency admissions for ambulatory care sensitive conditions(5, 6). One study noted that the intervention was both cheaper and more effective than standard care.(4)
- Four studies reported having conducting baseline testing such as blood pressure, weight, BMI, lipids, glucose, haemoglobin, vaccinations. Additional screening included mammograms, pap tests, fecal occult blood testing, diabetes testing, and Papanicolaou testing. Dental, vision, and hearing checks were also conducted(2, 4, 7, 9). The complete list of items checked in in Table 1.
- One study included a focus on staff.(7) Durbin et al. (2019) conducted a survey of physicians' and nurses' comfort, skills, knowledge and confidence in caring for patients with intellectual developmental delay (IDD). Those who had completed a Health Check rated their comfort and skills significantly higher ($P<0.05$) than those who had not. Fewer than half thought they had the necessary skills and resources to care for patients with IDD.
- Carers or non-clinical support workers were not targeted in the peer reviewed studies.., We note that four of the six instruments we sourced included components for completion by the participant or carer (see Table 1),
- The instruments used to conduct comprehensive health assessments in the peer reviewed studies are listed in Appendix 5. The items within the assessment instruments that we could source are listed in Table 1.
- The comparative effectiveness of three instruments used in comprehensive health assessments(2) was tested in one study. It found that CHAP was **the most effective instrument,** demonstrating statistically significant increases in health promotion and disease prevention and in new disease detection among people with an intellectual disability. A second study identified 20 different health assessment instruments and found that CHAP and Staywell had the highest quality (validity, reliability feasibility, acceptability).
- Two instruments which have not yet been evaluated may be of interest and are briefly described in Appendix 4.3. They are the InteRAI tool developed in Canada and InnoWell tool currently being tested in a clinical trial in Australia.

Grey literature, commentaries and related studies

- **Peer reviewed commentaries, related studies and agency reports recommended or reported the benefits of comprehensive health assessments.**
- These documents confirm that periodic comprehensive health assessments in adults with intellectual and developmental disabilities show success in increasing prevention activities, early detection of disease, increased detection of other conditions and improved follow up management.(10, 12-16)

- Of the six commentaries and reports that recommended health assessments, four stated that these should be conducted annually(13, 15, 17, 18) and two ‘periodically’ or ‘regularly’.(10, 19)

Jurisdictional searches

- We separately searched over 90 national and internationalgovernment, non-government agency websites to identify instruments that might be of relevance to the Commission. While not exhaustive, Ten instruments are listed with links in Appendix 5 and, for those instruments that we could source, the included items are presented in Appendix 5 Table 2.

Table 1— Items in comprehensive health assessment instruments identified in the peer-reviewed studies

Instrument**	C21st-II	SWH-HRA (Staywell)	CANE	Cardiff	DDPC	CHAP
Validated or evaluation Y/N	Y	Y	Y	Y	Y	Y
Components for patient carer Y/N	Y	N	Y	N	Y	Y
Template Y/N	Y	N	N	Y	Y	Y
Living arrangements, access to help	x	x	x		x	
Professionals involved in their care	x	x			x	
Wellbeing (interests, employment)	x	x	x		x	
Immunisations	x	x		x	x	x
Preventative screening	x			x	x	
Allergies and drug intolerance	x	x			x	x
Aetiology, Family medical history	x	x				x
Problem behaviours	x			x	x	x
Vision and visual activity	x		x	x	x	x
Hearing	x		x	X	x	x
Sleep	x				x	x
Dysphagia, oesophageal					x	x
Abuse / Safety (incl. self-harm)	x		x		x	x
Falls risk and safety	x		x		x	
Medication review	x			x	x	x
Diet, weight, height, BP, PR, hypertension	x		x	x	x	x
Genitourinary	x	x	x	x	x	x
Stomach and bowel (Gastrointestinal)	x	x	x	x	x	x
Activity, lifestyle, health promotion,	x		x	x	x	x
Sexual and reproductive health	x		x		x	x
Women' s health	x	x	x	x	x	x
Men' s health	x	x	x	x	x	x
Chronic conditions (epilepsy, arthritis, cancer)	x	x		x	x	x
Neurological and endocrine	x	x			x	
Speech	x	x		x		
Skin, ear, nose, throat, oral health	x	x		x	x	
Mobility and musculoskeletal	x	x			x	x
Cardiovascular and respiratory	x	x		x	x	x
Abdomen and pelvis	x	x		x	x	
Dementia	x	x	x		x	x
Pain	x	x			x	x
Systems	x			x		x
Mental health	x	x	x		x	x
Caregiver stress	x	x	x		x	
Ability level testing	x					
Benefits (access to money)	x		x			

* Excludes items listed in just one tool i.e. neck and thyroid, life transitions, infections, syndrome specific checks

**Instruments tested or used that we were unable to find include the Scottish health assessment Program, PCQCS, QOF

Table 2—Items in comprehensive health assessment instruments identified in jurisdictional searches

