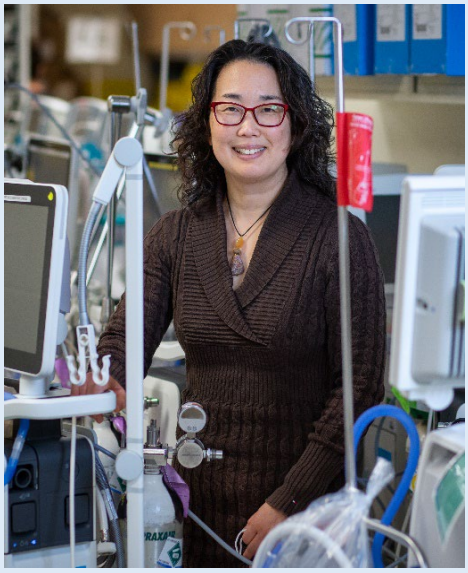
VIRTU-RT-ED
Research Study



Dr. Mika Nonoyama, PhD

Dr. Nonoyama is a registered respiratory therapist with a PhD in the Rehabilitation Science Institute from the University of Toronto. She completed post-doctoral fellowships at Toronto Rehabilitation Institute and the University of Toronto's Lawrence S. Bloomberg Faculty of Nursing. She is currently an Associate Professor in the Faculty of Health Sciences at Ontario Tech University; she holds a status-only Associate Professor position in the Department of Physical Therapy and Rehabilitation Sciences Institute at the University of Toronto, and a Health Clinician Scientist position at SickKids in the Respiratory Therapy Department and Clinical Health Evaluative Sciences.

Dr. Nonoyama, you are the Principle Investigator of a CSRT* funded research study called VIRTU-RT-ED Study. Can you tell us about the study?

This study is an equal collaboration with the team at the Ontario Ventilator Equipment Pool (VEP). Respiratory Therapists (RTs) from the VEP provide health care services and in-person instruction on the use and proper care of equipment, but COVID-19 necessitated virtual or remote appointments. There is little research showing the impact of virtual education and training for people using respiratory technology at home. For two home mechanical ventilators (the AirCurve 10™ ST-A and the Stellar™150), and a device that helps with coughing (CoughAssist™ E70), **this study will determine if education provided virtually is as good as (non-inferior) in-person RT-led educator sessions**, on device usability and difficulty of use. Calls to the VEP, daily device use, participant characteristics, and feedback on educational resources and RT training will also be collected.

What do you hope to learn from this research study? Why is it important to know this? How will this benefit ventilator-assisted individuals?

With the COVID-19 pandemic, telemedicine and other virtual methods have been used to provide health care services. Telemonitoring systems for people who are dependent on a mechanical ventilator have been shown to be safe and beneficial. This allows healthcare providers and patients to remain at home (minimizing risk of spread of infection) and optimizing personal protective supplies like masks and gowns. We could not find studies showing the benefits of remote education and training for patients and family caregivers using respiratory technology over a long period of time. This is a significant knowledge gap that could influence care provided at home. We predict

participant usability and difficulty using the devices after virtual RT-led education will be as good as in-person. We also predict participants will provide useful feedback to improve resources and processes. **This will support the ongoing creation of educational resources and virtual processes for other technology at the VEP, and similar institutions. This will support users of home respiratory technology during the pandemic, to supplement home visits, and/or as an option for initial and ongoing training e.g., reduce travel burden for patients.**

How many participants do you hope to recruit?

We hope to recruit **80 to 100 participants.** Participants must:

- be 18 years of age or older;
- meet government funding and eligibility criteria for the device;
- be new user (or person primarily responsible for overseeing device use);
- fluent in English;
- have access to internet and;
- agree to the collection and use of data over the internet.

What can a research participant expect during the VIRTU-RT-ED study?

Study Procedures will start with describing the details of the study to participants, answering any questions, and getting consent to be enrolled (a process called “informed consent"). Once informed consent is obtained, participants (together with the VEP RT Coordinator) will choose either a virtual or in-person RT-led educator session. Both groups will receive all educational resources provided by the VEP. RT-led educator sessions will be scheduled within 14 days. Participant demographics will be collected immediately after consent is provided. Data on usability, and difficulty of use will be collected at 14 days after the RT-led educator session. The end-of-study survey on the educational resources and training process will also be collected at this time. All data will be collected by a research team member that is not VEP staff using MICROSOFT TEAMS, telephone or email (participant preference), and will not know which intervention group the participant is in (being “blind”).

Whom do I contact for more information?

If you have any questions about this research study, please contact the Principal Investigator Dr. Mika Nonoyama at mika.nonoyama@ontariotechu.ca or 905-721-8668 ext. 5329

*Canadian Society of Respiratory Therapists