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Restoration of routine neuropsychological testing during the COVID 19 pandemic in a community health service for people who have intellectual disabilities: Changes to administration and service user views.

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- Covid 19 has made health services change how they do things. Covid 19 has changed how we test people for learning disabilities. Now we do the test dressed in PPE and use social distancing.
- We asked people doing a test what they thought of these changes. We found that most people were a bit scared of coming to the appointment. Most people liked the PPE and said that they felt safe. Most people said the PPE did not affect their performance. Some people said that they found the PPE a bit scary. Some people said they are used to people wearing PPE.
- We also looked at how many people were referred for a learning disability test during Covid 19. We found that fewer people were referred for a learning disability test during lockdowns.

- These findings can help other learning disability services make changes for Covid 19

Introduction

COVID-19 has caused considerable disruption to mental health services around the world (Jurcik *et al.*, 2020). The impact of the virus and subsequent infection prevention and control (IPC) procedures to prevent spreading infection, including social and physical distancing, have resulted in psychologists across services having to adapt their routine clinical practice (Rawlings *et al.,* 2021).

In this article, we reflect on our journey of working in a psychology assessment pathway as part of an adult intellectual disabilities' (ID) community health service during this time. The service is in a Borough in the North of England with a population of 245,200. Here, we discuss the impact of the COVID-19 pandemic on the administration of the Wechsler Adult Intelligence Scale-Fourth UK Edition (WAIS-IV; Wechsler, 2008) as part of the diagnostic assessment for ID, and our approach toward managing such challenges and restoring this aspect of care.

Following a period of remote and restricted face-to-face working, we moved to a process of restoring routine face-to-face services, however, the resumption of neuropsychological assessments have posed some challenges (British Psychological Society (BPS), 2020a; 2020b; 2020c; Sozzi *et al.*, 2020). Most tests involve the clinician and client sitting face-to-face across the same table for a significant period, touching of the same stimuli and adhering to the standardised way assessments must be administered (Wechsler, 2008). All of this can be difficult to achieve in the current climate. In services for people with ID, carrying out neuropsychological assessment such as the WAIS-IV is part of our core business, and this was put on hold when the lock down came in March 2020.

Impact on referral rates

As a result of the first lockdown across England, like most healthcare settings, our service temporarily ceased administering neuropsychological assessments in line with national and local policies, and IPC advice (BPS, 2020b). Concurrently the number of referrals reduced from an average of six to one per month. Our concern was the likelihood that client's needs are being unmet due to delay in receiving a diagnosis, and appropriate support and care.

Guidance on delivering neuropsychological tests in those with ID

The Division of Neuropsychology of the BPS (2020a; 2020c) published advice recommending that services attempt to maintain the continuity of neuropsychological assessments during the pandemic. The BPS Faculty for People who have ID, then published specific advice stating that psychologists were unable to administer assessments according to usual requirements. Moreover, the Faculty advised that tests including the WAIS should not be administered remotely with people who have ID (BPS, 2020b).

Within our service, in line with the International and BPS recommendations (BPS, 2015), we carry out an assessment of intellectual and social functioning using standardised scales. Assessments of social functioning are designed to be completed with an informant and can be carried out remotely.

For the assessment of intellectual functioning, most services use the WAIS-IV which was designed for individual face to face administration. The WAIS-IV has 15 subtests, ten of which constitute the core battery for the computation of an intelligence quotient (IQ) and four index scores.

Services for the general population began diverting resources to set up, deliver and evaluate the administration of neuropsychological testing via remote technologies with the

goal of continuing to provide care (Sozzi *et al.,* 2020). This was largely informed by the, albeit limited, evidence base as well as guidance issued by creators of the tests (Pearson, 2020b). Q-global UK (Pearson, 2020a), a web-based platform allowing subscales of the WAIS to be administered remotely via screen-sharing features has been recommended. However, this approach relies on the respondent not having any sensory impairments that could impact their use of the screen or understanding the administrator. Other potential barriers relevant to those with ID include, the availability of a facilitator at the client's end or cognitive ability to set up the test themselves; and access to technology, including a computer with a high-quality video and web camera feature, and a fast and reliable internet connection. What is more, only seven of the ten core tests could be administered this way. Indeed, the WAIS-IV developers acknowledge some tests are disproportionately affected by IPC guidelines given the variable need for in-person interactions. For example, the Block Design test is not possible for tele-practice if a professional facilitator is not used, and that sub-tests relying on the use of the response booklets (Symbol Search and Coding) similarly cannot be administered. In Table 1, we have summarised the WAIS-IV sub-tests that are likely to pose risk of cross infection.

