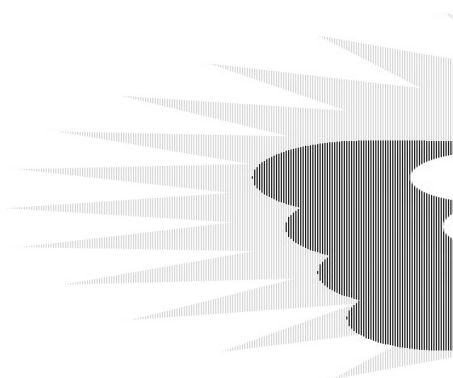


"We are a community dedicated to leading and promoting the use of statistics within the healthcare industry for the benefit of patients"



Student Newsletter



Your opinion matters

Is the content of this newsletter relevant to you?

Yes

No

Your feedback is valuable! [Email us](#) with your suggestions.

PSI Events

See what's happening in 2024.

PSI apprenticeship

Great news from universities.

SIG Spotlight: Data Sharing

Learn their objectives.

Placement Students in Medical Research

Hear about their experiences.

Undergraduate Prizes

Meet our undergraduate prize winners.

PSI Conference 2024

Highlights from this years conference.

The impact of Statisticians

How statistics improves patients' lives.

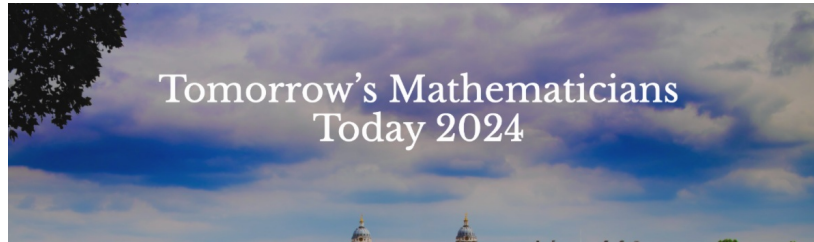
WELCOME

Welcome to our Autumn 2024 student newsletter aimed at providing you useful information and links to resources while you study a maths-related degree at University and start to think about future career options. PSI is a non-profit organisation run voluntarily by statisticians from industry. Our PSI Careers website can be found [here](#).

Just For Fun

Did you know that the word "hundred" comes from the old Norse term, "hundrath", which actually means 120 and not 100?

Events



PSI Events

PSI offers a range of opportunities to learn about statistical techniques used in the Pharmaceutical industry, as well as valuable personable skills. Sessions range from a couple of hours to all day events. Upcoming events and how to register can be found on our [Events page](#).

PSI Career Young Virtual Event

Date and time: Tuesday 10th December 2024 | 12:00-13:00 GMT

Location: Online via Zoom

Costs: Free

Who is this event intended for? New professionals - those with 5 years or less of experience in the industry (including students and placement students)

What is the benefit of attending? An opportunity to meet statisticians from across the pharmaceutical industry in a relaxed and informal setting

To register for this event, please click [here](#).

PSI Journal Club: Group Sequential Designs

Date and time: Thursday 12th December 2024 | 16:00-17:00 GMT

Location: Online via Zoom

Cost: Free

This webinar is for anyone interested in hearing more about group sequential designs, to gain a better understanding about them, their applications and their advantages and disadvantages.

To register for this event, please click [here](#).

Updates from the PSI Medical Statistics Apprenticeship scheme



Please remember to keep checking our webpage below for any upcoming apprenticeship vacancies.

[Visit our Website](#)

Clinical data has greater use beyond the original trial. These data can be used to further increase our scientific understanding of diseases and their treatment for the benefit of future patients. This re-use is a challenge, as both the data privacy and the regulatory framework continue to evolve. The members of this ESIG intend to lead the industry discussion in this area.

Their objectives include:

1. Promote an understanding of the challenges and responsibility organisations and statisticians have when re-using or sharing clinical data.
2. Improve understanding, implementation and examples of anonymisation methodologies within the context of clinical trial data sharing.
3. Influence and shape the environment and policies regarding clinical data sharing.
4. Collaborate with other groups and stakeholders in this area.

For more information, or to get involved, see this [webpage](#).

