Telepractice and the Bayley-4

The telepractice information in this document is intended to support professionals in making informed, well-reasoned decisions regarding remote assessment. This information is not intended to be comprehensive regarding all considerations for assessment via telepractice. It should not be interpreted as a requirement or recommendation to conduct assessment via telepractice.

Clinicians should remain mindful to:

- Follow professional best practice recommendations and respective ethical codes
- Follow telepractice regulations and legal requirements from federal, state and local authorities, licensing boards, professional liability insurance providers, and payors
- Develop competence with assessment via telepractice through activities such as practicing, studying, consulting with other professionals, and engaging in professional development.

Clinicians should use their clinical judgment to determine if assessment via telepractice is appropriate for a particular child, referral question, and situation. There are circumstances where assessment via telepractice is not feasible and/or is contraindicated. Documentation of all considerations, procedures, and conclusions remains a professional responsibility.

The Bayley-4 has two administration methods: The Social-Emotional & Adaptive-Behavior scales, questionnaires completed by parents or caregivers, and the Cognitive, Language and Motor scales, administered by a qualified professional through observation and direct interaction with the child.

For telepractice administration, The Social-Emotional & Adaptive-Behavior Questionnaires can be administered in 2 ways:

1. using Q-global for Remote On-Screen Administration (ROSA) which does not require video contact;
2. using Q-global for On-Screen Administration (OSA) via video-conferencing.

For ROSA, clinicians use Pearson's Q-Global system to email a link (URL) to parents or caregivers who then use the link to access and complete the questionnaire using any internet connected device; upon completion the questionnaire is immediately ready for reporting in Q-global. For OSA, the items may be read aloud to the parent/caregiver using the guidelines on page 270 of the Bayley-4 Administration Manual. This requires the use of video-conferencing and screen sharing to allow the parent/caregiver to view the questions and responses as they are read aloud by the clinician. Details regarding the Q-global system and how it is used are provided on the Q-global product page.

Either approach allows the clinician to calculate raw scores and derive norm-referenced scores for the Bayley-4 Social-Emotional and Adaptive Behavior scales.
The Cognitive, Language and Motor subtests cannot be administered in a standardized format via telepractice. However, the clinician can interact with and observe the child via telepractice to obtain qualitative information on cognitive, communication and motor skills (e.g., attends to the clinician on camera, shifts attention when name is called, babbles, reaches and grasps objects etc.). The clinician can review the Bayley-4 items at the age-appropriate start point in order to identify developmentally relevant skills. Information can be obtained through observation or caregiver questions; however, items involving specific manipulatives cannot be administered remotely.

Refer to the Item Presentation Summary located in the Q-global resource library for full details of items for which information can be obtained through observation or caregiver questions. This document is also hosted in the Q-global resource library. Further guidance on using the document is available in the following recorded presentation:

Bayley-4: Considerations if using Telepractice

Further guidance on developmental risk indicators is available in Appendix A of the Bayley-4 Technical Manual, and in Chapters 8, 9 and 10 of the Bayley-4 Clinical Use and Interpretation (Aylward, 2020).

This approach does not allow for calculation of scores for the cognitive, language and motor scales, but clinicians can use observations and information from the caregiver to inform their clinical opinion. The term “informed clinical opinion” appears in the regulatory requirements for the implementation of Part C of the Individual with Disabilities Education Act (IDEA) as an integral part of an eligibility determination. Using quantitative and qualitative information from the Bayley-4, along with information on the child’s developmental history, interviews with parents, and information from medical providers, social workers, and educators, clinicians can make recommendations about the child’s current developmental status and the potential need for early intervention.

Conducting Telepractice Assessment

Conducting a valid assessment in a telepractice service delivery model requires an understanding of the interplay between a number of complex issues. In addition to the general information on our telepractice overview page, professionals should address five factors (Eichstadt et al., 2013) when planning for administering Bayley-4 via telepractice:

1. Telepractice Environment & Equipment

Computers and connectivity

Two computers with audio and video capability and stable internet connectivity—one for the examiner and one for the caregiver/examinee—are required. A web camera, microphone, and speakers or headphones are required for both the examiner and the caregiver/examinee. It is recommended that the examiner have a second computer screen so that he or she can view the Administration and Scoring Manual, but the paper format manual can also be used. The second computer or large screen also tends to make sharing test content more straightforward for the examiner.

Teleconference platform

A teleconference platform is required. Screensharing capability is required if anything other than items with verbal stimuli and responses are administered.
Video

High-quality video (HD preferred) is required during the administration. Make sure the full faces of the examiner and the caregiver/examinee are seen using each respective web camera. The teleconference platform should allow all relevant visual stimuli to be fully visible to the caregiver/examinee when providing instruction or completing items; the view of the examiner should not impede the caregiver/examinee's view of visual test stimuli.

