

# Case Study

## Survey to inform demand and capacity analysis in clinical service planning.

### The current situation:

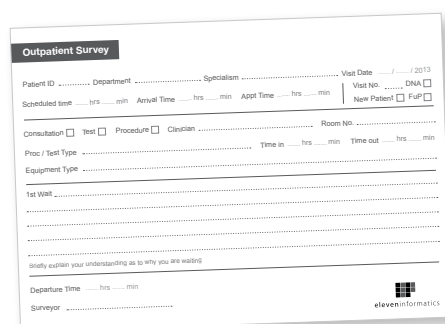
- The Oncology Unit has been operating under stress for some while. This is evidenced through clinical staff working long hours under intense pressure.
- The unit is resource constrained and needs to understand where to focus its efforts in terms of operational policy improvements.
- Analysis of the current process requires a level of detail of the data not captured within clinical information systems. This means that the clinical leadership is 'flying blind' because they do not have sufficient evidence to inform operational policy improvements.

### The Client's requirements:

- What can we learn from the current process in order to understand how to improve the service?
- What is the relative proportion of time that the patient spends in receiving the services (Dwell time), as distinct from waiting to receive them (Waiting time)?
- Do patterns emerge from the data that identify where process improvement needs to be focused?

### How the data was collected:

- Two modes of data collection were devised, and both used by surveyors to track all patient movements in the process. Survey cards and a tablet device were both tested. The tablet device was considered the easiest to use by the surveyors.
- The tablet devices were all connected on a small portable wireless network, and consequently pre-configured data in the database (For example: Doctors names, Room numbers, and patient types) could be synchronised with each device. In this way it made it much easier for the surveyors to log each activity along the patient pathway through the Oncology Unit.
- Patients were identified with a unique survey identifier, and surveyors were allocated to patients to track their movements at predefined stages of the process by completing data input fields either on the survey card or the tablet device. A survey co-ordinator ensured that all agreed operating procedures were adhered to.
- Each time the surveyors synchronised their tablet device on the wireless network the database would be updated. At the end of each day the database was automatically transferred over the Internet to a reporting server.




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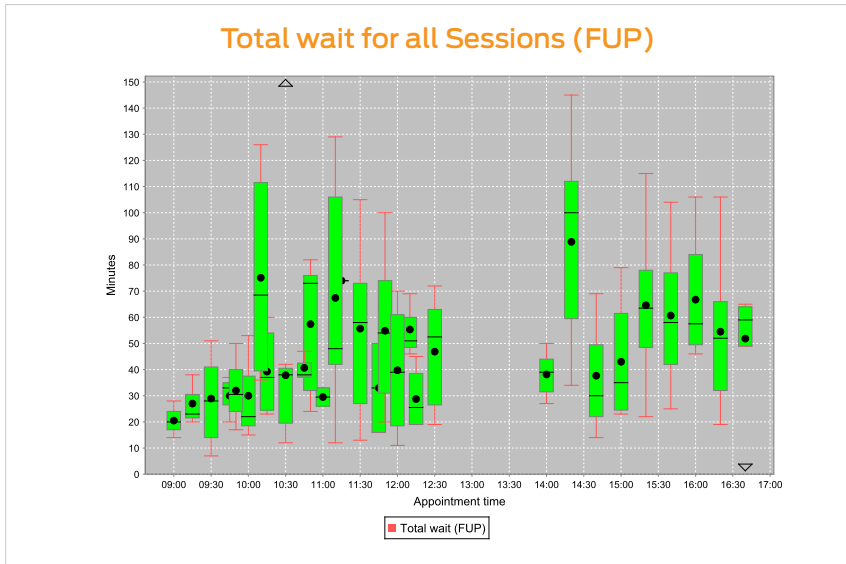


Figure 1 - Wait time results

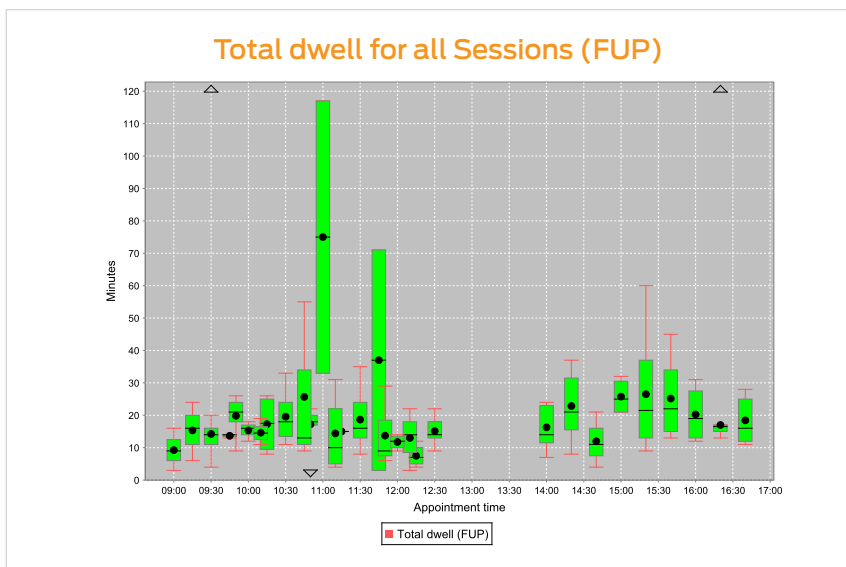
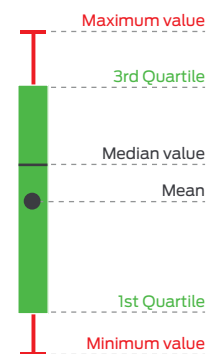


Figure 2 - Dwell time results

- Comparing Figure 1 with Figure 2 it can be immediately appreciated that the amount of time the patients spend waiting in the process is much greater than the time that they spend receiving the service.
- The survey identified key areas where the delays in the process impacted the patient experience. Key patterns emerged from the data that will provide the clinicians and service managers with the insights needed to improve the delivery of the service to the patients.
- The key challenge will be to use the data to help achieve a better understanding of demand and capacity. Where demand is not being effectively managed, or resources are not effectively aligned to demand, then the results illustrated above will be typical.



### Conclusions

- The survey clearly demonstrated how it is possible to collect valuable data that can provide key insights into the delivery of the service. It demonstrated that potential of technology to achieve the survey objectives, without the need to impact hospital IT infrastructure.
- The data provided the basis for further analysis, and in particular to understand 'why' delays arise and 'why' the apparently poor correlation between demand and capacity.
- The survey identifies the need for much better planning and forecasting of demand so that the available resources can be more effectively aligned to meet patient needs.