Imperial College Healthcare NHS Trust

The Big Room approach in driving service improvement - Roadmap to Reality

Vassiliki Bravis

Diabetes Head of Specialty, ICHNT

Clinical Lead for Diabetic Foot disease, ICHNT

Overview

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- Introduction to the ‘Big Room’ & ‘Flow coaching’
- Diabetes Foot Big Room case study
- Learnings & challenges from the reality of its application in today’s NHS
  - Can we mitigate?
  - What can we do as individuals, teams and institutions

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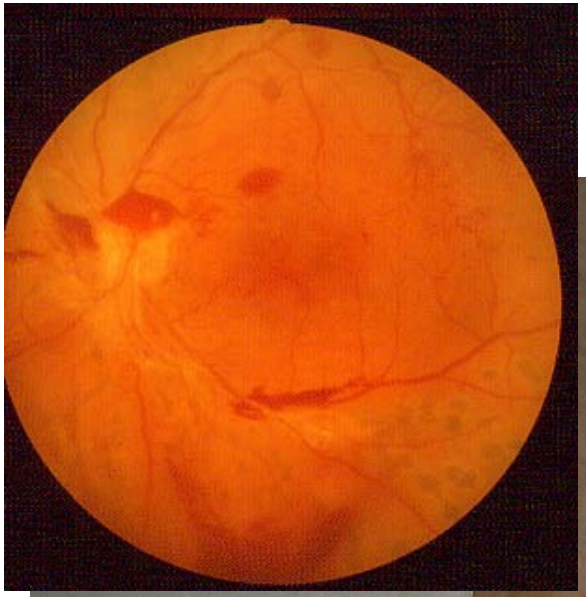
What is the ‘Big Room’



Microvascular Complications

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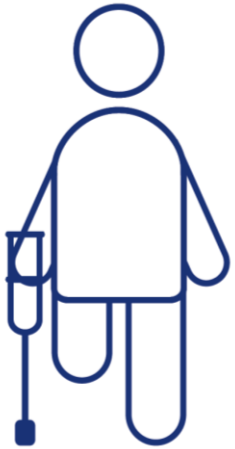
£1 in every £140 of NHS money is spent on diabetic foot problems.

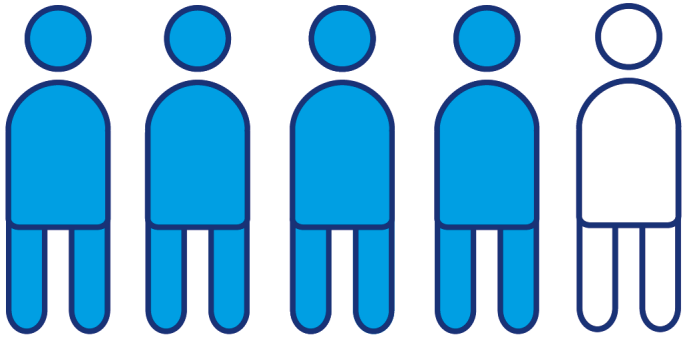
90% of diabetes budget (0.8-0.9% NHS budget)

86% of inpatient costs are for ulcer admissions



7,000/year

In England there are **over 140** leg, foot or toe amputations a week.



Four out of five amputations could be prevented as 80 per cent are preceded by largely treatable foot ulcers.

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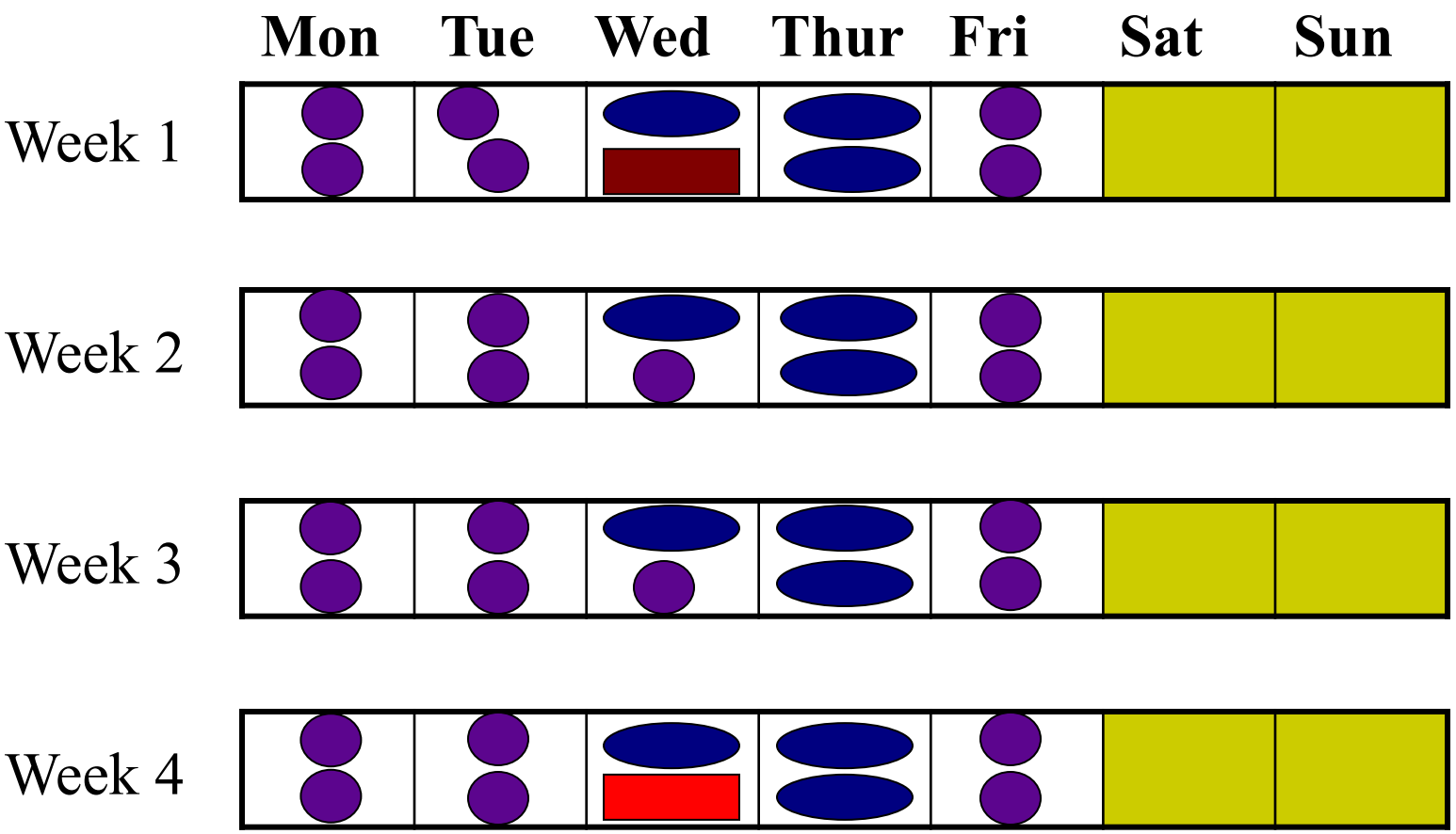