Website	Template Y/N	Living arrangements, access to help	Professionals involved in their care	Wellbeing eg interests, employment	Immunisation history	Screening e.g. cervical, colon	Allergies and drug intolerance	Aetiology and Family medical history	Trichiasis*	Problem behaviours	Vision and visual activity	Hearing	Sleep	Foot	Dysphagia + oesophageal	Respiratory	Abuse - physical, emotional, financial	Transport, mobility access	Falls risk	Medication review	Diet, weight, height, BP, PR, hypert	Urianalysis, bladder and continence	Stomach and bowel	Sexual and reproductive health	Activity, lifestyle, health promotion	Men's health	Women's health	Chronic care eg epilepsy, arthritis, cancer	Neurological and endocrine	Skin, ear, nose, throat, oral health	Mobility and musculoskeletal	Cardiovascular and respiratory	Abdomen and pelvis	Dementia	Pain	Systems	Mental health
RCGP UK	N	x		x	x	x								x	x	x	x	x		x	x	x		x	x	x	x	x			x	x	x	x		x
Canada HCARDD		x			x	x					x					x	x	x		x	x	x		x	x	x	x	x	x	x	x	x				
Medicare: Intellectual disability	Y	x	x		x		x				x				x		x			x	x	x		x	x	x	x	x		x	x					x
Medicare: 45–49 yrs	Y							x								x					x	x		x		x	x	x			x	x					x
Medicare 75+ yrs		x			x									x					x	x	x	x		x					x	x	x		x			x
Medicare Indigenous 55+ yrs	Y	x	x		x		x		x										x	x	x	x		x					x				x			x
Medicare Indigenous 15–54 yrs	Y	x	x		x		x	x	x		x									x	x	x		x	x	x	x		x							x
UK Annual Health Check (Hertford shire)	Y	x	x	x	x	x											x			x	x	x		x	x	x	x	x	x	x	x	x	x			x
National League for Nursing																								x	x	x	x										

Appendices

Appendix 1: Included publications

Peer reviewed studies

Bakker-van Gijssel, E. J., Lucassen, P. L. B. J., Hartman, T. O., Van Son, L., Assendelft, W. J. J., & van Schrojenstein Lantman-de Valk, H. M. J. (2017). Health assessment instruments for people with intellectual disabilities—A systematic review. Research in developmental disabilities, 64, 12-24.

Byrne, J. H., Lennox, N. G., & Ware, R. S. (2016). Systematic review and meta-analysis of primary healthcare interventions on health actions in people with intellectual disability. Journal of Intellectual and Developmental Disability, 41(1), 66-74.

Carey IM, Hosking FJ, Harris T, DeWilde S, Beighton C, Shah SM, Cook DG. Do health checks for adults with intellectual disability reduce emergency hospital admissions? Evaluation of a natural experiment. J Epidemiol Community Health. 2017 Jan 1;71(1):52-8.

Carey IM, Shah SM, Hosking FJ, DeWilde S, Harris T, Beighton C, Cook DG. Health characteristics and consultation patterns of people with intellectual disability: a cross-sectional database study in English general practice. Br J Gen Pract. 2016 Apr 1;66(645):e264-70.

Cooper SA, Morrison J, Allan LM, McConnachie A, Greenlaw N, Melville CA, Baltzer MC, McArthur LA, Lammie C, Martin G, Grieve EA. Practice nurse health checks for adults with intellectual disabilities: a cluster-design, randomised controlled trial. The Lancet Psychiatry. 2014 Dec 1;1(7):511-21.

Durbin J, Selick A, Casson I, Green L, Perry A, Abou Chacra M, Lunsky Y. Improving the quality of primary care for adults with intellectual and developmental disabilities: Value of the periodic health examination. Canadian Family Physician. 2019 Apr 1;65(Suppl 1):S66-72.

Kumar D, Rasania SK, Das R. Health care needs assessment of elderly with functional disability in Palam village of Delhi. International Journal of Community Medicine and Public Health. 2019 Sep;6(9):3943.

Smith G, Ouellette-Kuntz H, Green M. Comprehensive preventive care assessments for adults with intellectual and developmental disabilities: Part 2: 2003 to 2014. Canadian Family Physician. 2019 Apr 1;65(Suppl 1):S53-8.

Peer reviewed commentaries

Anand P, Roope LS, Culyer AJ, Smith R. Disability and multidimensional quality of life: A capability approach to health status assessment. Health Economics. 2020 Apr 16.

Byrne, J. H., Ware, R. S., & Lennox, N. G. (2015). Health actions prompted by health assessments for people with intellectual disability exceed actions recorded in general practitioners' records. Australian Journal of Primary Health, 21(3), 317-320.

Casson I, Broda T, Durbin J, Gonzales A, Green L, Grier E, Lunsky Y, Selick A, Sue K. Health checks for adults with intellectual and developmental disabilities in a family practice. Canadian Family Physician. 2018 Apr 1;64(Suppl 2):S44-50.

Davenport TA, LaMonica HM, Whittle L, English A, Iorfino F, Cross S, Hickie IB. Validation of the InnoWell platform: protocol for a clinical trial. JMIR research protocols. 2019;8(5):e13955.

Durbin J, Selick A, Casson I, Green L, Spassiani N, Perry A, Lunsky Y. Evaluating the implementation of health checks for adults with intellectual and developmental disabilities in primary care: the importance of organizational context. Intellectual and Developmental Disabilities. 2016 Apr;54(2):136-50.

Hirdes JP, van Everdingen C, Ferris J, Franco-Martin M, Fries BE, Heikkilä J, Hirdes A, Hoffman R, James ML, Martin L, Perlman CM. The interRAI suite of mental health assessment instruments: An integrated system for the continuum of care. Frontiers in psychiatry. 2020 Jan 17;10:926.

Sullivan WF, Diepstra H, Heng J, Ally S, Bradley E, Casson I, Hennen B, Kelly M, Korossy M, McNeil K, Abells D. Primary care of adults with intellectual and developmental disabilities: 2018 Canadian consensus guidelines. Canadian Family Physician. 2018 Apr 1;64(4):254-79.

