Kidney Quality Improvement Partnership (KQuIP) #KQuIPYH

Regional launch of national Quality Improvement Project MAGIC

(Managing Access by Generating Improvements in Cannulation)

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Introductions and Welcome

Ian Stott,
Consultant Nephrologist,
Doncaster Royal Infirmary

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Housekeeping and survival

Fire alarms and exits…

Car Park …

Toilet location…

Mobiles and pagers…

Breaks…

Photos…

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Patient Experience

David Whittle and Elaine Garnett

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Nurse's Experience

Gary Carlisle,
Dialysis Access Nurse, St. Luke's Hospital, Bradford

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Improving outcomes and experience

Rates of AVF / AVG / CVC

% of the haemodialysis population using AVF, AVG and CVC for haemodialysis.

AVF: Cannulation of normal vein segment, even if flow is supplemented by artificial material

AVG: Cannulation of artificial material

Hybrid: One site cannulates normal vein segment and one site cannulates artificial material

CVC: Tunnelled or non-tunnelled central venous catheter

Starting premise:

Fistulas are better than lines

Sepsis
Central vein stenosis

Missed Cannulation

Number of patients for that haemodialysis session that experienced more than one attempt to insert a needle at one needling site.

More than one attempt is defined as either:

- Complete removal and the reinsertion of another needle by either the same or a different person
- Adjustment of the needing once taped in place after the first insertion.

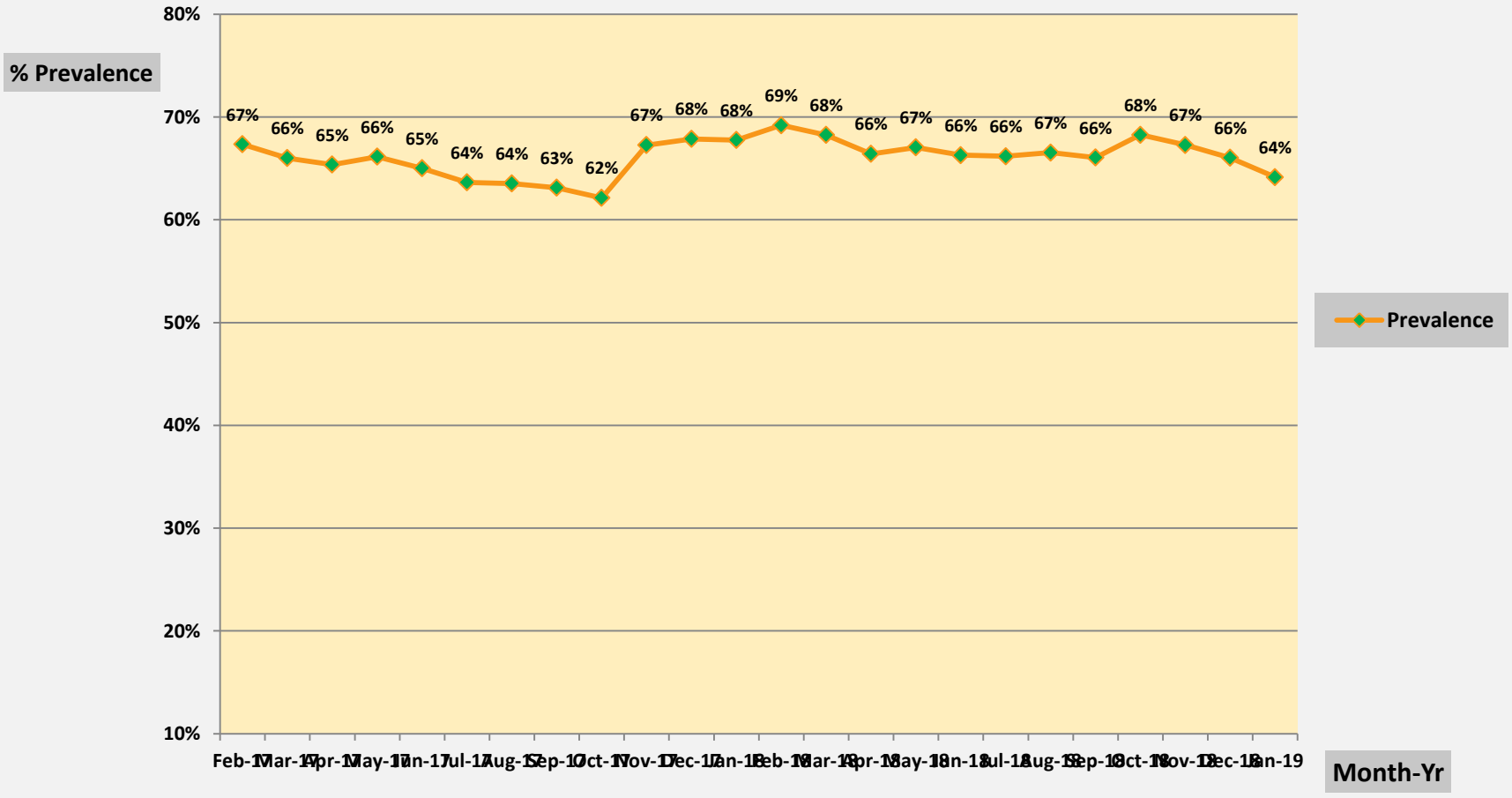
Patient Experience of Needling

Patients are asked about their needling experience, using the PREM needling question:

'How often do the renal team insert your needles with as little pain as possible?'.

Patient rate this on a score of 1 to 7, with 1 being 'Never' and 7 being 'Always'.

