

# Preschool Hearing and Speech Education – University of Pittsburgh (PHASE-UP)

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## What is PHASE-UP?

The Preschool Hearing and Speech Education – University of Pittsburgh (PHASE-UP) program collaborates with local preschools in the Pittsburgh community to offer no-cost, evidence-based hearing and speech screenings to preschoolers from a broad spectrum of diverse backgrounds.

On average, 800-1,000 preschool children are seen through PHASE-UP every year.

Under the supervision of a certified clinical audiologist and speech-language pathologist, 1<sup>st</sup>-year graduate students in the Doctor of Audiology (AuD) and Master of Arts/Master of Sciences in Speech-Language Pathology (SLP) programs perform the hearing and speech screenings.

## The Importance of PHASE-UP

Universal newborn hearing screening (UNHS) has significantly lowered the age at which congenital hearing loss is detected in children. As a result, children can now receive early intervention for hearing loss within their first year of life. However, UNHS does not ensure that all children with hearing loss are identified and receive early intervention due to false negatives, late-onset hearing loss, and other preventative factors.

The prevalence of hearing loss rises from 1-3 cases per 1,000 at birth, to 9-10 cases per 1,000 children in school (CDC, 2020). This statistic emphasizes that as children become older, unidentified hearing loss becomes more pronounced.

PHASE-UP seeks to bridge this gap of unidentified hearing loss during crucial periods of childhood development. This benefits children and families of local communities and in turn provides students with a unique academic and personal experience that enhances clinical skillsets across disciplines.

## Equipment & Supplies

Handheld screeners (DPOAE & pure tones)



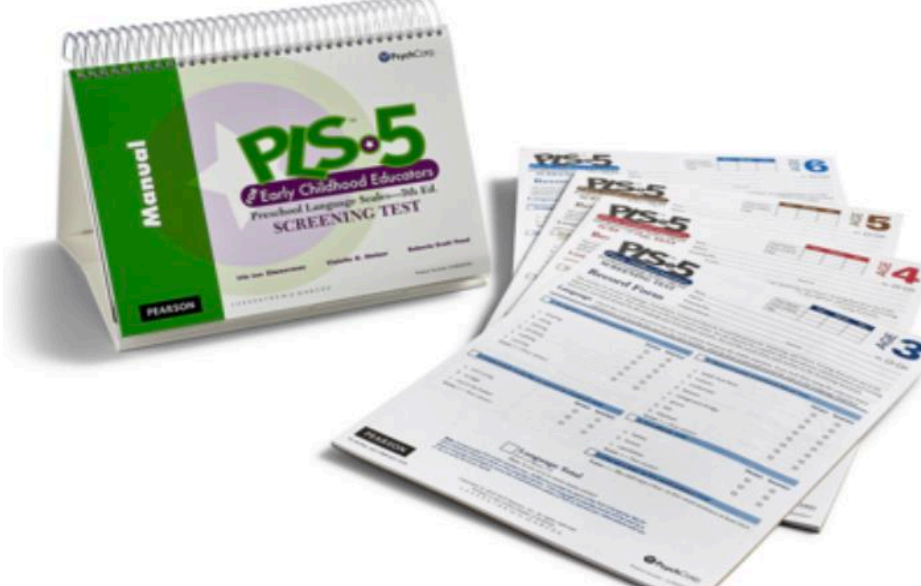
Sentiero Desktop (tymps, DPOAEs, & pure tones)



Welch Allyn otoscopes



The Preschool Language Scale 5 (PLS-5) screener



Personal Protective Equipment (PPE)



Headphone covers, stickers, clipboards, & pens



Additional Items:

- Paperwork (parent letter, cover letter, discipline specific data sheets)
- CPA toys that target age-appropriate fine motor tasks

## Coordination & Training

### Coordination

- Preschools are scheduled by the PHASE-UP Coordinator every summer preceding an academic year
- Schools are emailed to remind them about the screening day
- Parent consent forms are provided to the school to be collected prior to the screening day

### Student Training

- Training for 1<sup>st</sup>-year AuD and SLP students occurs over 1.5 days prior to the start of fall semester
- Training consists of didactic sessions and hands-on learning
- A peer teaching model involving 2<sup>nd</sup>- & 3<sup>rd</sup>-year AuD students is implemented for training hearing screenings
- Training topics include:
  - Rationale for screenings
  - Accessing the schedule
  - Site location directory and transit options
  - Process of checking-in and out equipment
  - Specific screening protocols and hands-on practice



## A Typical Screening Day

### Preparation

- Arrive 30 minutes prior to the start of the screenings
- Set up screening stations to minimize visual distractions and influence of external noise
- Complete biologic listening checks
- Conduct ambient noise-level readings using the NIOSH smartphone app
- Discuss screening goals

### Screenings

- Proper personal protective equipment (PPE) is used throughout the screenings
- Children are transported to the screening room by a staff member and/or graduate student
- Graduate students establish rapport with the child
- Testing begins with a task that is comfortable to the child
- Clinical instructor is present to assist with any testing needs
- Each child receives a sticker when screening is complete



### Hearing screenings consist of

- Tympanometry &/or otoscopy
- DPOAEs
- Pure-tone sweeps at 20 dB HL at 1000, 2000, & 4000 Hz in each ear



The PLS-5 screener is used to complete the speech screening.

### Results

- Screen results are documented on a discipline-specific data sheet and conveyed to the school staff
- Results are transferred to a "Parent Letter"
- Parents receive both the Parent Letter and a cover sheet explaining the screening tests, results, and next-steps as appropriate (e.g., follow-up with pediatrician)