Placement Students in Medical Research

PSI Careers: Career Opportunities & Industrial Placements



<https://www.psiweb.org/careers>



Many companies in the pharmaceutical and healthcare industry offer placement and internship opportunities – the majority of these are for students taking undergraduate degrees with the option of a year in industry, with some also offering short-term assignments for PhD students. These placements are a fantastic opportunity for students to gain confidence, build soft skills and apply their theoretical knowledge in the real world. The company and industry knowledge gained over the year makes a great addition to any CV, giving placement students a boost when applying for graduate roles after completion of their studies.

PSI have spoken to a number of students about their experiences of completing a placement year in 2023/24; view the video and written testimonials on the [PSI website](#) to find out a bit more about the benefits of completing a year in industry, what the students enjoyed most and tips for those looking to do a placement. We also spoke to supervisors about the key benefits of employing placement students and the support provided during placements – again see the page linked above!

Thanks to all the students who provided feedback on their year, PSI wishes them the best of luck for their final year and beyond!

Undergraduate Prizes

In July 2024 PSI awarded cash prizes to undergraduate students who were nominated by their University. Each University can only nominate one student and the PSI Careers team were very impressed with the nominations received. This is an annual award so if you are interested in being considered for the award, remember to discuss with your tutor for next year. Some of the winners wrote the following about their path in studying medical statistics.

Hi, I'm Josh. I graduated from the University of Warwick with a First-Class



Integrated Master's degree in Mathematics and Statistics. I'm honoured to receive a PSI undergraduate prize for my dissertation titled "Spatial Outbreak Detection," which used Bayesian statistics and Monte Carlo methods to detect the outbreaks of tuberculosis across England from 2000 to 2021.

My interest in medical statistics started during the pandemic. I watched the news every day and saw the various statistics about COVID-19 being reported, for example, the projected case numbers or the "R" number. I enjoyed seeing how statistics were being used to help solve a prominent, global issue. It encouraged me to choose more medically linked modules that can solve various issues present today. For instance, I studied experimental design, which can test the effectiveness of a new drug. By my final year, most of my modules had ties to medical statistics, either through my dissertation or by the content of the module.

My dissertation is the first piece of medical statistics research I have completed, so winning this award has given me the confidence to pursue a PhD in medical statistics, followed by a career in medical statistics. I would like to thank PSI for this award. I'm excited to get involved and be a part of this community.

Josh, University of Warwick

Hi, I'm Beth, and I graduated from the University of Sheffield with a BSc in Mathematics (2024). I've always been passionate about maths, not just for solving problems but for understanding its real-world impact. With both my parents being pharmacists, I've always wanted to use my mathematical knowledge to help people.



During my final year, I discovered my interest in medical statistics, which led me to pursue a summer internship at Smith & Nephew. This experience provided valuable insights into the medical field and how different companies operate. It's incredibly rewarding to find an area I enjoy that also benefits society.

Winning the PSI Award means a lot to me and has given me the confidence to further my education in this field. I'm excited to return to the University of Sheffield next year for an MSc in Statistics with Medical Applications. I'm grateful to the university, clubs, and societies for making my degree years so enjoyable and for equipping me with the skills to pursue my passion for medical statistics.

Beth, University of Sheffield

Hi, my name is Ryan. I studied an MMath in Mathematics and Statistics & Operational Research at Queen's University Belfast. I am grateful to receive the PSI Undergraduate Student Prize for 2024.

My statistics studies led me to take a module in survival analysis in my final year. I thoroughly enjoyed the content and techniques of the module. This culminated in a project where I analysed data from a real study on heart failure. The use of survival analysis allowed insights from the study that could not otherwise have been obtained. Moreover, it was highly rewarding to use techniques that I had learned in class on a relevant and important problem.

Ryan, Queen's University Belfast

Hello! My name's Oswald and I've recently graduated from Cardiff University having studied BSc Mathematics, Operational Research & Statistics. This PSI Undergraduate Student Prize truly means a lot to me as I have loved being a part of the PSI community over the past 2 years, including helping organise events for career young statisticians as part of the PSI Career Young committee.

I loved my placement year at UCB! One of my favourite parts was being in the development team for a tool that aided the use of innovative statistical methods at the trial design stage. From this, I fell in love with Bayesian clinical trial design, and researched the tool's underlying methodology for my university placement report which also involved developing a proposed extension of the tool for survival endpoints. I was lucky enough to continue working on the tool remotely during my degree's final year.