Renal Unit Prevalence



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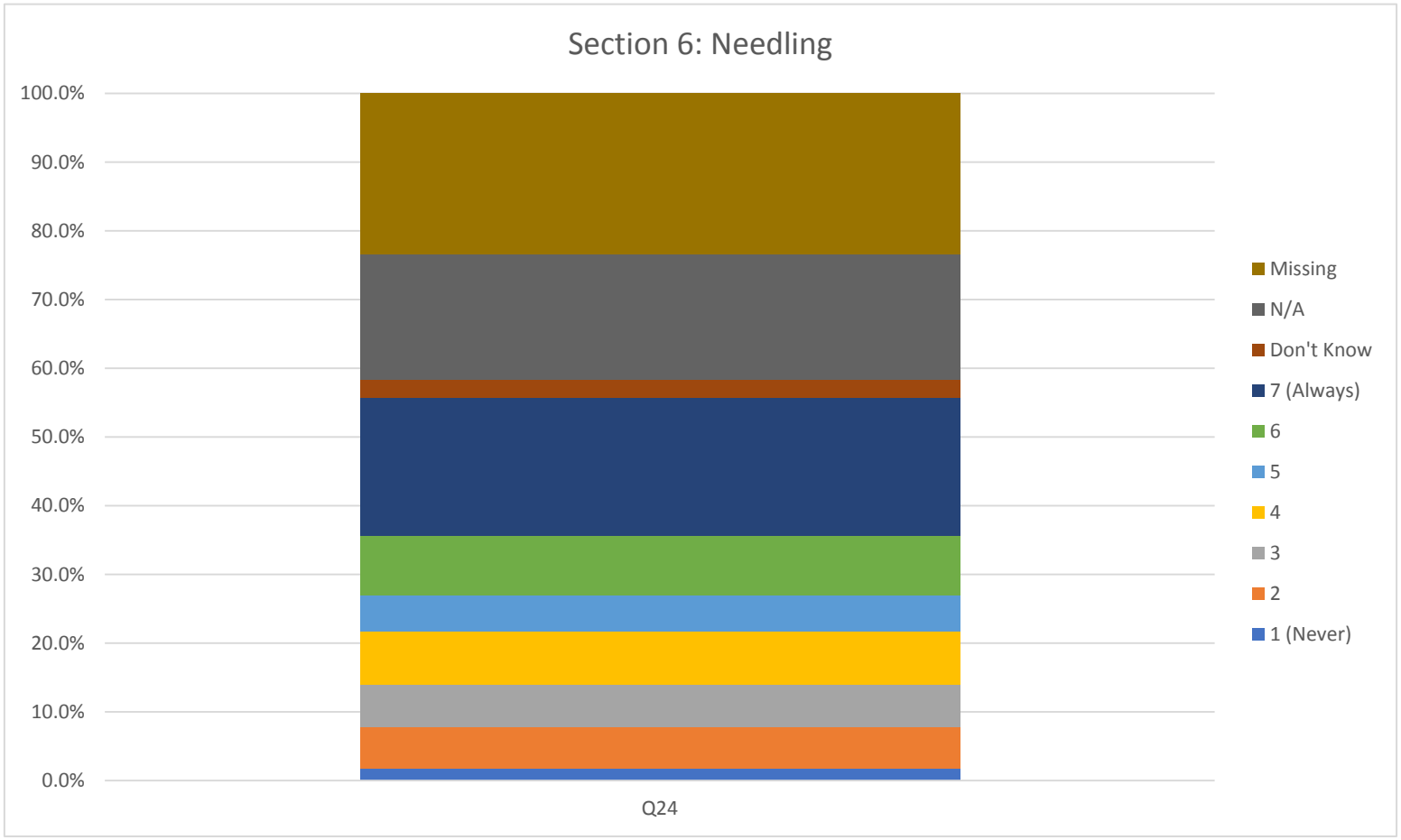
Total Number of dialysis starters	8	Percentage
Starters with AVF	2	25 %
Starters with PD catheter	0	0 %
Starters with tunnelled line	6	75 %

Buttonhole: Cannulation of each cannulation site in the same manner each time. Involves removing the scab of the previous cannulation prior to needling. Includes cannulation with sharp needles or blunt needles.

Rope Ladder: Cannulation that moves up the vein at each treatment in a progressive manner, to cover as much of the vein as is possible. Once the top of the vein is reached, cannulation starts at the bottom again. One cannulation site's (A or V site) needle marks should cover at least 5cm.

Area Puncture: Cannulation in a different site each time that does not progress up the vein is systematic manner AND/OR one cannulation site's needle marks cover less than 5cm.


Section 6: Needling
100.0%
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
Q24
Missing
N/A
Don't Know
7 (Always)
6
5
4
3
2
1 (Never)

Dialysis Access is a key issue for patients: -

- Lifeline
- Pain
- Appearance

Managing access is also stressful for staff

- First do no harm
- Proxy for general abilities
- Relationship with patient

Improvements in cannulation could improve staff morale

MAGIC can help us determine what we do well and where and how we can improve.

Achieving improvements in cannulation will improve patient outcomes and experience.

It could also improve staff experience.

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Specialist Experience

Mr Dury,
Vascular Surgeon, Doncaster and Bassetlaw Teaching Hospitals

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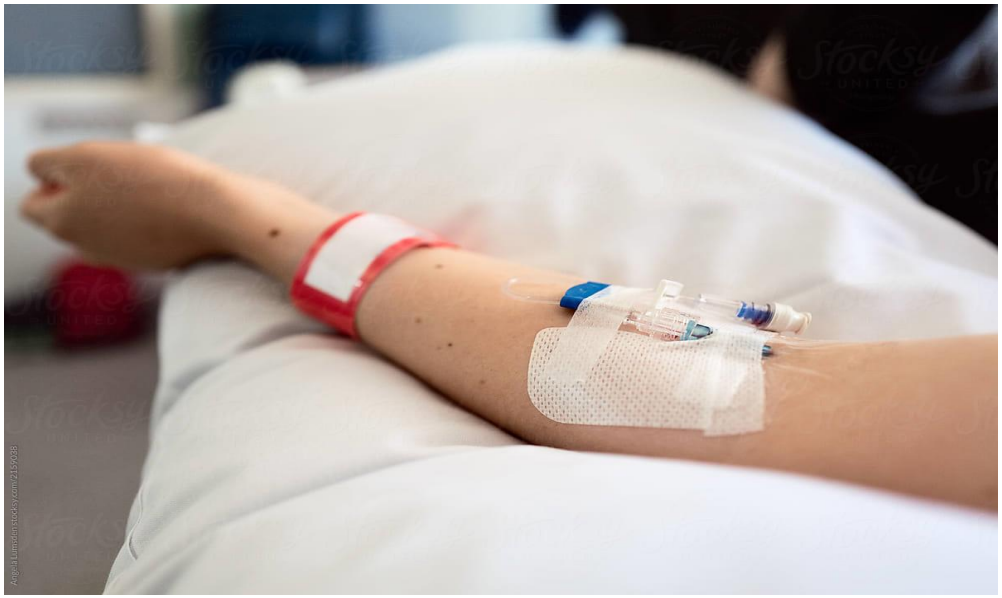
Complications – AV Access

How to maximise the longevity of Renal Access:

- Good planning
  - –Good artery
  - –Good vein
- Good surgical technique



How to maximise the longevity of Renal Access:

Regular Assessment of AVF/AVG.

Good needling technique.

Involve the patient in the care of their access/decision making .

Recognising the signs of a failing AVF/AVG (early detection is key).