Grey literature reports

Truesdale, M. & Brown, M. (2017). People with Learning Disabilities in Scotland: 2017 Health Needs Assessment Update Report. NHS Health Scotland. http://www.healthscotland.scot/media/1690/people-with-learning-disabilities-in-scotland.pdf

Cubbage J, Mills J. (2020). Delivering Better Health Outcomes for People with High Support Needs and/or Challenging Behaviour and their Families and Carers: Project Outcomes and An Exploration of the Literature. Microboards Australia: Bassendean WA. http://microboard.org.au/wp-content/uploads/2020/02/Delivering-Better-Health-Outcomes-Microboards-Australia-Report-2020.pdf

South Australian Department of Health (2020) South Australian Intellectual Disability Health Service Draft Model of Care. http://www.cpsu.asn.au/upload/2020-Info-Updates/SA%20Intellectual%20Disability%20Health%20Service%20Draft%20MoC.pdf

National Institute for Healthcare and Excellence (NICE) (2019). Care and support of people growing older with learning disabilities https://www.nice.org.uk/guidance/ng96/resources/care-and-support-of-people-growing-older-with-learning-disabilities-pdf-1837758519493

NHS UK (2019). NHS Long term plan. https://www.longtermplan.nhs.uk/wp-content/uploads/2019/08/nhs-long-term-plan-version-1.2.pdf

Northway R, Dix A. 2019. Improving equality of healthcare for people with learning disabilities Opinion piece for Nursing Times journal. https://www.nursingtimes.net/roles/learning-disability-nurses/improving-equality-of-healthcare-for-people-with-learning-disabilities-18-03-2019/

Healthcare Access Research and Development Disabilities. 2016.

Appendix 2: Search strategy

Key concepts

Concept 1	Concept 2	Concept 3	Concept 4
disabilit*	health assessment	effect*	detect*
disabled	health check	result*	diagnos*
delay*		outcome*	prevent*
		impact*	manag*

Timeframe

This review includes peer reviewed and grey literature published between 2014 and 30 September 2020.

Inclusion and exclusion criteria

We **included** studies that had been evaluated. We included studies of people with serious and permanent disability, including physical disability, learning or intellectual disability, mental illness or psychiatric conditions. Participants' impaired functionality may be related to brain injury, autism, cerebral palsy, hearing impairment, intellectual disability, developmental delay, global development delay, down syndrome, MS, psychosocial disability, spinal cord injury, stroke, or vision impairment as well as mental illness or psychiatric conditions. We included studies describing interventions that could be applicable to an NDIS Provider, a participant, a support worker, or a combination of the three.

We included studies that had been evaluated of comprehensive health assessments for adults that had been tailored for people with a disability. We also included assessments that were applied to the whole population if they provided commentary on the needs of people with disability or the needs of practitioners. We included: systematic reviews, narrative reviews, and primary research, as well as peer reviewed commentaries. Agency and jurisdictional searchers are listed in Appendix 5.

We **excluded** studies that examined the use of health assessments focusing on the nature or extent of an individual's disability or functionality or which focused on a single disease or condition. We excluded studies that looked at issues related to the interaction between practitioners and patients with a disability, where these did not mention comprehensive health assessments. We excluded

studies that examined comprehensive health assessment for children. We excluded correspondence, news, letters, editorials and protocols.

Studies that tested the validity, reliability, feasibility and acceptability of the instruments for use in comprehensive health assessments were excluded.

We did not critically appraise the included studies, however we categorised them according to the NHMRC designations of level of evidence.

Sources

1. Medline

   Search: ((disabilit* or disabled or delay*) and ((health adj3 assessment) or (health adj3 check*)) and (effect* or result* or outcome* or impact*) and (detect* or diagnos* or prevent* or manag*)).ab. limit 2 to (english language and humans and yr="2015 -Current")

   - Limited to articles published from 1 January 2014 to 26 September 2020
   - Excluded editorials, news, correspondence, letters

2. Scopus
   - Keywords: health assessment, check, delay, disability
   - Limited to articles published from 1 January 2014 to 6 October 2020

3. CINAHL
   - Keywords: health assessment, check, delay, disability
   - Limited to articles published from 1 October 2019 to 30 September 2020

6. Google Scholar
   - Keywords: health disability, assess, assessment, check, checkup
   - First 6 pages of 10 articles per page to 2019–2020.

Appendix 3 Search results

A Database	B Results of first search	C Results of second search	D Total papers identified	E Remove duplicates	F Excluded after title & abstract screening	G Full text review	H Excluded after full text review	I FINAL INCLUDED
	n=	n=	n=	n=	n=	n=	n=	n=
1 Medline	85	251	336					
2 CINAHL	81	151	323					
3 SCOPUS	185	299	484					
4 Google Scholar	80	NA	80					
TOTAL	431	701	1,132	623	451	58	50	***n=8***

The table above refers to peer-reviewed studies only.

Appendix 4: Data extraction tables

Table 4.1 Peer reviewed literature

Author, Year Country	Study design	Setting	Short description	Measures of effect	Results/Outcomes	Comments
Bakker et al., 2016 Various countries	Systematic review	Primary care, community	Assessments defined as a screening appropriate for all people with intellectual disability as part of a more comprehensive health assessment instrument	Development, clinimetric properties (validity, reliability, feasibility, acceptability), content and effectiveness	Two instruments were of high quality, Stay Well and Healthy! Health risk Appraisal (SWH-HRA) (US), and the Comprehensive Health Assessment Program (CHAP) (Australia). Effectiveness was measured for three instruments, using a cluster RCT design: Comprehensive Health Assessment Program (CHAP) was found to increase health promotion, prevention and new disease detection in the intervention group	

