An Endoscopy Problem

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Authors:

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Background

- 3 sites- 2 with JAG accreditation
- Approximately 80 new referrals per day across the sites
- Failing 2WW performance at 50%
- Diagnostic backlog over 1,500 patients waiting over 6 weeks
- Variety of issues contributing to this chaos
Issues on the ground

- Poorly utilised lists
- Phone not being answered
- Stopped partial booking
- Booking by PTL
- Electronic scheduler
- Extra capacity
- Scanning referrals
- SOP / processes

One team shared values
Methods

- Improvement methodology taught by NHS IQ to General Manager and Matron
- Walk round with NHS IQ and interviews
- LIA with admin team
- Team planning meeting
- Weekly phone calls involving Director of Performance
- Visit to UCLH

One team shared values
Working with business intelligence

• On the ground we knew the operational challenges, however Sophie provided the “fact” or “intelligence” on where we needed to focus our next improvement.
What is capacity and demand?

- A process
- A set of measures
- A balancing act

It’s about making sure that the capacity you have in terms of people/hours/slots is what you need to do (demand), taking into account other variables such as seasonal variation and drop off for example.
The Process

Demand
Requests in

Backlog
Waiting List

Bottleneck
Constraints e.g. how fast requests can be processed by WL Staff

Activity
What we did

Capacity
What we could do

One team shared values
The Measures

For illustrative purposes only...

<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
<th>Running Total</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>Additions to the WL</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Processing constraints</td>
<td>WL staff can only process some of the referrals in a week</td>
<td>400</td>
<td>-100</td>
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<tr>
<td>Drop off</td>
<td>Drop Off, inappropriate referrals, DNAs</td>
<td>350</td>
<td>-50</td>
</tr>
<tr>
<td>Rebooks</td>
<td>New patients who cancel on the day and rebooked back in</td>
<td>380</td>
<td>30</td>
</tr>
<tr>
<td>Capacity</td>
<td>Full capacity</td>
<td>330</td>
<td>-50</td>
</tr>
<tr>
<td>Reductions</td>
<td>Staff on leave</td>
<td>315</td>
<td>-15</td>
</tr>
<tr>
<td>Additional capacity</td>
<td>Could be locums temporarily taken on</td>
<td>320</td>
<td>5</td>
</tr>
<tr>
<td>Activity</td>
<td>Patients we saw</td>
<td>320</td>
<td>-180</td>
</tr>
</tbody>
</table>

In this example, 180 patients would be added to the waiting list

500 - 320 = 180
Operational solutions

1. Control Demand
2. Control Capacity

Controlling demand is harder as it is the element that UHL has less control over; however this has been successfully achieved by the change of a clinical pathway, i.e. CT Colon rather than Colonoscopy.

Two key strategies for controlling capacity:

i) look for ways of gaining capacity within the system

ii) look for ways of increasing the flexibility of the capacity

Develop and agree ways to meet the unexpected and the expected situations that occur e.g. add more appointment slots or clinicians as needed when demand goes up unexpectedly.
Ideas for increasing capacity

- Use scheduling to find and ease the constraint
- Work differently - flexible hours, weekends, pre-plan and cover annual leave, extended roles, etc.
- Bid for resources only when constraint is equipment or staff and working differently will not help.
- Temporary solution – external provider, if the system is too broken
• **Process Mapping** – improvements can be made to any of the points in the process including reducing demand e.g. analysis of where and when the majority of demand is coming from.

• **Modelling** - models can be as straight-forward or complex as you want to make them. Because Capacity and Demand models are only models, they are:-
  – A theoretical guide
  – Reliant on robust source data (garbage in garbage out)
  – No model can give an absolute assurance of waiting times
Some key things to know

• Understand how the pathways work
• The nuances of the data you have to work with
• Talking to people /discussing the model is key to success
• Working in silos is a recipe for disaster
Why All Models are Wrong
But some are useful

October 15 1987  BBC weather forecast

“Earlier on today apparently a woman rang the BBC and said she'd heard there was a hurricane on the way”.
"Well if you are watching don't worry, there isn't."
What happened

- The Great Storm of 1987 was the worst storm in nearly 300 years.
- Winds gusted at a speed of up to 115 miles an hour across the UK and France.
What the MET Office said:

• “We had picked up that there would be this vicious storm four or five days in advance.
• But one of the problems is that we have a computer which has a numerical model and we use that entirely to do the forecasts.

Because it's a global model, a very small error doesn't necessarily show up”.
Endoscopy Metrics

- Daily backlog – No. Waiting 6+ weeks with and without dates
- Demand vs activity delivered – are we managing to deliver more activity than work coming through the door?
- Demand for 2ww referrals
- Waiting List Size
- On the day cancellations / DNAs
- Cancer 2ww performance
Endoscopy Metrics – Pictures Speak 1,000 words

Patients on Gastro Diagnostic Waiting list 6+ weeks Actual vs Target

Weekly Endoscopy Demand vs Total Activity

Endoscopy Waiting List Size (Excl Planned)

2WW Cancer Performance

One team shared values
Future Proofing Endoscopy Services

• Increasing prevalence of cancer
• Demographic factors; The UK population is projected to increase to 68 million by mid-2022, equivalent to an annual growth rate of 0.6%; the proportion aged 65 or over is projected to be around one fifth to one quarter of the population across all regions of the UK.
• More than 750,000 additional endoscopy procedures a year will be undertaken by 2020 – this is more than the population of Leeds and represents a 44% increase on 2013/14 activity.
• Demand for colonoscopy and flexible sigmoidoscopy has been reported as doubling between 2012 to 2017.

Source: - SCOPING THE FUTURE. An evaluation of endoscopy capacity across the NHS in England
## Future Proofing Endoscopy Services

### Figure 3: Modelled Changes in Endoscopy Activity 2013/14 to 2019/20 (figures in thousands)

<table>
<thead>
<tr>
<th>Baseline 13/14</th>
<th>Match activity to demand</th>
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<tbody>
<tr>
<td></td>
<td>Population Size</td>
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<td></td>
<td>Population Age Profile</td>
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<tr>
<td></td>
<td>Cancer Incidence</td>
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<td></td>
<td>Cancer Survivability</td>
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<td></td>
<td>Barrett's Oesophagus Incidence</td>
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<tr>
<td></td>
<td>Screening &gt; Surveillance</td>
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<tr>
<td></td>
<td>B:SP - FOBT &gt; FIT</td>
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<tr>
<td></td>
<td>B:SP - Raise FIT Positivity Threshold</td>
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<tr>
<td></td>
<td>Increase &amp; reduce variation in ZWW referrals</td>
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<tr>
<td></td>
<td>Barrett’s Surveillance</td>
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<td>New NICE Cancer Referral Guidelines</td>
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<td>Public Awareness Campaigns</td>
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<td>Decommissioning Barium Enema</td>
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<td></td>
<td>Increasing CT Colonoscopy</td>
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<td></td>
<td>Interaction</td>
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<td>Final 19/20</td>
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One team shared values
Any questions?

One team shared values