The importance of good needling technique:

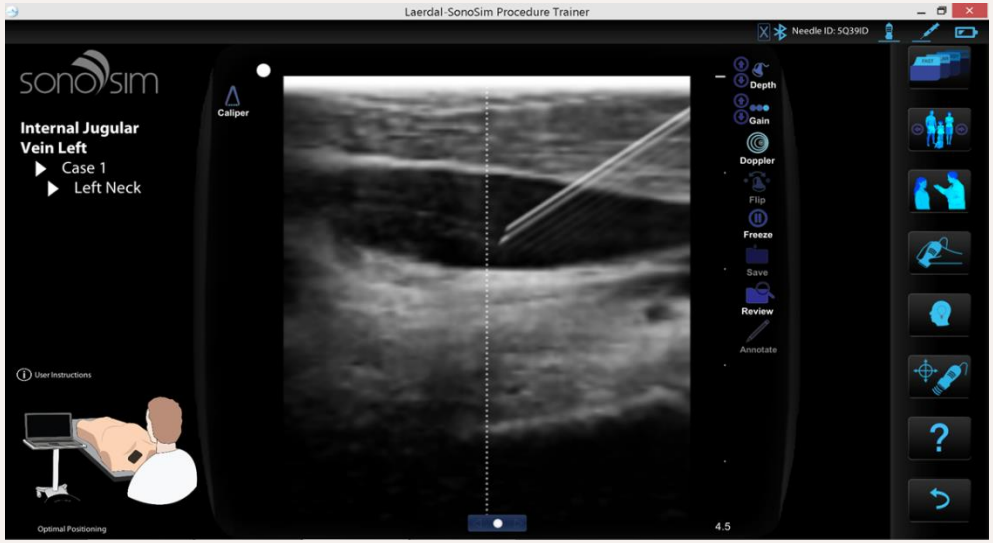
Reduce the complications associated with renal access.

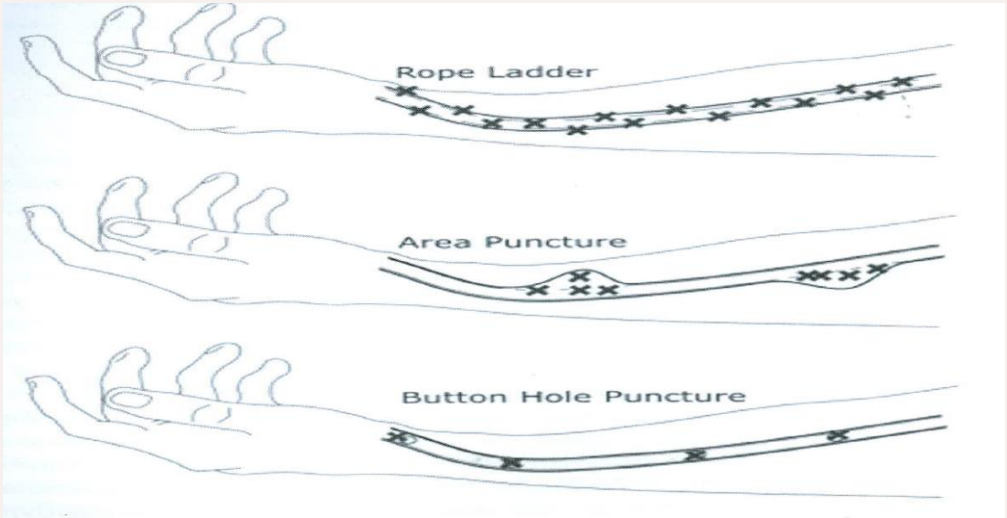
Minimise the damage to the fistula and surrounding tissue.

Minimise pain and anxiety for the patient.

INITIAL ASSESSMENT

•Prior to needling, the vein should be assessed from a look, listen and feel approach. This should highlight any issues prior to needling regarding skin integrity, auscultation and palpation. Good assessment of the vein should provide clarity on depth and direction of the needle.





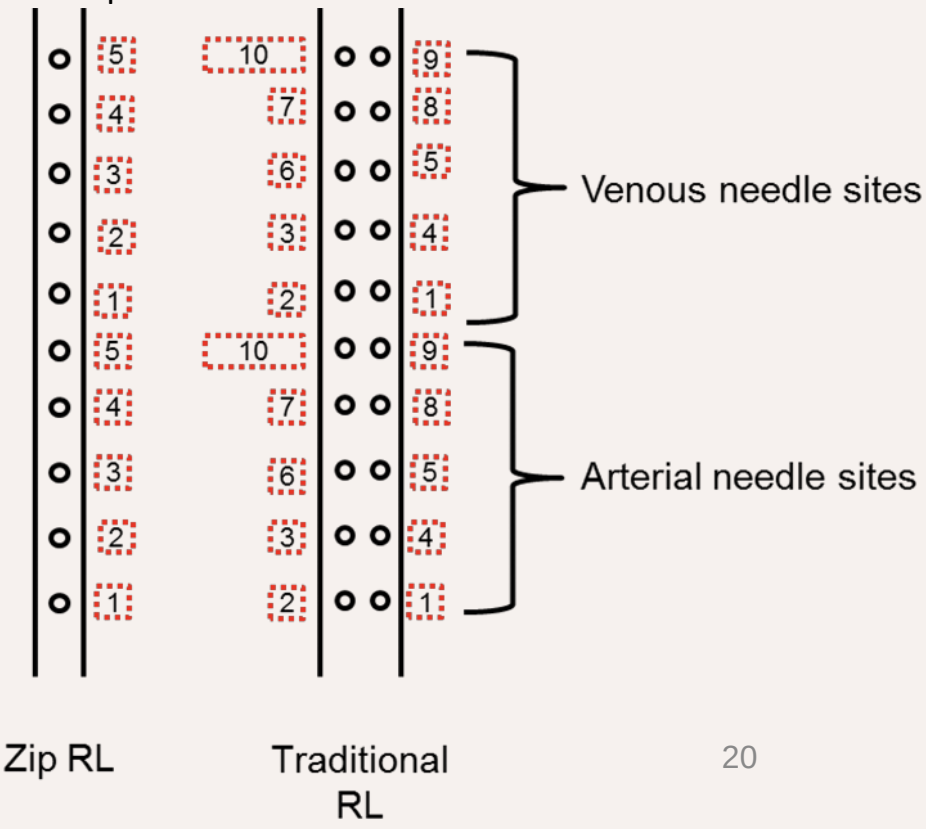
Venous hypertension

Central venous stenosis
Signs/Symptoms:

- severe upper limb oedema
- skin discoloration
- access dysfunction
- peripheral ischemia with resultant fingertip ulceration
- Raised venous pressures

Treatment:

- correcting the underlying vascular problem
- screening



Renal Access Assessment

- **Look**

(BRS pre needling assessment tool)

-Skin Integrity

-Aneurysms

-Pain

-Swelling

-Necrosis

- **Listen**

-Using a Stethoscope

-Can you hear the thrill through out the vein

Is the flow strong/weak

STENOSIS

Physical findings:
-Arm swelling
-AVF stays prominent when arm elevated
-Prolonged bleeding after needle withdrawal
-Collateral veins
-Altered features of the pulse or thrill
-Thrombus

