INTRODUCTION: The Transforming Outcomes and Health Economics Through Imaging (TOHETI) programme is engaging NHS partners across the London boroughs of Lambeth and Southwark to co-design, transform and improve services across a number of patient pathways, leading to improved patient experience and outcome and contributing to cost-effectiveness. By addressing whole pathways rather than focusing on small, piecemeal change, TOHETI asks ‘are we enabling the right imaging test to be done at the right point in time?’ The programme works particularly closely with the Clinical Imaging and Medical Physics (CLIMP) Directorate at Guy’s and St Thomas’ NHS Foundation Trust.

This programme of work is facilitated by £18m funding from Guy’s and St Thomas’ Charity, which will enable the installation in 2016 of a replacement Emergency Department CT scanner, and additional 3T-MRI and CT scanners, delivering increased capacity and providing the ability to introduce and measure innovations outside of ‘normal practice’.

IMPROVING PATHWAYS:
Ned哈尔滨pathways aims to identify and remove inefficiencies. Through a mixture of research studies and short term service improvement projects, TOHETI impacts widely across the Trust and local community, through the different clinical specialties, emergency medicine, primary care, patients, families and carers.

RESEARCH STUDIES:

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<tr>
<th>Pathway</th>
<th>Study Question/Design</th>
<th>Proposed benefits</th>
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| Chronic Headache | Evaluating direct access from GPs to MRI imaging services for patients with chronic headache | o Reduction in waiting times  
 o Reduction in Neurology appointments  
 o Supports patient management within the primary care setting due to MRI reassurance effect |
| Colon Cancer | Replacing colonoscopy with CT colonography for patients symptomatic for colon cancer. | o Increase early detection and improve prognosis.  
 o Lower risks and discomfort to patient.  
 o Address capacity issues, and release optical colonoscopy capacity to focus on high-risk patients. |
| Lung Cancer | To identify high-risk patients in the smoking population aged between 55-80 years (current and former smokers) and offer low-dose CT scans. Patients identification and engagement methods will include GP records & Community Pharmacies. | o Increase engagement and enable early detection  
 o Explore possibility of direct access for GPs to low dose CT.  
 o Increase understanding of non-compliance, and potential barriers to uptake of low-dose CT screening |
| Acute Chest Pain | To assess the use of CT Angiography (CTA) in patients with Acute Chest Pain (ACP) and no myocardial ischaemia referred from the A&E department to the Rapid Access Chest Pain Clinic (RACP). | o Increase the efficiency associated with the management of patients discharged from A&E following a non-ischaemic ACP episode  
 o Improve clinical care by enhancing the completeness of diagnosis, ruling in or ruling out Coronary Artery Disease (CAD) as the underlying cause of ACP  
 o Increase patient experience associated with the management of patients with an ACP episode |
| Scaphoid Fractures | Assessing MRI, alongside plain x-rays, on presentation for patients with suspected scaphoid fracture | o Improves the diagnostic pathway for suspected scaphoid fractures, to enable appropriate and timely treatment  
 o Cost of additional MRI scan predicted to be offset by savings in decreasing the amount of unnecessary diagnostic and treatment procedures |

STAKEHOLDER ENGAGEMENT:
Staff engagement and opportunity to shape and take ownership of change is fundamental to our approach, and suggested process change is led by clinical expertise and opinion. TOHETI has supported lean training for imaging managers, radiologists and radiographers.

Clinical Imaging and Medical Physics (CLIMP) Directorate
Guy’s and St Thomas’ NHS Foundation Trust

11 Consultant Radiologists
3 acting as Chief Investigator for TOHETI research studies
3 acting as Principal Investigator (Back-up for 1 Consultant Radiologist post funded by TOHETI)
Specialist Registrars

At least 12 Radiographers
5 trained in recruiting and consenting patients to research (Budget for 1 radiographer post funded by TOHETI)

Consultants, Nurse Consultants, and wider staff across Gastroenterology and Respiratory, Cardiovascular, Women’s Health, Health Services, Urology, Breast, Neurology, Orthopaedics, Evelina Children’s Hospital

Exploring new ways of working: we gathered staff feedback across the Trust on implementing a ‘GSTT Way’