The assessor's ability to make observations of the client's interactions and behaviour are also limited by remote working.

Table 1 WAIS-IV sub-tests tests with risk of cross infection posed by COVID-19.

Subtest	**Task**	**Supplementary material provided**
Block design	Respondents are provided a series of coloured blocks and asked to copy a pattern.	Respondents and administrator share a set of Kohs Blocks
Matrix reasoning	Clients are shown a series of incomplete patterns and asked to select the missing image from a series of possibilities.	Participants are shown images using a stimulus booklet
Vocabulary	Client is read a word and asked to define it.	Clients are shown pictures and words using a stimulus booklet

Arithmetic	Clients are asked a series of arithmetic questions.	Clients are shown images using a booklet as an aid, also asked to count pictured objects with their finger.
Symbol search	Clients are presented with two target symbols and then tasked to examine of group of symbols and identify if either of the target symbols are present.	Clients are required to write their responses in a booklet. Administer demonstrates the task in the same booklet
Visual puzzles	Clients are shown a series of images and needs to identify one which shares a common characteristic	Clients are shown images using a stimulus booklet.
Coding	Clients asked to translate a series of numbers using a key	Clients are required to record their responses in a booklet. Administer demonstrates the task in the same booklet

Given the limited evidence examining tele-practices for people with an ID, we undertook a service evaluation investigating the acceptability and accessibility of videoconference-mediated psychological intervention with adults with an ID on our waiting list for psychological therapy (Rawlings *et al.,* 2021). It was found that while auditory and visual difficulties were rare, most clients were not interested in engaging with tele-therapy. This left us to conclude that only the minority of our service users could engage in psychological interventions delivered remotely and even then, any work would be suited for those presenting as low risk and relatively able. We therefore felt that neuropsychological tests could not be administered using such technologies due to practical difficulties, and concerns over acceptability, reliability and validity. Our conclusion therefore concurred with guidance from the Faculty for People who have ID.

Adapting our practice

In June 2020, it became clear that the COVID-19 virus was going to be with us for the foreseeable future and that we needed to begin finding a way to restore our diagnostic assessment service. One option we considered was using a shorter form of the WAIS-IV. Available options are the Wechsler Abbreviated Scale of Intelligence (WASI; Wechsler,

1999) consisting of four subtests, or the computation of the General Ability Index (GAI) involving six subtests in the WAIS-IV. However, both options involve using sub-tests which cannot be administered at a distance or without sharing materials e.g. Vocabulary, Block design and Matrix reasoning.

We examined the literature to see what combinations of tests could be offered that are associated with minimal physical contact. Sadly, such research on the WAIS-IV with people who have ID is lacking. However, one study carried out an exploratory factor analysis of WAIS-IV assessments from 170 patients diagnosed as having ID in our service (Saleem, *et al.,* 2016). Based on the reported Eigenvalues, the best fit was a two-factor model like that found with a UK population study using the WAIS-III (Jones, *et al.,* 2006). However, examination of the loading of items using a two-factor solution found the best sub tests were those used in the computation of the GAI. The Faculty for People who have ID also suggested individual subtests should not be administered. However, their reasoning was to reduce any potential bias caused by practice effects on testing in the future (BPS, 2020b).

In July 2020, we consulted with the Trust IPC department to create strategies with the aim of administering the WAIS-IV face to face. First, the administrator would need to wear personal protective equipment (PPE) in the form of an apron, gloves, a face mask, and a visor. The client and administrator should be two metres apart as much as possible. Fortunately, we had some tables the required length, alternately we could have used two tables spaced apart. Interestingly, IPC had few concerns about the paper and pencil tests (Symbol search and Coding) as these could be administered with a brief interaction and the client was provided with their own pair of pencils. Then the completed forms would need to be placed in a folder and quarantined for 72 hours before scoring; this was based on evidence suggesting the virus can only survive on cardboard/paper for a number of days (van Doremalen *et al.,* 2020).