Test item security in the audiovisual environment

The examiner is responsible for ensuring test item security is maintained, as outlined in the Terms and Conditions for test use. The examiner should address test security requirements with the caregiver/examinee (and facilitator, if applicable) during the informed consent process. The examiner should make it clear that the video should not be captured, photos should not be taken, and stimuli should not be copied or recorded, as this is a copyright violation. The caregiver/examinee must agree that they will not record (audio or visual) or take photos or screenshots of any portion of the test materials or testing session, and not permit anyone to observe the testing session or be in the testing room (except for a facilitator, when necessary).

Peripheral camera or device

A stand-alone peripheral camera that can be positioned to provide a view of the session from another angle or a live view of the examinee is helpful. Alternately, a separate device (e.g., a smartphone with a camera or another peripheral device) can be connected to the teleconference and set in a stable position to further capture observations of the examinee. The device's audio should be silenced, and microphone should be muted to prevent feedback.

Audio considerations

For audio interaction during the administration, make sure the audio is working as expected. Test the audio prior to the administration through the caregiver/examinee's speakers to ensure a high-quality audio environment is present.

Manage audiovisual distractions

As with any testing session, the examiner should do everything possible to make sure the caregiver/examinee's environment is free from audio and visual distractions. If the examiner is unfamiliar with the caregiver/examinee's planned physical location, a visual tour of the intended testing room should be given during the initial virtual meeting. The examiner can then provide a list of issues to address to transform the environment into one suitable for testing. For example, remove distracting items, silence all electronics, and close doors. The examiner should confirm that these issues have been addressed at the time of testing. If possible, the caregiver/examinee should be positioned facing away from the door to ensure the examiner can verify through the caregiver/examinee's camera that the door remains shut and can monitor any interruptions. The examiner should confirm that all other applications on the computer, laptop, or peripheral device are closed, the keyboard is moved aside or covered after the session is connected, and alerts and notifications are silenced on the peripheral device. Radios, televisions, other cellular phones, fax machines, smart speakers, printers, and equipment that emit noise must be silenced and/or removed from the room.

Lighting
Good overhead and facial lighting should be established for the examiner and caregiver/examinee. Blinds or shades should be closed to reduce sun glare on faces and the computer screens.

**Disruptions**

The examiner should record any and all atypical events that occur during the testing session. This may include delayed audio or video, disruptions to connectivity, the caregiver/examinee being distracted by external stimuli, and any other anomalies. These should be noted and considered during interpretation and described in the written report.

**2. Assessment Procedures and Materials**

**Copyright**

Permission must be obtained for access to copyrighted materials (e.g., stimulus books, response booklets) as appropriate. Pearson has provided a [letter of No Objection (PDF | 75.02 KB)](https://www.pearsonassessments.com/professional-assessments/digital-solutions/telepractice/telepractice-and-the-bayley-4.html) to permit use of copyrighted materials for telepractice via teleconference platform and tools to assist in remote administration of assessment content during the COVID-19 pandemic.

**Digital assets**

The examiner should practice using the digital assets until the use of the materials is as smooth as a face-to-face administration. It is not recommended that the examiner display items from paper stimulus books on a camera.

Monitor the test session and the respondent's interaction with the test materials to ensure confidentiality and test session integrity as appropriate.

**Responding to Caregiver Questionnaires**

For ROSA ensure that the person completing the rating forms has a working email address in order to access the forms.

For ROSA and OSA, emphasize to the respondent(s) to follow the instructions as stated on the forms. For ROSA, provide valid examiner contact information in case the respondent has a question or problem with the online administration.

**3. Examinee Considerations**

**Appropriateness**

The examiner should first ensure that a telepractice administration is appropriate for the examinee and for the purpose of the assessment. Clinical judgment, best practice guidance for telepractice (e.g., APA Services, 2020; ASPPB, 2013; IOPC, 2020), information from professional organizations and other professional entities (e.g., licensing boards, legal resources, professional liability insurance providers, payors), consultation with other knowledgeable psychologists, existing research, and any available federal or state regulations should be considered in the decision-making process. Consideration should be given to whether the necessary administrative and technological tasks involved in a telepractice session can be accomplished without influencing results.

**Preparedness**
Before initiating test administration, the examiner should ensure that the
caregiver/examinee is well-rested, able, prepared, and ready to appropriately and
fully participate in the testing session.

Facilitator role

If using a facilitator, the role of the facilitator must be explained to the
caregiver/examinee so participation and actions are understood.

Mouse

On some teleconference platforms, the examiner can pass control of the mouse to
allow the caregiver to point to indicate responses; this is an option if it is within the
capabilities of the caregiver. However, best practice guidelines provide cautions
about this. For example, the IOPC guidelines suggest examiners be alert throughout
administration, return control of the screen once the task is finished, and never
leave the computer unattended while the caregiver/examinee has control over the
examiner's computer (IOPC, 2020).