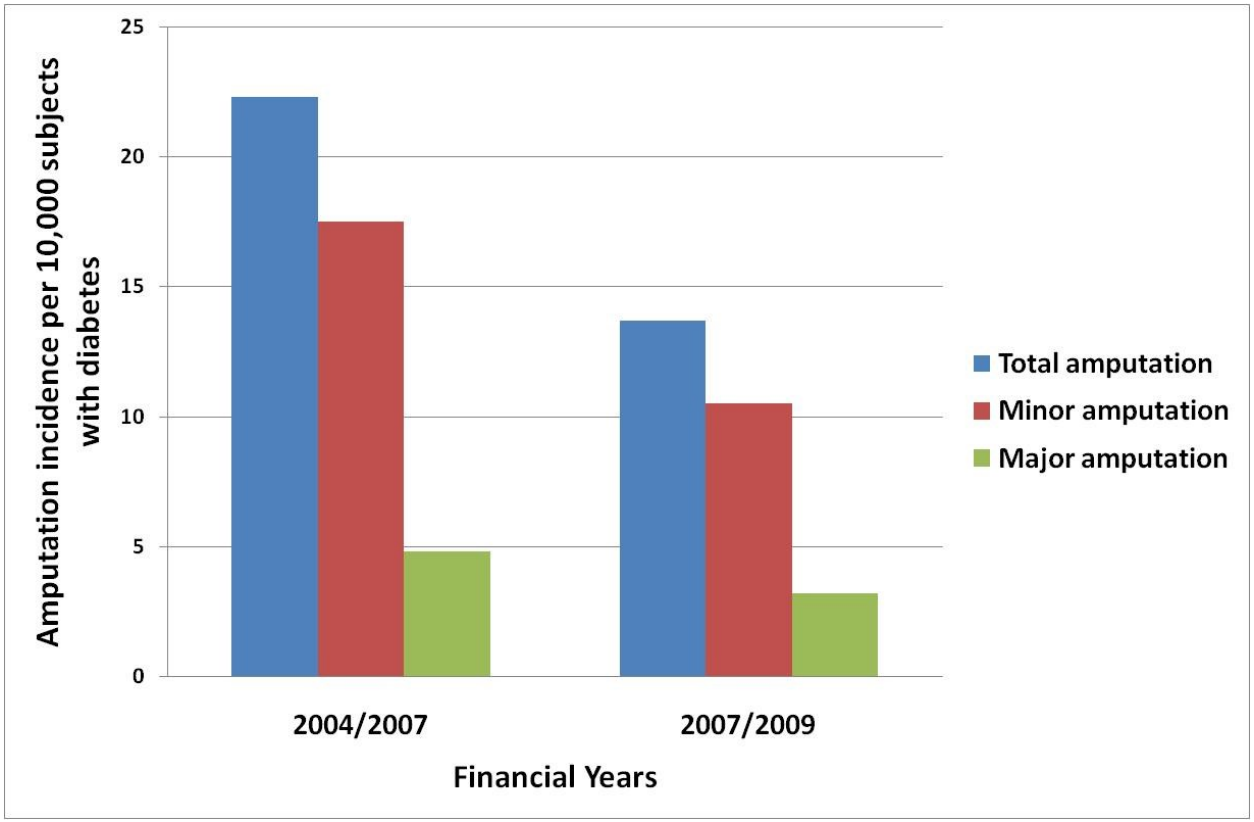
Imperial Multidisciplinary Foot Service

Podiatry clinic

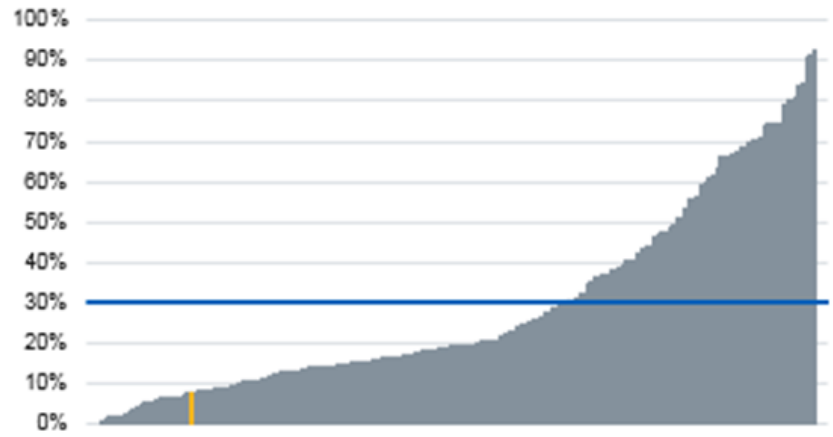
MDT Foot clinic

Multi-professional MDT Foot clinic

Amputation incidence per 10,000 subjects with diabetes in Westminster treated at St Mary's in financial years 2004-2007 compared to 2007-2009



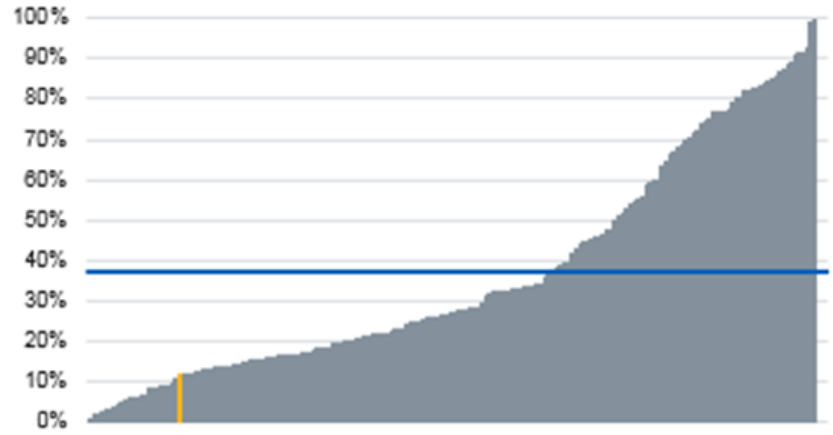
J Valabhji. Reducing Amputations at a multidisciplinary diabetic foot clinic. *The Diabetic Foot Journal* 2011 14 82-87



Received a foot risk assessment within 24 hours of admission 2010 - 2016

Audit year	Chosen site	Quartile	England
2010	26.1%	Quartile 3	23.7%
2011	17.5%	Quartile 3	21.7%
2012	22.7%	Quartile 2	29.8%
2013	40.9%	Quartile 3	37.3%
2015*	19.7%	Quartile 2	28.7%
2016	7.9%	Quartile 1	30.1%

* There was no audit collection or report in 2014, so 2014 data is not available.



Received a foot risk assessment during stay 2010 - 2016

Audit year	Chosen site	Quartile	England
2010	33.5%	Quartile 3	28.4%
2011	23.1%	Quartile 3	26.2%
2012	29.9%	Quartile 3	35.3%
2013	47.5%	Quartile 3	43.5%
2015*	30.9%	Quartile 3	34.1%
2016	11.9%	Quartile 1	37.5%

* There was no audit collection or report in 2014, so 2014 data is not available.

2017: And then came FLOW…

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FLOW improvement: the structure

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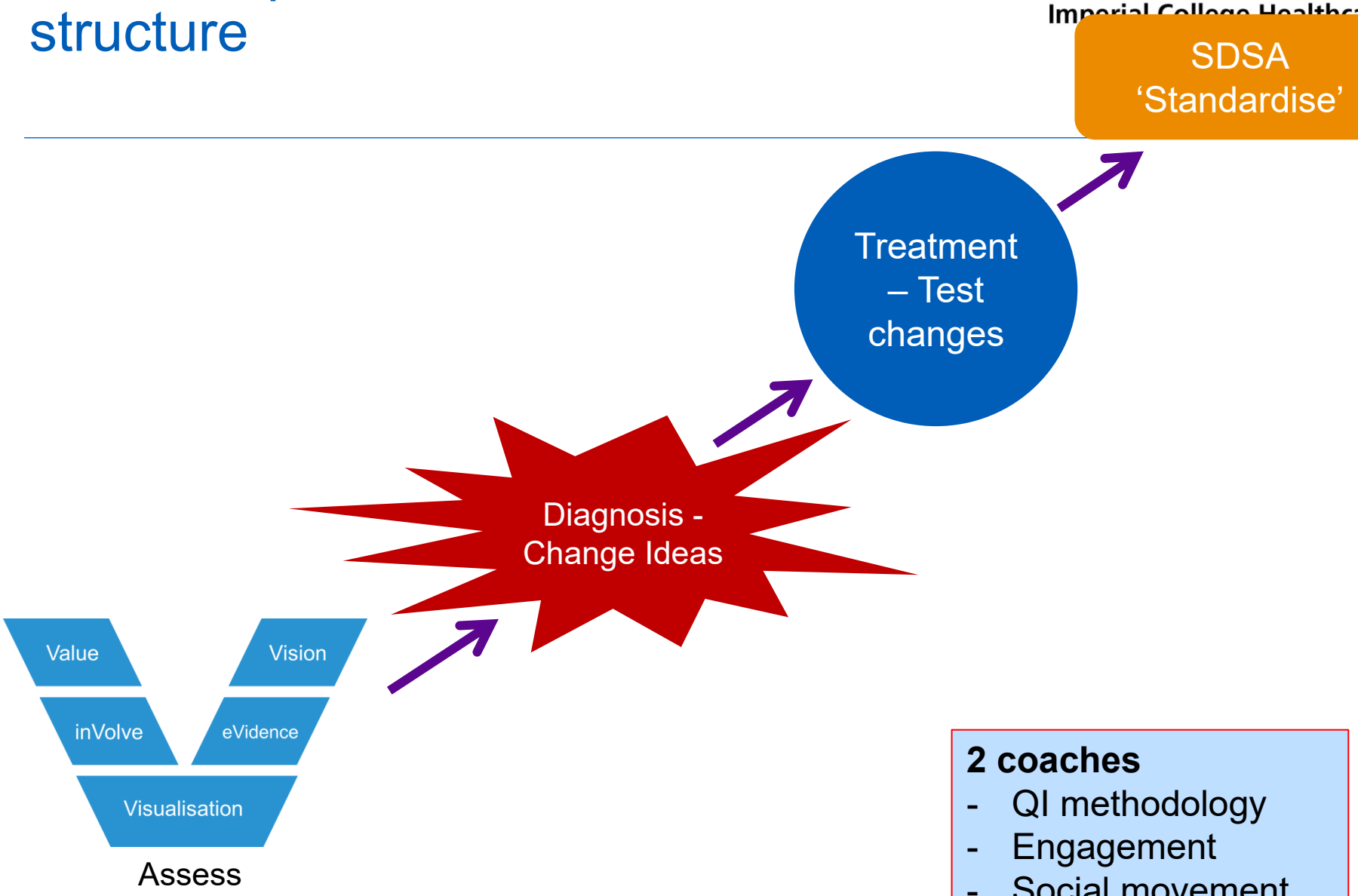

2 coaches
- QI methodology
- Engagement
- Social movement
- Behaviour change

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Build a Big Room

Value Vision inVolve eVidence Visualisation

Themes

'Post-it Frenzy'

