Interim Guidance on

Conducting Assessments in Disability Services

Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

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Executive Summary

This guidance has been developed to support clinicians in thinking through decision making regarding disability assessments in the context of Covid-19. It considers different elements of assessment and how these can be navigated either remotely, or using Personal Protective Equipment (PPE) and applying Infection Prevention and Control (IPC) procedures. The guidance 1) outlines the approach to assessment in general, 2) to assessment of need (AON) in particular, 3) provides a number of indicative assessment challenge scenarios, and 4) describes a range of instruments and resources that may be useful for clinical decision making. Using clinical expertise and a flexible approach, assessments can be legitimately undertaken and provide a quality of evidence sufficient to effectively guide intervention.

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Purpose of this Guidance

This guidance is intended to support clinicians who wish to adapt their prior practice for conducting assessments, in order to facilitate the need for remote working, or the use of Personal Protective Equipment (PPE) and application of Infection Prevention and Control (IPC) procedures.

This guidance has four parts:
Part 1 recommends the approach to assessment in general.
Part 2 recommends the approach to Assessment of Need (AON) and outlines a sample work process.
Part 3 provides assessment challenge scenarios and possible responses to them.
Part 4 links to useful resources to support clinicians in their decision making.

The guidance is not intended to constrain practice but to provide suggestions for how some of the challenges presented by different modalities can be navigated, whilst maintaining the integrity of the assessment process and relying on the clinical judgement of practitioners.

The National Clinical Programme for People with Disability (NCPD) has reviewed existing evidence and practice and believes that remote assessments, and where appropriate, assessments requiring the use of PPE and IPC, can be legitimately undertaken and can provide a quality of evidence sufficient to effectively guide intervention. The NCPD therefore encourages practitioners to apply this guidance to their practice.

The NCPD is committed to learning from the experience of service users and clinicians, especially with regard to new and alternative modes of assessment. The NCPD will establish a cumulative evidence-base to track progress, learn from new practices and guide future practice. The NCPD also welcomes feedback from practitioners on the use and enhancement of these guidelines. While this guidance has been shaped by valuable input from an advisory group; the current form of the guidance and any subsequent revisions of it are the responsibility of the NCPD.

PART 1

ASSESSMENT IN GENERAL

Scope of Assessment

Assessments in disability services generally entail some or all of the following components:

- Collecting information, taking a background history, eliciting and understanding a person's and sometimes other family members' challenges, concerns, needs, and goals
- Observation of behaviour
- Using assessment tools or techniques, including in some cases, hands on assessment.

Elements of the above can be done to varying degrees either remotely, at a safe social distance or by face-to-face and in-person interactions. During the Covid-19 pandemic in-person assessments should be conducted in accordance with local and national Infection Prevention and Control (IPC) guidelines and in line with current Public Health advice. Separate guidance has also been developed to support the resumption of disability services with a specific focus on return to work protocols and infection prevention and control practices (Guidance to Support the Resumption of Children's Disability Services, Guidance to Support the Framework for Resumption of Adult Day Services). While these restrictions pose a challenge for some traditional practices and procedures there are also opportunities for developing innovative and alternative ways of working which benefit both service users and providers. Digital technologies can be used for assessment as blended approaches that reduce travel and contact time for both service users and providers. In the current pandemic situation in-person interactions should only be used when there is no suitable alternative.

Use of Technology

The choice of which technologies to use will depend on availability and any existing approval protocols. The technologies chosen should comply with the technical requirements of the local organisation and HSE nationally and be used in line with existing information governance, General Data Protection Regulations (GDPR) and IT security policies. Should service users be willing to return information electronically then they may do this by e-mailing or scanning documentation to a secure address.

Accepted Good Practice

The approach advocated in this Guidance coincides with that advocated elsewhere, in the context of Covid-19, for instance; "Whenever possible, administration procedures should mimic or at least approximate the standardized protocols presented in test manuals. However, when this is not possible, … [clinicians] … should take steps to collect data that are as high quality as possible and use caution and clinical expertise when interpreting those data and integrating them with other information to make conclusions and inform clinical decisions." (American Psychological Society (2020). See Table 9 for more detail).

We now consider the three elements of assessment in more detail.

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Eliciting and attending to family concerns & background history

General position

In most instances background histories and self-, parent-, and collateral-reports can be obtained remotely without significant adaptation. Existing questionnaires, pro-formas, and interview formats can continue to be used with little or no adaptation. Assessment elements should be selected on a case-by-case basis.

Common issues

Language & culture

Consider cultural competence, language and supports that may be required. Interpreters should be conferenced into audio or video calls where required.

Return of posted material

Use of post, scanning and email to distribute/receive questionnaire material should be explored with families. Clinicians can receive data from families via email if they are happy to do so and in accordance with usual information governance protocols. Use of stamped-addressed envelopes may be preferred in some instances. Questionnaires that are designed to be self-report should usually be completed as such, although verbal or phone completion may be considered appropriate to overcome barriers to access (e.g. physical, sensory, or language issue) or address specific difficulties arising from Covid-19 that restrict access.

Use of remote versus face-to-face

Remote methods should be used in preference to face-to-face during Covid-19 if the clinician believes this to be efficient and aligned to person and family needs. Clinical judgement should be used, making such decisions on a case-by-case basis. Issues to be considered include the availability of adequate technology (internet access, access to software and hardware) for the person/family and clinician, the nature of the information to be obtained, and recommendations from test manufacturers.

Table 1: Possible approaches to eliciting and attending to family concerns & background history [1]

Post/email:	Previous reports; Demographics questionnaires; National Policy on Access (NAP) referral forms; Screeners (e.g., ASQ3, SCQ); Adaptive behaviour assessments (e.g., ABAS-3; Vineland-3 Parent/Caregiver and Teacher forms); Behavioural observation (e.g., CARS-2 QPC) ; Sensory Processing Measure, Strengths and Difficulties Questionnaire (SDQ); Children's Communication Checklist (CCCL); Pragmatics Profile
Phone/video call:	Parent/teacher interview; Screeners such M-CHAT-R; Structured parent report interviews such as Vineland 3, ADI-R[2], DISCO and computerised 3Di-sv, REEL, Pragmatics Profile
Face-to-face:	Socially distanced clinic session to gather background history from family who does not have access to adequate remote technology or suits family needs

Observation

General position

Observation may be a necessary part of screening, assessment, and diagnosis. Where opportunities for naturalistic observation are restricted or unavailable, alternative modalities may be used.

