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TITLE: Turning knowledge of a genetic cause into preventive behavioral interventions:
Proactive speech and language therapy for infants with classic galactosemia continues to
show signs of effectiveness

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ABSTRACT:

Speech and language disorders cannot be diagnosed behaviorally until children are old enough to show signs, age 2 to 3 years. In an ongoing clinical trial, we are addressing the question whether these disorders can be mitigated or even prevented if the risk is predictable at birth. Classic galactosemia (CG) is an inborn error of metabolism that is associated with these communication disorders. Infants with CG have a high (60-80%) risk for developing these disorders. Because they are identified via newborn screening, this risk is predictable at birth. We created a proactive bundle of routines and activities designed to support typical speech and language development. Infants enter the program before age 5 months and complete the intervention at age 2 years. The Babble Boot Camp © is implemented by a speech-language pathologist via parent training. The goals are to shape dyadic interactions, stimulate early vocalizations (coo, babble), support emergence of first words and sentences, and foster vocabulary and syntax growth, all at ages before conventional therapy is available. Here, we report on the progress of 9 children with CG who completed the intervention and one control child with CG. Results show that the treated children produced babble sounds and words with higher articulatory complexity than the control child. Seven children in the treatment group had typical expressive vocabulary sizes whereas the control child and two children in the treatment group had low vocabulary sizes. These results are consistent with beneficial effects of the behavioral intervention on traits of genetic etiology.

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