Table 4.1 Peer reviewed literature

Author, Year Country	Study design	Setting	Short description	Measures of effect	Results/Outcomes	Comments
					The Ask Health Diary did not increase health promotion, prevention or new disease detection The Scottish Health Check Program for Adults with Learning Disabilities showed a non-statistically significant increase in newly detected health needs being met	
Byrne et al., 2016 Various countries	Systematic review and meta-analysis	Primary care	Three types of interventions were identified: health checks, patient held health diaries, and a medical record-based health prompt Included health checks were the Comprehensive Health Assessment Program (CHAP), a modified Cardiff Health Check, and the C21st Health Check Studies focusing primarily on people with intellectual disabilities. Studies had to include one or more of the		Health checks were the only intervention to significantly increase short-term health promotion and disease prevention activity. The long-term effect of any intervention remains unknown GP led health checks were the most effective intervention and resulted	Health checks were the only intervention to significantly increase short-term health promotion and disease prevention activity The long-term effect of any intervention remains unknown

Table 4.1 Peer reviewed literature

Author, Year Country	Study design	Setting	Short description	Measures of effect	Results/Outcomes	Comments
			following: vision testing, hearing testing, weight measurement, blood pressure, Hep B immunisation and cervical screening		in significantly more clinical activities such as vision testing (risk ratio [RR]=3.3, 95% CI [2.3, 4.7]) and hepatitis B vaccinations	
Carey et al., 2016 UK	Evaluation of a natural experiment	Primary care Practitioners who perform health checks on adults with intellectual disabilities (ID)	Study aimed to assess whether the introduction of health checks in 2009 reduced emergency hospitalisation for adults with ID Presence of health check was identified using billing codes for health checks in health/hospital data for individuals identified in the data with specific conditions related to learning disability, chromosomal and metabolic disorders No specific information relating to health check reported	Main outcome – a count of emergency hospital admissions, defined as distinct periods of care on the HES (Hospital Episodes Statistics) record Secondary outcome – emergency admissions for ambulatory care sensitive conditions (ACSC) Analysis was performed at the practice-level and individual-level	Practices with high health check participation showed no change in emergency admission rate among patients with ID over time compared with nonparticipating practices, but emergency admissions for ACSCs did fall Among individuals with ID, health checks had no effect on overall emergency admissions compared with controls, although there was a relative reduction in	Annual health checks in primary care for adults with ID did not alter overall emergency admissions, but they appeared influential in reducing preventable emergency admissions

Table 4.1 Peer reviewed literature

Author, Year Country	Study design	Setting	Short description	Measures of effect	Results/Outcomes	Comments
					emergency admissions for ACSCs	
Carey et al., 2017 UK	A retrospective matched cohort study using primary care data linked to national hospital admissions and mortality data sets	Primary care practitioners who perform health checks on adults with intellectual disabilities (ID), and contribute data to Clinical Practice Research Datalink (CPRD)	As above	As above	Compared with the general population, adults with ID had higher levels of recorded comorbidity and were more likely to consult in primary care. However, they were less likely to have long doctor consultations, and had lower continuity of care. They had higher mortality rates, with 37.0% of deaths classified as being amenable to health-care intervention. They were more likely to have emergency hospital admissions, with 33.7% deemed preventable compared with 17.3% in controls	Same study as above but this paper reports more detail re: outcomes/results

Table 4.1 Peer reviewed literature

Author, Year Country	Study design	Setting	Short description	Measures of effect	Results/Outcomes	Comments
					Health checks for adults with ID had no effect on overall emergency admissions compared with controls, although there was a relative reduction in emergency admissions for ambulatory care-sensitive conditions. Practices with high health check participation also showed a relative fall in preventable emergency admissions for their patients with ID, compared with practices with minimal participation	
Cooper et al., 2014	Cluster design, single-blind RCT	Primary care (general practices)	Practice-nurse delivered. The method used aims to identify: (1) health associations specific to syndromal causes of intellectual disabilities if present, and health	Primary outcome: Incidence of new health needs detected and met during the 9	General health improved in the intervention group according to the EQ-5D but SF-36. The intervention was	

Table 4.1 Peer reviewed literature

Author, Year Country	Study design	Setting	Short description	Measures of effect	Results/Outcomes	Comments
			needs that are more relevant to the intellectual disabilities population; (2) general health needs (specific symptoms, brief examination); (3) health monitoring needs (i.e. chronic diseases that need monitoring or actions), as identified for the GPquality and Outcomes Framework (QOF), which contain a series of items that GPs should complete within specified timeframes for each of their patients with specified long-term disorders (e.g. checking management of diabetes). Performance on the QOF (mostly portion of completed items) defines the level of remuneration that practices receive for this component of their contract with the UK government; and (4) health promotion needs (e.g. access to population-wide screening grams, weight management, and nutrition education	months after randomisation Secondary outcomes: extent of health monitoring (QOF items) and health promotion needs being met, the change in participant or carer-rated general health (by using the European Quality of Life-5 Dimensions [EQ-5D] health utility scores and Short Form [SF-36] scores), serious adverse events and changes in resource use or costs during the 9 months after randomisation	associated with significantly more health monitoring needs being met, and generally higher health ratings than standard care. More newly detected health needs were met in the intervention group. There was no difference in health promotion needs. Economic analysis showed the intervention to be both cheaper and more effective than standard care from an NHS perspective	