Common issues

Limited opportunities

Opportunities for naturalistic observation may pose some challenges, for instance due to Infection Prevention and Control (IPC) requirements or social distancing restrictions.

On health service premises use of naturalistic barriers (such as room dividers as used in crèches/preschools), perspex barriers, or observation rooms may allow observation of play or interaction between family members.

At home or in child care/school settings, use of video clips (with appropriate consent) or - in some circumstances - domiciliary visits (using barriers, observation through windows, PPE where necessary and risk managed) may be used. Clinicians should use their judgement

[1] For more detail on some of these and other instruments, see Tables 4-9 respectively for details of some generic screening measures; ASD-specific screening measures; ASD diagnostic instruments; and cognitive and adaptive functioning assessment batteries.
[2] Secure video call (as per publisher).

regarding what methods are most likely to allow an authentic pattern of behaviour to be observed under the circumstances.

Structured observation and/or observation requiring interaction

In some instances, structured observation schedules (especially those requiring interaction) are more difficult (e.g., ADOS-2) because of IPC or social distancing requirements. In some instances parent-administration of ADOS-2 modules can provide useful qualitative information when viewed via a video link. However, new alternatives that are emerging for use during COVID19, and which may suffice in the majority of instances, include the Brief Observation of Symptoms of Autism (BOSA); and the Naturalistic Observation Diagnostic Assessment (NODA). These should be sufficient for assessment and possibly diagnosis in most circumstances.

Table 2: Possible approaches to observation

Remote:	BOSA; NODA; TELE-ASD-PEDS; SORF; Unstructured video clips of child behaviour/interaction (e.g., ADOS-2 modules for qualitative data; STAT); CARS2-ST
Domiciliary:	Home observation with social distancing or using windows or PPE
Face-to-face:	Some structured observation with teenagers or older children may be possible with 2m distancing

Other assessment tools and assessment techniques

General position

Many tests and assessment techniques can be completed using IPC while still within the limits of standardised administration protocols. Clinical judgement should be used in estimating the effects of any deviations from these and accounted for in decision-making and reporting. Where possible, alternatives should be sought if standard administration is compromised to the extent that the clinician believes that test results lack sufficient authenticity to make informed judgements.

Common issues

Age and risk

The ability to control infection risks while completing in-person standardised tests and assessments may vary with age. It may be possible in many cases to complete standardised assessments of language, movement, or cognition with older or more mature children, or adults using appropriate personal protective equipment (PPE) and IPC. Such judgement

should be made on a case-by-case basis and reflect the capacity of the person being assessed. Remote administration is possible in limited circumstances (e.g., WISC-V app). The effect of changes to standardised administration should be noted in any reports/interpretations.

Younger children in particular may not be capable of cooperating with IPC measures or may be negatively affected by PPE. This may mean that some common developmental tests (e.g., Bayley-III/Griffiths) are not viable with younger age-ranges.

Table 3: Possible assessment tools and techniques

Face-to-face (with PPE/IPC):	IQ assessments for older children or adults; Physiotherapy assessment of tone and range of movement, balance, etc.; Movement ABC, Beery VMI, Handwriting test, informal play observations for movement and language, PLS with parent as facilitator; DEAP/STAP/PLS Screener.
Remote/App	WISC-V app, , informal observation with developmental checklists; CELF 5; non standardised assessments used as screening tools e.g. RAPT, PLS 5 non-standardised,

PART 2

ASSESSMENT OF NEED (AON)

The HSE Standard Operating Procedure for Assessment of Need (V2) was implemented for all AON applications from 15th January 2020. Some services will have a cohort of outstanding "legacy" AONs that will require a range of diagnostic assessments. AON applications received on or after 15th January will receive a Preliminary Team Assessment (PTA) in line with the SOP.

Legacy AONs (pre-January 15th 2020)

Legacy AONs should be conducted as closely to existing local practice as possible while incorporating the above guidance for remote or face-to-face administration for each of the three areas of assessment.

The Disability Act specifies that AONs should be completed within 6 months of receipt of the completed application. All legacy AONs are now overdue for completion. Therefore every effort should be made to progress these assessments using conventional tools and procedures, where possible, or adaptations as described above.

In some cases, elements of an assessment which would normally be conducted may not possible during COVID 19 and cannot be substituted for. In these cases, the AON should be completed and needs/findings reported based on the elements of assessment that are possible. The need for further assessment at a later time may form part of further recommendations and could be captured in the Service Statement.[3]

New SOP AONs (January 15th 2020 onwards)

Services should ensure that there are arrangements in place to progress applications in this cohort in parallel to the legacy assessments. Consideration should be given to completing as much of the PTA remotely as possible, in line with the above guidelines and with the current AON SOP. Many families may be able to participate in a video call interview and complete/return questionnaire data electronically, or by post. Use of tools such as the BOSA can add a degree of structure to remote video observation. Observation of play, or interaction, can also occur in large divided clinic rooms, or through use of observation rooms in a health services setting, or using video recording. Selected subtests from standardised tests can be used remotely, or in person where appropriate, to inform the PTA. A judicious mix of the above techniques should allow a PTA to proceed to make a sufficiently authentic assessment in the majority of cases. A risk assessment should be completed in all cases where it is necessary to conduct an assessment face-to-face in accordance with local and national guidelines (see also Guidance on Resumption of Children's Disability Services).

Sample Standardised Process for Assessment of Need (AON)

The following outlines a sample process for an Assessment of Need. The extent of assessments used and choices of instruments are a matter for clinical judgment and will be individualised to each referral. All assessments should be conducted in line with national guidance and protocols for Assessment of Need (AON). Appendix 2 outlines a more expanded text for a sample work process.