Sub-tests requiring close proximity to administer were of most concern to our IPC team, and ourselves. We were advised to demonstrate or turn the page of the stimulus book and then step back to two metre distance. The stimulus pages would need to be wiped after each use if the respondents touched the pages during administration; so, we had to add prompts asking the client not to touch the stimulus book or if they prefer, to point with a pencil. It was also recommended that the pages be laminated or covered with transparent sleeves. The respondent would need to see the administrator's mouth for clarity around verbal instructions so surgical masks could not be worn. It was recommended that we use clear face masks or/and full-face visors. For the block design sub test, we were required to provide a set for the client and a set for the clinician. We had to add additional prompts to ask the client to only use their set and not to touch the examiners set. Also, because of this, we could not follow the standardised layout and procedure as the client had to take, place and mix their own blocks between each item administration.

Evaluating our practice

To explore the potential impact of these adaptations, we conducted a service evaluation examining client's experiences of being administered assessments in line with IPC guidelines. Twenty-five service users who had been referred for an assessment for ID were invited and consented to participate. The test was administered by either a Consultant, Trainee or Assistant Practitioner Clinical Psychologist under supervision. The out-patient clinic where assessments took place was assessed and deemed COVID-19 secure.

Clients were contacted by telephone to arrange the assessments and were asked to attend at the time of their appointment as there was no waiting room. Appointments were scheduled to prevent people congregating at the entrance. Clients were informed they could

bring someone with them. Clients were asked not to attend if they had any symptoms of COVID-19 or were self-isolating.

On arrival, clients were again asked if they were experiencing any COVID-19 related symptoms, then to use hand sanitiser and wear a face mask (if they were not already wearing a mask) that was provided. Clients were asked if they wanted their supporter to stay with them. No client or supporter expressed any issues with this procedure.

The clinician then took them to the room in the clinic prepared for the assessment. The room had been cleaned and the test stimulus and blocks had been cleaned using NHS approved sanitising wipes and laid out ready. The room was risk assessed as able to have up to five people socially distancing so clients could be accompanied if they wished. Each room had a door that led straight outside, which was used by clients after their appointment. The stimulus book was covered with plastic sleeves. There were two sets of Kohs Blocks, a set of pencils for the client and the response sheet. There was also a plastic wallet to place the response booklet after the assessment for quarantine. Chairs were placed at either end of the table. Also on the table were masks, hand sanitiser and protective gloves.

The assessor was bare below the elbow, had washed their hands and wore the required PPE. Clients and their supporters were informed that they could continue wearing a mask, if they wished, or take it off but only while they remained seated. Only one client kept their mask on throughout the assessment. The test was administered as far as possible at two-meter distance. When demonstrations (as in Block design, and symbol search, for example) and page turning was needed, the administrator went close to the client for the shortest possible time (matter of seconds) and moved back to the recommended distance.

Following completion of the test, the assessor invited clients to take part in the evaluation. A questionnaire was developed to explore the acceptability and feasibility of the assessment. This asked if clients were worried about attending the service to complete the

assessment due to COVID-19, if they felt the modifications (i.e. IPC procedures) made them feel safe and whether they believed it affected their performance on the test. Open-ended questions were asked about what they liked best and least about the modifications, and if they had any other comments. The service evaluation was registered with the Trust's Quality Improvement and Assurance Team.

Median age of clients was 20 years (range 17-53 years); 13 female, 10 males (and two not reported). One client was Asian and did not have English as their first language and needed a remote interpreter; so, the Wechsler Non-Verbal test was administered. The other clients were White British and completed the WAIS-IV. The authors feel ethnicity of the sample is representative of clients who are referred and access the service - although it is slightly below that of the area (a 2011 census found 95% were White British). Three clients had been diagnosed with an autism spectrum disorder, one with attention deficit hyperactivity disorder and one with Tourette disorder. Median time to complete the test was 70 minutes (range 49-110 minutes). The authors believe this is consistent with the duration of completing neuropsychological assessments prior to COVID-19.