Global Aim

Generate Change Ideas

Brainstorming

Change Concepts

Benchmarking and visits

Process/Value Stream Map

Fishbone

Spaghetti Diagrams

Selection criteria & Multivoting

Driver Diagram

Specific aim

Change idea

Define measures

A P S D

A P S D

A P S D

Standardise

Pre-Phase

Coached weekly meetings

Patient stories

System data

Reflective learning

Coaching skills

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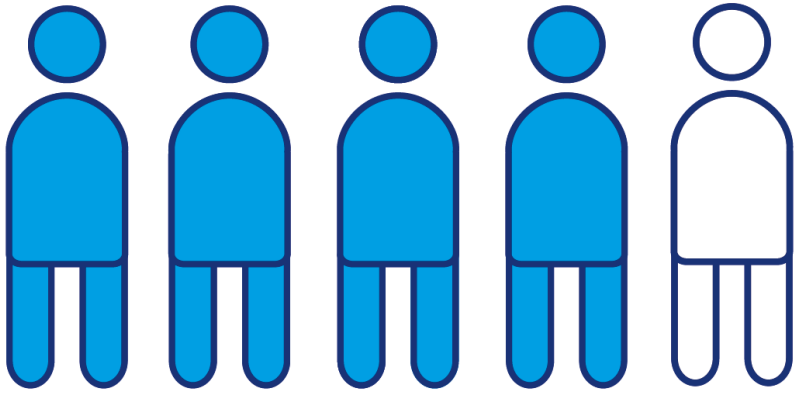
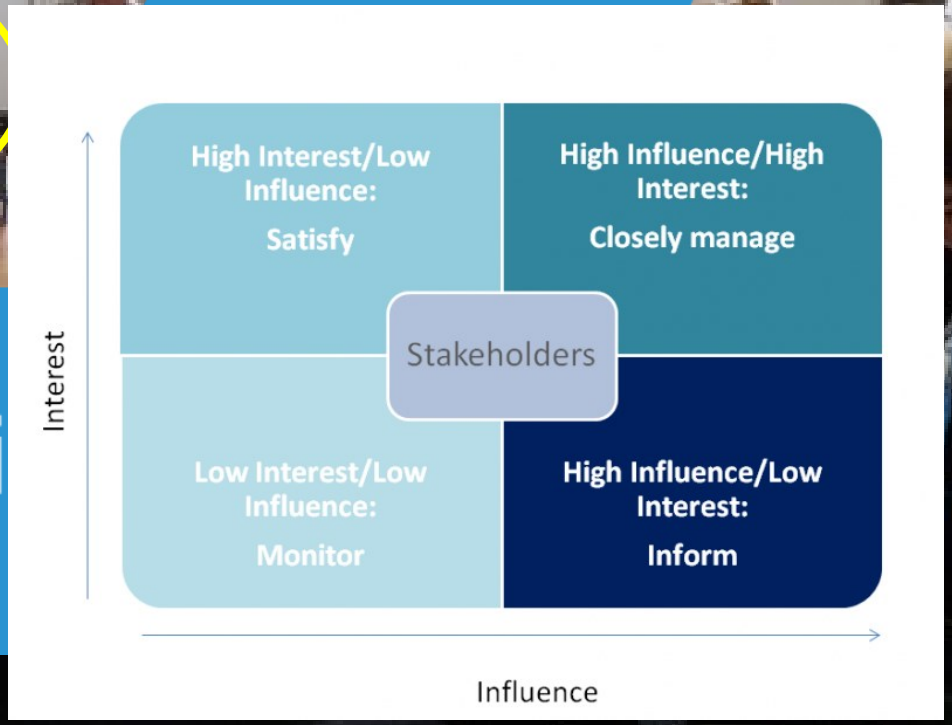
Helping	Active Listening	COM-B	Reframing
Ladder of Inference	Resistance & Reflection	Psychology	ARTS & PEARLS
Giving & Receiving Feedback	Time Management	Coaching Roadblocks	Troika Consulting



Four out of five amputations could be prevented as 80 per cent are preceded by largely treatable foot ulcers.

Patient journey & experience

Early access to expert care



Effective meetings – for the first time (and always since)

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- Conducted in a disciplined manner
- Active participation of all
- Clear action items
- Agenda for the next meeting
- **Evaluation** of meeting
- Runs to time

0 _____ 10

What went well?

What could be improved?

Leader

Prepares the agenda and help the team move through it by eliciting participation from all.

MCA

Timekeeper

- Keeps the team on time by tracking time through each agenda
- Re-negotiates time allocations where necessary
- Announces half time, one minute from end and end times

MCA

Facilitator

- Manages the group processes by ensuring balanced participation from all members of the group
- Alerts the group when the discussion is not focused on the agenda

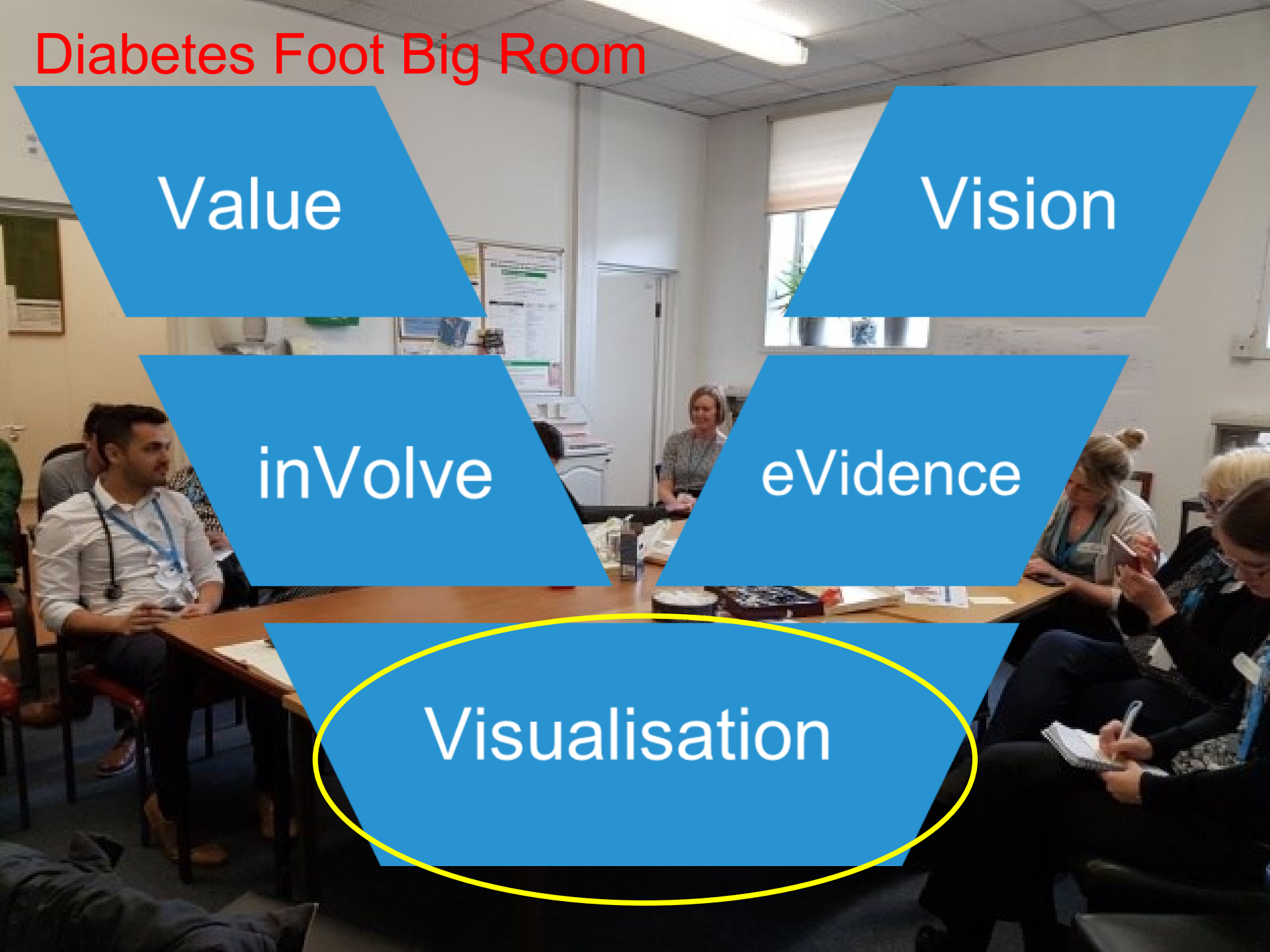
MCA

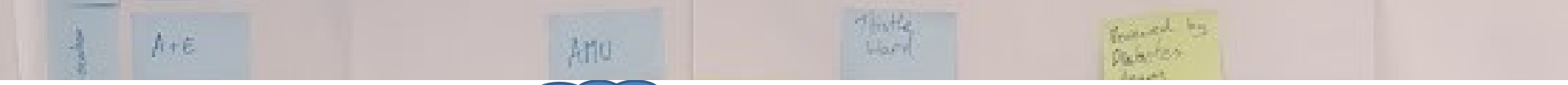
Recorder

- Keeps a visual record for the team
- Tracks the next steps/ action items/parking lot lists

MCA

Diabetes Foot Big Room





Process

- No robust F/U of plasties for renal pts – lack of ownership and no pathway
- Antibiotic ownership when given over dialysis
- Some disconnect re anti-microbial resistance – who advises?
- Few inpatient visits by podiatry on HH wards
- No foot round at HH
- No treat and transfer – delays in angio and vascular for pts at HH
- Renal unit not aware when podiatrists are on site
- Timing of foot WR and dialysis
- Renal ward nurses don't know who to refer to
- Dialysis patients off-site for long periods of time due to transport
- Renal ward nurses don't know who to refer to
- Service level agreement between renal and podiatry not defined
- Pts who dialyse at other hospitals e.g. NWP seen by several specialties
- HD causes pts to miss WR/drugs/podiatry reviews/investigations

IR and Vascular delays

- Palliative care involvement can be late
- Foot Waterloo score not done properly
- Access to equipment e.g. prevalon boots, pressure relief mattresses
- Outcome measures – quality of life not taken into account
- Lack of continuity between teams
- Lack of continuity – consultant of the week model
- Lack of screening – falls, cognition, frailty
- Lack of recognition of DF issue at admission
- FWR 1xweek and only at SMH
- Lack of screening of diabetes inpts
- EDD not always known or no medical decision on care plans
- OT/PT time of assessment
- No defined DF pathways
- Board round lack of structure
- No foot ward round template

Infrastructure

- Service centred care not patient centred care
- Microbiology expertise is at SMH
- No dialysis at HH*
- No interventional service at HH
- Visibility of scans – access to duplex results from HH/SMH/CXH
- Renal dialysis at HH while vascular hub at SMH*
- Not all specialist consultants (in endo) are DF specialists
- Thistlewhaite facilities
- Beds – capacity and allocation
- Waits for Zachary Cope
- Multi-site issues
- No co-location with vascular
- Cerner issues e.g. template delays, no diabetes flags, not user friendly to read notes
- Imaging – MRI scanner breaks down
- Staffing e.g. duplex, nurses on Thistlewhaite

Investigations / Interventions

Scheduling (dialysis, ward rounds, interventions, surgery)

- Surgery delays due to dialysis*
- Delays – duplex, angio, imaging, surgery
- Lack of dedicated slots
- Pts bumped off emergency surgery lists and inpt slots
- Unnecessary investigations – previous history not known/not read
- Variability & timing of MDT
- Admit pts to bypass OPD waiting lists
- Contradictory opinions on right course

Pathway definition and clarification

Effect: Long length of stay for diabetic foot patients

People Factors

Nursing Education

- Conservative approach to treatment
- Expectation of long stays – leads to not chasing tests
- Frailty status – not always performed/identified
- HCPs not reading notes
- Cognition – not always determined/identified as an issue
- Staff overwhelmed with complex needs of patients and need regular up-skilling from diabetes specialist nurse
- Challenges with dressings on renal wards and centres
- Lack of advanced care planning between foot and renal MDTs
- Main focus on renal/dialysis issues - associated co-morbidities sometimes overlooked
- Institutional competition works against pathway

