NHS Foundation Trust

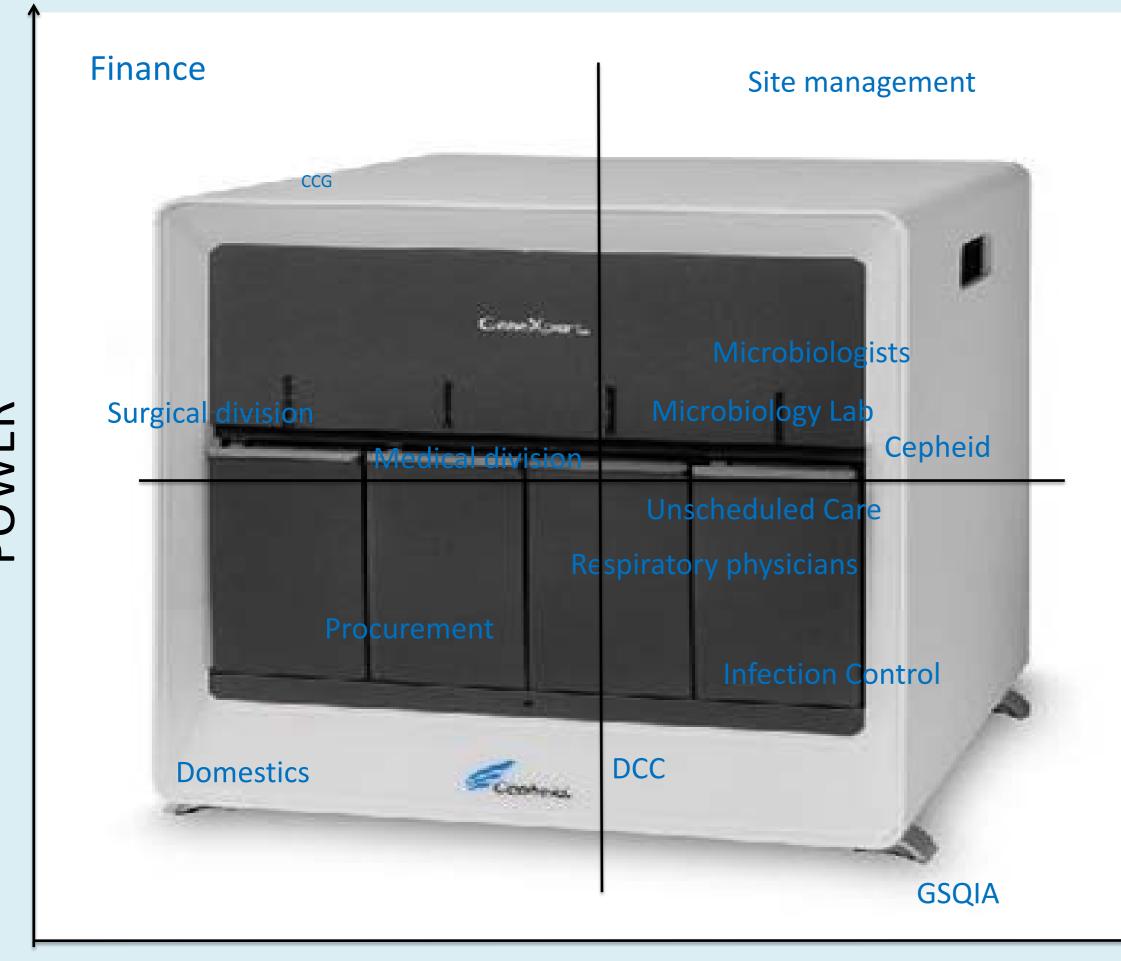
Introduction of influenza point of care testing (POCT) to reduce hospital-acquired flu & bed days lost to flu during 2017/18 season

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THE SAFETY CONCERN

During the 2016/17 influenza season (December 2016 to March 2017) there were a significant number of cases of hospital-acquired influenza (flu +ve ≥5days into admission) and also a significant number of bed days lost to influenza at GRH. This resulted in lost revenue, breaches in ED, additional antimicrobial costs and of course a degree of reputational impact for the Trust. Hospital-acquired flu at GRH last season represented 63 out of 165 total flu positives (38.1%). There were 195 bed days lost at GRH over the time period. It was felt that this number of hospital acquired cases of influenza and this number of lost bed days was unacceptable!