4. Examiner Considerations

Practice

Practice the mechanics and workflow of assigning, starting, and completing the
assessment using the On-Screen Administration capabilities of Q-global before you
go through this process with a caregiver so that you are familiar with the
administration procedures

During the telepractice setup, and before administering to any actual
caregiver/examinee, the examiner should rehearse the mechanics and workflow of
every item in the entire test using the selected teleconference platform so that the
examiner is familiar with the administration procedures. For example, a colleague
could be used as a practice examinee.

Standardized procedures

The examiner must follow the administration procedures of in-person
administration as much as possible. For example, if a spoken stimulus cannot be
said more than once during in-person administration, the examiner must not say it
more than once in a telepractice administration unless a technical difficulty
precluded the caregiver/examinee from hearing the stimulus.

Administrative and technological tasks

In order to conduct a smooth telepractice session, audiovisual needs and materials
must be managed appropriately. The initial virtual meeting involves the examiner,
caregiver/examinee, and/or the facilitator (if used), and is the opportunity for the
examiner to provide information about the audiovisual needs and materials. During
the initial virtual meeting, the examiner should provide training in troubleshooting
audiovisual needs that arise during the testing session, including camera angle,
lighting, and audio checks. The examiner should provide verbal feedback to guide
camera adjustment, checking the onscreen video shown by the peripheral
camera/device to provide information about how to reposition it until the proper
view is shown.

If used, the facilitator is to assist with administrative and technological tasks and not
to manage rapport, engagement, or attention during the testing session. The
examiner should direct them not to interfere with the caregiver/examinee's
performance or responses. Any other roles and responsibilities for which an
examiner needs support, such as behavior management, should be outlined and trained prior to the beginning of the testing session. The examiner is responsible for documenting all behaviors of the facilitator during test administration and taking these into consideration when reporting scores and performance.

5. Other Considerations

There are special considerations for written reports describing testing that takes place via telepractice.

The professional completing the written report should state in the report that the test was administered via telepractice, and briefly describe the method of telepractice used. For example, “The Bayley-4 was administered via remote telepractice using observations and caregiver questions to elicit information during the live video connection using the [name of telepractice system, e.g., Zoom] platform.”

The professional should also make a clinical judgment, similar to an in-person session, about whether or not the examiner was able to obtain the examinee's best performance. Clinical decisions should be explained in the report, including comments on the factors that led to the decision to conduct testing via telepractice and to report all (or not to report suspect) scores. In addition, it is recommended that the report include a record of any and all atypical events during the testing session (e.g., delayed video or audio, disruptions to connectivity, extraneous noises such as phone ringing or loud dog barking, person or animal unexpectedly walking into room, the caregiver/examinee responding to other external stimuli). List and describe these anomalies as is typical for reporting behavioral observations in the written report, as well as any observed or perceived impact on the testing sessions and/or results, and consider these in the interpretation of results. For example, “The remote testing environment appeared free of distractions, adequate rapport was established with the caregiver/examinee via video and s/he appeared appropriately engaged in the task throughout the session. No significant technological problems were noted during administration, and the results are considered to be a valid estimate of the examinee's skills/abilities.”

Conclusion

The Bayley-4 has two administration methods: The Social-Emotional & Adaptive-Behavior scales, questionnaires completed by parents or caregivers, and the Cognitive, Language and Motor scales, administered by a qualified professional through observation and direct interaction with the child. Provided that you have thoroughly considered and addressed all five factors and the special considerations as listed above, and based on the available research, there is little reason that you should have concerns about the reliable and valid delivery of the Bayley-4 Social-Emotional & Adaptive-Behavior questionnaires via telepractice as well as the use of the normative data. However, the Cognitive, Language and Motor scales of the Bayley-4 were not standardized in a telepractice mode, and this should be taken into consideration when using the observations and caregiver responses to inform clinical opinion. For example, the examiner should consider relying on convergence of multiple data sources and/or being tentative about conclusions.

You may use the Bayley-4 via telepractice without additional permission from Pearson in the following published context:
Bayley-4 Social-Emotional & Adaptive-Behavior form On-Screen Administration (OSA) or Remote On-Screen Administration (ROSA) via Q-global, or paper record form.

Bayley-4 manuals, Behavior Observation Inventory, and Observation Checklist

Bayley-4 Item Presentation Summary, located in the Q-global resource library

Any other use of the Bayley-4 via telepractice is not currently recommended. This includes, but is not limited to, scanning the paper stimulus books, digitizing the paper record forms, holding the stimulus books physically up in the camera’s viewing area, or uploading a manual onto a shared drive or site.

References and selected research to date

See Bayley-4 Item Presentation Summary located in the Q-global Resource Library


A customer reflects on using Q-global digital stimulus books and manuals:

Q-Global has been a great solution for us. Managing testing materials between a variety of sites and districts could be very tricky. The online testing materials have completely resolved any access challenges we faced. Observing and recording the client's response through telepractice continues to require a good deal of coordination—particularly for pointing activities. However, the clinician being able to directly manage test stimuli and present them to the client through screen share technology makes that process much less cumbersome.

Thank you for being so proactive with making your tools accessible to telepractitioners!

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