Communication

MDT ward function

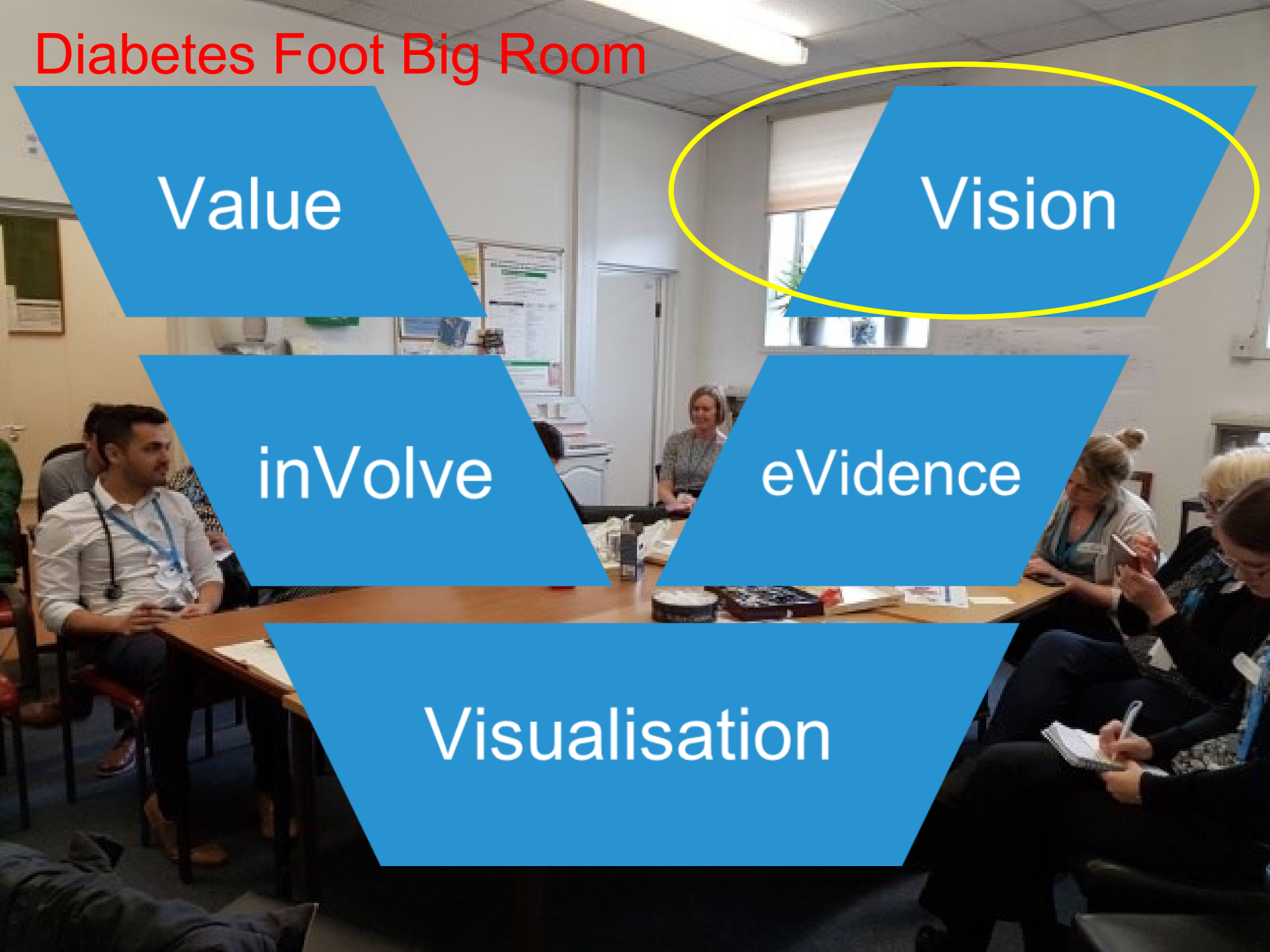
- Between Foot MDT & ward teams
- Between Sites
- Between specialties
- Between nursing staff and medical team
- Between investigation depts
- Lack of coordination of care
- With other organisations (GPs, Community, Trusts)
- Difficulty in liaising with satellite units
- Varying levels of clinician engagement
- Lack of communication between microbiology at HH and SMH re foot pts
- Duplication – lack of clarity over points of contact

Discharge

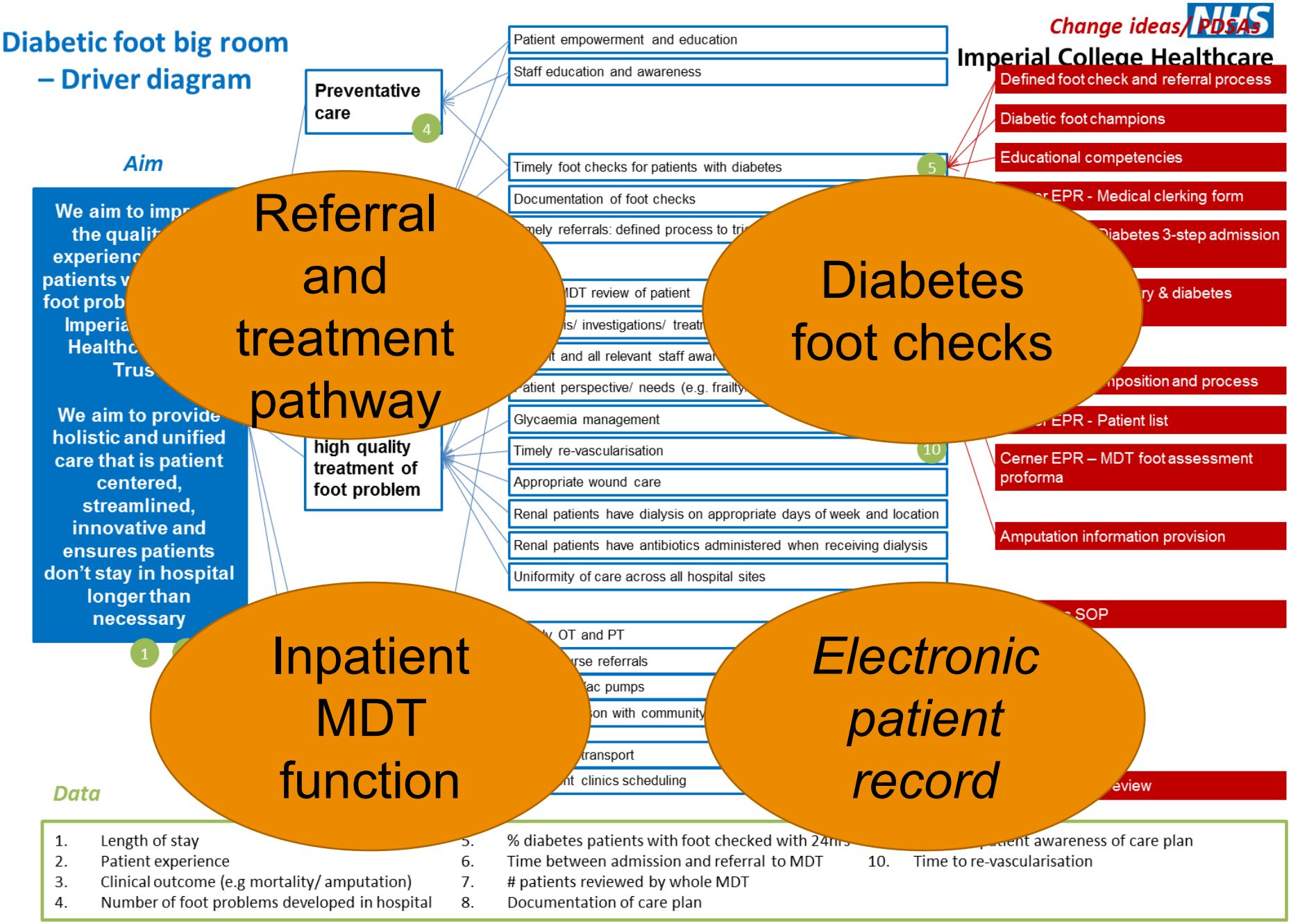
- TTA delays
- Late referrals to OT/PT
- New care package delays
- Delays in referring/starting community vac
- No confirmation re DNs receiving referral
- Vac and larvae not provided by all boroughs (Brent & HF)
- Delay in referral to DN
- Social Services

