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Large-scale automation of medicines distribution in NHS Greater Glasgow & Clyde



A recently completed project investigated the large-scale automation of medicines distribution in NHS Greater Glasgow & Clyde, which is the largest regional health organisation in the UK.

Their pharmacy service is delivered on 14 hospital sites. This involves approximately 530 pharmacy staff and an annual expenditure on medicines of around £120 million (€38 million).

Key objectives

In 2008 the Executive Board of the organisation adopted a redesign proposal with the following key objectives:

1. to redefine the core business around 'patients own medicines' medication management for hospital inpatients (known by staff as the 'MyMeds' initiative)
2. to redesign, consolidate and automate hospital pharmacy medicines distribution, in order to release staff to near-patient tasks as part of integrated clinical teams
3. to adopt new technology as an integral part of this redesign

Pharmacy Distribution Centre (PDC)

A key element in the redesign has been the opening of a Pharmacy Distribution Centre (PDC) in the spring of 2010 replacing 11 different in-hospital pharmacy stores.

The PDC is now the single facility responsible for the procurement and automated distribution of medicines to replenish ward and site pharmacy stocks for all hospitals and community clinics in the region.

Robots

Within the PDC, eight advanced robots (ROWA VMAX Extent2) are working in tandem as an integrated storage and distribution system. There's an additional robot (ROWA Speedcase Select) installed within a vault for safe and secure handling of narcotic agents. Also, there's three areas where staff have to hand-pick items that are not suitable for robotic storage. The capital investment in the nine robots and associated equipment was around €25 million. This constitutes the largest automation project (by size and scale of activity) for hospital pharmacy in the UK. According to the knowledge of the robotic system supplier, the integrated system of robots is double the size of any other current installation worldwide.

Project outcomes

This automation project had significant implications for jobs, work organisation and employees' experiences.

Most pharmacists, many pharmacy technicians and some pharmacy support staff were relocated from dedicated dispensaries at hospital sites to 'nearer the patient', ward-based activities. In this, the key role of ward-based pharmacy technicians involved the delivery of the MyMeds initiative:

- arranging prescriptions for, and gathering information from, patients
- supporting the work of ward-based pharmacists

Other pharmacy technicians and many members of support staff were redeployed to the PDC to manage, maintain and facilitate the automated distribution processes.

Finally, a minority of pharmacy staff were retained to deliver the remaining support services provided by hospital dispensaries.

Contact

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