Table 4.1 Peer reviewed literature

Author, Year Country	Study design	Setting	Short description	Measures of effect	Results/Outcomes	Comments
Durbin et al., 2019 Canada	Retrospective chart review and staff survey	Two Ontario family health teams	The checklist was based on the Canadian guidelines for primary care of adults with developmental disabilities (Sullivan et al. 2011) It assesses the delivery of 8 preventive manoeuvres: blood pressure, weight, BMI, Papanicolaou test result (cervical cancer screener), mammogram, FOBT (colorectal cancer screener), FPG or HbA result, and influenza vaccine status The survey asked a convenience sample of physicians and nurses (n=?) about their confidence in the quality of care of people with developmental delay, and their skills, knowledge and comfort in care of patients with IDD. Those who had performed a health check were also asked about its fit, benefit, and feasibility. For each item, staff rated their agreement on a 5-point	Proportion of eligible patients in the 'health check group' who received each manoeuvre during a 2-year period, compared to proportion of patients in the 'non-health check group' For the survey, confidence, knowledge, skills, comfort and views about the Health Check tool	Documentation of blood pressure, weight, body mass index, and influenza vaccination was significantly higher (P<.001) in the Health Check group, exceeding 70% of patients. Screening rates were higher for mammograms (63% vs 54%), fecal occult blood testing (39% vs 23%), and diabetes testing (80% vs 61%), but not significantly so, and they were similar to general population rates. Papanicolaou test rates were low for both groups (34% vs 32%). Staff comfort and skills were rated significantly higher (P<.05) for those who performed the Health Check. Fewer than half	Performing the Health Check was associated with improved preventive care and staff experience

Table 4.1 Peer reviewed literature

Author, Year Country	Study design	Setting	Short description	Measures of effect	Results/Outcomes	Comments
			Likert scale from strongly disagree to strongly agree		thought they had the necessary skills and resources to care for patients with IDD	
Kumar et al., 2019 India	Cross-sectional study	Elderly persons with functional disability in Palam village of Delhi	CANE questionnaire (Camberwell Assessment of Need for the Elderly). It comprises 24 items and two items related to caregivers need: accommodation, looking after the home, food, self-care, caring for someone else, daytime activities, memory, eyesight or hearing or communication, mobility or falls, continence, physical health, drugs, psychotic symptoms, psychological distress, information (on condition and treatment), deliberate self-harm, accidental self-harm, abuse or neglect, behaviour, alcohol, company, intimate relationships, money or budgeting, benefits The two items related to caregivers are caregiver's need for information (about subject's condition) and caregiver's psychological distress	The CANE assessment defines the needs of elderly persons in three categories as "no need", "met need" and "unmet need" No need as defined by the CANE for the purpose of assessment is for the user who is coping well independently. A met need is defined as a problem that is receiving intervention and an unmet need is a significant problem that is considered to require an intervention	Among the elderly with functional disabilities, 28.4% had unmet needs related to benefits, 16% related to company, 19.8% related to psychological distress and 18.5% had unmet needs related to money/budgeting	The CANE questionnaire was specifically designed to measure the numerous needs of elderly

Table 4.1 Peer reviewed literature

Author, Year Country	Study design	Setting	Short description	Measures of effect	Results/Outcomes	Comments
Smith et al., 2019 Canada	Cross-sectional study	Primary care Practitioners who perform health checks on adults with intellectual and developmental disabilities (IDD)	The Primary Care Quality Composite Score (PCQS) developed by Dahrouge et al.12 combines 7 screening manoeuvres that are identified as either up to date or not: lipid, glucose, cervical cancer, breast cancer, colorectal cancer, eye examination, HBA A score is created based on the proportion of eligible manoeuvres that are up to date	Health examination: defined using the Ontario Health Insurance Plan billing data fee code Primary Care Quality Composite Score (PCQS): combines 7 different screening manoeuvres (lipid, glucose, breast cancer, cervical cancer, colorectal cancer, eye, and hemoglobin A1c screening). This was identified using administrative health data	Overall, 12.1% of adults with IDD received a health examination; 51.2% received a high (≥0.6) PCQS. Male patients were more likely to have received all of their eligible screening manoeuvres if they had had a health examination compared with female patients (odds ratio of 5.73 vs 3.99, respectively)	This study aimed to determine how best to measure the provision of comprehensive preventive care assessments to adults with IDD using administrative health data. This was done by examining the relationship between physician billing for a health examination or a personal health visit and patients receiving a high PCQS. It found less than 60% of adults with IDD were receiving comprehensive preventive care Adults with IDD, especially male patients, who are

Table 4.1 Peer reviewed literature

Author, Year Country	Study design	Setting	Short description	Measures of effect	Results/Outcomes	Comments
						receiving health examinations are more likely to be up to date with all recommended screening

Table 4.2—Peer reviewed commentary

Author, Year	Summary	Authors recommend comprehensive health assessments?
Durbin, 2016	Qualitative study evaluating the implementation and process of a comprehensive health assessment at two primary care clinics in Ontario, Canada, with a focus on organisational context. The research team identified the following core components of a health check for people with intellectual and developmental disabilities (IDD) in primary care: • Identification of patients with IDD, through electronic medical record searching, and manual searching • Proactive invitation for health check visits • Staff education and training in key information about IDD and the reasons for the health check • Delivery of the health check in alignment with current guidelines, including screening for prevalent conditions (e.g. vision, dental), adapting communication to obtain relevant information and using a collaborative team approach	Yes, periodic comprehensive health assessments in adults with intellectual and developmental disabilities show success in increasing prevention activities, early detection of disease, increased detection of other conditions and improved follow up management
Casson et al., 2018	Canadian article identifying practical ways to implement health checks for people with IDD in primary care. Strategies to increase uptake and implementation of an annual health checks include: • Using a medical record template as a basis for a broad functional enquiry among people with IDD who may be unlikely to volunteer symptoms • Use the annual health check as a process to accomplish over several appointments, so that the needs of people with IDD can be accommodated • Increase time allowed for appointments and use easy-to-understand patient information on common screening procedures • Use a collaborative team approach with multiple health care practitioners across disciplines	Yes, annual comprehensive health assessments are of benefit to people with intellectual and developmental disabilities

