**Company: Velindre Cancer Care Services**

**Contact: Emma Powell**

**Briefly describe the idea or problem and discuss why this project is relevant and timely.**

The Acute Oncology Services (AOS) operations across Wales and an enhancement of this service is being developed for the South East Region. There is an increasing requirement to view the whole system pathway for cancer patients to enable the evaluation, redesign and further develop of the AOS service.

Velindre University NHS Trust provide clinical support and an assessment unit that supports the wider AOS service. This project aims to undertake the linkage of Cancer Patients treated within South East Wales to establish the whole system pathway view and the impacts/benefits Velindre’s assessment unit has on the patient pathways.

This project will aid and inform the wider AOS project by providing the holistic patient pathways views that will identify patient contact points and interventions. In addition, it will enable the identify potential benefits in terms of reduced Emergency admissions and ED attendance compared to the average/median for similar cohorts

**What are the specific aims of this project?**

**The aims of the project are to:**

* Develop linked data via the National Data Resource that links existing and future dataset together to view the patient pathway. Existing datasets include Emergency Departments, Outpatient Attendances, Elective and Emergency Admissions and manual Acute Oncology Dataset. Future datasets include the newly defined electronic Acute Oncology Dataset.
* Identify the benefit of the service in terms of reducing the patients admitted into the Inpatient wards within Velindre. In addition, to reducing the emergency admissions and emergency department (ED) attendances within other Health Boards.
* This link data will enable the identification of Velindre patients that are frequent attenders within ED. This will allow the service to identify the most effect pathways and instigate early interventions for the patients to reduce the number of attendances to ED.
* From analysing all Velindre patients against activity within Health Boards the patient pathway can be establish and where along the pathway the AOS services is impacting or where early intervention could benefit the patient.
* Develop a Dashboard that visualises the patient pathways, service delivery and benefits.

**What specific methodologies/skills/software are most important for this project?**

The project will require a number of different elements to be undertaken:

* In partnership with the National Data Resource (NDR) Teams within Velindre, HBs and NWIS to undertake the development of the linked cancer patient data within the NDR environment and within Velindre’s Data Warehouse.
* Using the linked data undertake the historic and predictive analysis on the data to predict the future demand for the service.
* Using the linked data undertake the analysis on the benefits of the service
* Develop and implement automated reporting/dashboards solutions that enable the service to instantly view their current and future capacity and demand predications. In addition, to developing and implementing measures to display and monitor the impact of the service.

**Do you envisage any barriers that may impact on the objectives of this project? For example, availability or access to data based on the current pandemic/working from home.**

To enable this project to be undertaken the Trust Data needs to be linked to the data held within NWIS/NDR from the National submissions, such as ED attendances and Emergency Admissions. Initial discussion with NWIS has been undertaken to establish that the linkage are feasible, further liaising is required to establish the specification for the data and to set up the views.

There will be opportunity for the student to be based within the business Intelligence team for the duration of the project. As both NWIS’s Data Warehouse and the Trusts Data Warehouse are held within SQL databased there is a requirement that the student has SQL skills along with other languages such as R and python.

**Are there any eligibility requirements to undertake this work?**

This project is sensitive, and the successful student will need to sign an honorary contract with the Trust.

**Is the project suitable for a part-time student?**

Yes.