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"Secrets of Life with Brachial Plexus Palsy," A Storybook by An Occupational Therapist, Improves Medical Knowledge Among Parents of Children with Neonatal Brachial Plexus Palsy

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Introduction: Neonatal brachial plexus palsy (NBPP) impacts around 1.4 per 1,000 live births annually. The stretch of brachial plexus nerves causes weakness of the arm, and therapy is the mainstay of treatment. Few available educational materials are appropriate for laypersons. We developed "Secrets of Life with Brachial Plexus Palsy" to help families understand their children's condition.

Objectives: The objective is to evaluate parents' medical knowledge and concerns about NBPP, before and after reading the NBPP storybook.

Methods: The NBPP storybook tells of a baby with NBPP and challenges /opportunities that she and her family face: contained within is didactic information regarding medical knowledge. This cross-sectional study recruited 37 parents of infants with NBPP who were surveyed for (1) their knowledge of brachial plexus anatomy and (2) their concerns about NBPP - before and after reading the NBPP storybook during a 12-month period. Standard statistical analyses were applied for response percentage comparisons.

Results: Overall correctness percentage of NBPP anatomy improved 10% (63% vs 73%, $P=0.001$) after reading the NBPP storybook: 25% of the parents improved understanding regarding numbers of nerve roots and 34% reported better correlation of the specific arm functions conveyed by each nerve root. The parents expressed reduced anxiety and increased confidence with NBPP medical terminology at post-reading.

Conclusions: Our findings demonstrate that an NBPP storybook effectively improve parents' medical knowledge and concerns about NBPP. OTs can function as effective educators to encourage parents' engagement in treatment decision-making, to improve physician/parent communication, and to increase parent satisfaction.