The clock is ticking

The clock is ticking: an innovative echocardiogram efficiency improvement programme at Guys & St Thomas' NHS Trust vs national picture

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Background

Transthoracic Echocardiography (TTE) is one of the most requested non-invasive cardiac diagnostic tests in the NHS, with demand often exceeding capacity. This is reflected in the national dataset, where post-pandemic data show around 45% of TTE outpatients wait longer than the 6-week NHS England target of 1% set in 2008, compared with 7% pre-pandemic. These national data show Guy's & St Thomas' (GSTT) performance was 30% breaching in February 2022 (figure 1). Whilst there is no equivalent national dataset for inpatient TTE, many Trusts, including GSTT, experience similar challenges on the inpatient side, despite robust triaging and the BSE's TTE timeframe guidelines.

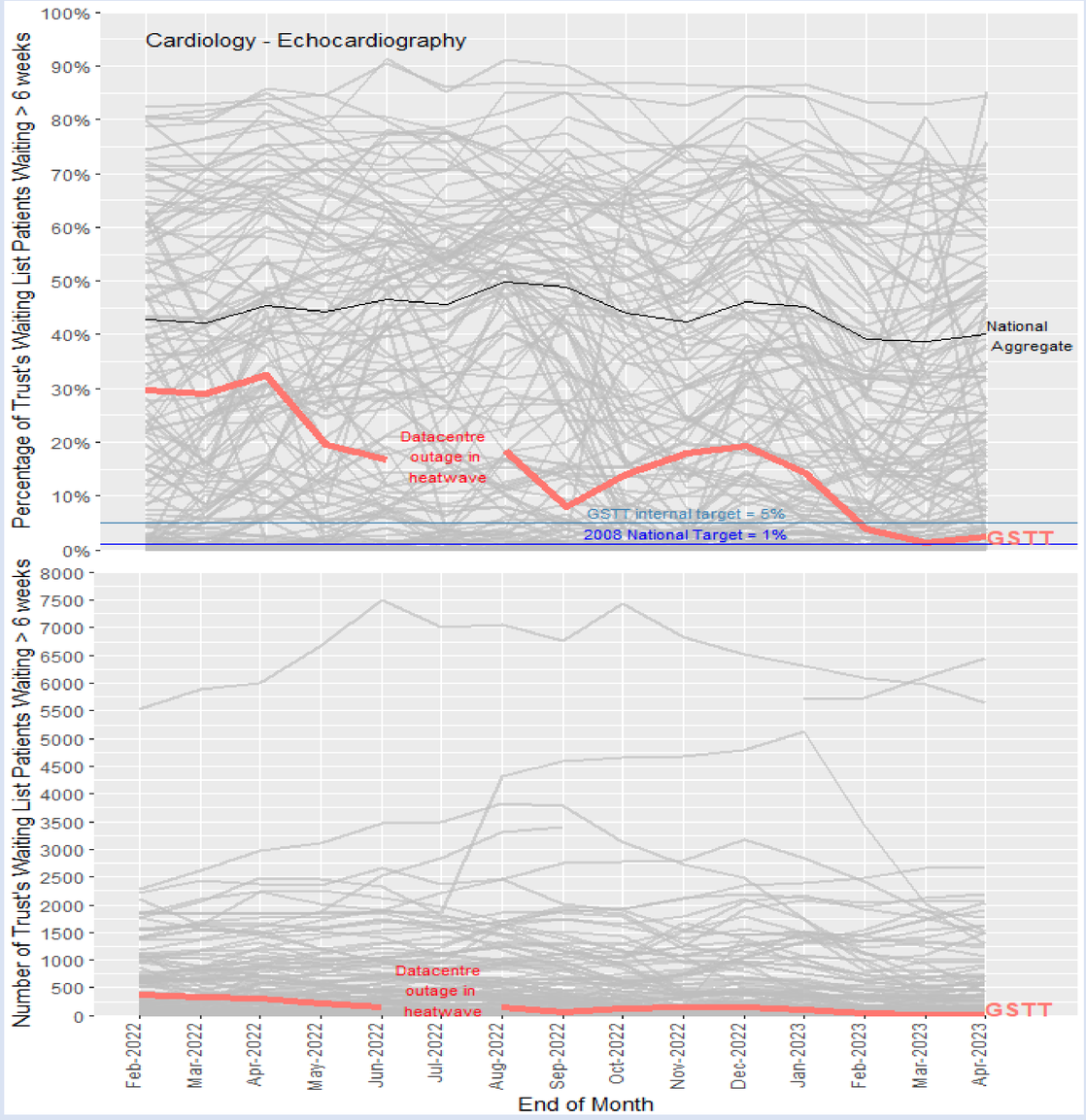

Figure 1: National Diagnostic set data. ach line is the performance of an NHS trust [N=134] on the 6-week-wait benchmark as a % of the Echocardiography waiting list (top) and the number of patients (bottom).