Other Indicators:
-High venous pressures on HD
-Reduction in clearance
-Recirculation

Confirmation:
-Duplex ultrasonography
-Venography

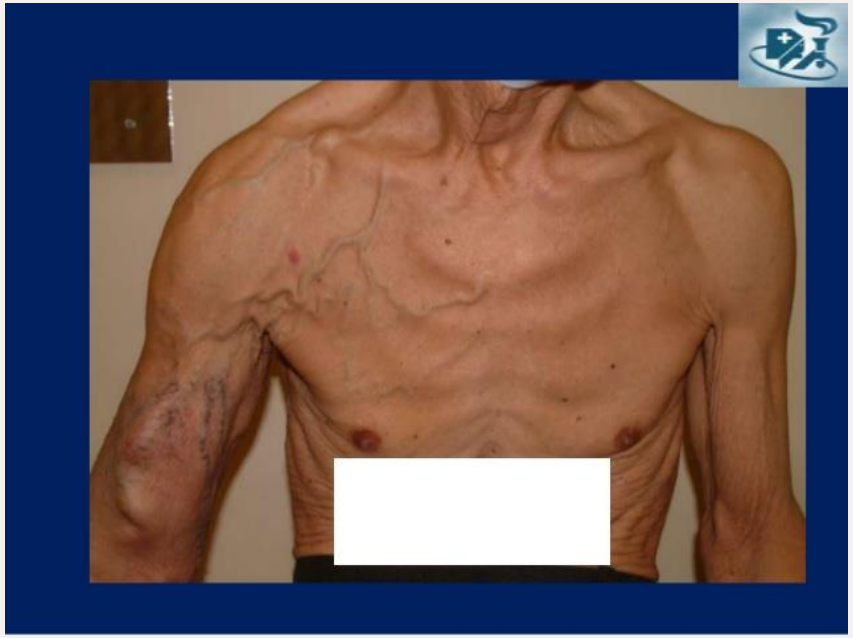
- **Feel**

-Vein palpable

-Does the vein collapse when the arm is elevated

-Is it there a thrill or is it pulsatile

-Does the flow feel equal throughout



Percutaneous Angioplasty

- Corrects over 80% of stenosis
- Consider recommend angioplasty if:

- stenosis in fistula >50%
- stenosis in graft >50% + (abnormal physical findings, intra graft blood flow <600, or elevated static pressure)
- Delays in treatment of stenosis results in:
  - -Inadequate dialysis
  - -Thrombosed AVF

Treatment of venous stenosis

Percutaneous angioplasty

Endovascular stents

Surgical revision

Percutaneous Angioplasty

- Corrects over 80% of stenosis
- Consider recommend angioplasty if:

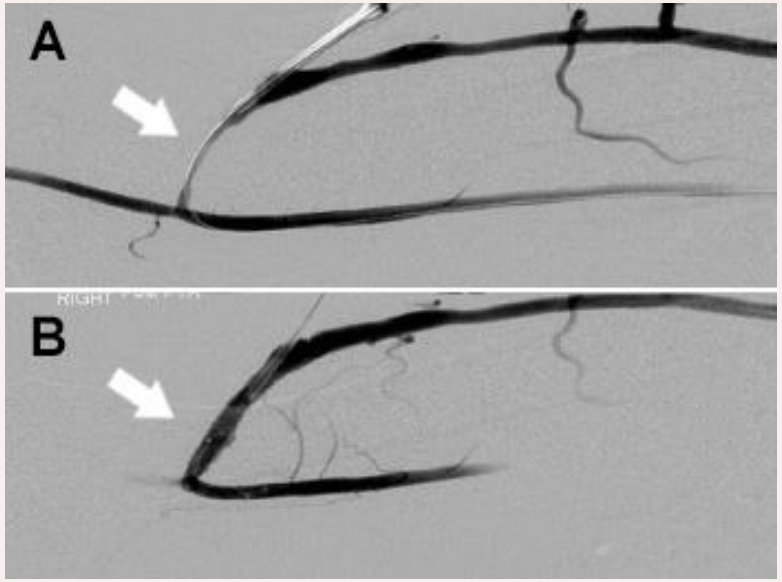
–stenosis in fistula >50%

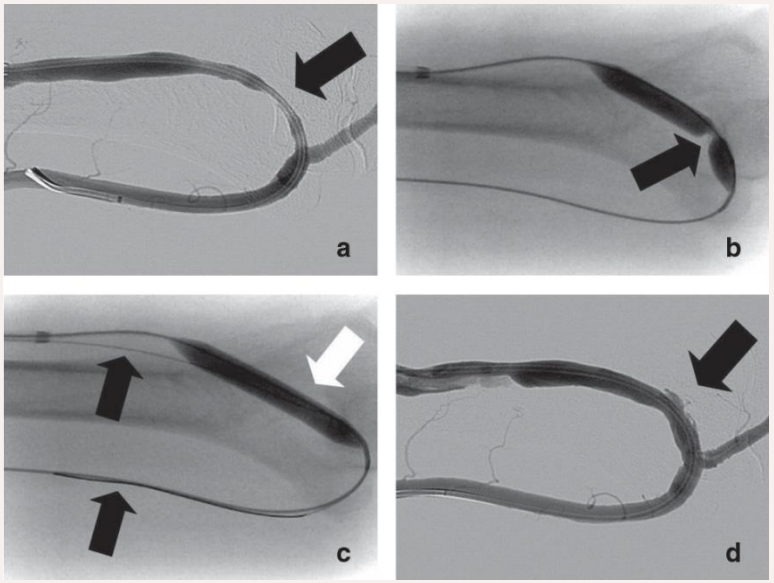
–stenosis in graft >50% + (abnormal physical findings, intra graft blood flow <600, or elevated static pressure)

- Delays in treatment of stenosis results in:

-Inadequate dialysis

-Thrombosed AVF





Thrombosis

•The most common (80-85%) complication

•The cumulative fistula patency rate in most centres:

-60 to 70% at one year

-50 to 60% at two years

•Predisposing factors:

-Anatomic venous stenosis, 80-85%

-Arterial stenosis

-Excessive post-dialysis fistula compression

-Hypotension

-Increased Haematocrit levels

-Hypovolemia

-Hypercoagulable states
-Infection

Non thrombotic complications

Infection

Heart failure

Distal ischemia

Aneurysm and pseudo aneurysm

Venous hypertension

Median nerve injury

Seroma formation

Infection

- Accounts for 20% of access loss

- Predisposing factors:

