

**NIHR Collaborations for Leadership in Applied
Health Research and Care South West Peninsula (PenCLAHRC)**

Case Study Example of the Value of NIHR CLAHRC Funding

1st April 2016 – 31st March 2017

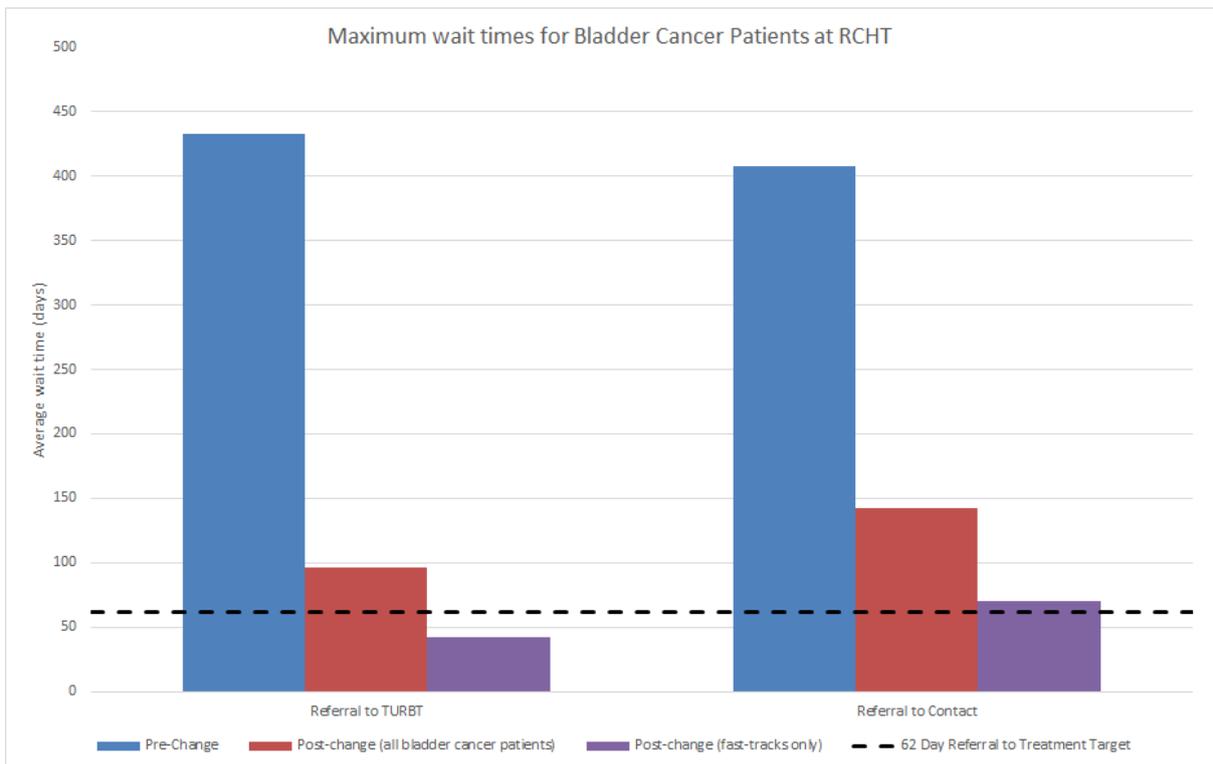
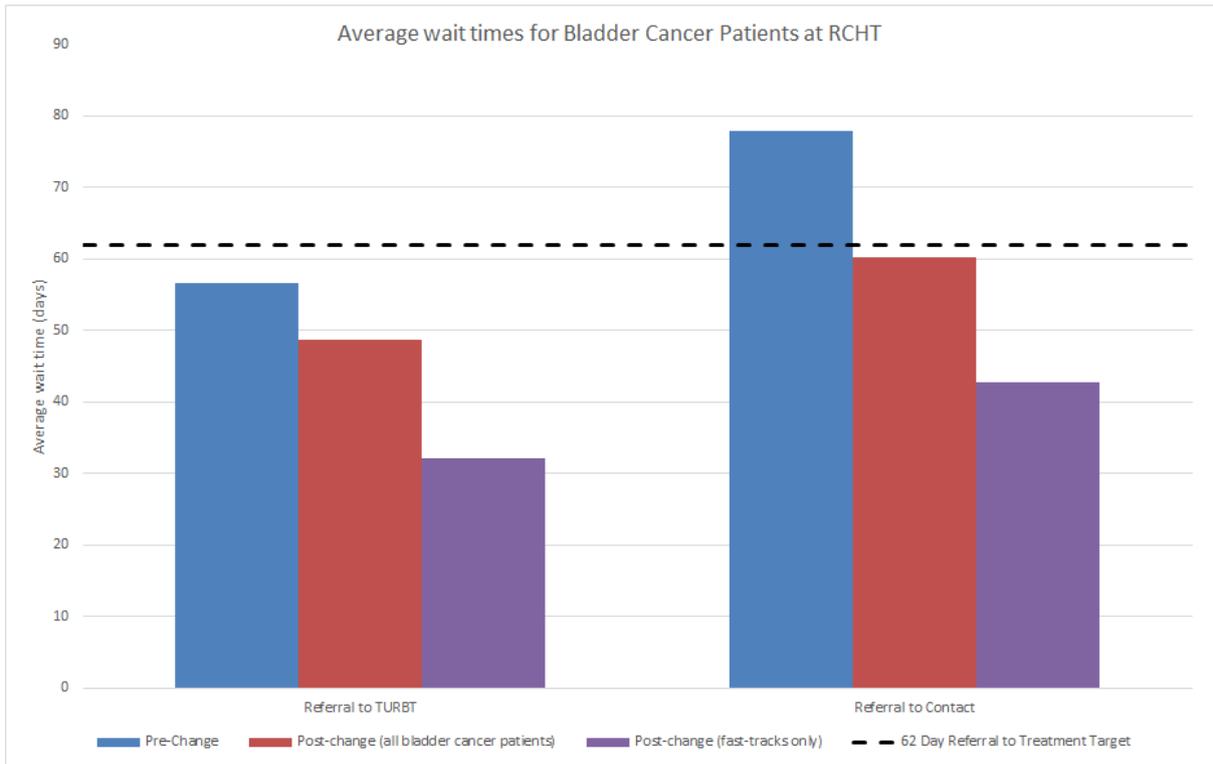
BLADDER CANCER MODELLING

