

## Plain English Summary

**Aim:** To create an App that can be used by medical laboratory workers to track the flow of patient samples in the laboratory.

**Background:** Do you ever wonder how laboratory workers are able to track samples and know what to do with them at any given point in time?

One can draw many similarities with doctor's appointments. The relevant information gets recorded in the Electronic Patient Record (EPR). Similarly, laboratories have a Laboratory Information and Management System (LIMS) that records all relevant information about each sample they receive.

How does a doctor know what patients are booked into their clinics? Appointments are managed using a separate booking system that is used to generate clinic lists. In preparation, doctors may review the patient record and check the results of investigations.

In a similar fashion our LIMS is not designed to track samples. We use packets for this purpose. These are small waxy paper envelopes that contain the doctor's request (referral form) and laboratory generated information pertaining to the sample. This information will be recorded in the LIMS system.

Depending on the tests required a sample can be divided into multiple aliquots and each aliquot will have their own packet with this documentation duplicated. Packets move physically through the lab and this will prompt lab workers to take the necessary actions. This process is slow and inefficient and misplaced packets will likely cause delays in testing. It is also costly as our lab spans two sites and packets are transported by taxi.

More recently, we have a WebApp for this purpose. This app was a great step forward but packets are still required. It has become noticeable slower as the number of users have increased. Principles of co-design have not been employed and this is reflected in its usability.

**Work plan:** The plan is to work collaboratively with a small team of laboratory workers, software developers and IT to create an improved version of the App. As development progresses, other users will be invited to contribute. The app will consist of dashboards to provide an overview of the work that needs to be completed and tables listing samples and their relevant details so that they can be actioned. And a section allowing every user to provide feedback ensuring that their expectations are met both in terms of work requirements and also their unique needs.

**Benefits and anticipated outcomes:** I expect this app to make my work and the work of my colleagues easier, enabling us to be more efficient and productive and ultimately to benefit patients by getting their results quicker.