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## PHI Awards \$100,000 for New Research in 2016-2017

Joan L. Headley, Executive Director, PHI

The decision was a difficult one for the review panel of Post-Polio Health International's Research Fund, but ultimately they recommended a two-year study involving the CoughAssist to the PHI Board of Directors.

The CoughAssist (Philips Respironics) is a device that helps to clear secretions from the lungs. It was developed in the early 1990s by the J.H. Emerson Company as the In-Exsufflator. The device was reminiscent of the Cof-flator made in the late 1950s and early 1960s and used by polio survivors. Currently, there are several companies that make similar devices worldwide.

Submitted by Louise Rose, RN, MN, PhD, Associate Professor, Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, Ontario, Canada, the project title is "CoughAssist: use education needs, health service utilization and outcomes." Rose also holds the TD (TD Bank Group) Nursing Professor in Critical Care Research at Sunnybrook Health Sciences Centre, Toronto.

Her co-lead researcher is Mika Nonoyama, RRT, PhD, Assistant Professor at the University of Ontario Institute of Technology and a lecturer in the Department of Physical Therapy at the University of Toronto. Nonoyama also holds a project investigator position at SickKids, Toronto.

In 2014, the publicly-funded Provincial (Ontario) CoughAssist Program was established. The program makes available the device and associated equipment free of charge to ventilator-assisted individuals living at home. A pulmonary specialist's evaluation is required to determine that the device is beneficial for that individual.

These individuals, and those new to the program, will be involved in the research, as well as caregivers.

The research questions include: What education, both initial and ongoing, is needed to assure use of the device? What effect has the availability of

the device had on emergency room visits, hospital admissions, family physician, clinic and specialists visits, e.g., health service utilization, and associated costs? What effect has it had on health-related quality of life and the individual's symptoms, e.g., shortness of breath, fatigue, etc. How does the actual use of the device compare to its prescribed use?

Rose and Nonoyama have lined up an impressive list of experts in noninvasive ventilation and cough augmentation, in both the adult and pediatric populations. In addition, the researchers have assembled experts in knowledge translation; health services and outcomes; qualitative methods of research that include participant observation and interview analysis.

The researchers project that the results will generate a new understanding of the educational needs of users of the CoughAssist, so improvements can be made in service delivery. They also anticipate that the results will validate the use of the device and will offer justification for similar programs around the world, providing greater access to the device, as well as improved symptom relief and quality of life for more ventilator users living at home.

Chair of PHI's Research Committee, Daniel Wilson, PhD, states, "The reviewers felt that even though the device has been used by patients with neuromuscular respiratory conditions for many years, evidence about efficacy is largely anecdotal. There is also little information about obstacles to its use." ■

*The award of \$100,000 will be for activities completed in 2016 and 2017. The next request for proposals will be issued in early 2017 for 2018.*