Table 4.2—Peer reviewed commentary

Author, Year	Summary	Authors recommend comprehensive health assessments?
Hirdes et al., 2020	This paper provides an overview of the interRAI suite of mental health assessment instruments, designed to function as comprehensive assessment and screening tools. The interRAI assessment tools cover 20 domains, including behaviour, cognition, physical health conditions, nutritional status, employment, medications and service use. The key applications of these instruments include care planning, outcome measurement, quality improvement, and resource allocation	Yes, appropriate assessment is an important tool that health systems must deploy to respond to the strengths, preferences, and needs of people with a mental illness

Table 4.3—Grey literature data extraction

Author, Year	Summary	Authors recommend comprehensive health assessments?
Cubbage and Mills, 2020	Literature review exploring the barriers to accessing medical and dental services for people with intellectual disability. It states that tools such as the Comprehensive Health Assessment Program (CHAP) are underutilised in primary health care compared to the United Kingdom	Yes. One of the five key themes identified from the literature review was the support/call for regular health assessments for people with an intellectual disability
South Australian Department of Health, 2020	SA's Intellectual Disability Health Service Draft Model of Care outlines recommendations for the delivery of health services for people with intellectual disability and complex health needs in South Australia. This resource states that the CHAP tool is effective in minimising barriers to healthcare for people with intellectual disability. The South Australian Department of Health aims to promote the use of the CHAP tool through: • Possible funding commitment or partnership between stakeholders e.g. NGOs and Primary Health Networks (PHNs) • Licensing the CHAP for accommodation service providers to facilitate access to the CHAP tool for people with intellectual disability • Promotion of the CHAP tool to patients and GPs • Education, support and advocacy for its use • Evaluation of outcomes to support continued allocation of funding	Yes. Recommendation 6.1 is to promote the use of the CHAP tool in South Australia to increase health screening for people with intellectual disability
National Institute for Health Care and Excellence (NICE) 2019	NICE Guideline covering the care and support for adults with learning disabilities as they grow older. This guideline contains several recommendations for health checks and screening: • Offer annual health checks and prompt referral to specialist services where needed • Offer older people with learning disabilities the same routine screening and health checks as other older people • Discuss other available care and support services during annual health checks • Discuss dental health during annual health check	Yes, recommends offering annual health checks to older people with learning disabilities
NHS UK, 2019	The NHS' Long Term Plan sets out the strategic goals across the national health service for the next five to ten years across a broad range of	Yes. To help tackle the causes of morbidity and preventable deaths for people with learning

Table 4.3—Grey literature data extraction

Author, Year	Summary	Authors recommend comprehensive health assessments?
	areas, including clinical care, funding structures, workforce, quality improvement and prevention activities	disabilities and autism the NHS aims to improve uptake of existing annual health checks in primary care, with a target of at least 75% of eligible people receiving an annual health check
Northway, 2019	Opinion piece by Ruth Northway in the UK "Nursing Times" on improving equality of healthcare for people with learning disabilities. Describes that people with learning disabilities die prematurely of often preventable causes and have poorer health than the general population. The article summarises findings and recommendations of the Learning Disabilities Mortality Review (LeDeR) Programme which reviews the deaths of people with learning disabilities. One of the recommendations of the review is that Health Action Plans, developed as part of the learning disabilities annual health check should be shared with relevant health and social care agencies to improve collaboration and communication between agencies. The article also describes how nurses can take an active role in supporting people with learning disabilities to complete annual health checks in primary care	Yes, states that annual health checks can lead to targeted actions such as screening and health-promotion activities
Healthcare Access Research and Developmental Disabilities, 2016	This resource is a toolkit for primary care providers in Canada to support the provision of health checks for patients with developmental disabilities. The resource states that health checks are a recommended intervention of the Canadian Consensus Guidelines for Adults with Developmental Disabilities (2011)	Yes. This resource states that health checks are a high-yield intervention and have been shown to increase rates of screening and identification of previously unrecognised factors and disease

Appendix 5: Tools and instruments used in comprehensive health assessments

Appendix 5.1: Validated instruments used in the peer reviewed studies

Validated instruments used in the peer reviewed studies (see Table 1, above)

1. The Canadian guidelines for primary care of adults with developmental disabilities (Durbin et al). See Surrey Place https://ddprimarycare.surreyplace.ca/tools-2/general-health/preventive-care-checklist/
2. CANE (Camberwell Assessment of Need for the Elderly) (Kumar et al) https://www.cambridge.org/core/journals/the-british-journal-of-psychiatry/article/camberwell-assessment-of-need-for-the-elderly-cane/F2159EF0AB7EB007BCB8E10A1EC04702/core-reader
3. The Primary Care Quality Composite Score (Smith)
4. GP Quality and Outcomes Framework (QOF) (Cooper) https://www.bma.org.uk/advice-and-support/gp-practices/funding-and-contracts/quality-and-outcomes-framework-qof
5. CHAP (Byrne, Bakker) https://www.communities.qld.gov.au/disability-connect-queensland/service-providers/comprehensive-health-assessment-program-chap
6. The Ask Health Diary https://qcidd.centre.uq.edu.au/resources/ask-health-diary-and-app
7. The Scottish Health-check Program for Adults with Learning Disabilities (Bakker)
8. The Cardiff Health Check (Bryne) www.improvinghealthandlives.org.uk
9. The 21st Health Check, Glascow (Bryne) https://www.gla.ac.uk/media/Media_62785_smxx.pdf