Sample AON Work Process

Stage 1

At Stage 1 of the AON process the Assessment Officer should engage with the applicant / family remotely using post, e-mail, telephone and "Attend Anywhere" as appropriate. The Assessment Officer will gather all relevant reports, and ensure that the relevant National Access Policy forms are completed. To progress an application to Stage 2, the Assessment

[3] Care should be taken when recommending further assessment, noting the circumstances under which it should occur & noting the responsibility of the future team/professional to make the final decision as to whether it is then necessary or not (e.g. "An ADOS should be repeated in future when XXX has greater ability to engage with the assessment process, subject to the opinion of the clinical team" or "A review adaptive behaviour assessment may be beneficial in future following a period of appropriate intervention and subject of the opinion of the clinical team").

Officer "commences" the assessment by initiating a referral for a clinical assessment. All relevant documentation is forwarded to the relevant assessors.

Stage 2

1. The children's disability service reviews the referral documentation and engages with the applicant / family by telephone to outline the next steps.
2. Information pack posted to parents
   a. Remote assessment information sheets and guidelines
   b. Written consent from parents/ carers
   c. Screening measures[3]
3. Conduct parent /carer interview via video link (e.g., to further explore parental concerns; further profile developmental history; and to review completed screening measures);
4. Ask parents to video their child doing various (pre-defined) activities and send this in (ensure aligned to information governance and IT security protocols) [4]
5. While requiring corroborating evidence, clinician(s) reviews video(s)
6. Clinicians link remotely with child for observation
7. Child and parent attend an assessment where the parent is the facilitator using a one way mirror or video based system with the clinicians in another room. The parent can be coached and guided through the facilitation process;
8. If face to face required, conduct in accordance with local IPC and Public Health guidelines;(https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/guidance/guidanceforhealthcareworkers/)
9. CDNT discussion;
10. Clinicians link remotely with parent; and
11. Clinicians complete their report and forward with a completed AON Summary Report to the Assessment Officer.

For the above process there may need to be variations depending on the age of person being assessed and this should be determined thorough clinical judgement.

Situations where remote assessment may not be appropriate

There may be situations where remote is not appropriate. In such cases in-person assessment can be conducted in line with IPC controls and any public health advice applying at the time.(https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/guidance/guidanceforhealthcareworkers/

[3] If query ASD, screening measures include Social Communication Questionnaire; Social Responsiveness Scale; Autism Spectrum Rating Scale (parent / school / preschool); M-CHAT; CBCL; ABAS-3 forms (parent / school / preschool)

[4] This may not be appropriate with older children / adolescents. And, older children or adolescents may feel highly uncomfortable with coming online live to speak with the clinicians for informal chat & this would be unlikely to give a sense of their skills etc.

Requirements for families where remote assessment is appropriate

- Phone/Laptop which will support the use of the Attend Anywhere Platform (instructions on downloading and using this software will be provided to parents)
- Internet access
- Physical space (i.e. a room which other children/individuals in the home will not enter)
- Assessment materials (3 – 5 motivating toys (age dependent); e.g., bubbles/ balloons/balls/cars, snack in a sealed tub)
- A parent/carer will require another adult to be present in the event that there are other children in the house, so that these children can be supervised safely away from the assessment room
- Consent to engage in process.

Supports required for teams to facilitate remote

- Access to the platform Attend Anywhere or other platforms which have been approved by HSE and local organisation for clinical work
- Laptops/desktops with cameras, headphones and microphones for clinicians
- Forms (e.g., TELE-ASD-PEDS rating form that is available for free download)
- Assessment materials (e.g., 3 – 5 motivating toys, for example bubbles/ balloons/balls/cars, snack in a sealed container) – provided by parents

PART 3

3.1 ASSESSMENT CHALLENGE SCENARIOS

These scenarios are provided to illustrate how clinicians use their clinical judgement to think though a cohesive assessment response to some challenging situations. The scenarios are only indicative and do not attempt to represent the range or severity of possible presentations of impairment or disability.

Scenario 1: A person being assessed for possible Autism Spectrum Disorder (ASD)

An 8 year old is attending a mainstream class and presenting with some fine motor and gross motor delays, emotional distress/anxious behaviours, difficulty with friendships, and difficulty attending in class. Following an interview and completion of ABAS and SCQ, an ASD assessment is indicated. At the interview using the ADI-R with the parent/guardian, a 10 minute planned observation over telehealth platform will be utilising developmental checklists as appropriate. On a separate session, the parent/child could be brought to the clinic and utilising the BOSA with the clinicians in an observation room, or in another room from the parent/child with the use of telehealth platforms. Parent may be requested to bring a short video of the child to share with the clinicians in an alternative school/home setting. This can be observed and observations recorded; however the video will not be kept

and will be destroyed after the assessment has been made. Another clinical room may also be prepared with the appropriate play items (following IPC protocols) to follow this assessment with a modified language and/or motor assessment with a clinician while the parent is not in the room. A follow-up session could then take place with the parent via telehealth.

Scenario 2: A person being assessed for a possible intellectual disability

A 5-year-old boy going into Senior Infants and the teacher has recommended to the parent that they seek assessment as the child appears well behind their peers. In the application form for services, the teacher report, and in the parental interview, it is reported that the child is not toilet-trained fully by day; he didn't babble much and started saying first words at 24 months. He walked independently at 18 months and never crawled. He finds it hard to sit up straight in school and has poor ball skills at home. In preschool, the teacher reported that he was quiet and preferred independent play. At school, he is well behaved; however, he has frequent tantrums at home. In school, as compared to his peers, he is well behind in developing concepts and fine motor skills.

Possible Assessment battery:

- SCQ to screen for ASD concerns
- Vineland comprehensive interview completed by video platform.
- Vineland teacher form
- Movement ABC with the use of PPE
- PLS 5 screener
- Stanford Binet 5 Full Scale IQ test where the assessor follows local IPC guidelines.

