

Rachel McDowell reflects on the first year of her PhD. (July 2025)**Where are you in your PhD journey?**

I am ten months into my full time PhD, based at the Centre for Nutrition, Exercise and Metabolism (CNEM) in the University of Bath. I also have data-based project with a supervisor at Cardiff University. The year prior to my PhD I was planning my project whilst working clinically as a physiotherapist at University Hospital Llandough and finishing my Advanced Physiotherapy: Cardiorespiratory MSc. I took my physiotherapy work down to 80% for 12 months to manage this.

How was the transition from work into your PhD?

I felt ready for a new challenge when moving from clinical work to the PhD. I have enjoyed having more flexible hours, however the double edge to this sword is that sometimes I work when I wouldn't have been working clinically before! There has been a steep learning curve, but the PhD gives you space to think deeply and develop new knowledge.

What helped you navigate the transition successfully? What would you do differently or any advice you'd give to health and care professionals looking to do a PhD?

I would say that if you're thinking about applying then be proactive and reach out to potential supervisors, researchers in your field, and charities or patient groups linked to your area of interest. I found people I approached very open to helping develop my proposal, and their insights strengthened my application and open doors. I also found it helpful to practise explaining my project to people outside of academia too such as family and friends who are willing to listen!

How's it your research going compared to your proposal/timeline/expectations.

I currently am recruiting for my first study, which explores exercise and activity in adults with Cystic Fibrosis. Alongside this I am working on a data-based project using the CF Registry and risk prediction tools. Practically, it has been good to have both projects on the go as recruitment has started off slower than anticipated for the study whereas the database work I can pick up and put down during the ebbs and flows of the lab work.

What's big challenges have you've faced so far during your PhD, and how have you overcome them?

Staying connected with others has been essential, as a PhD can feel isolating at times especially compared to the nature of clinical work. I've found that keeping a positive mindset and can-do attitude is key. A friend shared a helpful reframe of the challenges which feel uncomfortable or tough as "growing pains" as you push yourself to achieve new things. This has really stuck with me.

What are you most pleased with / what has worked better than you expected?

I presented work from both my PhD and my Masters at the European Cystic Fibrosis Society conference in Milan in June of this year, including my first oral presentation - definitely a career highlight! I have also joined the Health Care Research Wales network as an associate member which has increased my networking more locally within Wales. Another highlight



was winning the prize for best 1st year presentation at the University of Bath's Department for Health Postgraduate conference which was a confidence boost!

What aspects of the GW4-CAT HP programme has helped you most so far?

Everything about the GW4-CAT HP programme has helped me on this journey, from the informative and collaborative cohort days to the support and guidance from the programme directors. The admin team have been brilliant, and being part of a peer group who are going through similar experiences has been especially valuable. I've come away from every cohort day with practical takeaways I have used in my research planning.

What is the best part of your PhD?

I have loved being part of CNEM and learning new skills. I can now take physiological measurements in a lab (e.g. resting metabolic rate, DEXA scans), perform cannulation and venepuncture, run an ELISA or chemical blood analyses. The people in CNEM are so welcoming and supportive of new members so I really feel part of a team.

I have also improved non-practical skills such as organising a Patient and Public Involvement group with a patient charity to increase the relevance of my research, navigate ethics and portfolio adoption applications, and improve my statistics and data science skills using techniques such as multiple imputation for missing data in R. These are all things I wouldn't have had the opportunity to learn without embarking on a PhD.

What advice would you give to other health care professionals, wishing to follow a career in clinical academia? Anything from the application process, to interviews to proposal writing.

Don't underestimate how valuable your clinical experience is, both for shaping research questions and connecting with participants. Draw on this when crafting your proposal and in interviews.

Make time to get familiar with the academic environment, read papers, attend online webinars or conferences if you can, and consider short courses in research methods or statistics if you haven't done them. My MSc covered this brilliantly and I am glad now of this basis it provided.

Most importantly, have a good support network around you who support your goals and encourage you to keep going when things get tough (which they will!). Clinical academia is a challenging but rewarding path, and you don't have to walk it alone.