Instruments validated but not yet evaluated

10. InterRai (Hirdes)
11. Innowell (Davenport

Appendix 5.2: Instruments identified in jurisdictional searches

For more detail see Table 2 below

Tools and instruments

Australia

The Comprehensive Health Assessment Program (CHAP) 2019: https://www.communities.qld.gov.au/disability-connect-queensland/service-providers/comprehensive-health-assessment-program-chap

Medicare Health Assessment for people with an intellectual disability:

Proforma. https://www1.health.gov.au/internet/main/publishing.nsf/Content/AA19024A21F2A7EACA257BF0001DAB97/$File/Health%20Assessment%20for%20people%20with%20an%20intellectual%20disability%20Proforma%20final.pdf

VicHealth Comprehensive health assessment of the older person in health and aged care: Assessment template 2014 https://www2.health.vic.gov.au/ageing-and-aged-care/residential-aged-care/safety-and-quality/improving-resident-care/comprehensive-health-assessment

Canada

Health Access Canada: https://www.porticonetwork.ca/documents/38160/99698/Primary+Care+Toolkit_FINAL_ym2.pdf/dfa654d6-8463-41da-9b79-3478315503eb See also Surrey Place https://ddprimarycare.surreyplace.ca/tools-2/mental-health/risk-assessment-tool-for-adults-with-dd/

UK

University of Hertfordshire UK: http://www.intellectualdisability.info/how-to-guides/articles/annual-health-checks-for-people-with-intellectual-disabilities-in-general-practice

NHS Learning disabilities (https://digital.nhs.uk/data-and-information/publications/statistical/learning-disabilities-health-check-scheme/england-quarter-4-2019-20

RACGP Toolkit for NHS: https://www.rcgp.org.uk/clinical-and-research/resources/toolkits/health-check-toolkit.aspx

United States

National League of Nursing US, Assessment of Persons with Disability. http://www.nln.org/professional-development-programs/teaching-resources/ace-d/additional-resources/assessment-of-a-person-with-disability

Resources

Australia

Medicare Health Assessments **Resource Kit** (includes a 'health assessment for people with an intellectual disability proforma' including links to Health assessments for people with an intellectual disability https://www1.health.gov.au/internet/main/publishing.nsf/Content/mha_resource_kit

Medicare Benefits Schedule (MBS) Health assessment for people with an intellectual disability: **Fact Sheet** https://www1.health.gov.au/internet/main/publishing.nsf/Content/mbsprimarycare_mbsitem_intellectual_disability

Australian Government Department of Health Medicare Health Assessment for people with an intellectual disability: **Fact Sheet** https://www1.health.gov.au/internet/main/publishing.nsf/Content/AA19024A21F2A7EACA257BF0001

DAB97/$File/Health%20Assessment%20for%20people%20with%20an%20intellectual%20disability%20Proforma%20final.pdf

North West Melbourne PHN website: ‘Health assessment for people aged 45 to 49 years who are at risk of developing a chronic disease: **Fact Sheet.**
https://www1.health.gov.au/internet/main/publishing.nsf/Content/A91B76A85AD1244CCA257BF0001FEAF9/$File/45%20to%2049%20years%20health%20assessment,%20Jan%202014.pdf

Appendix 5 Table 2—Items in comprehensive health assessment instruments identified in jurisdictional searches

Website	Template Y/N	Living arrangements, access to help	Professionals involved in their care	Wellbeing eg interests, employment	Immunisation history	Screening e.g. cervical, colon	Allergies and drug intolerance	Aetiology and Family medical history	Trichiasis*	Problem behaviours	Vision and visual activity	Hearing	Sleep	Foot	Dysphagia + oesophageal	Respiratory	Abuse - physical, emotional, financial	Transport, mobility access	Falls risk	Medication review	Diet, weight, height, BP, PR, hypert	Urianalysis, bladder and continence	Stomach and bowel	Sexual and reproductive health	Activity, lifestyle, health promotion	Men's health	Women's health	Chronic care eg epilepsy, arthritis, cancer	Neurological and endocrine	Skin, ear, nose, throat, oral health	Mobility and musculoskeletal	Cardiovascular and respiratory	Abdomen and pelvis	Dementia	Pain	Systems	Mental health
RCGP UK	N	x		x	x	x								x	x	x	x	x		x	x	x		x	x	x	x	x			x	x	x	x			x
Canada HCARDD		x			x	x					x					x	x	x		x	x	x		x	x	x	x	x	x	x	x	x				
Medicare: Intellectual disability	Y	x	x		x		x				x				x		x			x	x	x		x	x	x	x	x		x	x					x
Medicare: 45–49 yrs	Y							x								x					x	x		x		x	x	x			x	x					x
Medicare 75+ yrs		x			x									x					x	x	x	x		x					x	x	x		x				x
Medicare Indigenous 55+ yrs	Y	x	x		x		x		x										x	x	x	x		x					x				x				x
Medicare Indigenous 15–54 yrs	Y	x	x		x		x	x	x		x									x	x	x		x	x	x	x		x								x
UK Annual Health Check (Hertford shire)	Y	x	x	x	x	x											x			x	x	x		x	x	x	x	x	x	x	x	x	x				x
National League for Nursing																								x	x	x	x										

Appendix 6

An Evidence Snapshot is a rapid review of existing evidence tailored to the needs of an agency. An Evidence Snapshot answers one specific policy or program question and is presented as a short brief of 3-4 pages summarising existing evidence. Evidence Snapshots may review up to 20 peer reviewed and up to 20 websites or grey literature reports, focusing on literature published in last 12 months identified using limited databases and search terms. A detailed synthesis and analysis are not provided.