Based on the tools used, it was the professional opinion of the assessing clinicians that there was sufficient evidence across multiple domains to determine that the child meets criteria for a mild intellectual disability. It was deemed that the results of the Standford Binet 5 represented a valid estimation of the child's cognitive skills. Whilst noting the possible impact of the PPE during administration, it was the clinical opinion of the administering clinician that the child's performance was not unduly compromised by the use of PPE. It was recommended that as the child progresses through school, he would benefit from a psycho-educational assessment (for which his school principal may refer to NEPS) which may shed further light on his cognitive profile and tailor his educational supports for his identified needs.

Scenario 3: A person being assessed for a possible physical disability

A 2 year old child is referred to the physiotherapy service by the Public Health Nurse who expresses a concern regarding delayed milestone achievement, unsteady gait and issues with persistent falling. Initial contact is made with the child's mother who is established as the legal guardian, and she is asked to complete and return a service specific questionnaire. Following this, a date and time are agreed for a virtual consultation in order to complete a full assessment via Attend Anywhere video link.

During this video consultation an attempt is made to look at various age appropriate physical tasks, to gain a better understanding of where this child is objectively. Unfortunately compliance during the consultation makes this difficult. The child's gait appears to be unsteady and antalgic but the reasons for same remain unclear following the consultation.

At the end of the consultation, the child's mother is asked to take a series of videos with the child performing set activities in order to give a better idea of gross and fine motor skill performance. These include tasks such as walking, running, squatting, hand eye co-ordination, etc. The physiotherapist checks that the mother is happy to send these videos via email and, following agreement, confirms their secure email address with the child's mother. She is advised that the findings of these videos will be documented in the client chart and the videos will then be deleted. Over the next 3 days the child's mother sends in a series of videos which, whilst helpful, do not resolve all the questions remaining with regards to the child's physical status and needs.

The Physiotherapist has on-going concerns that there is an underlying physical condition and concludes that there is a need to physically assess the child for issues with joint range, tone, and other concerns. As a result, the decision is made that this client needs to be seen in person. An appointment is subsequently booked for the child to attend with his/her mother and this is carried out in suitable PPE, in line with HSE/HPSC guidance (https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/guidance/guidanceforhealthcareworkers/).

Scenario 4 - A person being assessed for possible Attention Deficit Hyperactive Disorder (ADHD)/ Developmental Coordination Disorder (DCD)

A 10-year-old girl is attending mainstream primary school. For the past two years the school has been concerned regarding this child's ability to participate in class. The parent and school report that she is struggling to keep up with the curriculum even with learning support. She has difficulty managing friendships, often falling out with her friends. She is accident-prone and clumsy and has minimal interest in sports. She is easily upset and frustrated. At home, she has emotional outbursts. She has a long history of sleep difficulties. In the parent interview, developmental milestones were reported to be

somewhat delayed in some areas: toilet trained at 4½ years, walking at 18 months, first words at 16 months.

Possible Assessment Battery:

- Parent Vineland Comprehensive Interview
- Vineland Teacher Report Form
- SCQ to screen for possible ASD
- Connors 3 (teacher, Parent) to identify possible ADHD concerns
- Language Assessment CELF 5 (telehealth)
- Movement ABC with the use of PPE
- VMI + Handwriting sample
- Due to concerns about the child's ability to engage in the remote administration of the WISC-V using the Q-global online testing platform, administration of the WISC-V in clinic with the assessor was indicated as being required. The assessor will need to follow local IPC guidelines regarding PPE (parent not in room) and complete all of the required assessment tasks, while minimizing the risk of infection to self and child.

Based on the above assessment battery, the child presented with an uneven profile with significant difficulties regarding information processing speed and working memory difficulties, language impairment, and coordination concerns (possible DCD). The assessment did not suggest that either ID or ASD were likely. Further investigation for ADHD is warranted following a period of intervention based on current assessment results.

Part 4

RESOURCES TO SUPPORT CLINICIANS

These resources may support clinicians generally in their decision making, and may have some particular value in terms of considering alternative assessment options in the context of Covid-19 restriction. Please click on the resources below:

- **Table 4**: Generic Screening Instruments and their associated characteristics
- **Table 5**: Specific Screening Instruments for ASD and their associated characteristics
- **Table 6**: ASD diagnostic instruments
- **Table 7**: Cognitive functioning assessment batteries
- **Table 8**: Considerations in conducting special education assessments via tele-practice during Covid-19
- **Table 9**: American Psychological Association Guidance Principles for psychological tele-assessment during Covid-19

- **Appendix 1**: Glossary of Terms
- **Appendix 2**: Sample of more Detailed AON Process

Table 4. Generic screening instruments and their associated characteristics

Screening instrument	Symptoms assessed	Age range	Format	Number of items and completion time	Sensitivity*	Specificity*
Communication and Social Behaviour Scale: Infant-Toddler Checklist (ITC; Wetherby et al., 2008)	Communication delays	9-24 months	Parent Questionnaire: 3 point Likert scale	24 items	87.4%	75.2%
Conners Behaviour Rating Scale (CBRS; Conners et al., 2011)	Assesses behaviours, emotions, academic performance, social issues	6-18 years	Parent, teacher, or self-Administered Rating scales	Parent 203 Teacher 205 Self-Report 179 20 minutes	-	-
Conners Early Childhood (Conners, 2009)	Assesses a range of behavioural, emotional, and social concerns, as well as developmental delays	2-6 years	Parent/ teacher/ carer questionnaire: 3 point Likert scale	Parents – 191 items Teachers/ carers – 187 items 25 minutes	-	-
Developmental Behaviour Checklist – primary care version (DBC-ES; Gray & Tonge, 2005)	Behavioural and emotional problems	18-48 months	Parent rated 0-2 rating scale	96 items 5-10 minutes	83%	48%
The Schedule of Growing Skills (SGS; Bellman, & Cash, 1987)	Establishes the development levels of children in 9 key areas; Passive posture, active posture, locomotor, manipulative, visual, hearing and language, speech and language, interactive social, self-care social	Birth- 5 years	Clinician rated behavioural observation	20-30 minutes	.44 - .82	.94 – 1.0

