WHAT'S IT LIKE TO BE A CLINICAL TRIAL STATISTICIAN?

Statisticians play a critical role at every stage of the trial lifecycle, from study design to data analysis. Their expertise in crafting rigorous methodologies and interpreting data is essential for the success of these trials, advancing medical knowledge & improving patient outcomes.

UK Registered Clinical Trials Unit Network

What can YOU expect in an academic statistics role?

Alex Mitchell - York Trials Unit



My name's Alex Mitchell and I work as a trial statistician for York Trials Unit at the University of York.

What's your background? For my undergraduate degree I studied theoretical physics but in my final year I decided I wanted to work in a field with more immediate benefits to society, and after some research I thought medical statistics was a great fit!

After graduating I did a Masters in Statistics with Medical Applications at the University of Sheffield and was then lucky enough to get a job as a trainee statistician at York Trials Unit. In the seven years since I've been promoted twice and now work as a senior statistician at the unit.

What do you like best about your job? There is a lot of variation each week in what I do, one week I could be helping design a study database, drafting an analysis plan and writing a presentation, whilst another week I might be discussing trial design with clinical colleagues, writing some code and carrying out methodological research. I've had lots of exciting opportunities including being involved in nationally important research and going on a trip to meet research collaborators in Pakistan!

What next for you? My aims while working are focussed on continuing to challenge myself by working on new and interesting studies, which the role of a trial statistician certainly provides! Currently I am in the initial stages of drafting a fellowship application that would enable me to study for a PhD while working.

Any advice to share? To anyone interested in working as a trial statistician, I would recommend getting in touch with your local CTU to see if there are any shadowing opportunities available, as this is a really great way to get a sense of what the job is about!

For more about CTUs & the Network visit https://ukctunetwork.org

WHAT'S IT LIKE TO BE A CLINICAL TRIAL STATISTICIAN?

Versha Cheed - Birmingham CTU

My name is Versha Cheed and I am a senior statistician at the Birmingham Clinical Trials Unit at the University of Birmingham.

What's your background? My undergraduate degree was a BSc in Management Science (also known as operational research). Following that, I worked as an Analyst for NPOWER. I enjoyed working with data, and had an interest in the medical field.

I applied for a few roles as a statistician, and was advised to do a Masters in Statistics. So I did the MSc Statistics course at Leicester, and then applied for a job as a Trainee Medical Statistician at BCTU where I have been ever since.

Which clinical areas/methodological areas are you currently working in? I mainly work on a portfolio of late phase clinical trials in obstetrics and gynaecology, which is one of BCTU's main disease areas with the University being so close to the large Birmingham Women's Hospital, and our Director being a Professor of Obstetrics and Maternal Fetal Medicine. However, I also have trials in intraoperative care, HIV and social care that assess medical, surgical and complex interventions.

What is the most rewarding aspect of your job? One of the most rewarding things about being a statistician in an Academic CTU is seeing the trial from the idea stage through to the very end, and carrying out the final analyses. Undertaking a final analysis is not a small task, and as statisticians, we work closely with the Trial Management Team to ensure that the data is clean and accurate ahead of running the analyses. Undertaking the final analyses for a trial is exciting and we are in the privileged position of being the first to seeing the results, then presenting the results to the Chief Investigator and the research team of the trial, with the hope to publish the paper in high impact journals.

Our work leads to the development of effective treatments which will then lead to improved patient care and health outcomes.

What do you like best about your job? I would say that it's the variety of work and the application of statistical methods to health-related data that I enjoy the most. I enjoy the statistical programming side to my job, the combination of technical work and the communication of this to colleagues is also something I like. In reality, being a statistician is just problem solving and, with that, decision making. Decisions have to be made all day every day, you are constantly learning!

WHAT'S IT LIKE TO BE A CLINICAL TRIAL STATISTICIAN?