Key:
renal patients only
Key improvement areas

Diabetes Foot Big Room



Diabetic foot big room – Driver diagram

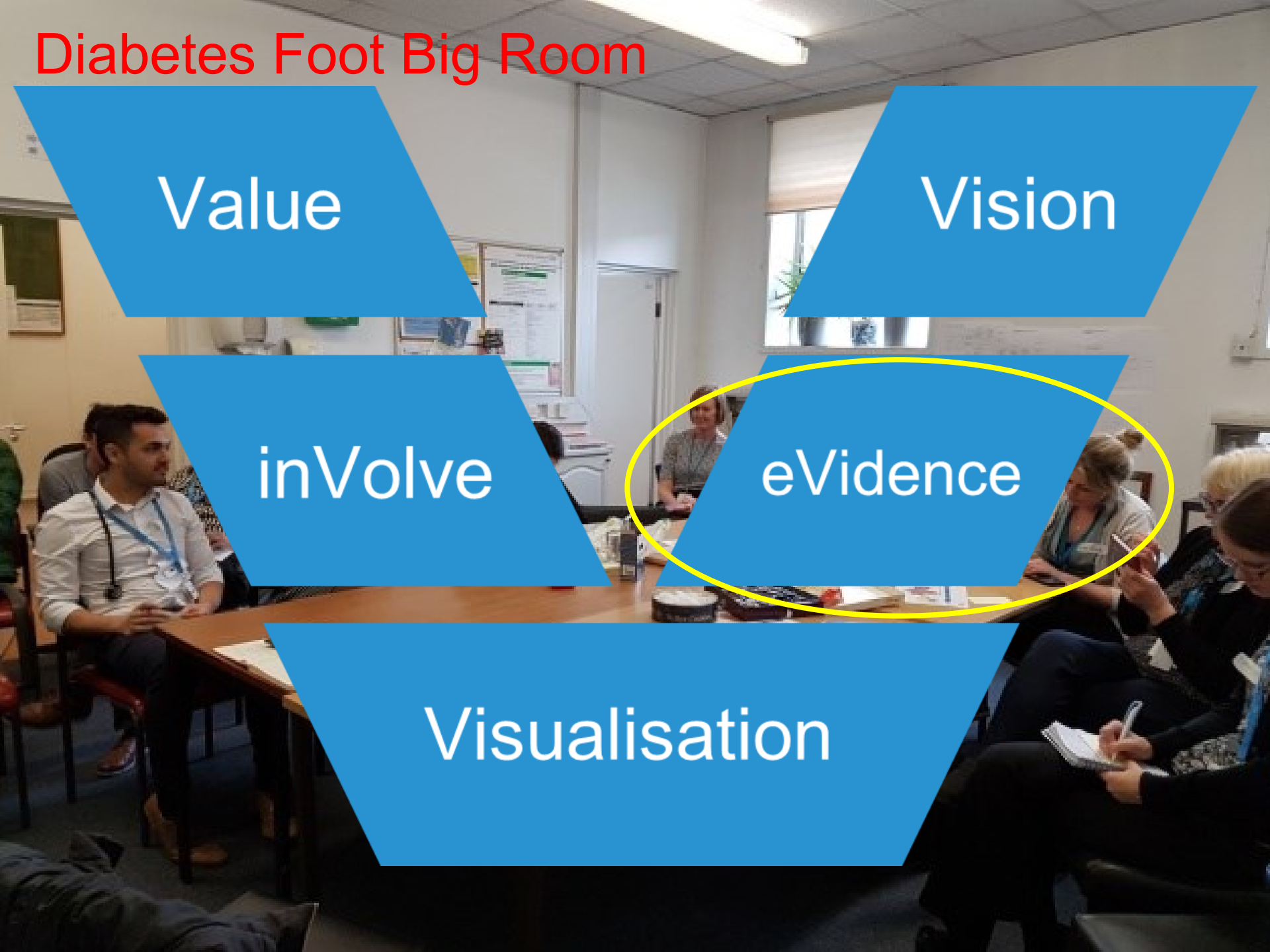


Data

1. Length of stay
2. Patient experience
3. Clinical outcome (e.g mortality/ amputation)
4. Number of foot problems developed in hospital
5. % diabetes patients with foot checked with 24hr
6. Time between admission and referral to MDT
7. # patients reviewed by whole MDT
8. Documentation of care plan
10. Time to re-vascularisation

tient awareness of care plan

Diabetes Foot Big Room



Diabetes 10 point Training - Foot Card

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NHS North West London Collaboration of Clinical Commisioning Groups

1. The Person

Listen to
Diabetes

2.Know the diffe

People w
People w
If the pe
Stopping

3.Feet (see foot c

Within 2
Always r
Problem
SpR blee
Podiatry
Refer to

4.Hypoglycaemia

Hypogly
Identify
Refer to

5.Hyperglycaemi

Prolonge
Avoid PR
If blood
Out of h

Diabetes 10 point Training

NHS Imperial College Trust NHS Trust

NHS North West London Collaboration of Clinical Commisioning Groups

6.How do I prescribe and administer insulin safely?

Insulin is a high risk drug
Ensure right person, right insulin, right dose, right time, right device
NEVER omit long-acting insulin in patients with type 1 diabetes: Ask if unsure
Always use e-prescribing on CERNER

7.How do I manage a tube fed person on insulin?

Give insulin at start of feed
Remember to review insulin dose or regimen when feed is increased/reduced OR if the timing has changed

8.Does my patient need IV insulin? (Not DKA/HHS)

Not if they are eating and drinking
Only in: NBM/peri-operatively/acutely ill patients (see guideline on The Source)
Check blood glucose hourly until stable (blood glucose 6-10 mmol/L) and 2 hourly thereafter
ALWAYS continue basal insulin alongside IV insulin
ALWAYS use Trust variable rate intravenous insulin infusion (VRIII) Guidelines on The Source
All patients receiving IV insulin MUST be prescribed IV dextrose

9.Diabetic ketoacidosis (DKA) & Hyperosmolar hyperglycaemic state (HHS)

DKA and HHS are diabetic emergencies
Seek senior medical advice and follow Trust guidelines. ALWAYS refer to the Diabetes Specialist Team
Patient will require fixed rate intravenous insulin infusion (FRIII) when unwell: IV fluids must be prescribed

10.Know how to refer to Diabetes Team

Start discharge planning from the moment of admission.
Refer on CERNER if patient meets referral criteria
Urgent referrals: DKA, HHS, acute diabetic foot, severe recurrent hypoglycaemia, pregnancy, insulin pump
Urgent out of hours referrals: contact medical doctor on-call
DSN bleeps: SMH 1224, CXH 6753, HH 6759, Renal 5238
Podiatry 02033125437/ Vascular on-call 02033128737 if urgent

Staff Confidence scores

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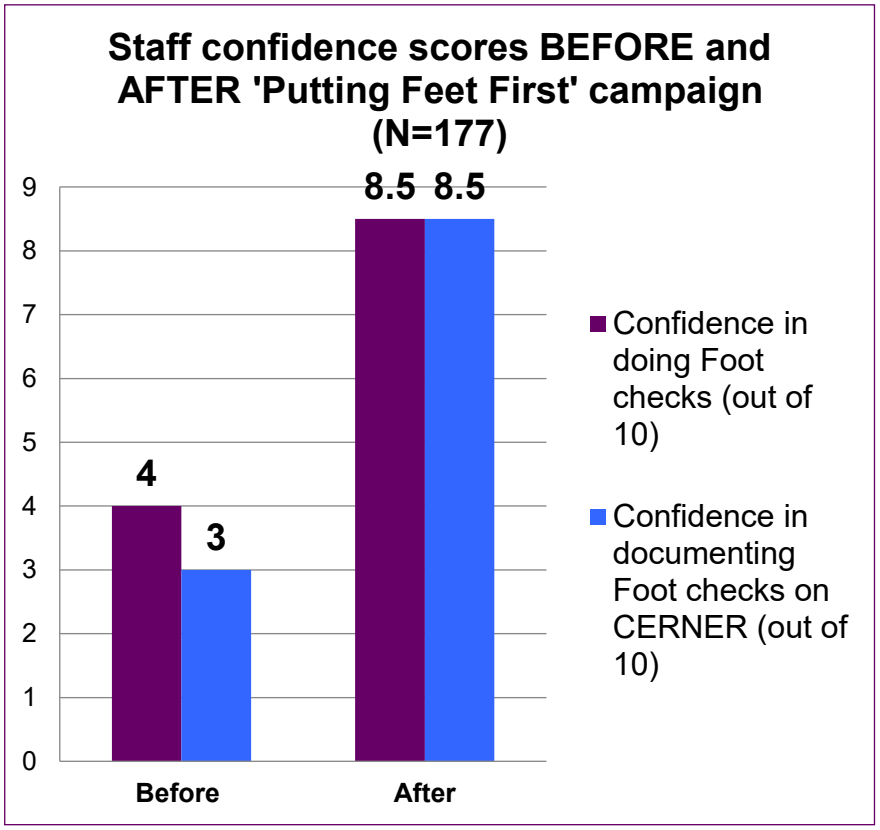
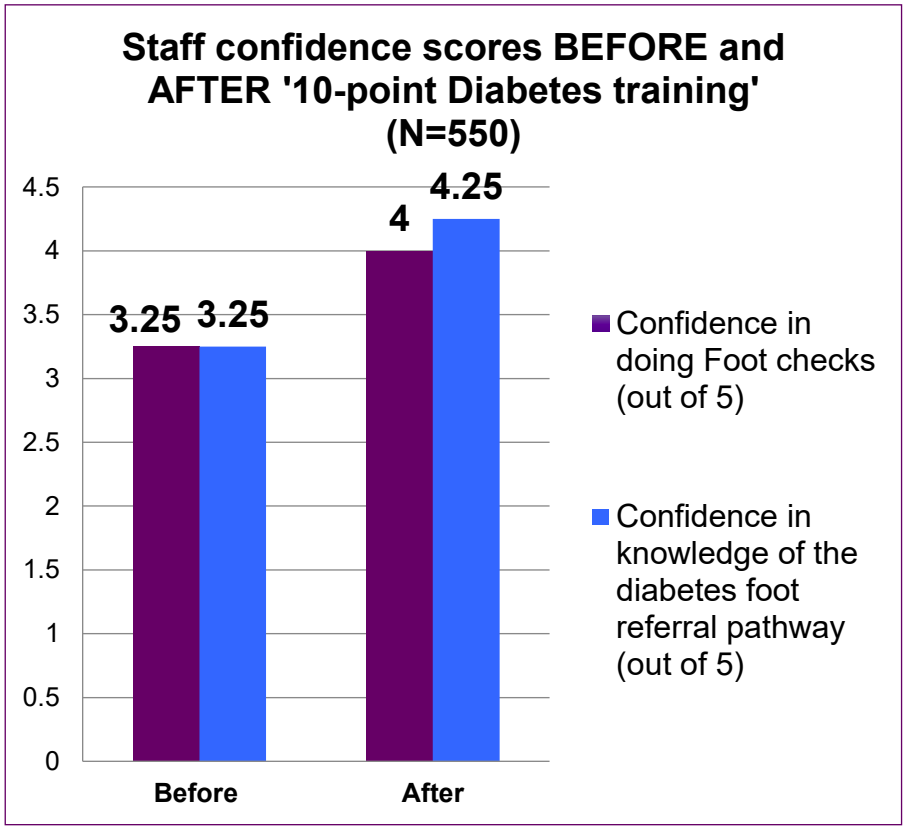
‘Putting Feet First’ campaign



’10-Point Diabetes Training’



Diabetes foot check audit Sep 2017 (n=43) vs Dec 2017 (n=53) vs Nov 2018 (n=52)

