



September 18, 2009

## MEMORANDUM

**To:** Shelly Martinez, Kashka Kubzdela  
**From:** Gail Mulligan, Jill Carlivati, Chris Chapman  
**Subject:** Changes to the ECLS-K:2011 Hearing Screening

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This memo provides a description of the proposed changes to the hearing screenings that are to be conducted as part of the Early Childhood Longitudinal Study, Kindergarten Class of 2010-11 (ECLS-K:2011). These changes to the data collection protocol for the hearing test are recommended as a result of ECLS-K:2011 staff observations during health technician training for the field test. During training, staff noticed that the younger children being screened experienced some unease about the ear pressure test (the test of tympanometry). Study staff decided to not conduct any hearing screenings in the field test until consensus could be reached with the cosponsor funding the study about how to proceed with all children in the sample. As a result, no hearing screenings have been conducted in the field to date.

We would like to do the ear pressure test only with the older children (second and third graders) as opposed to the full sample (kindergarten through third grade) as originally proposed in the OMB clearance request. All children would continue to be administered the screening that tests children's ability to hear sounds at certain frequencies (audiometry). In addition, we would like to make the hearing test for children of all grades in the study conditional on active consent by parents; previous protocol would have allowed for passive consent in schools that only required this type of consent. The hearing screening flyer has been updated since the 7/28/09 change request submission to reflect these changes; the updated text is attached below.

With your approval, we look forward to implementing the updated hearing protocol in the ECLS-K:2011 field test, which is already underway. Please let us know if you would like additional information. If you have any questions regarding the hearing screening, please contact the ECLS-K:2011 Project Officer Gail Mulligan (502-7491), ECLS-K:2011 Staff Member Jill Carlivati (219-7002), or ECHS Program Director Chris Chapman (502-7414).

Thank you very much for your prompt attention to this issue.

**Updated text of the Hearing Test Flyer (replaces page 9 of  
“ECLS-K11\_Appendix C PDF Respondent Materials.pdf”  
submitted as part of 1850-0750 v.6 change request)**

**Why test children’s hearing?**

Good hearing ability is important for doing well in school. In order to learn well, children must be able to hear and understand what is going on around them. Even minor hearing losses can lead to problems in school. Some children may be born with a hearing loss that is not detected. Children may also develop hearing loss due to ear infections, accidents, loud noise, or medications. As part of the Early Childhood Longitudinal Study, Kindergarten Class of 2010-11 (ECLS-K:2011), trained technicians will assess participating children’s hearing. Information collected through the ECLS-K:2011 will provide needed information on the emergence of hearing problems in a national sample of young children and help to further explain how hearing loss is related to academic experiences and performance.

In Phase I of the ECLS-K:2011, we will be evaluating the feasibility of including a hearing screening in the school environment that incorporates best practices and procedures for screening hearing in young school-age children as part of Phase II. This evaluation will include a test of two types of hearing equipment to determine which works best in a school setting, as well as a comparison of different procedures for administering the screening (e.g., use of over-the-ear headphones or insert earphones). More information on the specific screening activities that will be conducted as part of Phase I are described below.

**How will hearing be tested?**

Testing your child’s hearing will take about 15 minutes.

Children in kindergarten and first grade will be asked to wear headphones over their ears, and the technician will play a series of short tones through them to measure how well children can hear certain sounds. The tones will have various pitches from low to high and will gradually become softer and softer until your child cannot hear them. The technician will ask your child to raise his or her hand whenever he or she hears a tone.

Screening for second- and third-graders includes exams that are routinely performed by audiologists. Before performing the hearing screening, the technician will ask your child whether he or she has an earache or infection; if so, your child will not be screened. For children who do not report an earache or infection, the technician will look into the child’s ear canals with an otoscope (a light such as the one your doctor uses) to see if anything (such as earwax) is blocking them. The technician will not attempt to remove blockages, but will use this information to determine which parts of the hearing screening are appropriate and safe for your child. At this point in the screening the technician also will press on the outside of the ear while watching the inside with the light to see how the child’s ear canal reacts.

The technician will then perform two additional screenings. First, the technician will check to see how well your child’s eardrums move. Eardrums vibrate in response to sound, but sometimes ear infections or fluid in the ears can prevent them from moving properly and affect a child’s ability to hear. During this test, the technician will cover your child’s ear canal with a rubber-covered seal placed into the outer ear and send

sounds into the ear canal while changing the pressure in the ear to measure the eardrum's response. Second, the technician will measure how well your child can hear certain sounds. To do this, the technician will use inserted earphones, which are small foam-covered tips that are placed inside the ear canal, and play a series of short tones through them. The tones will have various pitches from low to high and will gradually become softer and softer until your child cannot hear them. The technician will ask your child to raise his or her hand whenever he or she hears a tone. A subset of children also will have the short tones played for them while watching a computer monitor. This exam has the child touch the screen to report whether tones were heard rather than raising his or her hand. Children who have a blockage in their ears will be asked to wear headphones that cover their ears, rather than insert earphones, for these exams.

If any child tires of any of these exams or reports any discomfort at the feel of the earphones or headphones, the exams will be stopped. For each child screened, the technician will either use a new set of disposable components or will disinfect nondisposable equipment that touches the child's ears.

Parents will be asked to sign consent forms to indicate that their children can participate in this aspect of the study. You will receive a letter with the findings of your child's hearing exam. If technicians find that your child's exam suggests possible hearing problems, the letter will suggest that you talk with your child's doctor or a health care provider who specializes in hearing assessments, such as an audiologist or an ENT (ear, nose, throat) doctor.

The hearing screening is being conducted in collaboration with the National Institute on Deafness and Other Communication Disorders (NIDCD), National Institutes of Health (NIH), (<http://www.nidcd.nih.gov>), which is a cosponsor of the ECLS-K:2011.