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Researchers find quick, low-cost tests can accurately identify childhood developmental delays

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BC Children's Hospital and University of British Columbia (UBC) researchers have found that two existing screening tests are accurate in diagnosing development delays in children and could be incorporated in a busy family practice setting with relative ease.

Parents can complete the Ages and Stages Questionnaire (ASQ) or the Parents' Evaluation of Developmental Status (PEDS) at home or in the family physician's office, with the physician scoring the tests and providing results in a matter of minutes.

"Only 30 per cent of children with developmental delays are identified prior to school age – whether that's social, physical or learning – and most experts would agree that we should be identifying those delays earlier through regular screening," says Dr. Marjolaine Limbos, principal investigator and a psychologist at BC Children's Hospital, an agency of the Provincial Health Services Authority.

However, researchers believe the tests aren't routinely administered by Canadian family physicians because they haven't been validated (tested for accuracy) in a primary care setting (physician's office) and because of physicians' concerns about having enough time to administer such tests in a busy practice.

"Right now, the majority of family physicians do the eyeball test," says

co-author Dr. David Joyce, a clinical assistant professor in UBC's Department of Family Practice and a Vancouver family physician. "But research shows that is not very accurate, and kids are falling through the cracks. It's critical to catch and treat disabilities early because the longer you leave them, the more intractable they become. The brain becomes more hard-wired, and opportunities for change become narrower."

The results were published recently in the online version of the *Journal of Developmental & Behavioral Pediatrics*, a leading resource for clinicians, teachers, and researchers involved in pediatric healthcare.

Researchers recruited 334 children between the ages of one and five years old. Families were recruited from more than 80 physician offices in Ontario. The parents completed both the PEDS and the ASQ tests, and children underwent a full battery of psychological testing to serve as a comparison or gold standard. While both tests had reasonable accuracy in picking up abnormalities, the PEDS had a slightly lower accuracy than the ASQ.

The PEDS, the shorter of the two tests, takes five minutes to complete and is based on a parent's recollection of their child's abilities, with yes or no responses. The ASQ is a longer test, taking about 15 minutes, and asks parents about their child's ability to perform certain activities, such as throwing a ball to test motor skills. Both the sensitivity and specificity of the ASQ in identifying developmental delays was higher.

"Our research shows that overall, the ASQ and, to a lesser extent, the PEDS are accurate and can be administered effectively and at low cost," says Dr. Limbos. "The study results will hopefully provide physicians with the confidence that the tests can be incorporated into a busy physician practice with relatively little demand on staff time, with the results being easy to interpret and validate."

Children who are identified as having a developmental disability through the screening tests would then be referred to a specialist for further testing and treatment.

The findings are a part of a larger study the researchers are conducting to examine the accuracy of screening tests used in primary care and the factors related to physician screening for developmental delay.

Provided by University of British Columbia

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