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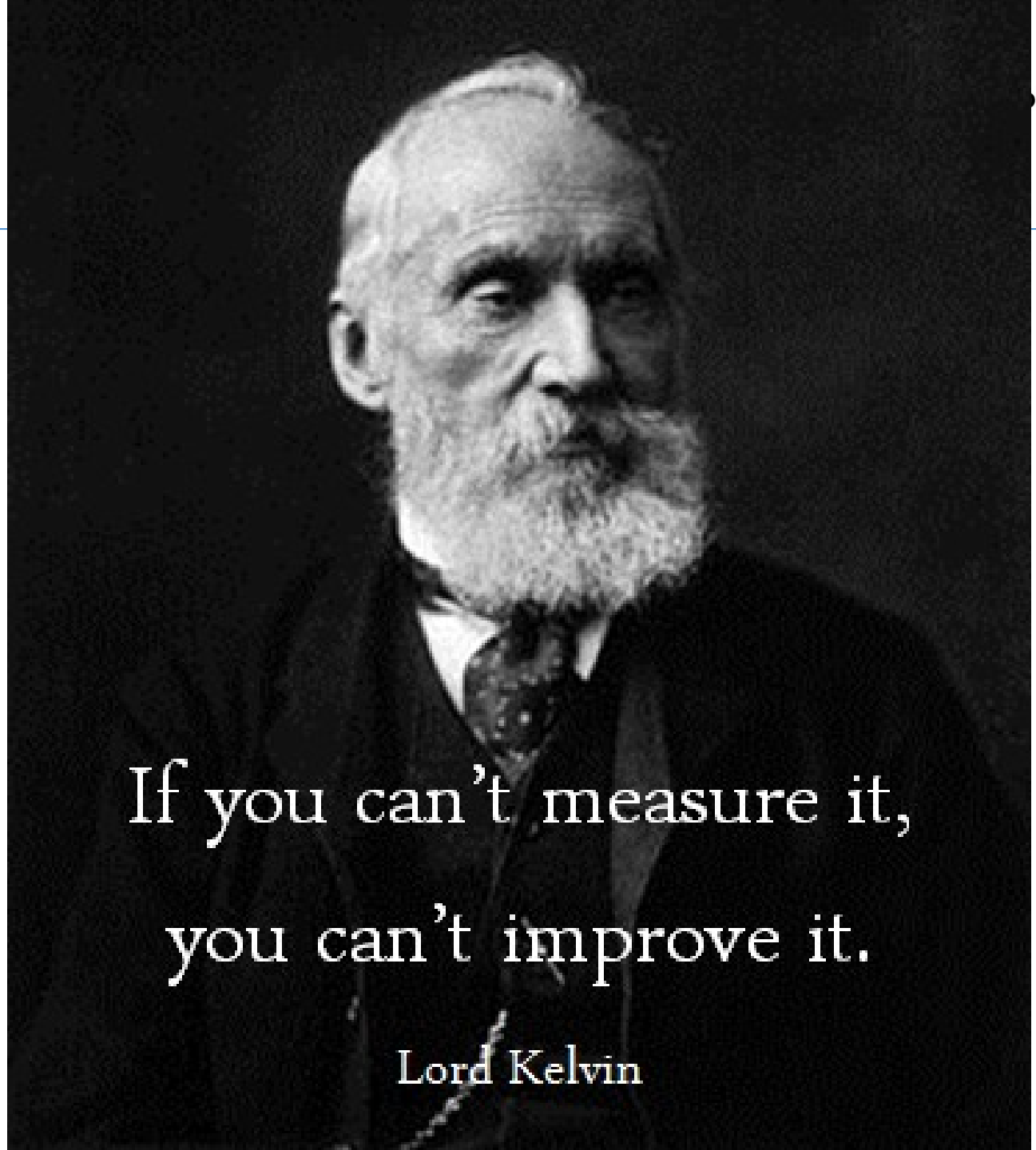
We need LIVE data from all clinical areas to identify *training needs* and *resource* allocation

(and we have not had it for >2 years!)


If you can't measure it,
you can't improve it.
Lord Kelvin

Cerner

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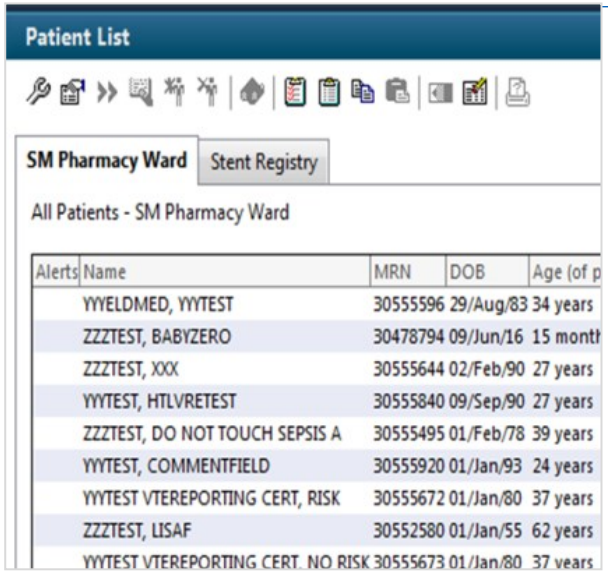
Diabetes Foot MDT Assessment

Clinical Information	<Hide Structure> <Use Free Text>
Anticipated Discharge Date	DATE
Senior Clinician Ward Round	PERSON SEARCH
Senior Clinician Role	Con - Locum Cons / St-Fellow / CT1-2 / FY1-2
Problems	<Hide Structure> <Use Free Text>
Foot complaint	Include problem list / OTHER
Medications	<Hide Structure> <Use Free Text>



Podiatry Referral

Hospital site (St Marys, Charing Cross, Hammersmith Hospital)

Ward

Referrer contact bleep / extension

Does the patient have diabetes? Y/N

What type of diabetes does the patient have?
- **Drop down menu :**

Type1
Type 2
Gestational diabetes
LADA
MODY
Other

Reason for referral:
- Drop down menu

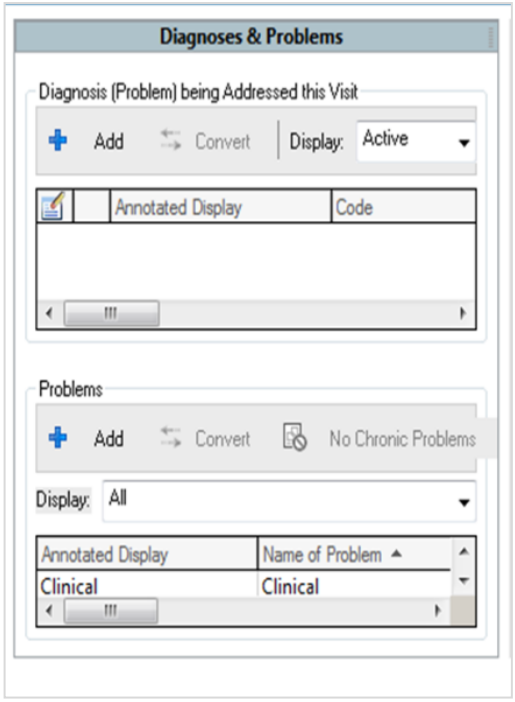
Active ulceration or break in skin
Hot, red, swollen foot
Necrotic tissue, gangrene
Hard skin affecting rehabilitation
Nail condition affecting rehabilitation
Other (add in comments)

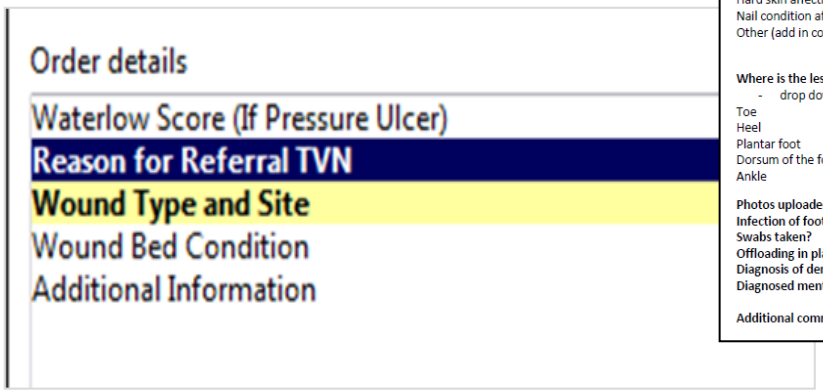
Where is the lesion?
- drop down menu

Toe
Heel
Plantar foot
Dorsum of the foot
Ankle

Photos uploaded to Cerner? Y/N
Infection of foot wounds suspected? Y/N
Swabs taken? Y/N
Offloading in place Y/N
Diagnosis of dementia Y/N
Diagnosed mental health illness? Y/N

Additional comments:





Individual patient length of stay – Patients under care of MDT Diabetes Foot team

(April 2015 – March 2019)