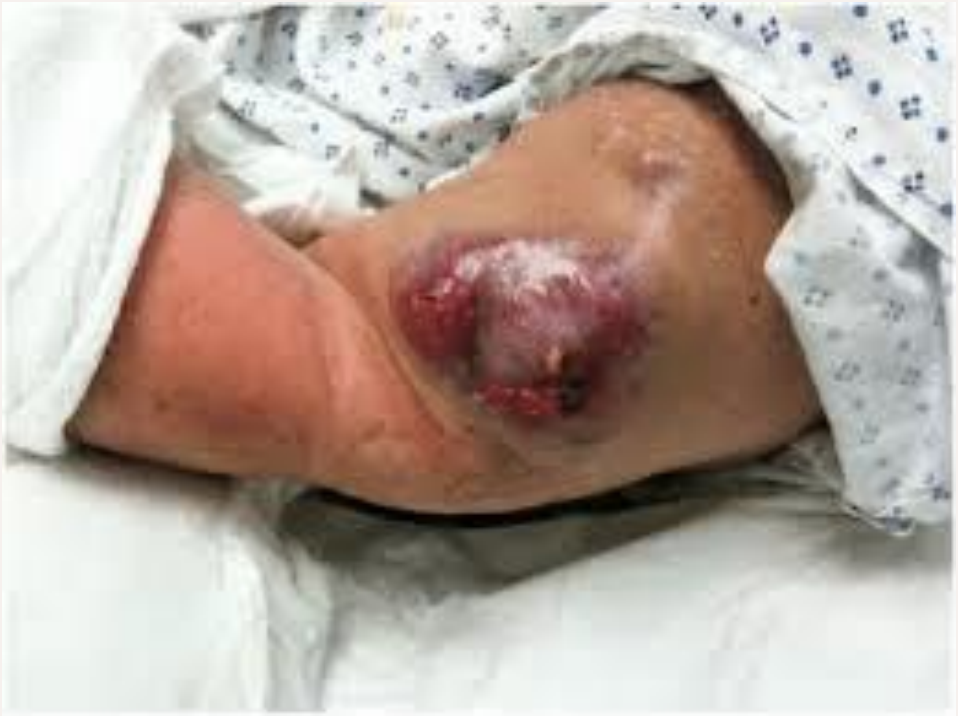
  -Hygiene (disinfection prior to needling)

  -Pseudo aneurysms or peri fistula haematomas

  -Severe pruritus over needle sites

  -Intravenous drug abuse

  -Post op/Secondary surgical procedures



Distal Ischaemia

Distal hypo perfusion of the extremity
Shunting ("steal") of arterial blood flow
1-20%, DM and the elderly
Absent pulse or a cold extremity warrant immediate surgery
Paresthesia, sense of coolness with retained pulses, improve over weeks
Management:

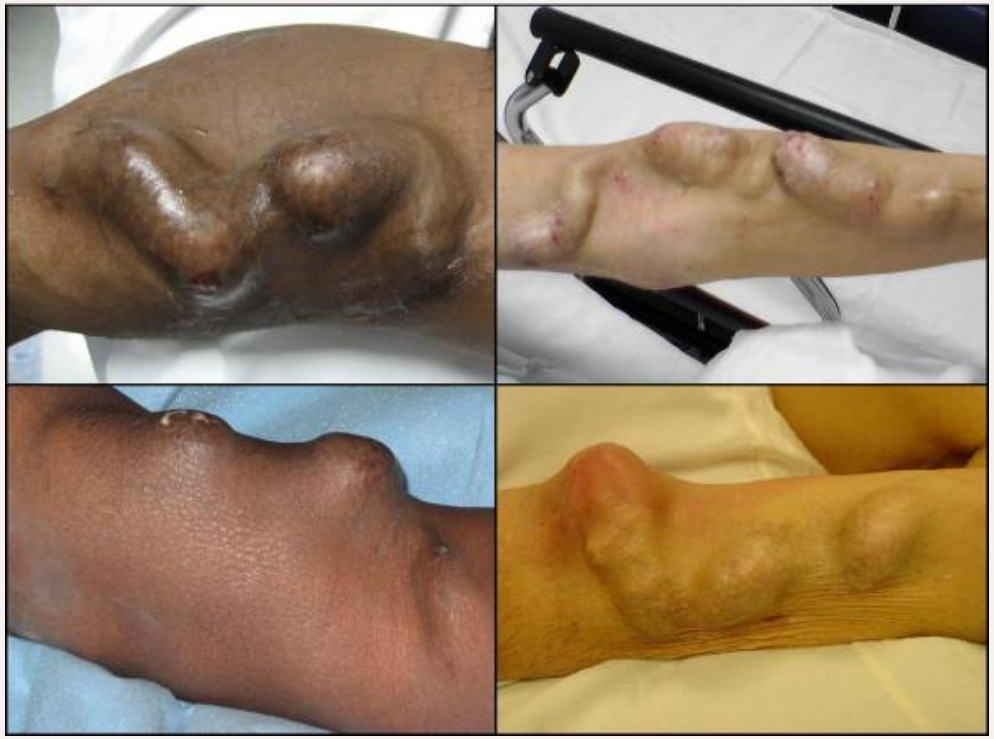
- percutaneous transluminal balloon angioplasty
- distal revascularization with interval ligation

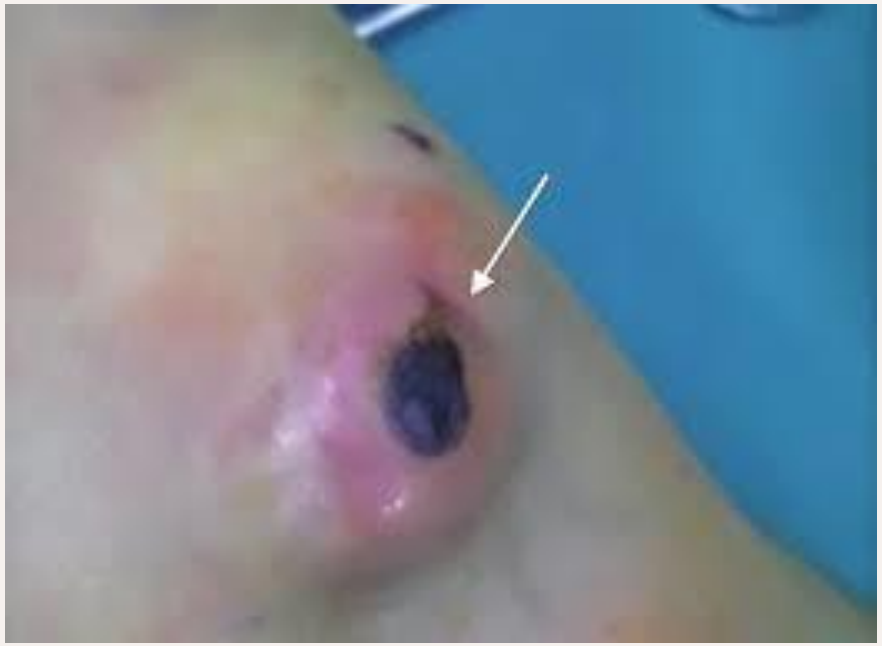
Aneurysm and Pseudo Aneurysm

•Causes of Aneurysms :
-Repeated cannulation in the same area
-Tortuous vein
-Stenosis