*Sensitivity refers to a test's or instrument's ability to correctly identify ASD or associated characteristics in individuals.
*Specificity refers to a test's accuracy in correctly identifying those who do not possess the characteristics which the test is measuring

Table 5. Specific Screening Instruments for ASD assessment and their associated characteristics

Screening instrument	ASD symptoms assessed	Age range	Format	Number of items & completion time	Sensitivity*	Specificity *
Asperger Syndrome Diagnostic Scale (ASDS; Myles, Simpson, & Bock, 2001)	Measures behaviours specific to Asperger syndrome including cognitive, maladaptive, social, and sensorimotor factors	5-18 years	Parent/ teacher rated Rating scale	50 items 10-15 minutes	85%	-
Autism Behaviour Checklist (ABC; Krug et al., 1980)	Sensory, body and object use, language, social and self-help skills	>36 months	Parent rated 4 point Likert scale	57 items 15 minutes	58%	76%
Autistic Behavioural Indicators Instrument (ABII; Ward-King et al., 2010)	Social attention, sensory arousal, behaviour	24-72 months	Clinician rated	18 items 30 minutes	100%	-
Autism Detection in Early Childhood (ADEC; Young, 2007)	Preverbal behaviours - response to name, imitation, ritualistic play, joint attention and social referencing, eye contact, functional play, pretend play, reaction to sounds, gaze monitoring, delayed language, reciprocity of smile, following verbal commands, nestling, anticipation of social advances, use of gestures, task switching	12 months	Parent or nurse rated Play based observation checklists	16 items 12 minutes	79-94%	88-100%
Baby and Infant Screen for Children with Autistic Traits (BISCUIT; Matson et al., 2009)	Adaptive behaviour, personal-social behaviour, communication, motor characteristics, cognitive behaviour	17-37 months	Parent rated	42 items 15 minutes	84%	86%

Autism Observation Schedule for Infants (AOSI; Bryson et al., 2008)	Visual tracking and attentional disengagement, coordination of eye gaze and action imitation, early social-affective and communicative behaviours, behavioural reactivity, and various sensory-motor behaviours	6 – 18 months	Clinician rated Direct observational measure	18 items 20 minutes	84%	98%
Autism Quotient – Adolescent version (AQ-Adolescent; Baron-Cohen, Hoekstra, Knickmeyer, Wheelwright, 2006)	Social skills, attention switching, attention to detail, communication, and imagination	11-16 years	Parent rated 4 point Likert scale	50 items 10-15 minutes	89%	100%
Autism Quotient – Child version (AQ- Child; Auyeung, Baron-Cohen, Wheelwright, Allison, 2008)	Social skills, attention switching, attention to detail, communication, and imagination	4-11 years	Parent rated 4 point Likert scale	50 items 10-15 minutes	95%	95%
Autism Quotient – Short version (AQ-short; Hoekstra et al., 2011)	Difficulties with social skills, preference for routine, attention switching difficulties, difficulties with imagination, a fascination with numbers and patterns	18 +	Self-report 4 point Likert scale	28 items 5 minutes	94%	91%
Autism Spectrum Rating Scales (ASRS; Goldstein & Naglieri, 2010)	Peer Socialisation; Adult Socialization; Social/Emotional Reciprocity; Atypical Language; Stereotypy; Behavioural Rigidity; Sensory Sensitivity; Attention/Self-Regulation (ages 6 to 18 only); and Attention	2-18 years	Teacher and parent rated 5 point Likert scale	Full form - 70 items Short form – 15 items 20 minutes/ 4 minutes for short form	-	-
Checklist for Early Signs of Developmental Disorders (CESDD; Dereu et al., 2010)	Language development, eye contact, responsiveness, emotion, sensory behaviours, play behaviours, imitation, gestures, pointing, expressive behaviours, reciprocal behaviours	0-36 months	Child care worker rated	12 items	80%	-

Childhood Autism Spectrum Test (CAST; Scott, Baron-Cohen, Bolton, & Brayne, 2002)	Impairments in socialisation, communication, and behaviour in school-age children (e.g. peer relationships, conversational skills, intense areas of interest)	4-11 years	Parent questionnaire	37 yes/ no items 10 minutes	74-100%	97-98%
Diagnostic Behavioural Assessment for ASD – revised (DiBAS-R; Sappok et al., 2014)	Screening tool designed to assess for features of ASD such as social communication and interaction, and stereotypy, rigidity, and sensory abnormalities - in adults with intellectual disability	18+ years	Parent/ relative/ professional rated 4 point Likert scale	20 item 5-10 minutes	81%	81%
Early Screening of Autistic Traits Questionnaire (ESAT; Dietz et al., 2006)	Play behaviour, emotions, reaction to sensory stimuli	14-15 months	Parent questionnaire	14 item dichotomous yes/ no response 10 minutes	-	-
High Functioning Autism Screening Questionnaire (ASSQ; Ehlers, Gillberg, Wing, 1999) (see appendix S)	Social interaction (11), communication (6), restricted and repetitive behaviours (5), motor clumsiness and other associated symptoms (including motor and visual tics) (5)	6-17 year olds	Parent/ teacher rated 3- point scale	27 item checklist 10 minutes	62-82% (parent) 65-70% (teacher)	23-42%
Joint attention-observation schedule (JA-OBS; Nygren et al., 2012)	Protodeclarative pointing, response to name, interest in peers, showing objects of interest to parents, imitation, responding to others pointing	20-48 months	Child nurse rated M-CHAT and follow-up interview	5 items 5-10 minutes	86%	-
Modified Checklist for Autism in Toddlers (M-CHAT-F; Robbins, 2001)	Proto-declarative pointing, response to name, interest in peers, showing objects of interest to parents, imitation, responding to others pointing	18 – 30 months	Parent rated	23 yes/ no items 5-10 minutes	91%	95%

