Hospital Hearing Screening Equipment
Evaluation Considerations

Are you purchasing new equipment for your facility? If so, beware that not all equipment is created equal. The importance of making an educated choice when purchasing equipment best suited for your facility cannot be over emphasized. It is in your best interest to use published best practice references and reliable resources to assist you in making informed decisions versus relying on equipment manufacturers.

These decisions can significantly impact:

- Best screening practices
- Screening integrity
- Equipment performance
- Cost per baby
- Mechanism for exporting and merging
- Meeting state reporting requirements
- Customer service and support

The following considerations can help guide your investigation. Asking questions and comparing features between the different screeners can help you in the decision-making process. You may also consider requesting that the manufacturers loan you equipment for a trial period prior to committing to a purchase. Other options are to contact other hospitals for their feedback on the equipment you are investigating.

Best screening practices
Depending on nursery levels (well baby versus NICU), what screening technology will ensure best practices are being used, i.e. OAE versus AABR or both?
* When screening in the well baby nursery, a 2-step protocol consisting of OAE and AABR, when infant refers on OAE (versus OAE only) will render lower refer rates and keep disposable costs down. NICU babies should only be screened with AABR.

Screening integrity
Taking into consideration that a newborn’s ear canal can vary in size, it is important to ask about accuracy of the stimulus level being presented in the baby’s ear and how the equipment monitors and adjusts the level to ensure accuracy.
* The standard presentation level of sound in AABR screening is $\leq 35 \text{ dB nHL}$ thus detecting mild to moderate hearing loss in babies. Not all screening equipment has the ability of assuring accuracy in the sound pressure level (SPL) presented which could result in passing babies with more significant hearing losses.

Equipment Performance
Some of the newer equipment is updated in the way it determines a pass versus a refer result. It is also improved in its performance in the presence of noise and artifact. These characteristics can significantly impact screening performance, increase accuracy and decrease screening times. It is also beneficial to screen with the equipment “unplugged” by way of a rechargeable battery, if there is an excessive amount of electrical interference or unexplained artifact, while plugged in. It is important to ask questions about the features that improve equipment performance.
Cost of screening each baby
There is significant variability in per-baby disposable costs depending on technology and equipment. For example; with OAE screening, the cost of the disposables may vary among screening units, but there is only one option per device. However, ABR screening equipment some devices have up to 3 different ways to place sound into the baby’s ears and the costs and method for each differs. A comparison between the different options should be demonstrated in order to make the best choice for your facility from a cost and practical perspective.

Mechanism for exporting and merging
Historically, the export of screening data from the equipment was on a floppy, CD disk or flash drive. For data security and HIPAA reasons, many hospitals no longer allow the use of these tools. Fortunately, equipment now allows seamless transmission of data through the internet directly from the screening equipment to HiTrack Web. It is important to verify that this feature is available.

Meeting state reporting requirements
Different equipment software varies in the process and accuracy of exporting and merging data from the screening equipment to HiTrack. Although the equipment manufacturer may in general, report their equipment works with HiTrack, it does not mean that the majority of required data elements merge seamlessly. Specific questions should be asked and a demonstration showing the export and merge process as well as verification of the merge will prevent unnecessary frustration, minimize data management activities and improve workflow.

Customer service and support
The importance of good customer support cannot be overemphasized. Ideally, it is best to have local representation to address issues that arise. Not all manufacturers provide this. Below are some questions you may want ask:
• What happens if my equipment doesn’t appear to be working properly?
• How quickly are issues addressed?
• How quickly can I get a replacement part?
• Is there 24/7 customer support?
• Does the company provide in-state, on-site, technical support?
• Are loaner units available if my equipment breaks down and requires that the unit get shipped back to the factory? Is there a loaner charge?
• What is the warranty period and what is covered/not covered?

Resources and References:
• National Center for Hearing Assessment and Management (NCHAM). Newborn & Infant Hearing Screening - Equipment Manufacturers and Products. http://www.infanthearing.org/resources/linksequipment.html

Contact the state contracted audiologist randiwinston@mac.com with any questions you may have.