

Working Towards a Personalised Surgical Pathway

In collaboration with McLaren Applied Technologies, University of Oxford researchers are working to improve patient preparation and flow through the surgical pathway, improving both surgery outcomes and patient experience. Researchers are developing a system of remote monitoring and personalised patient feedback that can be integrated into the care of surgical patients, improving the care provided.



On average, a person will have four operations in their lifetime. The pathway from initial contact through to the postoperative recovery period is complex and can be confusing.

Many factors along the pathway will affect patient experience and outcomes, but most current research has only focused on improving the 'hands on' care provided by doctors to patients in hospitals.

Our research will investigate ways of using innovative technology to involve patients in their entire surgical pathway, in order to provide better care.

We have used commercially available wearable remote activity monitoring technology to assess patient' fitness levels before and after an operation, adding value to the care of surgical patients in the NHS.

Our findings will help keep doctors better informed of a patient's health status, and help patients to optimise their health before an operation.

The project aims to use a new patient pathway, supported by innovative patient monitoring methods and software design to achieve:

- Patient Centred Care

- Empowering patients with timely and relevant information about their operation so they feel fully prepared
- Enable patients to control and update their own medical information and alert their doctors of any problems
- Improve communication between the patient, GP and the hospital before an operation to avoid delays and errors in patient care

- Personalised Care

- Individual monitoring of patients at home before their operation using wearable technology to give detailed patient profiles
- Ability to build an accurate patient profile and therefore target areas needing intervention well in advance of the operation
- Providing personalised feedback on the patient's health status and advice on how to optimise their health before their operation
- An app that helps patients to understand their test results and medication changes before their operation.



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