Evidence Snapshots include review of the summary by a content expert. In this instance, the Australian Commission on Safety and Quality in Health Care elected to provide content expertise.

Included

- Proposal

  A project brief is provided to the agency following a one-off knowledge brokering session. Once the brief ('proposal') is agreed with the agency, additional changes to the project brief incur a fee. Evidence Snapshots allow for one round of questions for clarification.

- **Report**

  Evidence Snapshots are written in the Sax Institute template and include the report (approximately 3-4 pages); the appendices; and the reference list.

- **Appendices**

  The appendices include the search strategy and method; the data extraction table for peer-reviewed studies (8-9 columns); grey literature and peer reviewed commentaries (3 columns).

Exclusions

Snapshot Reviews exclude: a synthesis of the findings of the peer reviewed and grey literature; summaries of individual included papers; a detailed analysis; quality assessment of included studies; additional comments by the agency (following an initial review and questions of clarification); presentation of findings to the agency or stakeholders.

Publication

Evidence Snapshots are uploaded to the Sax Institute website with the consent of the agency.

References

1. National Health and Medical Research Council. NHMRC levels of evidence and grades for recommendations for developers of guidelines. National Health and Medical Research Council; 2009.

2. Byrne JH, Lennox NG, Ware RS. Systematic review and meta-analysis of primary healthcare interventions on health actions in people with intellectual disability. Journal of Intellectual and Developmental Disability. 2016;41(1):66-74.

3. Bakker-van Gijssel E, Lucassen P, Hartman TO, Van Son L, Assendelft W, van Schrojenstein Lantman-de Valk H. Health assessment instruments for people with intellectual disabilities—A systematic review. Research in Developmental Disabilities. 2017;64:12-24.

4. Cooper S-A, Morrison J, Allan LM, McConnachie A, Greenlaw N, Melville CA, et al. Practice nurse health checks for adults with intellectual disabilities: a cluster-design, randomised controlled trial. The Lancet Psychiatry. 2014;1(7):511-21.

5. Carey IM, Hosking FJ, Harris T, DeWilde S, Beighton C, Shah SM, et al. Do health checks for adults with intellectual disability reduce emergency hospital admissions? Evaluation of a natural experiment. Journal of Epidemiology & Community Health. 2017;71(1):52-8.

6. Carey IM, Shah SM, Hosking FJ, DeWilde S, Harris T, Beighton C, et al. Health characteristics and consultation patterns of people with intellectual disability: a cross-sectional database study in English general practice. British Journal of General Practice. 2016;66(645):e264-e70.

7. Durbin J, Selick A, Casson I, Green L, Perry A, Abou Chacra M, et al. Improving the quality of primary care for adults with intellectual and developmental disabilities: Value of the periodic health examination. Canadian Family Physician. 2019;65(Suppl 1):S66-S72.

8. Kumar D, Rasania S, Das R. Health care needs assessment of elderly with functional disability in Palam village of Delhi. International Journal of Community Medicine and Public Health. 2019;6(9):3943.

9. Smith M, Manduchi B, Burke É, Carroll R, McCallion P, McCarron M. Communication difficulties in adults with Intellectual Disability: Results from a national cross-sectional study. Research in Developmental Disabilities. 2020;97:103557.

10. Durbin J, Selick A, Casson I, Green L, Spassiani N, Perry A, et al. Evaluating the implementation of health checks for adults with intellectual and developmental disabilities in primary care: the importance of organizational context. Intellectual and Developmental Disabilities. 2016;54(2):136-50.

11. Byrne JH, Ware RS, Lennox NG. Health actions prompted by health assessments for people with intellectual disability exceed actions recorded in general practitioners' records. Australian Journal of Primary Health. 2015;21(3):317-20.

12. Hirdes JP, van Everdingen C, Ferris J, Franco-Martin M, Fries BE, Heikkilä J, et al. The interRAI suite of mental health assessment instruments: An integrated system for the continuum of care. Frontiers in Psychiatry. 2020;10:926.

13. Northway R DA. Improving equality of healthcare for people with learning disabilities. Nursing Times [online]. 2019;115(4):27-31.

14. Healthcare Access Research and Developmental Disabilities (H-CARDD): Toolkits Canada: (H-CARDD); 2016 [Available from: https://www.nursingtimes.net/roles/learning-disability-nurses/improving-equality-of-healthcare-for-people-with-learning-disabilities-18-03-2019/.

15. (NICE) NIfHaE. Care and support of people growing older with learning disabilities London: NICE; 2019 [Available from: https://www.nice.org.uk/guidance/ng96/resources/care-and-support-of-people-growing-older-with-learning-disabilities-pdf-1837758519493.

16. Health SADo. South Australian Intellectual Disability Health Service Draft Model of Care Adelaide: South Australian Department of Health 2020 [Available from: http://www.cpsu.asn.au/upload/2020-Info-Updates/SA%20Intellectual%20Disability%20Health%20Service%20Draft%20MoC.pdf.

17. Casson I, Broda T, Durbin J, Gonzales A, Green L, Grier E, et al. Health checks for adults with intellectual and developmental disabilities in a family practice. Canadian Family Physician. 2018;64(Suppl 2):S44-S50.

18. National Health Service (NHS) UK. The NHS Long Term Plan.

19. Cubbage J MJ. Delivering Better Health Outcomes for People with High Support Needs and/or Challenging Behaviour and their Families and Carers: Project Outcomes and An Exploration of the Literature. Bassendean WA: Microboards Australia; 2020.