In 2016, the time from initial referral to referral for definitive treatment for muscle-invasive bladder cancer patients at Royal Cornwall Hospitals NHS Trust (RCHT) was around 90 days. The aim of this project was to use simulation modelling to help the trust identify causes of delays in the pathway and test the impact of potential changes on referral to treatment times.

We developed a model using two years of trust data, and simulated the flow of patients through the system. The simulation catalysed and focussed discussion between multidisciplinary RCHT staff which identified potential changes. The likely impact of these was then tested and compared in the simulation model.

The model predicted that by making two key cost-neutral changes: fast-tracking bladder cancer patients with suspected muscle-invasion, and nurse specialists speaking to the patient to discuss options whilst on the ward for their TransUrethral Resection of Bladder Tumor (TURBT), the average referral to treatment time could reduce by up to five and a half weeks.

On the back of this evidence, the Cancer Lead for Urology at the trust immediately re-wrote the protocol for muscle-invasive bladder cancer patients, and the new protocol was implemented in less than 24 hours. Analysis of data collected three months later shows that people with muscle-invasive cancer are now waiting 25 days less for their TURBT and 5 weeks less to be contacted about their diagnosis. The modelling study probably also had a wider impact on quality of care with an 18 day average reduction in waiting times across all bladder cancer patients.



CONTRIBUTION OF NIHR CLAHRC

RCHT had experienced lengthy times from referral to treatment for bladder cancer, and was keen to make changes to the pathway to reduce delays. However, they did not have the skills or expertise to be able to confidently identify and explore possible changes. PenCLAHRC was able to apply Operational Research expertise to develop a simulation model of the bladder cancer pathway, and

used this to test potential changes to the pathway without the costs or safety issues associated with a trial-and-error approach to real world changes.

WHAT HAPPENED NEXT?

RCHT is continuing to collect data so that we can feedback on the performance improvements made and identify areas for further improvement. The evidence will be used in discussions with other trusts in the region to explore whether such an approach could also be used to reduce delays in their own systems. RCHT and PenCLAHRC are developing a joint press release about this work and a joint publication for submission to a peer-reviewed journal. The findings will also be disseminated at relevant clinical conferences.