

Job title: Director of Health Informatics

Current employer: AstraZeneca

Sector: Pharmaceuticals



Tell us about your current role and organisation.

I am a Director of Health Informatics at AstraZeneca's Global Medicines Development (GMD). GMD is responsible for transforming innovative molecules into medicines that change lives. In Health Informatics we aim to optimise the use of real-world evidence (RWE) to support drug development, clinical trial design & management. I currently lead RWE activities for Cardiovascular Renal and Metabolic Therapy Area in GMD. This includes conducting analysis to understand unmet need, supporting study teams run feasibility analysis for clinical trials and contextualising results of clinical trials for regulatory submissions. Considering the large datasets that are becoming available, I am also working closely with data scientists in the organisation to use advance machine learnings and AI to better understand disease patterns and progression.

What sort of person would this role suit? (i.e. personal skills, qualities and values)

I think there are three main types of skills that are required for this role:

1. **Technical skills** - this includes programming skills such as ability to extract, manipulate, and analyse large datasets, knowledge of analytical methods used in observational research, and knowledge of data sources and the context of collection.
2. **Business acumen** – understanding of drug development processes and data requirements for bringing a drug to the market.
3. **Critical thinking** – this seems obvious but also the most important skill in this role.

What does a normal working day look like for you?

A normal working day would consist of a few hours of analytical work for a particular project, meetings or presentations with various stakeholders to present current work or showcase capabilities of the department and advise on how health informatics can support business needs and my train journey home consists of trying to keep up with what is happening in the field. This is a fast-changing environment and in order to stay at the top of the game we have to keep an eye on external developments.

How did you get to where you are now? (i.e. what are the entry-level roles graduates would apply for to get where you are?)

I started as an information analyst in the NHS. This was a very valuable experience as I gained first-hand knowledge on how these types of datasets are collected and what are the sources of biases and potential drawbacks of using them for research. I had a master's degree in information technology but I did struggle to land my first role as many NHS organisations required some prior knowledge of NHS even for entry

levels. A master's in Health Informatics or related field would be advantageous for landing the first job in the NHS.

How would you go about getting experience (*placements, work experience, internship*) in the industry you work in?

Both the NHS and Industry have internships or work experience schemes that can be useful for gaining experience. I'd also advise choosing the topic of the dissertation / theses to something that is related to what they want to do. Lastly, I think students may want to be proactive in finding opportunities and things like dropping an email to the head of the department or member of staff that works in the desired field / organisation would not hurt. People are always willing to help, you just need to ask.

What are the biggest challenges you face in your work?

I'd say the biggest challenge is access to good quality, comprehensive data. We have access to many data sources; claims, EHRs, registries etc. However, most of these datasets are fragmented and give only part of the picture. We need to make sure we understand what these datasets can and cannot answer.

What's the progression like/where do you see yourself going from here?

I think the field of Health Informatics is extremely exciting at the moment and opportunities for career progression are countless. We are seeing large investments from tech giants such as Apple and Amazon as well as exciting start-ups that are developing some cool products. Pharmaceutical companies have also finally made the leap to embracing health informatics and recent investments in data partnerships are just the starting point. Every day I hear about a new and exciting opportunity that has the potential to transform lives.

What top tips would you pass on to students interested in this type of work? (*i.e. any particular skills, knowledge, experiences, volunteering, extracurricular activities*)

There is a lot of freely available material that can help gain some initial knowledge. As mentioned above, I would advise looking for placement schemes / internships or even just emailing people who work in the field to find out more or offer to do some work experience.