Modified Checklist for Autism in Toddlers, Revised with Follow-up (M-CHAT-R/F; Robins et al., 2014)	Protodeclarative pointing, response to name, interest in peers, showing objects of interest to parents, imitation, responding to others pointing	16-20 months	Parent rated Yes/ no format	20 items And follow-up interview	85%	99%
Pervasive Developmental Disorders Rating Scale (PDDRS; Eaves & Milner, 1993)	Arousal, affect, cognition	>12 months	Parent rated	51 items 60 minutes	-	-
Pervasive Developmental Disorders Screening Test-II, Primary Care Screener (PDDST-II PCS; Siegel, 2004)	Measures social interactions, communication, and atypical behaviours	18-48 months	Parent questionnaire	22 yes/ no items 10-15 minutes	85-92%	91%
Qualitative Checklist for Autism in Toddlers (Q-CHAT; Allison, Baron-Cohen, Wheelwright, Charman, Richler, Brayne, 2008)	Proto-declarative pointing, response to name, interest in peers, showing objects of interest to parents, imitation, responding to others pointing	18-24 months	Parent rated 5 point Likert scale (0-4)	25 items 5-10 minutes	91%	89%
Screening for Infants with Developmental Deficits and/ or Autism (SEEK; Persson et al., 2006)	Sleep rhythm, eating rhythm, interaction, eye contact, body contact, bodily tonus	8 months	Parent and clinician rated observation	9 + 28 30-40 minutes	-	-
Screening Tool for Autism in Two-Year-Olds (STAT; Stone et al., 2000)	Play behaviour, imitation, communication	24-35 months	Child care worker rated	12 items 20 minutes	83%	86%
Social Attention and Communication Study (SACS; Barbaro & Dissanayke, 2010)	Social attention and communicative behaviours	8, 12, 18, 24 months	Clinician rated Developmental surveillance	15 items 5 minutes	83%	99%
Social Communication Questionnaire (SCQ; Rutter et al., 2003)	Communication skills and social functioning in those suspected of having ASD	4 years and above (mental age of 2 years +)	Parent questionnaire: Lifetime and current versions	40 yes/ no items 10 minutes	74%	54%

	Based on the ADI-R					
Social Responsiveness Scale – Second Edition (SRS-2; Constantino & Gruber, 2012)	Measures social awareness, social information processing, reciprocal social communication, social anxiety, autistic traits, and preoccupations Distinguishes autism spectrum conditions from other psychiatric conditions by identifying presence and extent of autistic social impairment	2-6, 4-6 > 4-0 to 18-0 > 19-89 > 19+ >	Four rating forms Preschool form School age form Adult Form Self-report form 1-4 Likert scale	65 items 15-20 minutes	92%	92%
The First Year Inventory (FYI; Baranek, Watson, Crais & Reznick, 2003)	Social orientation and receptive communication, social affective engagement, imitation, expressive communication, sensory processing, regulatory patterns, reactivity, repetitive behaviour	12 months	Parent report questionnaire 46 Likert scale 14 multiple choice answers 2 open-ended questions A question for the parent asking what sounds the infant produces	59 items 10 minutes	92%	
Three-item direct observation screen test (TIDOS; Oner et al., 2013)	Joint attention, eye contact, responsiveness to name	18-60 months	Clinician rated	3 items 5 minutes	95%	85%
Young autism and other developmental disorders checkup tool (YACHT; Honda et al., 2009)	Development of motor function, communication and social interaction, pointing, and language comprehension	18 months	Clinician rated	18 items – questionnaire, interview with carers, and picture card test	82%	86%

				10 minutes		

*Sensitivity refers to a test's or instrument's ability to correctly identify ASD or associated characteristics in individuals (i.e. true positive rate).
*Specificity refers to a test's accuracy in correctly identifying those who do not possess the characteristics that a test is measuring (i.e. true negative rat

Table 6. ASD diagnostic instruments.

Diagnostic Instrument	ASD symptoms assessed	Age range	Format	Number of items & completion time	Sensitivity*	Specificity*
Autism Diagnostic Interview (ADI-R; Rutter et al., 2003)	Reciprocal social interaction, communication and language, restricted and repetitive, stereotyped behaviours and interests	18 months and above	Clinician rated Semi-structured interview	93 items 90 minutes	92%	89%
Autism Diagnostic Observation Schedule – Revised (ADOS-2; Lord et al., 2012)	Communication, social interaction, play, and restricted and repetitive behaviours	12 months +	Clinician delivered Semi-structured play-based observation 4 point scale	5 modules 40-60 minutes	100%	61-90%
Childhood Rating Scale- Second Edition (CARS-2; Schopler, Van Bourgondien, Wellman, & Love, 2010)	Verbal and non-verbal communication, relating to people, visual response, imitation, social-emotional understanding, emotional response, object use, body use, adaption to change	2+ years	Clinician rated	Two 15 item rating scales 5-10 minutes	88%	86%
Developmental Diagnostic Dimensional Interview – short version (3Di-sv; Santosh et al., 2009).	Reciprocal social interaction, communication, and Stereotyped Repetitive Behaviours	3 years +	Parent-report Computerised semi-structured interview	53 items 45 minutes	66.7-96%	54-96%
Diagnostic Interview for Social and Communicative disorders (DISCO; Wing et al., 2002)	Social-communication behaviours, socio-emotional behaviours reciprocity, stereotyped or repetitive behaviours/ motor movements or use of objects or speech,	Lifespan	Clinician led Semi-structured	300 questions 2-4 hour	96%	79%

	insistence on sameness, inflexibility, adherence to routine, ritualised patterns		interview schedule			
Gilliam Asperger's Disorder Scale (GADS; Gilliam, 2001)	Social interaction, restricted patterns of behaviour, cognitive patterns, and pragmatic skills	3-22 years	Parent, teacher, psychologist rated 4 point scale	32 items 10 minutes	92%	-
Gilliam Autism Rating Scale – 2nd Edition (GARS-2; Gilliam, 2006)	Stereotyped behaviours, communication, social interaction, and developmental disturbance	3-22 years	Parent/ teacher rated Likert 3-point scale	42 item 5-10 minutes		

*Sensitivity refers to a test's or instrument's ability to correctly identify ASD or associated characteristics in individuals (i.e. true positive rate).
*Specificity refers to a test's accuracy in correctly identifying those who do not possess the characteristics that a test is measuring (i.e. true negative rate).