CTUs are experts in the design, execution, analysis, and publication of clinical trials and other studies that assess the efficacy and effectiveness of clinical therapies and treatments. To achieve Network Registration, CTUs must demonstrate their expertise and ongoing capability to an international panel of experts.

UK Registered Clinical Trials Unit Network

What can YOU expect in an academic statistics role?

Yunli Ou - Pragmatic CTU



My name is Yunli Ou, and I am currently a statistician in the Pragmatic Clinical Trials Unit at the Queen Mary University of London (PCTU).

What's your background? I had a master's degree in Statistics with a focus on applications in medicine, where I developed a strong interest in applying statistical methods to address health-related issues, particularly through the course on Clinical Trials that I really enjoyed. I then worked at the University of Exeter as a medical statistician for one year, which was a great start to my journey in clinical trial statistics.

Which clinical areas/methodological areas are you currently working in? I am currently working on two psychiatry trials in the PCTU, what I do on an everyday basis really depends on what stage the trials are at. I am now involving in tasks such as data checking, sample size calculations, statistical analyses, conducting a systematic review and meta-analysis, and learning some new statistical methods.

What do you like best about your job? The best part about working as a trial statistician is the opportunity to work in medical studies that I am passionate about. It's rewarding to apply my statistical skills to help improve patient outcomes. And it has been wonderful to work with such excellent teams and enrich my perspective through collaboration across the wider disciplines within clinical trials.

Any advice to share? I would advise anyone interested in working in a CTU to explore the websites of National Institute for Health and Care Research (NIHR) and various CTUs. They often provide detailed information about the trials they are involved in, along with publications related to those trials. This can be a good start to gain a better understanding of the breadth of clinical trials conducted and the various aspects involved in running a trial. They often have very useful links to resources and training opportunities as well!

For more about CTUs & the Network visit https://ukcrc-ctu.org.uk/

WHAT'S IT LIKE TO BE A CLINICAL TRIAL STATISTICIAN?

James Swingler - CHaRT



My name is James Swingler. I'm based at the Aberdeen Centre for Evaluation (ACE - previously HSRU). I've been a trial statistician (research fellow) for about 18 months.

What's your background? I did a Bcom in Economics & Statistics, an Honours degree in Statistics, and an MSc in Biostatistics. All of these were done in South Africa at Stellenbosch University & the University of Cape Town, respectively.

The Masters degree was incredibly rewarding and provided useful resources for clinical trials. Before this position, I worked part-time during my Masters for the Desmond Tutu Health Foundation back home in South Africa. This introduced me to real world health data and solidified my interest in working in the medical research sector.

What do you do in a typical week? Every week is about progressing your existing trials and thinking of new potential studies for the future. This includes being the lead author for the trial's Statistical Analysis Plan (SAP), data quality checks, final analysis when the time arrives, attending meetings to monitor and develop aspects of your trials and also reporting results to data monitoring committees or trial steering committees. As the trial statistician you really are part of the trial from inception of an idea to the dissemination of results in academic journals.

What do you like best about your job? As a trial statistician I feel that my work is making an impact in the future of healthcare research. You are constantly working towards a better future for all. I find that having the right motivation behind my work pushes me on when trials get tough, knowing that the outcome is always worth the hard graft you put in. There is also a great aspect of being the first to run the final analysis and for a period of time being the only person on the planet to know the outcome of a trial which has been likely been worked on for many years. As someone who enjoys problem solving, I've enjoyed the complexity of some trials and the requirement to better myself in order to find solutions. You are always learning and that keeps the mind young.

Any advice to share? Communication is key. Since you work in all aspects of the trial from start to finish, you need to clearly communicate with team members for the benefit of yourself, the associated team members and of course the trial itself. Good communication prevents confusion and potential conflict, which in turn leads to a better trial for all.

WHAT'S IT LIKE TO BE A CLINICAL TRIAL STATISTICIAN?

The CTU Network is an independent organisation dedicated to providing support for Registered CTUs undertaking non-commercial and investigator-led clinical trials both in the UK and overseas. The Network spans the entirety of the UK and participates in national & international clinical research initiatives.

