

Case Study

Oncology clinics: Visualising the burden of medication errors

Background

Medication errors are incidents where there has been an error in the process of prescribing, dispensing, preparing or administering a drug.

Research evidence indicates the following medication error rates in the medicine use process¹:

- prescribing error rate in hospital, 7% of prescription items
- dispensing error rate in hospitals, 0.02 – 2.7% of dispensed medicines
- medicine administration errors in hospital, 3 – 8%.

Most of medication incidents reported low or no harm clinical outcomes. However, they often cause delayed or omitted medicine doses, thus present an important local and national care (and financial) challenge

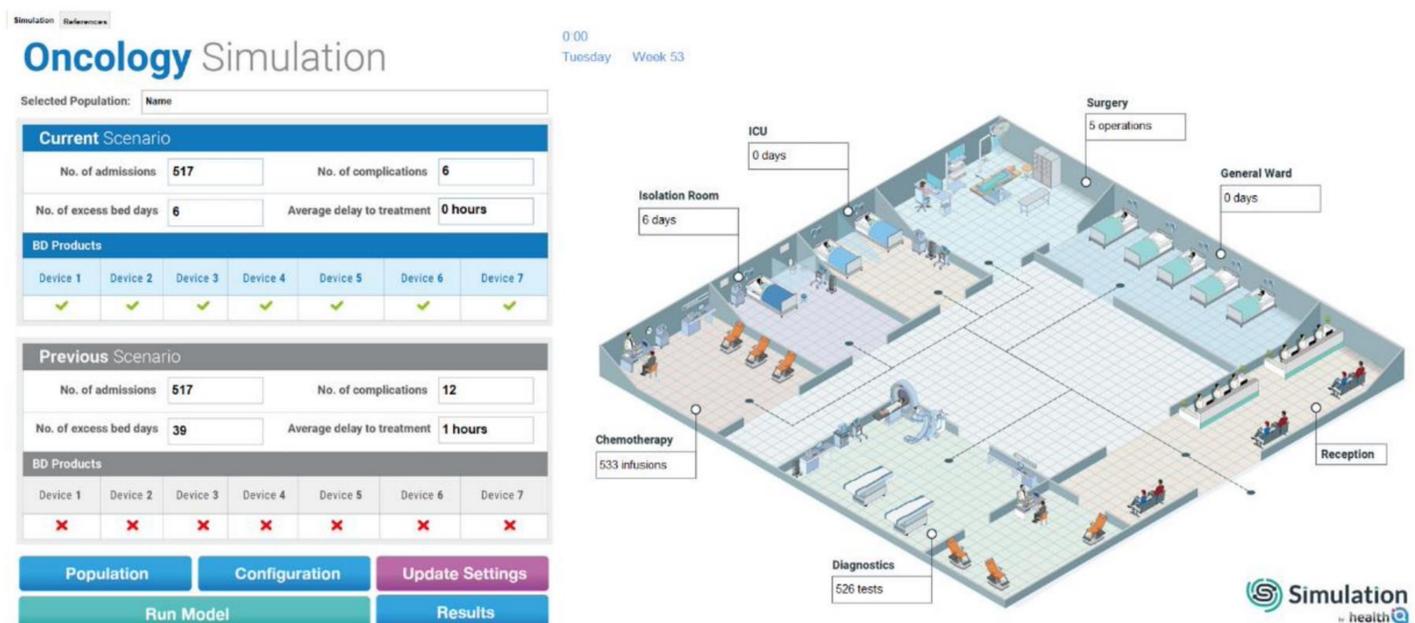
The 16% of errors resulting in actual harm to patients lead to additional hospital bed days, potentially in ICU, or even death (0.9%)¹.

[1] <https://www.england.nhs.uk/wp-content/uploads/2014/03/psa-sup-info-med-error.pdf>

Health iQ

Health iQ are leaders in real-world data and digital solutions for healthcare and life sciences, with a clear mission to transform patient outcomes through innovative data & technology solutions.

Simulation by Health iQ offers you bespoke, animated models to simulate real-life scenarios in healthcare that can help you engage partners such as CCGs, Provider Trusts, STPs, Vanguard etc to highlight the true value of your product and visualize the path for change.



The Challenge

hospitals have to make choices between a multitude of innovative medical management solutions, whilst studies can provide evidence for the benefits of certain products. Hospitals and their trust board members are challenged to quantify the impact of their decisions to utilise a medical device or integrated solution in the local pathway.

Our client, a European medical technology leader, requested a practical solution, based on real-world data to support a compelling case for change.

Health iQ delivering an Oncology Simulation, visualising local pathways

The delivered solution, visualises a general chemotherapy administration pathway quantifying the burden of chemotherapy related medication errors for a local hospital. Providing the flexibility of local pathway variation via altering the device choices and associated medication error risks for each touchpoint allows to examine how incidents could be avoided and importantly to evaluate the downstream effect on hospital capacity.

Health iQ's expertise analysing and visualising real-world data allowed for accurate patient data to be added to the simulation model, which our client uses with English NHS Trusts, with applicability in wider European markets via additional user input fields.

Our simulation was built upon structured research comparing studies of medication error risks for different medical devices. Liaising with our network of frontline NHS clinical teams at oncology departments across the country enabled our expert team to map a typical oncology clinic and chemotherapy administration workflow within the model.

A successful outcome

The model supported the client to conduct intense engagement with UK oncology departments, with regards to identifying optimization potential within their service.

The communication of the chemotherapy administration pathway in a clear systematic fashion supported by accurate patient numbers and referenced risk values for medication errors allowed the medical devices company to convince stakeholders that in many cases investment in innovative technology was compensated by reducing the number of medication errors.

A landmark project, the model has also been utilised in several European markets.