•Causes of Pseudo Aneurysms:
-Weakening of the vessel wall
-Poor Needling technique
-Area puncture

A particular problem with PTFE grafts, the material deteriorates after prolonged use





Synthetic grafts

- Polytetrafluoroethylene (PTFE)

Common Issues with AV Grafts

Non incorporation

Infection

Tear/Pseudo Aneurysm

Haematoma surrounding the AVG

Stenosis

Thrombosis

Median nerve injury

Compression of the median nerve

due to the extravasation of blood or fluid

Ischemic injury by a vascular steal effect

Intraoperative damage

Venous hypertension

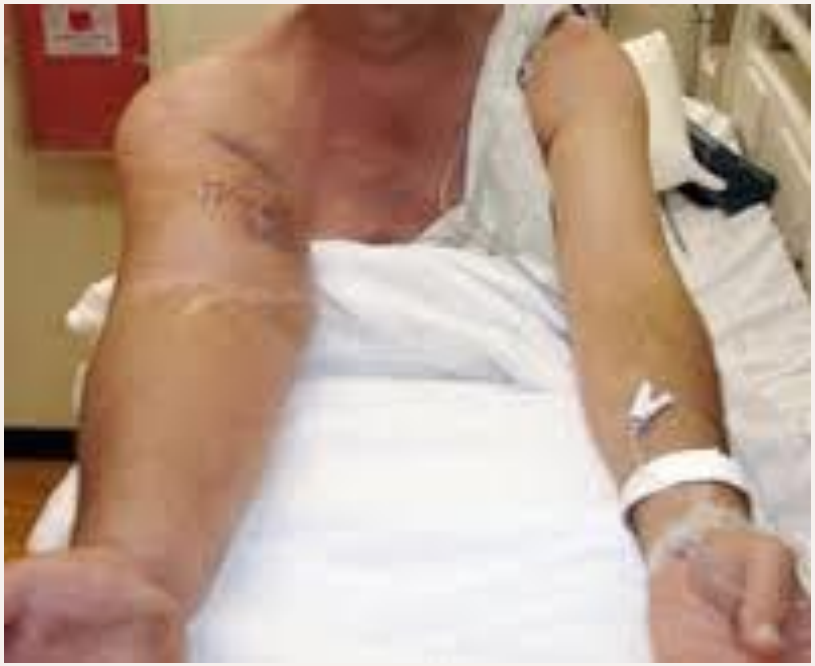
Central venous stenosis

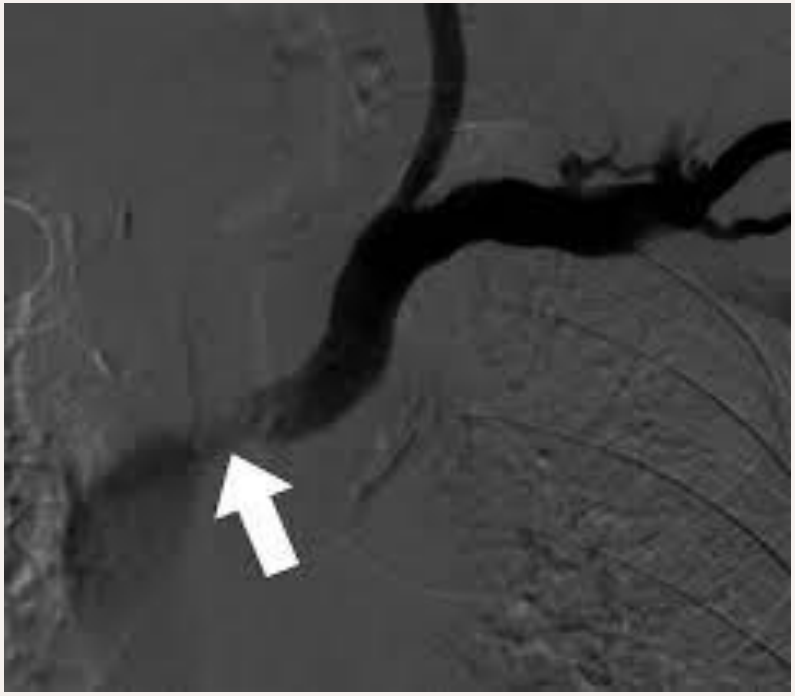
Signs/Symptoms:

- severe upper limb oedema
- skin discoloration
- access dysfunction
- peripheral ischemia with resultant fingertip ulceration
- Raised venous pressures

Treatment:

- correcting the underlying vascular problem
- screening





Seroma formation

- Weeping syndrome:
  - –ultrafiltration of plasma across a PTFE graft
- A pocket of serous fluid, firm and gelatinous

Questions ?

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PREM data

John Stoves,
Consultant Nephrologist, St. Luke's Hospital, Bradford

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UKRR/KQuIP Yorkshire and Humber Network Regional Day
National Coal Mining Museum 6th July 2017
Summary Report

John Stoves, Karen Thomas et al

July 2017

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KQuIP Day 2017 Vascular Access Breakout Session

3.3.1 Vascular Access

Katie Fielding presented an overview of vascular access and facilitated the breakout session.

For the full details of the presentation, please **click here**. To view an additional presentation outlining the use of fistula safety cannulae in the Bradford Renal Unit, please **click here**.

Photo 6, Vascular Access breakout session

Patient Reported Experience Measure

- Have you looked at your PREM data?
- Did you know there is a national report?
- Did you know you can access more in-depth data on-line?

What is Patient Reported Experience Measure (PREM)?

- A patient survey with over 13,000 patient responses across 71 adult renal units across the UK.

- It meets the critical need for kidney disease-specific measures of patient experience .