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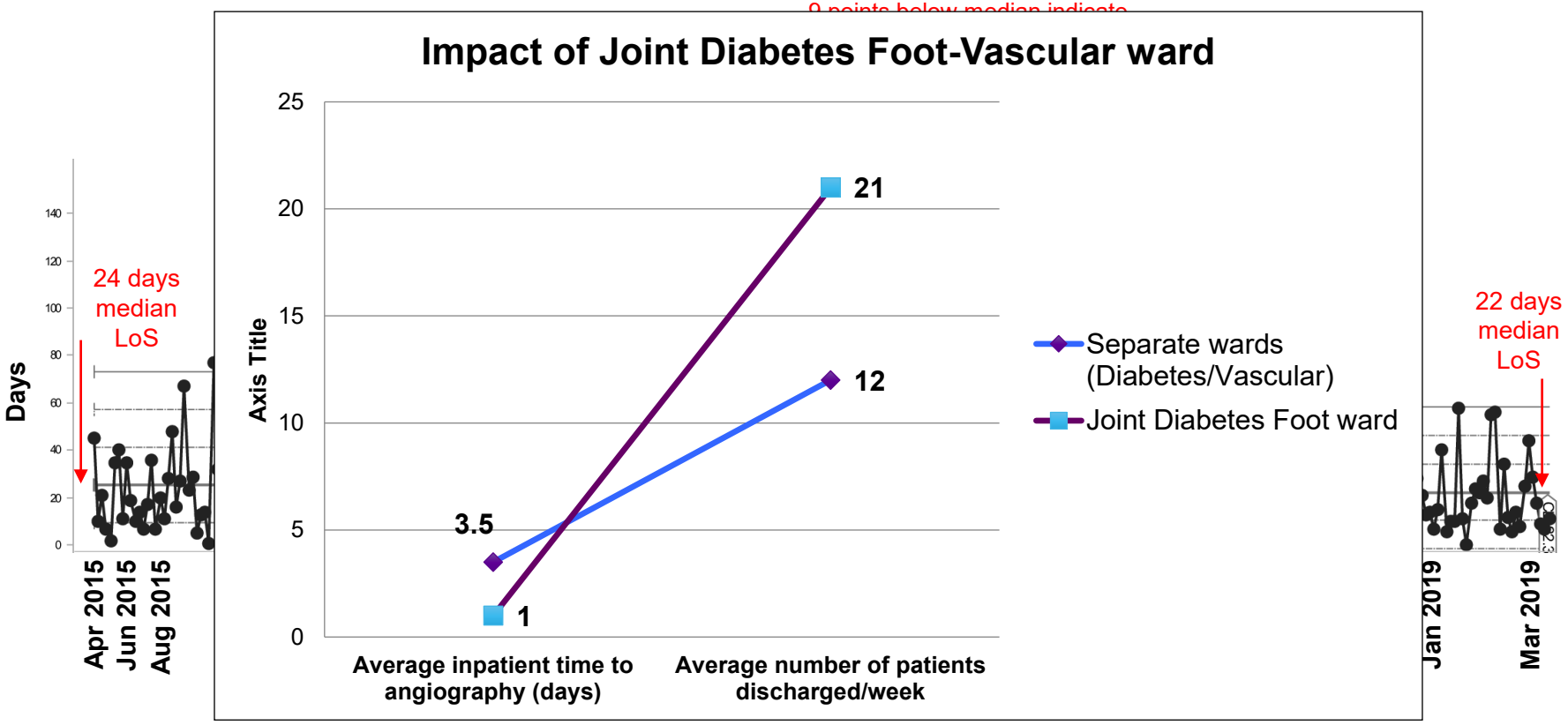
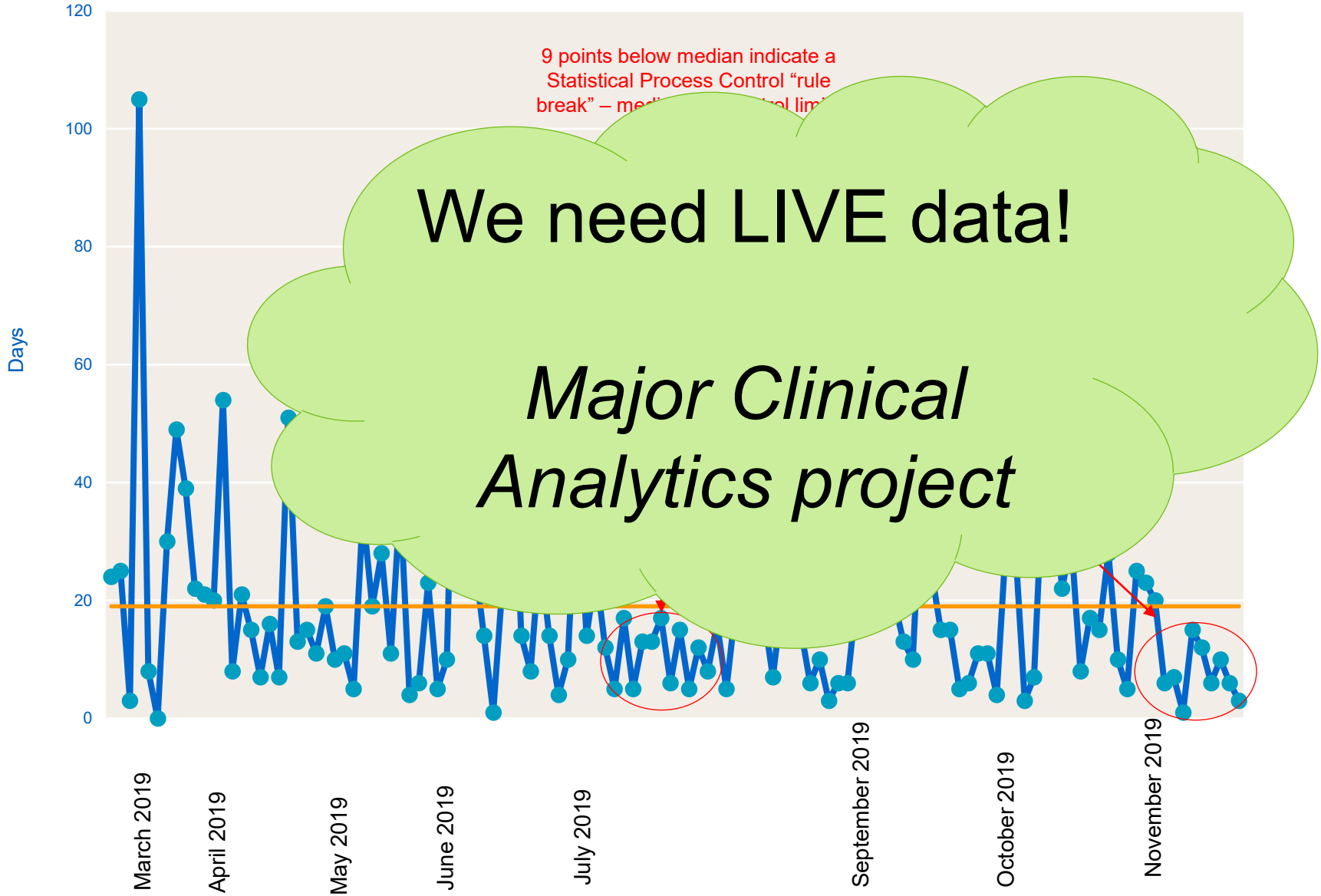


Achievements:

- **Reduced length of stay**
- **Reduced variation**
- **Reduced long stay patients**

Individual patient length of stay –
Patients under care of MDT Diabetes Foot team



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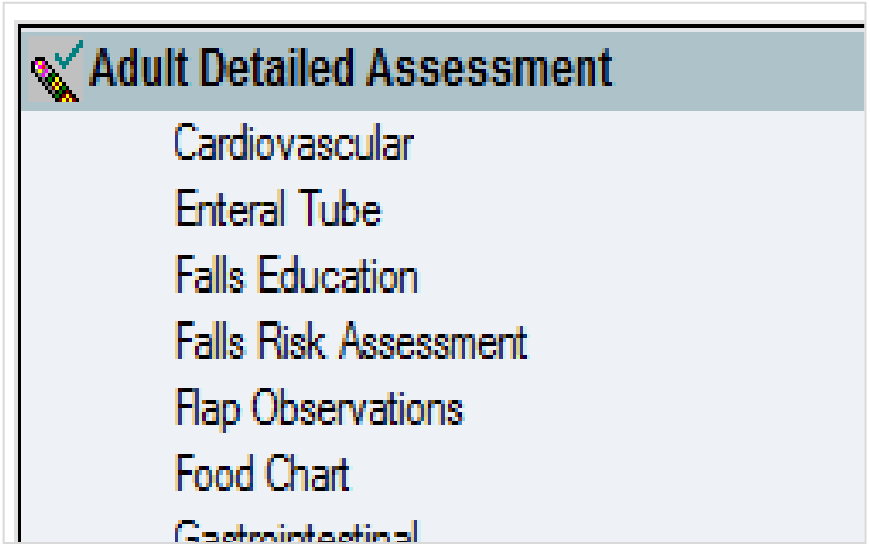
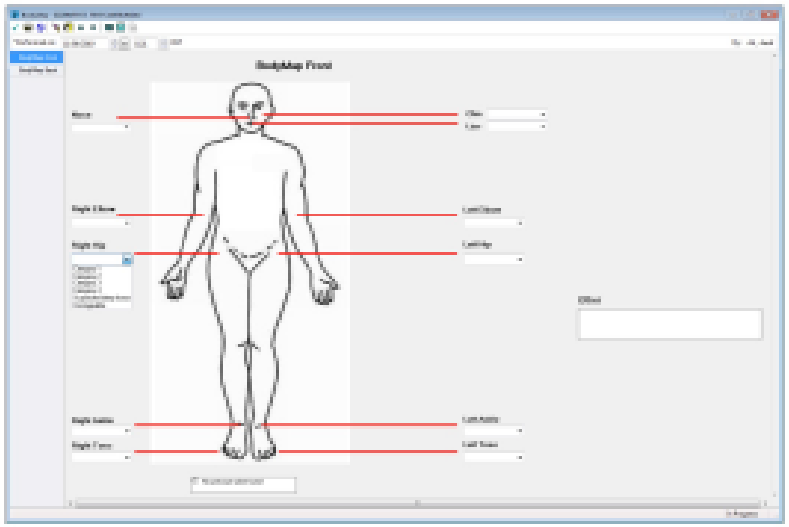
Diabetes Foot Checks – launched May 2019