UK Registered Clinical Trials Unit Network

What can YOU expect in an academic statistics role?

Laura Finneran, ICR-CTSU



My name is Laura Finneran and I work as a trial statistician at the ICR Clinical Trials and Statistics Unit (ICR-CTSU) in London.

What's your background? After getting an MSc in Medical Statistics, I worked for two years in process monitoring. However, I realised this was not an area I wanted to pursue and kept coming back to much I had enjoyed the clinical trial aspects of my MSc and decided to make a change. I was lucky enough to get a role as a trial statistician at ICR-CTSU and have been working here for 6 years.

What do you do in a typical week? The work of a trial statistician is very varied, we are involved from the design of the trial to publishing results. No two weeks are the same. My responsibilities include developing statistical analysis plans, monitoring trial data, conducting interim and final analyses, preparing reports for data monitoring committees, and contributing to scientific manuscripts and conference presentations.

What do you like best about your job? I enjoy working in a multidisciplinary environment and doing your bit in a trial that makes a difference is really rewarding. It is a big push, and stressful at times, but once the results are out there and can make an impact for future patients, it is all worth it.

What next for you? My aim is to continue refining my expertise in statistical analysis, design methodologies, and data integrity, with the goal of contributing to clinical trials that improve health outcomes.

Any advice to share? My advice to something thinking about becoming a trial statistician is to always be open to learning about new ideas. There are always new methodologies, trial designs or analysis methods to explore. Doing research on a new idea and working as a team to implement it, at a trial or even a unit level can be really rewarding.

For more about CTUs & the Network visit https://ukctunetwork.org

WHAT'S IT LIKE TO BE A CLINICAL TRIAL STATISTICIAN?

Kamran Khan - Pragmatic CTU



My name is Kamran Khan and currently, I am working as a clinical trials statistician splitting my time between the Queen Mary University of London pragmatic clinical trials unit (PCTU) and the critical care and peri-operative research group (CCPMG) at the Royal London Hospital.

What's your background? I have a master's degree in health informatics, and I am a recent PhD graduate in health informatics & biostatistics from University College London. I started working as a clinical trials statistician during the last two years of my PhD at the cardiovascular clinical trial unit (CVCTU) at the William Harvey Heart Centre, Queen Mary University of London.

What do you do in a typical week? My responsibilities include:

- Reading trial protocols and writing statistical analysis plans (SAPs) for various trials
- Data cleaning and wrangling
- Analysing study data according to SAPs using appropriate statistical methods
- Generating clinical reports for meetings such as data monitoring and safety committees using statistical programming languages like R
- Contributing to manuscripts for scientific publications
- Other aspects of clinical trials such as sample size calculation.

What do you like best about your job? I love working as a statistician because I play a crucial role in contributing to medical advances by working on different trials which evaluate new treatments/devices to detect or treat different diseases and the analysis results can impact clinical practices.

I am still gaining experience as a clinical trials statistician and learning about different trials designs and novel statistical modelling techniques.

Any advice to share? I would advise anyone who wants to become a clinical trials statistician to first gain the relevant degree such as a master's degree in biostatics and learn about how clinical trials are conducted and study designs, sample size calculation and data analysis and visualisation techniques using Stata, R or Python and then look for internships or entry level positions to gain some practical experience.

WHAT'S IT LIKE TO BE A CLINICAL TRIAL STATISTICIAN?

The UK Registered CTU Network was established in 2007 to address the critical need for sustained expertise and capacity in clinical trials research across the UK. Today, it spans all four nations of the UK, encompassing 50 Clinical Trials Units, and plays a vital role in advancing clinical research nationwide.

UK Registered Clinical Trials Unit Network

What can YOU expect in an academic statistics role?

Yuk Lam Wong - Pragmatic CTU



Hi, my name is Yuk and I'm a trial statistician at Queen Mary University of London's Pragmatic Clinical Trials Unit (PCTU).

