



Applying learning from an online Lean improvement training programme: Redesigning the paediatric pathway

The benefits of applying a Lean improvement methodology to make service changes to improve productivity, clinician capacity and patient experience.

What is the project?

- NHS England and NHS Improvement's freely available Lean online programme¹ introduces Lean improvement concepts and tools through practical, structured sessions. It emphasises the benefits of applying the learning to a small, focused area of improvement, as David Smith did when looking at the East Lancashire Hospitals paediatrics pathway.
- David joined the NHS after being furloughed from his retail job. In his paediatrics service bank role, he investigated the pathway for children with neurodevelopmental concerns. He cleaned patient lists of duplicated data and mapped out a pathway that streamlined processes from two separate pathways. The team decided to roll out the new pathway, applying the Lean principles and learning David had acquired through the course.
- David spoke with Q peer interviewer **Joe Home**, Q's Insight and Evaluation Officer Henry Cann and **Iain Smith**, National Improvement Lead for NHS England and NHS Improvement (who worked on the development of the programme), to share learning.

What were the challenges? How did they overcome them?

Having the time to apply their learning.

Iain reflected that the Lean online programme was designed to help teams 'to learn really simple techniques and apply them to

small'. However, as evaluations of improvement training programmes frequently reflect, participants are often not supported to find the time or opportunity to apply their learning.² David secured senior staff's trust and backing to facilitate some of the potentially counter-cultural changes; highlighting the potential longer-term benefits.

"You've got to invest time to release time. There is no free improvement, unfortunately. But if you can invest time and invest in the right thing, the payback can be well worth it."

Getting staff on board to make the changes needed.

Getting buy-in for improvement work from already over-stretched staff can be a real challenge. Disjointed and often duplicated departmental processes meant a lot of the workload that overburdened clinicians was administrative work that could be safely and effectively done by non-clinical teams. Highlighting this helped get staff on board for fairly fundamental changes.

"We couldn't do it unless we did a data cleansing [...] there was a lot of work crossed over. For example, I would update part of a patient record and somebody would go in and change it, because we were using separate spreadsheets. So we removed all the access to all but a handful of people who were communicating and doing huddles with each other."

What were the results?

More manageable lists and pathways.

After the data cleansing process to remove discharged patients or to request information for records with incomplete referral information, the existing waiting list reduced from around 1,200 to just over 200. This reduced waiting times from an average of over a year to just over three months.³ Merging two previously separate pathways reduced unnecessary duplication, thus saving time and money, while also providing a clearer and more navigable process for those accessing the service.

Increasing clinician capacity to see more patients, and adding value to staff roles.

Fundamentally changing the structure of work for staff freed up clinicians' time to see more patients. A temporary increase from six to twelve patients seen in clinic by the multi-disciplinary team reduced its backlog of cases.

“We actually increased the consultant workload [...] we removed the administration processes... Because the workload was easier to manage and maintain, we were able to increase the capacity with service-user flow through the programme.”

This is having a positive effect on staff in both clinical and non-clinical roles. David suggests it has improved staff productivity, morale and retention:

“Redesigning and distributing workloads has given additional value to staff. They have more manageable workloads, and are better able to carry out their roles to their full potential. With the administration side, they were actually enjoying it, because it added value to the role, it gave them a bit more diversity to what they were doing.”

Lessons for improvers

Ensuring senior accountability and support.

Organisational support for improvement was essential in enabling improvers to apply the Lean improvement structure and create 'a connection between what happens at the front line being fed right back up to the top of the office'. Senior accountability, with a commitment to follow through and review the changes implemented, is vital for service-level change to be made sustainable.

Building capability to sustain the change.

A common challenge that David and Iain see is maintaining changes over time when project managers brought in to implement a change move on. 'With the NHS... we fix something, we take our eye off it, we move to a different area, and we don't maintain it.' Developing improvement capabilities in-house, in this case through accessible online training, ensures staff such as ward managers and matrons have the skills to sustain improvements, decreasing reliance on external support.

Find out more

There are currently two Lean online programme courses available: [Lean Fundamentals](#) and [Lean Intermediate](#). Each comprise six 1-hour content modules available 24/7 over eight weeks.

For more on applying Lean principles in practice:

Iain and David's paper applying the Lean Fundamentals online content to vaccination processes: Smith IM, Smith DTL. [Mass production methods for mass vaccination: improving flow and operational performance in a COVID-19 mass vaccination centre using Lean](#). *BMJ Open Quality*. 2021;10:e001525. doi: 10.1136/bmjopen-2021-001525. St Thomas' vaccination service

Endnotes

- 1 www.england.nhs.uk/sustainableimprovement/lean-online
- 2 See, for example, learning from Q Exchange-funded [A Framework for the Evaluation of Quality Improvement Training](#).
- 3 This was evidenced by the team using statistical process control.