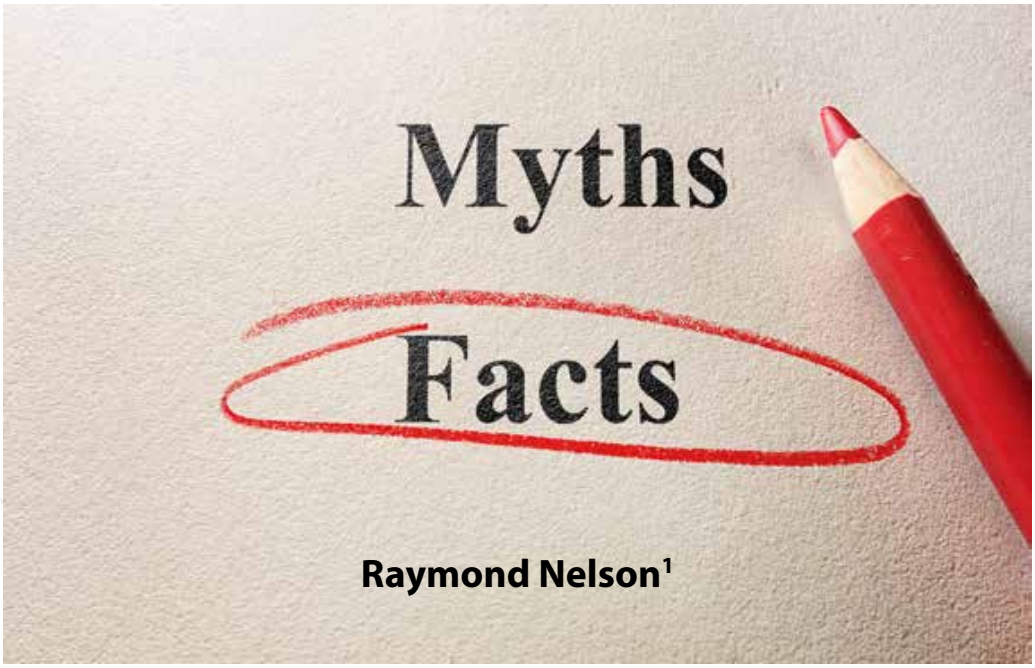
Practical Polygraph: Managing the Cardio Cuff Sensor During the Pretest Interview



©FotoliaLLC/zimmytws

Raymond Nelson[1]

Effective management of the cardio cuff sensor, including the physical placement of the sensor and communication with the examinee, can increase the effectiveness of the test by reducing the occurrence of potential problems. Potential problems associated with the cardio sensor can include distraction of examinee attention away from the test stimuli, interpersonal drama, and suboptimal data quality. Cardio data quality, though

1. Raymond Nelson is a psychotherapist and polygraph examiner who has conducted several thousand polygraph examinations. He has expertise in working with perpetrators and victims of sexual crimes and other abuse and violence. Mr. Nelson has expertise in statistics and data analysis and is one of the developers of the OSS-3 scoring algorithm and the Empirical Scoring System. He is a researcher for Lafayette Instrument Company (LIC), a developer and manufacturer of polygraph and life-science technologies, and is also a past-President of the American Polygraph Association (APA), currently serving as an elected Director. Mr. Nelson teaches and lectures frequently throughout the United States and internationally, and has published numerous studies and papers on all aspects of the polygraph testing, including the psychological and physiological basis, test data analysis, faking/countermeasures, interviewing and question formation and test target selection. Mr. Nelson has been involved in policy development at the local, state, national and international levels in both polygraph and psychology, and has testified as an expert witness in court cases in municipal, district, appellate, superior and supreme courts. Mr. Nelson is also the academic director of the International Polygraph Training Center (IPTC). There are no proprietary or commercial interests and no conflicts of interest associated with the content of this publication. The views and opinions expressed in this publication are those of the author and not necessarily those of the APA, LIC or IPTC. Mr. Nelson can be reached at raymond.nelson@gmail.com.

beyond the scope of this article, may also be affected by a combination of other factors, including cardio cuff placement, the physical position of the examinee, and individual physiology.

Effective communication with the examinee during the early stages of the pretest interview can help to avoid problems, improve data quality, and increase the effectiveness of polygraph test results. The pretest interview can be conducted as a structured interview that is executed verbatim, without deviation, according to a carefully prepared or memorized script, or a semi-structured interview in which the examiner and examinee provide and exchange a structured list of information points in a dialogue that emerges in the natural language and communication styles of the two individuals.

Structured interviews have the advantage of consistency, though they also give rise to questions about the need for expensive professional expertise because the exchange of structured verbatim information does not require expertise, and can be accomplished with even greater consistency and less expense using a paper-and-pencil task, computerized kiosk task, or recording. Semi-structured interviews attempt to provide an outline or information structure to an interpersonal task, while fostering increased engagement and rapport between polygraph interviewer and polygraph examinee. The main requirement of a semi-structured interview is to clearly express and exchange all the information points defined in the semi-structured interview protocol.