What's your background? I completed my first degree in statistics at UCL, where I was introduced to the application of statistics in medicine. After my degree I interned at IQVIA as a patient recruitment analyst, which furthered my interest in clinical research. I then decided to develop my technical skills further by completing an MSc in Medical Statistics at LSHTM.

What do you do in a typical week? My typical work week involves the following tasks:

- Data checking and cleaning
- Writing statistical analysis plans
- Carrying out statistical analysis
- Online/face-to-face meetings with various stakeholders

What do you like best about your job? What I like best about working as a trial statistician is the balance between independent working and teamwork, as well as the balance between creative and technical thinking.

What next for you? This is my first post since my MSc; I look forward to gaining more exposure to different study designs and therapeutic areas down the line.

Any advice to share? To those who are interested in working in a CTU, I'd suggest reaching out to researchers to learn more about their work and day-to-day tasks, job-shadow where possible, and gaining the relevant degrees once you've made up your mind.

For more about CTUs & the Network visit https://ukctunetwork.org

WHAT'S IT LIKE TO BE A CLINICAL TRIAL STATISTICIAN?

Cydney Bruce - Nottingham CTU



My name is Cydney Bruce. I'm a Medical Statistician at Nottingham Clinical Trials Unit.

What's your background? I started my BSc in Mathematics at Keele University in 2014. However, my career trajectory didn't become obvious until my third year when the course had a module and dissertation in Medical Statistics, both of which I did.

From there, in 2017 I started an MSc in Medical Statistics at the University of Leicester. After graduation, I went to work at the Institute of Cancer Research for a few years as an epidemiologist but after two years in this role, I moved my focus to clinical trials. In 2020, I came to the University of Nottingham to start a PhD in clinical trials methodology and in 2021, I moved to part-time study and took up a role as a medical statistician in the trials unit.

What do you do in a typical week? For me, the best part of being a trial statistician is that every week looks different. I work across a few trials all in different stages of set up. Typically, I spend most of my time contributing to trial specific documents (today I have a statistician analysis plan to finalise) and writing up code to produce reports throughout trial conduct.

However, the role has also allowed me to get involved in the updating of standard operating procedures, contribute to the writing of academic papers, get involved in teaching and to join University committees. I have also had opportunities to attend additional training to learn more specific skills (most recently diagnostic testing) and gotten involved in the process of putting the grant application together.

Any advice to share? For anyone interested in working as a trial statistician, my advice is to practice coding, it is a big part of the job and for many of us not something we get a lot of experience of during undergrad!

WANT TO FIND OUT MORE?

Interested in finding out more about non-commercial clinical trials? Wondering about where you can look for more information? Want to arrange a work placement, shadowing, or have a more detailed conversation about the role? Read on to find out more!

UK Registered Clinical Trials Unit Network

Use our top tips to find out more about working in a non-commercial CTU

Speak to a CTU about your options



Registered CTUs are usually attached to a university or an NHS Trust and can be found throughout the UK.

Our 'Find a CTU' search tool can help you to identify a CTU that is based near you, or that works in an area that particularly interests you. Find out more here https://ukctunetwork.org/find-a-ctu/.

By contacting these units directly. you may be able to arrange work shadowing or get advanced notice about training placements and job opportunities.

Develop your skill set



There are a wide range of specialist training opportunities provided by, or in association with, CTUs. Many offer discounted fees to students.

These will enable you to gain valuable understanding and skills directly related to clinical trials - as well providing useful opportunities to network with future colleagues.

Find out more here https://ukctunetwork.org/learning-development/.

Ready to apply?

Insert your photo here

Working in an academic or non-commercial CTU can offer you exciting opportunities that may not be available to you elsewhere. These range from publishing your research, presenting at national or international conferences, or teaching the next generation of researchers, as well as making a positive difference to patient and public health. Find out more here https://ukctunetwork.org/vacancies-with-registered-ctus/.

For more about CTUs & the Network visit https://ukctunetwork.org