Table 7. Cognitive functioning assessment batteries

Verbal assessment batteries	**Age Range**
Bayley Scales of Infant & Toddler Development – Third Edition (Bayley-III; Bayley, 2006)	1-42 months
British Ability Scales – Second Edition (BAS-II; Elliott, Smith, & McCulloch, 1996)	2-17 years
Griffiths Mental Development Scales (Extended Revised) (GMDS-ER; Luiz, Barnard, Knoesen, Kotras, McAlinden, & O'Connell, 2004)	0-8 years - 11 months
NEPSY – Second Edition (NEPSY-II; Korkman, Kirk, Kemp, 2007)	3-16 years
The Wechsler Adult Intelligence Scale – Fourth Edition (WAIS-IV; Wechsler, 2008)	16-90 years
The Wechsler Individual Achievement Test- Third Edition (WIAT-III; NCS Pearson, 2009)	4.0-50.11 years
The Wechsler Intelligence Scale for Children – Fifth Edition (WISC-V, Wechsler, 2014)	6-16 years
The Wechsler Pre-School and Primary Scale of Intelligence – Third Edition (WPPSI-III, Wechsler, 1967)	2-6 years
Stanford Binet Intelligence Scale – Fifth Edition (SBS; Roid, 2003)	2-89 years

Non-verbal assessment batteries	**Age range**
Leiter International Performance Scale – Revised (Leiter-R; Michalec, 2011)	2-20 years
Test of Nonverbal Intelligence, 3rd Edition (TONI; Brown, 2003)	6-89 years
Ravens Progressive Matrices (Raven, 2003)	5 years - adult

Measure of Adaptive Functioning	**Age Range**
Adaptive Behaviour Assessment System – Third Edition (ABAS-3; Harrison & Oakland, 2015)	Birth – 18 years
Vineland Adaptive Behaviour Scales, Third Edition (Vineland-3; Sparrow et al., 2016)	Birth – 90 years

Table 8. Considerations in conducting special education assessments via telepractice during Covid-19. For School Psychologists in the USA but with some relevant information regarding test publisher permissions to use tests virtually. Available on the following link: http://charterselpa.org/wp-content/uploads/2020/05/Sped-Assessments-and-Telepractice-Considerations-COVID-19.pdf

Table 9: American Psychological Association Guidance Principles for psychological tele-assessment during Covid-19

More details at https://www.apaservices.org/practice/reimbursement/health-codes/testing/tele-assessment-covid-19
Principle 1: Do not jeopardize test security **Principle 2: Do the best you can with what is available to you (mindfully and ethically)** **Principle 3: Be rigorously mindful of data quality** **Principle 4: Think critically about test and subtest substitutions** **Principle 5: Widen "confidence intervals" when making conclusions and clinical decisions** **Principle 6: Maintain the same ethical standards of care as in traditional psychological assessment services** **Concluding Statement:** "Whenever possible, administration procedures should mimic or at least approximate the standardized protocols presented in test manuals. However, when this is not possible, psychologists should take steps to collect data that are as high quality as possible and use caution and clinical expertise when interpreting those data and integrating them with other information to make conclusions and inform clinical decisions."

Appendix 1: Glossary of terms [5]

ABAS-3 = Adaptive Behaviour Assessment System – Third Edition can be scored and administered by any CDNT clinician. Appropriate for all age ranges, it yields standard scores across all domains of function i.e. communication, academics, self-direction, leisure, social, community use, home living, health and safety, self-care and motor.

ADI-R = Autism Diagnostic Interview – Revised

BOSA = Brief Observation of Symptoms of Autism is a 14-minute observation schedule adapted from the ADOS that is set up remotely with parent as administrator & the examiner is the observer. This might involve parent & child coming into the building, setting up the Ax. room & clinician observing all from another room. Alternatively, items from the BOSA could be provided to the parent to use at home for the purpose of the BOSA (this would be challenging & likely lead to loss of materials etc.).

CARS2-ST = 15-item Childhood Autism Rating Scale-Second Edition-Standard Version

CARS2-QPC = 15-item Childhood Autism Rating Scale-Second Edition-Questionnaire for Parents or Caregivers

CBCL = Childhood Behaviour Checklist

SORF = Systematic Observation of Red Flags is an observational measure intended to detect 22 red flags in children with ASD on the basis of the DSM-5 diagnostic criteria. It is intended to grade observations while watching an approximately 20-minute video recording of the *Behaviour Sample* of the *Communication and Symbolic Behaviour Scales Developmental Profile* (CSBS; Wetherby & Prizant, 2002) carried out in a clinical setting. The *CSBS Behaviour Sample* is a standardised, norm-referenced instrument designed to measure early social communication skills in children 9-24 months of age as a follow-up to the *CSBS Infant-Toddler Checklist*, a parent-report screener for communication delay (Wetherby et al. 2020). The *CSBS Behaviour Sample* offers a framework to detect early red flags of ASD i.e. it provides a short-term systematic sample with structured and unstructured happenings to observe both a lack of typical milestones of social communication development as well as the presence of unusual behaviours.

TELE-ASD-PEDS

- This is a play-based assessment tool developed for the diagnostic assessment of ASD. This tool can be used remotely via video-call in the assessment of ASD in children aged up to 36 months.
- There is a growing evidence-base for this tool.
- Research from Vanderbilt Kennedy Centre for Autism (although still at an early stage) indicates that a diagnostic conclusion using this approach was reached in 87% of cases. The remaining 13% required further assessment.
- Use of this tool replaces the use of the ADOS-2, although the two assessment tools are very similar & assess the same aspects of functioning. Use of this tool does not preclude the later use of the ADOS-2 if further Ax is required.
- The Tele-ASD-PEDS rating form is available for free download.
- Parents can provide assessment materials (3 – 5 motivating toys, for example bubbles/ balloons/balls/cars, snack in a sealed container).
- Using this tool is in line with the PSI Best Practice Guidelines for ASD Assessment which does not specify a specific tool to be used in observations of a child during an ASD assessment.