Overall, 22 clients responded when asked about their anxiety attending the assessment, of whom, eight (36.4%) replied they were "*not at all worried*", another eight (36.4%) "*a little bit worried*" and six (27.2%) "*a lot worried*". Clients were asked to expand on their answer. Some expressed anxiety over "*coming out,* [as] *I do not leave my home*", being in social situations or just feeling "*nervous in general"*. Worries specific to COVID-19 included "*get*[ting] *contaminated* [with Covid-19]" and feeling "*really nervous about catching it* ". One client reported "[I] *have been shielding* [due to a medical condition]" while another explained this was their "*first appointment since lock down*" and "*first time I had to wear a mask*". Clients expressed the fear that they may "*pass it* [coronavirus] *to my kids*", parent or grandparent, whether they accompanied them to the service or not – indeed, one

client made reference to the service being in a "*high risk area"* [for COVID-19 infection]. One client who reported feeling not worried explained "*I'm alright, better being out than sat at home on my own driving myself mad"*.

When asked if the modifications made clients feel safe, the majority (n=18) reported that the procedures made them feel "*a lot safe*" with five feeling "*a little safe".* One client said "*I was very scared, but you* [the assessor] *talked to me and you made me feel better*". No clients responded "*not at all*" to this question. Only one client touched the stimulus book and needed a further prompt.

Taken together the findings demonstrate that over two-thirds of clients experienced levels of anxiety related to COVID-19. Anxiety over presenting to services could pose a considerable barrier in this population, and the general public. However, our modifications were found to be acceptable and helped to make those clients who responded feel safe.

All the clients responded when asked if they believe the modifications affected their performance on the test, with 22 (88%) reporting that it did not. Two clients reported "*yes*", with one explaining that they could not understand the questions as the clear face mask muffled what the clinician was asking – the other client did not expand on their answer. The final client was "*not sure*" but did find the mask "*a bit scary*". Indeed, having to wear masks seemed to be the most common barrier (albeit still rare).One client explained it is "*not unusual to see people in masks*", as their support staff constantly wore PPE. Two clients explained they "*didn't think about it* [the modifications]" or "*didn't notice it*".

When clients were asked the three open ended questions, the most common comments regarding the adapted test was that it was "*safe*" and allowed them to complete the assessment – as opposed to waiting for when the service offered tests as usual or having to do it over the phone. One client thought the "*modifications helped*" and would have "*liked gloves*". These were available, so from then on we asked clients if they would like to wear

them - no one else did. Finally, one client was fearful that the administer thought they had the virus, and another felt confused and scared "*seeing people dressed up in PPE*" but recognised "*it's got to be done to get things done".*

Interestingly, we noticed that the PPE had the advantage of acting as a talking point for the assessor for gaining rapport, reduce any anxieties the client had regarding the test itself and/or COVID-19.The time taken for the assessor to dress in the PPE allowed the client to get comfortable in the room before starting the test. The majority of the PPE was not found to interfere with executing the assessment. However, the gloves did create some inconvenience in working the stopwatch on a touch screen phone. On warmer days the examiners also found they felt hotter and therefore more uncomfortable than they would without PPE. Although somewhat still an unusual experience, overall, we felt that many clients (and ourselves) had grown accustomed to seeing others wearing PPE and adhering to infection control procedures. As such, the outlined modifications fit in with people's perceptions of what has become the new normal.

Concluding remarks

This article reflects our journey of managing the impact of the COVID-19 pandemic on neuropsychological testing within an adult ID community health service. In doing so, we have described the measures that we have taken. The results should be considered in the context of modest sample sizes and data collected from a single service. However, we hope the adaptations to our practice can help guide other clinicians working in this area who like us, have found their routine practice disrupted by the current pandemic. We wish to highlight the importance of clinicians working with their infection control teams as advice may vary. Most importantly however, clinicians should still consider any potential differences between standardised administration procedures and the modified approach adhering to infection

control. However, our intent was to facilitate restoration and continuation of services for people with ID.

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