← Fig 1
Stakeholder diagram: The people and depts. with a vested interest in the project showing estimated interest versus power to enable project to succeed. (Background image: GeneXpert POCT machine © Cepheid)

Fig $2 \rightarrow$ PDSA cycle showing overarching approach of the pilot study at GRH.

INTEREST

Increase awareness of Use available side rooms patients in SRs-**ENVIRONMENT** (SR) better ?morning ward rounds Reduce the number of patients with flu-symptoms Site management to help in open bays or ward areas identify suitable areas for Create cohort bays/wards with non-flu patients cohort bays/wards Reduce the number of Improve movement out of Arrange better transport hospital SRs for those patients to lab acquired cases of that don't need them DIAGNOSTICS influenza and the number Reduce the time to a lab Implement POCT Implement testing that of bed days diagnosis of influenza negates the need for lost to testing at GRH transport (POCT) influenza by 50% compared to 2016/17 Reduce the length of the <u>EQUIPMENT</u> Update flu bundle testing process Improve the use of PPE and other IC precautions Liaise with Education re use of PPE procurement to ensure adequate PPE Fig 3 个 Increase availability of Driver Diagram with the implemented PPE change idea highlighted.

AIMS

- 1. To reduce the number of hospital acquired case of influenza by 50% between December 2017 and the start of April 2018
- 2. To reduce the number of bed days lost due to influenza by 50% between December 2017 and the start of April 2018.

THE QI TEAM (LEAD - Dr John Boyes)

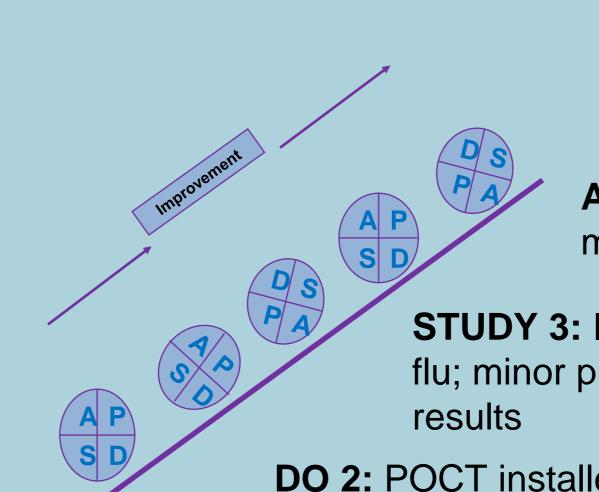
Pathology – Jeff Keast (ChemPath), Jon Lewis (Micro), Gillian Graham (IT support), other CMMs

Medicine – Dr Jeff Meecham-Jones (Resp), Dr Emma Wylie & Chris Custard (Unscheduled Care), ANPs – Lou, Sarah, Jemma, Kate

Infection Control – all the ICNs (and Sue of course!), Dr Rob Jackson

Procurement – Lee Robertson

Cepheid – Alison Tilley & Eric Michel



ACT 4: need to improve IT connectivity; cross site machines; better patient pathway

STUDY 3: Initial data collected; significant reduction in HCAI flu; minor problems with data accuracy & false positive results

DO 2: POCT installed; data gathered; problems with IT connectivity, training, kits

PLAN 1: Reduce HCAI cases of influenza by reducing flu patient exposures; install POCT machine; collect data prospectively; predicted ability to reduce bed days lost and cases of HCAI

RESULTS:

1. Flu diagnosed ≥5days into admission at GRH 2017/18 = 74/543 = **13.9**%

Total reduction in cases of HCAI influenza = **63.5**% (target 50%)

2. Bed days lost at GRH 2017/18 = 5Total reduction in bed days lost due to influenza = 97.2% (target 50%)

OTHER BENEFITS:

- Conservative savings of £228,188.00 for the Trust
- 196 patients prevented from acquiring influenza whilst in hospital
- 12 potential deaths from influenza prevented
- 1. https://www.gov.uk/government/collections/seasonal-influenza-guidance-data-and-analysis
- 2. Elaine Ross, Martin Connor, Adele Foster 'No sitting ducks' presentation. The impact of point of care PCR testing on admission to hospital. NHS Dumfries and Galloway
- Reducing HCAI what the commisioner needs to know. **Sarah Mantle** NHSEngland presentation ppt. March 2015
- 4. Progress report on the UK 5 year AMR strategy: 2016. Department of Health and Social Care. November 2017. https://www.gov.uk/government/publications/progress-report-on-the-uk-5-year-amr-strategy-2016