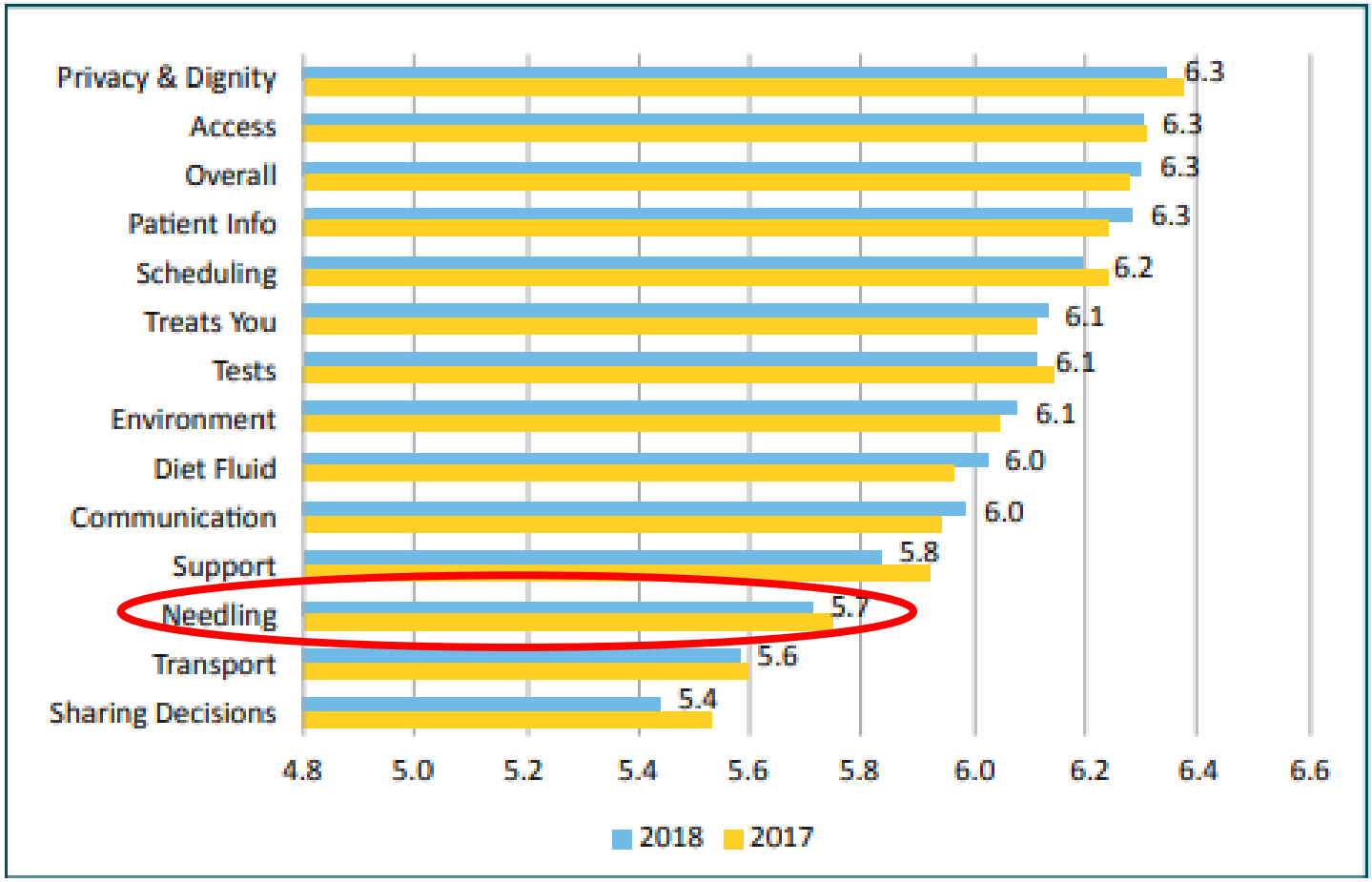
- Puts the patient voice at the forefront of quality improvement for Commissioners and those who deliver kidney services.

- The Kidney PREM has already been adopted as a key element of service review by the NHS England's Getting it Right First Time process

Aims of kidney PREM is to:

- Reminds us to drive towards patients and healthcare professionals working together as equals.
- Help renal teams understand and how patient feel about their care.
- Shows where improvements can be made.
- Gives us a national, regional and local picture of people's experience of care.

National mean scores for the 13 Kidney PREM themes

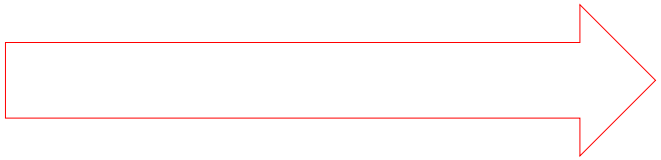


NEEDLING Question:

SECTION 6: NEEDLING

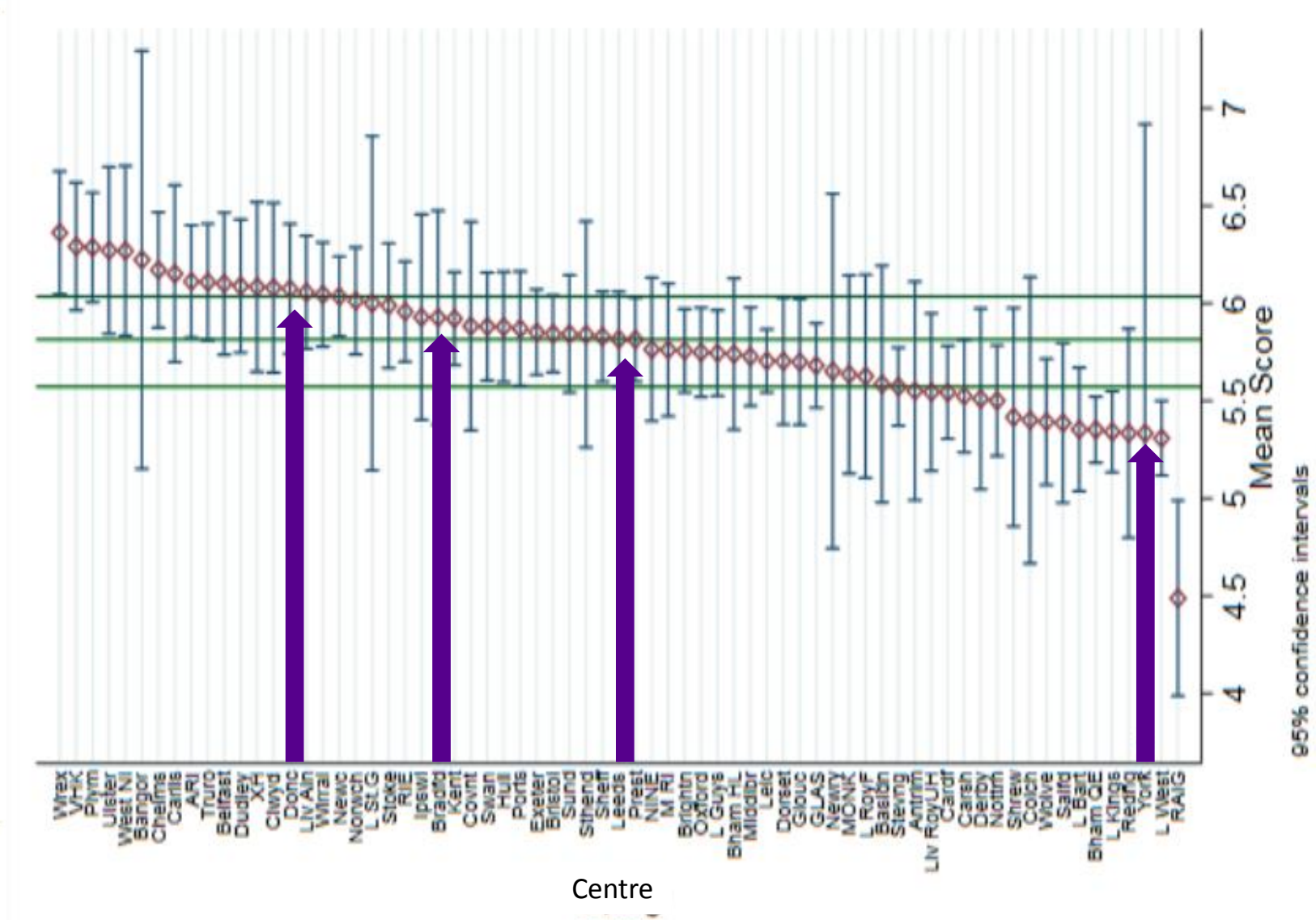
If you are on in-hospital or in-satellite haemodialysis please answer question 16, otherwise please go to SECTION 7: TESTS