Purpose

To understand GSTT TTE performance and apply innovative quality improvement (QI) methodologies to inpatient and outpatient pathways to improve service efficiency and reduce waiting times.

Methods

Several change ideas were designed, tested & refined through plan-do-study-act (PDSA) cycles (figures 2&3).

Results

Around 20 outpatient appointments per week are no longer wasted, an increase in activity of over 1000 TTEs per year, representing 9% increase in TTE outpatient service productivity (18% on the clinic-linked side). 6-week waiting-time breaches fell below 5%.

Inpatient TTE service efficiency improved from 73% to 88% of referrals performed within 1-day or less. Levels of staffing and number of TTE referrals consistently stayed the same throughout the QI project.

Conclusions

Clinical Scientists leading rigorous QI initiatives can significantly improve TTE service efficiency in the post-pandemic era, despite national workforce shortages and with no additional resources. Other ongoing elements of our QI programme include work on reducing DNA rates, inappropriate TTE referrals and maintaining TTE service efficiency despite major IT changes in the Trust.

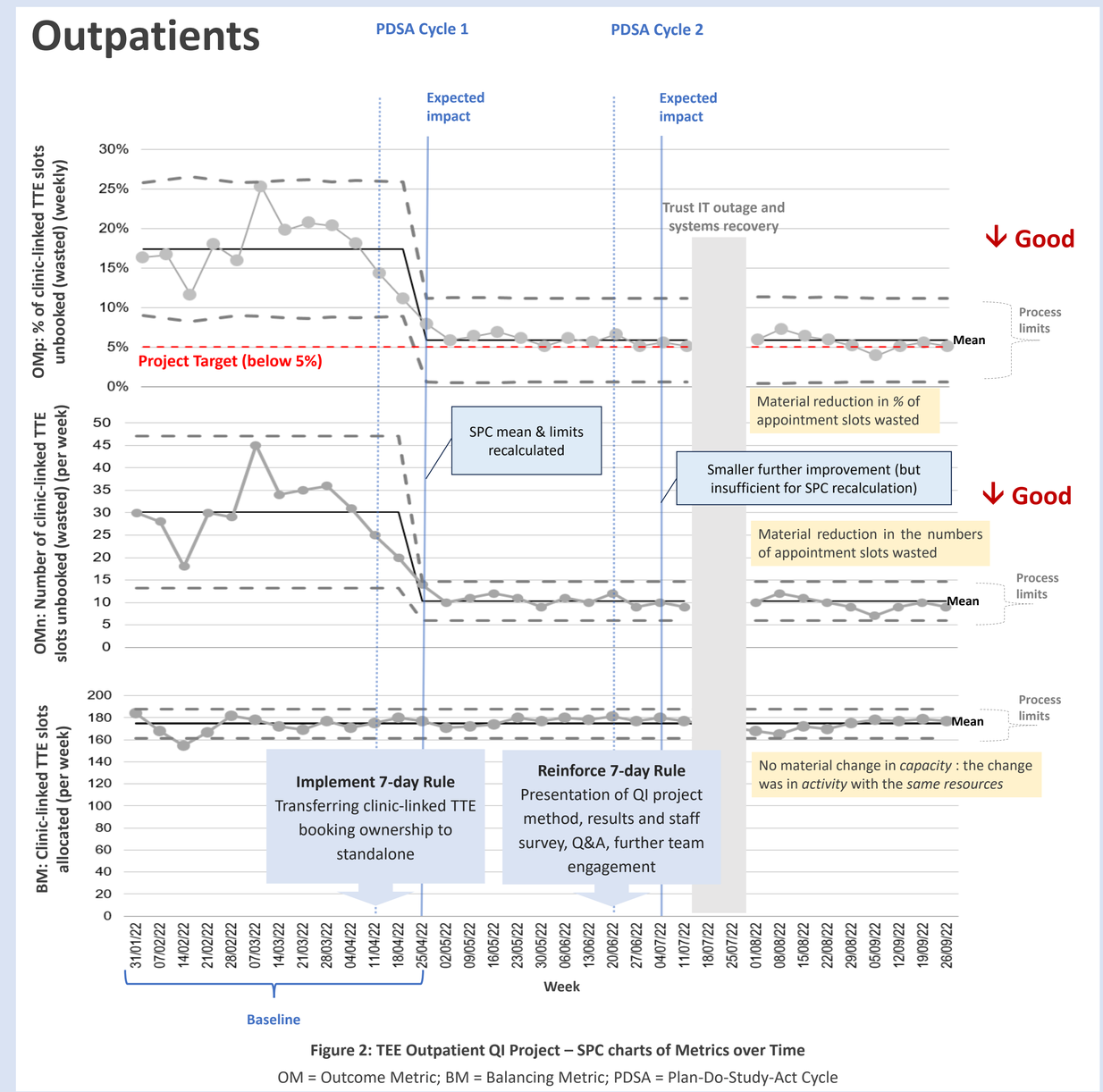

Figure 2: TEE Outpatient QI Project – SPC charts of Metrics over Time

OM = Outcome Metric; BM = Balancing Metric; PDSA = Plan-Do-Study-Act Cycle

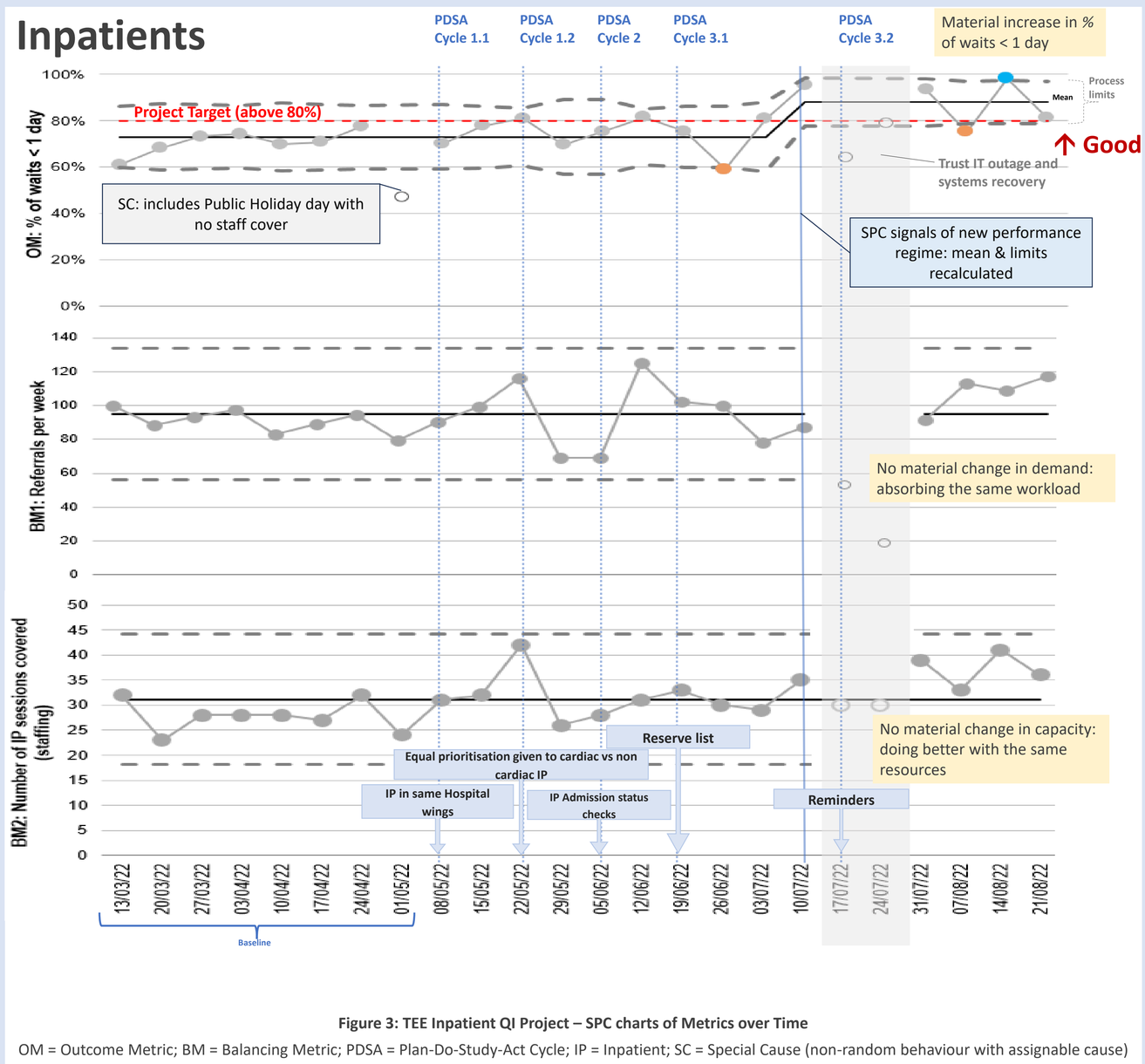

Figure 3: TEE Inpatient QI Project – SPC charts of Metrics over Time

OM = Outcome Metric; BM = Balancing Metric; PDSA = Plan-Do-Study-Act Cycle; IP = Inpatient; SC = Special Cause (non-random behaviour with assignable cause)

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