The onset or initial stage of the polygraph pretest interview is simply to greet the examinee, introduce and identify the names and pronouns to be used during the examination, and, of course, to positively identify the examinee and the role of the polygraph examiner. Following that, the examiner should proceed to briefly summarize and explain the polygraph process. This is to ensure that the examinee is properly informed about the ensuing polygraph process, so that the examiner can obtain the examinee's informed consent to proceed with the polygraph examination. Informed consent requires that the examinee has been provided with correct information about what will be done during the examination – including the pretest interview, test data recording, and analysis phases – and who will receive information from the examination. A summary of the polygraph process will include a brief explanation of the polygraph sensors that will be attached to the examinee during data acquisition. Following is a list of information points that can be explained to the examinee.

- Polygraph examiners do not check or measure blood pressure during

testing

- Normal blood pressure is 120/80mmHg (read: "120 over 80 millimeters of mercury")
- Cuff pressure during polygraph testing is approximately 65mmHg, and is adjusted for each examinee to optimize data quality and examinee comfort
- 65mmHg of pressure is less than 120/80, meaning that is not mechanically possible to completely occlude or completely cut-off circulation during testing, though circulation may be reduced during testing
- Some persons report the cardio cuff sensor is uncomfortable
- Some persons find their hand will turn red during testing
- Some persons find their hand will become tingly during testing
- These effects are not harmful
- The color and sensations in the hand will quickly return to normal after testing is completed

Some examinees may be concerned about their blood pressure or they may be concerned that their blood pressure may affect the test result. Informing the examinee that the polygraph test does not involve actual measurement of blood pressure serves to help assure the examinee that this type of medical concern will not affect the test. Informing the examinee that normal blood pressure is 120/80mmHg can help to elicit information from examinees who may report that they have high blood pressure or low blood pressure. Although this does not affect the examination, it can help the examiner to more easily anticipate the kinds of cuff pressure and sensitivity adjustments that will be necessary to optimize the examinee's recorded data. More importantly, the examinee should be reassured that the cuff in not completely occlusive and does not cut off circulation during testing.

Discomfort from the blood-pressure cuff is a known concern. Although most examinees will deny attempting to access information about the polygraph prior to the examination date, many will, in fact, have read information on the Internet or will have spoken to others about the test. Examinees who have sought out information on the polygraph may have encountered dramatized portrayals of this, leading to elevated levels of apprehension about the test.

It will not suffice for polygraph professionals to attempt to assert that the cardio cuff is not uncomfortable. Attempts to do so might damage rapport and professional credibility. Here, polygraph examiners will be wise to take their lessons from dentists and nurses – professionals who routinely work with persons who make experience discomfort. Experienced profes-

sionals, when asked about the possibility of discomfort, know that any excuses or dishonesty about the experience of discomfort will result only in a loss of professional credibility and trust. They will respond in a neutral and factual manner, without either minimization or exaggeration. They will not make repeated inquiries into the experience of discomfort, knowing that attention is best devoted to the task at hand, and that repeated inquiry about discomfort will only result in increased difficulty. Instead, discussion of these matters in the early stages of the pretest interview serves to permit the spontaneous expression of discomfort if necessary.

The optimal approach will be for polygraph professionals to remain factual, with a neutral demeanor that neither exaggerates nor minimizes the potential for discomfort from the cardio cuff sensor. Some examiners may choose to wait for the examinee to inquire about discomfort before engaging this discussion.

Another approach will be to engage the discussion of discomfort without waiting for inquiry and without waiting for the examinee to react with surprise. The advantage of this will be to provide information to those examinees who may have wondered but did not find a way to ask. When discussing the issue of discomfort from the cardio cuff sensor, the examiner will provide factual and neutral information about the potential for the hand to turn red or reddish during testing, in addition to the potential for a tingling sensation because of reduced distal circulation during testing. Discussion at this early stage of the pretest interview can help to prevent distraction during data acquisition and recording, and may also serve to reduce the amount of real or feigned emotional and behavioral reactivity that examinee's may engage in when they notice these things during testing. Discussion of these potential sensations during the pretest interview also provides the examiner an opportunity to avoid difficulties by reassuring the examinee that the polygraph testing process is not harmful, despite what they have read or heard previously.

Of course, some examinees intend on being disruptive to the test as a strategy to either conceal the fact that they are being deceptive or in attempt to distort the polygraph test data and result. In these cases, there may be nothing that will adequately reduce the drama and disruption an examinee introduces to the testing context. Learning to manage the cardio cuff sensor during the pretest interview can give the professional examiner an opportunity to observe whether the examinee is capable of and willing to cooperate during testing.

For innocent and truthful individuals who desire to cooperate and produce favorable testing outcomes, the provi-

sion of factual and correct information through professionally neutral and accountable discussion can help to construct an effective rapport between examiner and examinee, leading to the calm, relaxed, awake and alert psychological states that are knows to be associated with more effective attention, concentration, cooperation, memory, comprehension and communication. If properly discussed at the early stages of the pretest interview, in the context of obtaining the examinee's informed consent for testing, it should not be necessary to engage in any later inquiry or discussion about discomfort from the cardio cuff sensor; doing so will encourage reactivity to perceptions that the cuff is somehow harmful. A systematic and well-organized and well-prepared understanding of the information contained in the brief summary will enable the examiner to devote more attention to the task of understanding the examinee and building conversational rapport that can support the development of more useful information during the remainder of the pretest interview.