Professor Chris Farley Interview

1. To start off, could you give us a quick summary of your research so we can introduce you to our audience?

I'm a PhD candidate in the School of Rehabilitation Science at McMaster University. My MSc work focused on whether research studies of rehabilitation interventions in the Intensive Care Unit (ICU) were delivered as planned. Since moving on to my PhD, my work now focuses on the recovery of patients who were admitted to the ICU once they leave hospital. My PhD studies specifically focus on summarizing the outcomes of post-hospital rehabilitation on ICU survivors, understanding what ICU survivors want and need from a post-hospital rehabilitation program, and to understand if ICU survivors are interested in participating in a research study of post-hospital rehabilitation.

2. How does your background as an acute care physiotherapist influence the way you approach research?

During the defense of my MSc, I recounted how much difficulty I had coming up with original research ideas early on in my research training. Many assignments in graduate school involve designing a study protocol; I always struggled to come up with an idea. As I moved through my research training, my research approach became increasingly influenced by reflecting on my years working as both an ICU and ward physiotherapist. I have seen previously independent patients experience what seemed like unavoidable deconditioning during their recovery from critical illness. On the ward, these same patients were sent home before they returned to their pre-admission functional status. I recall feeling like I was working in a system that was contributing to the deconditioning of these patients, with inadequate resources to help them recover. This experience has been the main influence for my PhD studies. Rather than just *surviving* the ICU, my hope is to develop a program that helps people to *thrive* after their critical illness.

3. Has studying rehabilitation science changed the way you approach ICU recovery?

Yes. Rehabilitation in the ICU is a relatively new treatment; the first physical rehabilitation randomized controlled trial was published less than 20 years ago. Since it is such a new area of practice, there are lots of different approaches to rehabilitation that are being studies, like in-bed cycling, neuromuscular electrical stimulation, and training the breathing muscles. Studying rehabilitation science has afforded me the opportunity to have a better understanding of the current approaches to rehabilitation that are being tested and potentially use them in my clinical practice. Since I started studying rehabilitation science, I've improved at interpreting research methods. This has enhanced my ability to assess how relevant study results are to clinical practice.

4. What inspired you to pursue rehabilitation research?

My inspiration for pursing rehabilitation research is based on my clinical work. In the ICU, despite our best efforts, patients often develop significant muscle weakness. Frequently, these patients are sent home from hospital with ongoing muscle weakness and physical deconditioning. Currently, there are very few programs that exist to support people who have survived an admission to the ICU. My inspiration for pursing rehabilitation research has come from my hope to develop a program that can help people return to doing the things they want in life rather than just surviving.

5. What gaps in current ICU rehabilitation research do you hope to address through your research work?

- For a rehabilitation program to be most effective, it is important that it is designed to match what patients want for their recovery. Currently, there is limited research that has asked ICU survivors what they need or want regarding rehabilitation after they are discharged from the hospital. One of my research studies will address this gap.
- Studies have assessed the effect of post-hospital rehabilitation on physical function in several countries across the world, but no study has been done in Canada. My research will help identify the effect of post-hospital rehabilitation in ICU survivors within a Canadian context.

6. What advice would you give to students who want to get involved in healthcare or rehabilitation research?

A great way to get involved in rehabilitation research is to seek volunteer opportunities from faculty members who are conducting research that interests you. There is so much to learn from conducting a study that can't be appreciated by simply reading about how to do research. If you decide you want to pursue research training, make sure you do your research. Before committing to a particular lab, talk to prospective supervisors and ask to speak with their current and recent trainees. Your supervisor is so influential to your overall trajectory and success; take the time to understand their learning environment and supervisory style to make sure it fits with your learning needs.

7. What were some of the biggest challenges you faced during your PhD, and how did you overcome them?

One major challenge has been balancing ongoing clinical work, research responsibilities, teaching, and life outside of academia without burning out. I've had to get much more intentional about prioritizing projects, saying no to some opportunities, and working with supportive teams so that the work is shared rather than carried alone.

8. For those unfamiliar with post-ICU rehabilitation, what are some of the biggest barriers patients face after leaving intensive care?

Many patients who are discharged from the ICU experience Post-Intensive Care Syndrome. People with Post-Intensive Care Syndrome experience some combination of persistent physical weakness and fatigue, cognitive problems (like memory and concentration issues), and psychological symptoms such as anxiety, depression, or PTSD-like reactions. Post-Intensive Care Syndrome is a significant barrier to patient's returning to the life they had before they got sick. Currently, there are limited resources that exist or are publicly funded to address Post-Intensive Care Syndrome which is a huge barrier for patients to return to their normal life.

9. What does a typical day look like for you in the field?

One of the things I enjoy most about my current role is that there isn't a *typical day*. Some days I am teaching undergraduate or graduate students, some days I am working clinically in the ICU, some days I am collaborating with a colleague on their research study and other days I am advancing my

own research projects. Each day is totally based on the highest priority at that time, which could include completing a funding application, finishing up a manuscript for publication, teaching course material to students or working as a physiotherapist at the hospital to help patients who are acutely ill.

10. If you could go back is there anything you would change or do differently about your academic and/or career journey?

When I graduated as an entry-level physiotherapist, I was already thinking about applying to start a PhD. Due to life circumstances and other goals, I didn't pursue research training until after I had worked clinically for several years. If I could back, I wouldn't change anything. A PhD is a really long journey and if you don't have a passion for your topic, it can be really hard to finish. My clinical work led me to a topic I'm genuinely passionate about, so even on hard days I'm motivated by more than just earning a PhD, and that deeper purpose keeps me going.

11. How does the Sit-to-Stand test help you measure progress in patients?

The Sit-to-Stand test is a simple physical test where people repeatedly stand up from and sit down on a chair. As part of my PhD work, I led a systematic review evaluating how well Sit-to-Stand tests measure physical capacity in people with stable chronic obstructive pulmonary disease (COPD). We found that the 30-second Sit-to-Stand test is sufficiently responsive, meaning it can detect meaningful changes in a person's physical capacity over time. In practice, if someone's capacity improves, they're able to complete more sit-to-stand movements in 30 seconds; if their capacity declines, the number of repetitions goes down. This means, the 30-second Sit-to-Stand test can be used by clinicians to understand how patients with stable COPD are responding to their rehabilitation treatments.

12. What made you decide to choose this topic for your PhD?

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