Both my project and the wonderful work environment at UCB have made me want to pursue a career in Medical Statistics. Thankfully, I was awarded a NIHR (National Institute for Health & Care Research) Pre-doctoral Fellowship, which will start this September and be hosted by ICTU (Imperial Clinical Trials Unit). As part of this, I will undertake the MSc in Statistics for Clinical Trials by the MRC CTU (UCL), followed by a research project related to Bayesian clinical trial design. I am incredibly excited for the years ahead and to continue being a part of this amazing community!

Oswald, Cardiff University

My name is Jake and I studied BSc Mathematics and Statistics with a Placement Year at the University of Reading. I am delighted to have received this prize, in my final year of university, from the organisation that inspired me to pursue a career in biostatistics back in my first year of university!

I initially became aware of medical statistics as a career path from the then-online PSI Careers Event in 2021. Despite having no idea what to ask them, the exhibitors were all friendly and full of insights! Since then, I have been eager to apply my love of statistics to the rewarding field of healthcare.

I got my first taste of the industry on my placement year with Amgen, where I had the wonderful opportunity to present a poster at the PSI 2023 Conference on the future of early phase trials. I then spent the following summer with the Early Phase and Adaptive Trials team at the Institute of Cancer Research. Both were invaluable experiences for which I am deeply grateful.

I was proud to receive the award for the best Part 3 Statistics Project, for which I analysed a PBC patient dataset using survival analysis. I am excited to spend the next two years at the University of Leicester, where I will begin my NIHR Pre-doctoral Fellowship and study MSc Medical Statistics.

Jake, University of Reading

PSI Conference 2024



In June 2024, PSI held its annual conference in Amsterdam. We have a review from Caitlin Ruth below:

"The conference was the first I've ever been to, so I was apprehensive at first and not sure what to expect. All the attendees were very welcoming, and the broad range of topics on offer meant that there was always something I was interested in and wanted to learn more about. The "Gone in 60 seconds" where presenters summarised their posters in one minute was a highlight. The discussions after were constructive and helped me solidify my thoughts and gave me ideas for future research and applications."

More sessions from the conference are also available to watch on the video-on-demand page. Look for the videos with PSI Conference 2024 in the title. Don't miss the thought-provoking keynote "[Neurodiversity at Work: Unleashing Potential in Every Mind](#)" and discover the very popular "[Technical TED Talks](#)", with 6 short snappy talks on statistics.

If you're interested in attending next year's PSI conference, which will be held in Hammersmith,



How Statisticians are valued by non-Statisticians in the Pharmaceutical Industry

As a Statistician in the Pharmaceutical industry, you get to work with different people with different areas of expertise. Here, a Senior Epidemiologist expresses the importance of the Statistician's role...



"Pharmacoepidemiology is a discipline that heavily relies on statistical methods to analyze data on drug use, safety, and effectiveness. It also involves understanding the distribution, patterns, and determinants of health and disease conditions in defined populations.

The role of the statistician is crucial in multiple phases of pharmacoepidemiologic studies. In collaboration with the epidemiologist, they evaluate the feasibility of the study, select the appropriate statistical models for generating good quality evidence and interpret the results. Statisticians contribute to the data analysis and study size section of protocols, supporting the study design; they develop the statistical analysis plan and are highly involved in the execution phase of studies, until publication of results. As an epidemiologist, I particularly appreciate the input from statisticians in implementing and interpreting complex models and in walking me through the possible risks and pitfalls of different choices. This strengthens the quality of the deliverables and ensures that together we abide by the highest scientific standards."

**Silvia Narduzzi, Senior Epidemiologist in RWE
Rare Diseases and Neurodegeneration, UCB**

Reminders

PSI student membership

PSI student membership is **free** to join and has many benefits during your journey to becoming a statistician in the pharmaceutical industry: [Join PSI \(psiweb.org\)](https://psiweb.org)

PSI run many webinars which are free to members (but cost for non-members), so as a free PSI Student member you can also join these events for free.

Keep your contact details up to date

If you are finishing your studies at the end of this academic year, please remember to change your email address to a personal one on your PSI account, so you don't miss important updates and continue to receive our regular emails. To edit your contact details, you can log into Glue Up and go to "My profile": <https://app.glueup.com/my/profile/>.

Job Vacancies

Many companies employing statisticians advertise their job vacancies on the [PSI website](#). Career Opportunities are updated on a regular basis, and is always worth a look to see what options are available.

Follow us on social media | psiweb.org



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