[5] For more detail on some of these and other instruments, see Tables 4 and 5

- It is in line with DSM-V criteria for ASD.

Wechsler Abbreviated Scale of Intelligence (WASI) = Appropriate for those aged 6-89-years-old, this consists of 4 subtests. The 2 verbal subtests assess expressive vocabulary and abstract verbal reasoning. The 2 performance subtests assess visual-construction skills and visual reasoning. The *WASI* yields three index scores: verbal IQ (VIQ), performance IQ (PIQ) and full-scale IQ (FSIQ).

Appendix 2: Detailed Sample AON Process – Stage 2

ELICITING AND ATTENDING TO PARENTAL CONCERN, OBTAINING A RELEVANT HISTORY

On obtaining the application form and the additional information forms (National Access Policy) from the Assessment Officer, the clinical team on review may also request further information from parents. Together this will include gathering information regarding the child/young person's strengths, areas of a concern and functional goals. A school/preschool form will be provided. This will provide additional information across contexts for the team. In addition parents will be provided with a standardised measure of adaptive function to complete.

A sample tool that can be used is the **Adaptive Behaviour Assessment System (ABAS)**. This tool is standardised and can be scored and administered by any member of the team. The ABAS yields standard scores across all domains of function i.e. communication, academics, self-direction, leisure, social, community use, home living, health and safety, self-care and motor. Other questionnaires which may provide valid information include the CBCL, SCQ, or other specific information. It is advised that the MDT consider information that is obtained in a few questionnaires rather than multiple individual checklists/questionnaires.

This information is then received and scored by a member of the team. The next steps will then be identified at this point to complete the remainder of the assessment. A link person may also be appointed for the family.

A clinician will then invite the parents/caregivers to a clinical interview by tele-health using Attend Anywhere. The interview will elicit concerns and information regarding meaningful participation across several contexts and activity limitations. The interview will also address information that is already available to the clinician from the questionnaires.

Challenges:

1. **Access to technology. Telephone or video interviews may suffice. A face to face interview may be required to take place with social distancing guidelines in place.**
2. **Timeliness of returning questionnaires prior to contact by a clinician. Using scanning technology and the ability to email the questionnaires. Emphasis in any accompanying letters the importance of this information to commence/complete the assessment**
3. **Language Barriers. Use of interpreters for interviews.**

ACCURATE AND INFORMATIVE OBSERVATIONS

During the interview the child/young person may be invited to attend for an observation session or request videos. This could occur as part of the interview process. However, given the nature of some of the children, it is likely that this session will occur on a separate day to the parental interview and specific instructions will be given to the parent/carer. In addition, any video consent etc. will be sought. Once viewed, videos will not be kept beyond what is required to complete the assessment. 1-2 clinicians will be present. The second clinician may be the individual who has completed the parental interview.

This session may also include a participation measure, to assist with determining a child's participation restrictions. This could be in the form of a developmental checklist.

How this session is set up will depend on the age and presentation of the child / young person. However it is **recommended that there is a combination of table top and gross motor/movement activities within every session. This will require catering to each family circumstance and the availability of toys (appropriate to age) within their environment. As part of the interview, the clinician should review what is required as preparation for the observation.** It is understood that due to a child's presenting needs and the opinion of the clinician, it may be more appropriate to complete certain standardised assessments. This should be additional to gathering information from the child/young person regarding participation and functional difficulties.

Where possible this session should include feedback to parents/caregiver regarding initial impression, health needs, care pathway, possible determination of disability. Any universal strategies to promote participation or appropriate waiting list initiatives should be provided at this time.

FURTHER EVALUATION

Where clinical presentation is sufficiently clear, and a diagnostic determination can be made with high confidence by qualified and experienced clinician(s), utilising the other information gained from the other professionals. This is recommended to take place and may include a necessary Cognitive Assessment.

Where the child's presentation is more complex or subtle and requires more assessment, this will take place in line with the Covid-19 restrictions. This may require one or more standardised assessments. The information to be collected includes:

- Additional information to further appraise symptoms and potential co-occurring and/or differential diagnosis conditions.

- Observation and administration of standardised assessments as required and in line with Covid-19 restrictions. Various documents of work done across the country are considered in conjunction with this document.

- ASD assessment has specific concerns due to the Covid-19 restrictions and may include:
    - Semi-structured play-based observed sessions via HSE-approved video platforms or using observation rooms. A schedule utilised by the team may be informed by the DSM 5/ICD 10 criteria, developmental level and language competencies. It is important that consent to use telehealth platforms is obtained.
    - Utilise the BOSA developed by Dr Catherine Lord and staff at UCLA (who also developed the ADOS-2). The assessment is conducted by viewing a parent/child interaction using a specific set of toys either via video or a one way mirror. The clinicians then utilise the relevant codes from the ADOS 2 to summarise the behaviours. The materials used are from the ADOS kit with additional items. An algorithm using the DSM 5 criteria has been made available. The clinician must be ADOS-2 trained and experienced. It is reported that there is a risk of false positives and false negatives. Further assessment may be required in some cases using the ADOS-2 when there are no further restrictions.
    - Additional information will be gained by completing an ADI-R, home video observations or other information via telehealth as deemed clinically appropriate

- Home videos, provided that this material is supplemented by additional opportunities for gathering information regarding the child's engagement, responsiveness, social communication and play skills. These will be brought in by the parent on their own device, observed by the clinicians and not saved. If saved, these will only be kept until the completion of the assessment report, at which time, any video will be destroyed.

- Where using standardised assessments typically used to determine any language, articulation, motor, and sensory difficulties, these may have to be adapted and diagnosis is then based on qualitative information along with clinical judgement only.

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