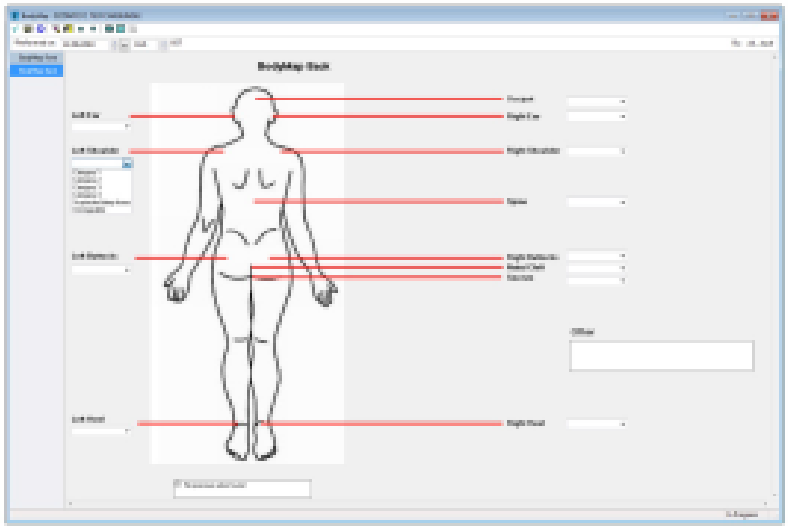


Watch this space…
NADIA HARMS

Front



Back



Innovation? - Journey of reflective self-improvement

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- ‘Big Room’ & Changes through it
- **Clinically & N**
- **Clinically driv**
- **Non-hierarch**
- Permission to
- Patici
- **Ownership** of
- £500 budget
- *Business ‘as u*

Improvement is 80% human and 20% technical (‘about people’)

‘Serving the community can indeed be joy’

Challenges

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Changing culture at Institutional level involves giving people the TIME to sustain the Big Room

- Time
- Data quality
- Engagement (specialties/sites)
- Time to implement changes
- People's commitment to 'doing the work' can be variable

- *Business as usual:* 'We will Big Room it'
  - Focus on problems with good diagnostics

Challenges

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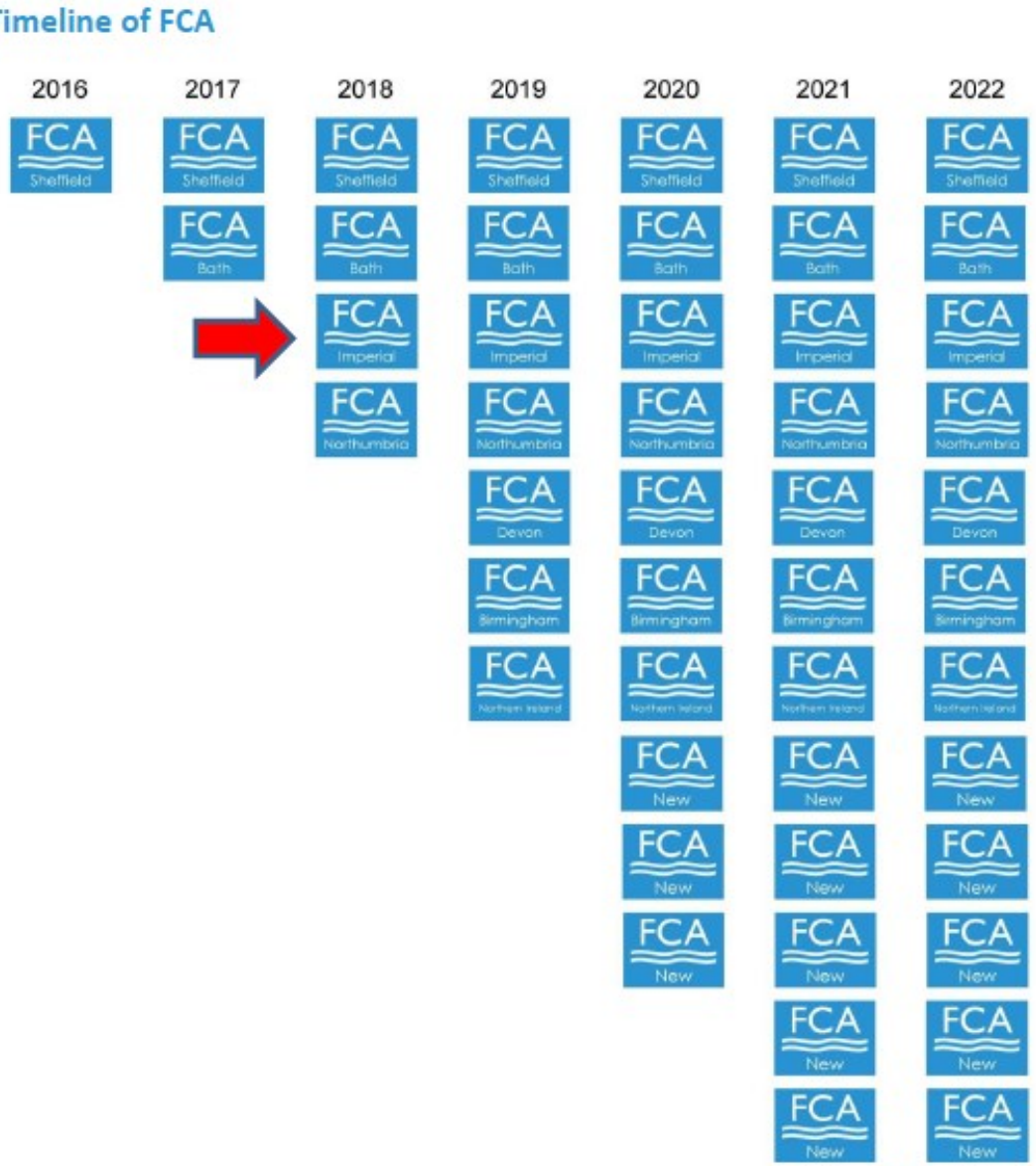
- **Changi level in TIME to**
- **Faculty**
  - Depart
  - Clinica
- **Membe underg be able**



February 2019

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Make A Difference award

The **Diabetic foot MDT were the winners of the Make A Difference award last week.** They were nominated by **Richard Gibbs – Clinical Director General and Vascular Surgery** - based in the Zachary Cope ward St Marys.

The Imperial Multidisciplinary Diabetes Foot Team is currently making great headway in improving the treatment and pathway for this vulnerable group of patients (who account for the greatest number of inpatient bed days in the NHS).

The latest 2018 GIRFT data shows very significant improvement in lengths of stay –now down to or better than the national average for diabetic patients requiring angioplasty and open surgery.

Imperial remains excellent at saving legs with lower than expected rates of leg amputation, but now with far more efficient pathways. We have a high rate of % procedures performed electively (75% vs 60% England average). Ratio of lower limb major amputation to revascularisation in top 10% England Trusts.

The Imperial Diabetic Foot MDT has achieved these clear and objective improvements by implementing a new service and placing patients with diabetic foot disease at the centre of all they do –irrespective of traditional silo thinking. Their collegiate way of working across Medicine, Surgery and Interventional Radiology has brought great flexibility and benefit –both clinically to patients and also to the Trust in terms of freeing up beds and working more efficiently.

Contact: Richard Gibbs
Clinical Director General & Vascular Surgery

Con ns, Diabetic Foot Team!

May 2019

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BMJ Awards 2019

Congratulations to the Diabetic Foot Team who were shortlist finalist at the BMJ Awards 2019 for "Diabetes Team of the year".

The team have also been shortlisted for the Chairwoman's Award in the category of "Driving improvement through data".

The Big Room concept of designing and improving services was harnessed by the team and the project supported the service in creating systems to capture data within existing electronic records. The Diabetes Foot MDT tool which is used for all patients with active disease, is an example of this. The data captured converts into auditable measures which can be used to benchmark against national standards.

The project has promoted collaborative working from all stakeholders and improved both staff and patient experience.

Contact: Donyale French
General Manager, Specialist Medicine HH

July 2019

Imperial College Healthcare NHS Trust

ICHNT Make a Difference Awards 2019
'Chairman's Award 2019 nomination'

Next…

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Mitigating our challenges

Imperial College Healthcare NHS Trust

- **RESILIENCE**
- ***Clinical coach = Clinical lead for the service***
  - 'Stepping back' physically in the Big Room
  - Active weekly coaching by non-pathway coach
  - Independent coaching (at home)
- **Involve key Big Room members in QI Hub 'coaching' activities**
  - Building team leadership in coaching
- **IT leadership rather than support**
  - Live data to support the Big Room weekly
- **Clear direction of travel**
  - NOT everything can be fixed immediately and in a finite period of time

NHS
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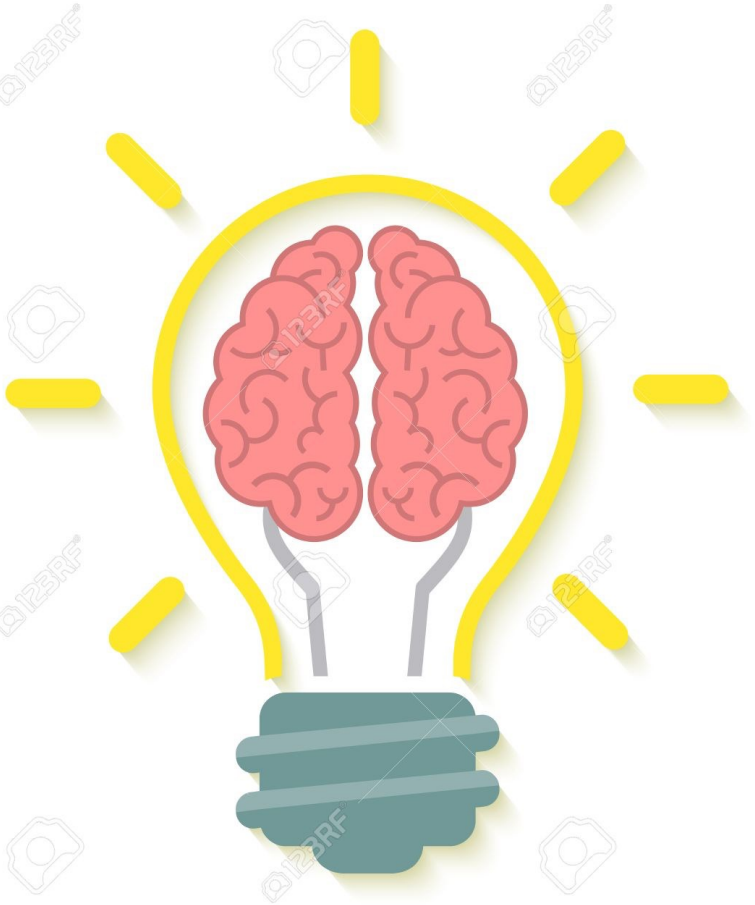

FCA
Flow Coaching Academy