	Never						Always	Don't know	Not Applicable
	1	2	3	4	5	6	7		
16. How often do the renal team insert your needles with as little pain as possible?	☐	☐	☐	☐	☐	☐	☐	☐	☐



Flow of Improvement

Where are we now?



What's next - Acting on these results

We are:

- **Committed to participating in the Kidney Quality Improvement Partnership Programme (KQuIP) which provides support in building QI capability with front line healthcare professionals**

- **Starting to working collaboratively on the national QI project Managing Access by Generating Improvements in Cannulation (MAGIC) being supported by KQuIP.**

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COFFEE

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World Café Session

MAGIC Objectives - Anne Budenburg,
Senior Sister, St. James' Hospital, Leeds

MAGIC Measurement - Mark Wright,
Consultant Renal Medicine, St. James' Hospital, Leeds

MAGIC Next Steps - Leeanne Lockey
Renal Association QI Programme Manager

Patient Experience - Julia McCarthy, David Whittle, and Elaine Garnett,
Renal Clinical Nurse Educator/ Sister, St. Luke's Hospital, Bradford

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How a World Café Session works

- 4 tables.
- Your choice where you start
- You have 15 mins to listen and discuss the table topic.
- After 15 mins, move to your next choice of table.
- Need to visit all 4 tables

World Café Session

MAGIC Objectives - Anne Budenburg,
Senior Sister, St. James' Hospital

MAGIC Measurement - Mark Wright,
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Make a pledge

Leeanne Lockley,
RA QI Programme Manager

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hello my name is…

…And I pledge to support the
National Quality Improvement Project
MAGIC
in my renal unit
of_____________________________

'THINK KIDNEYS' KQuIP

MAGIC
Managing Access by Generating Improvements in Cannulation

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Next steps

Leeanne Lockley,
RA QI Programme Manager

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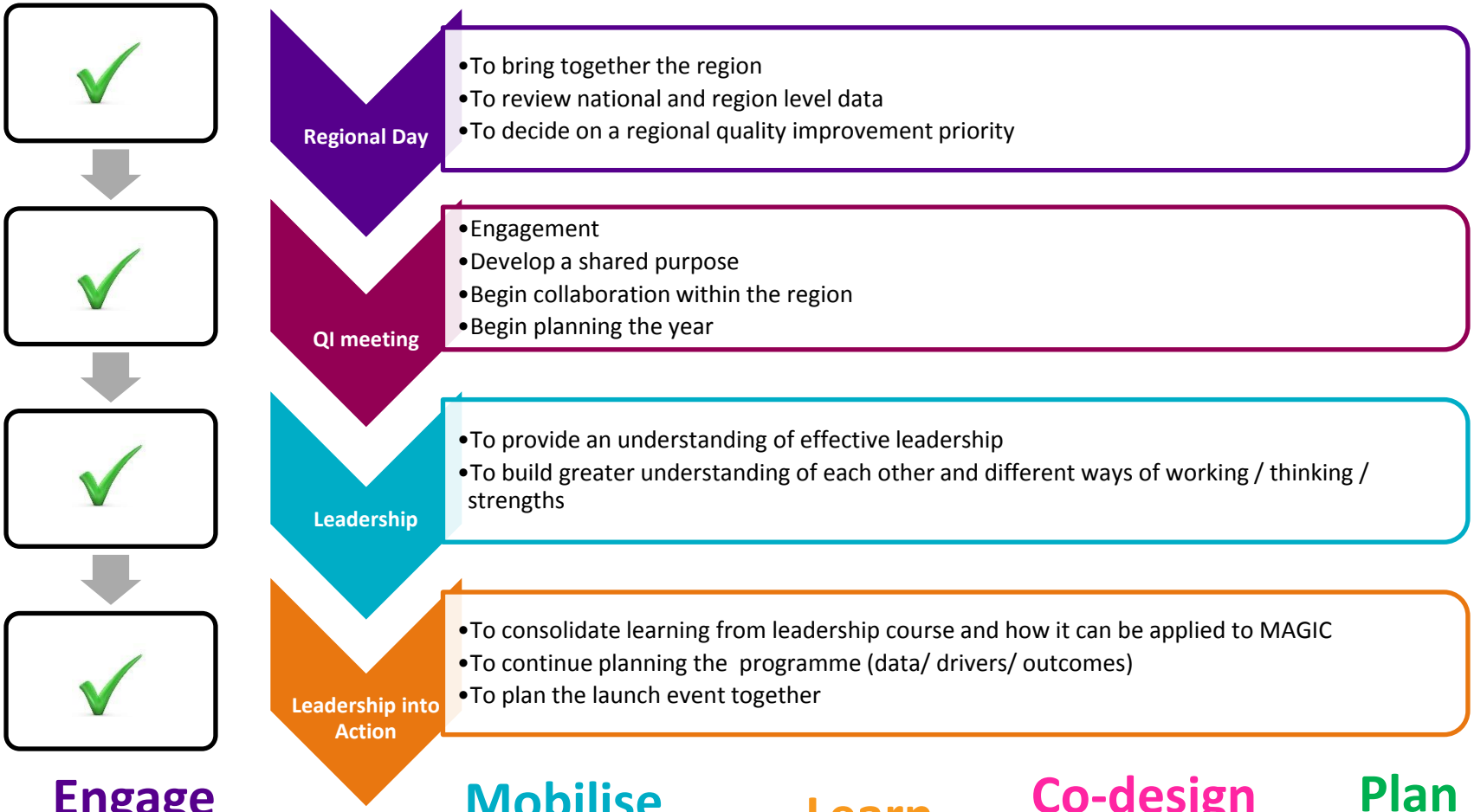
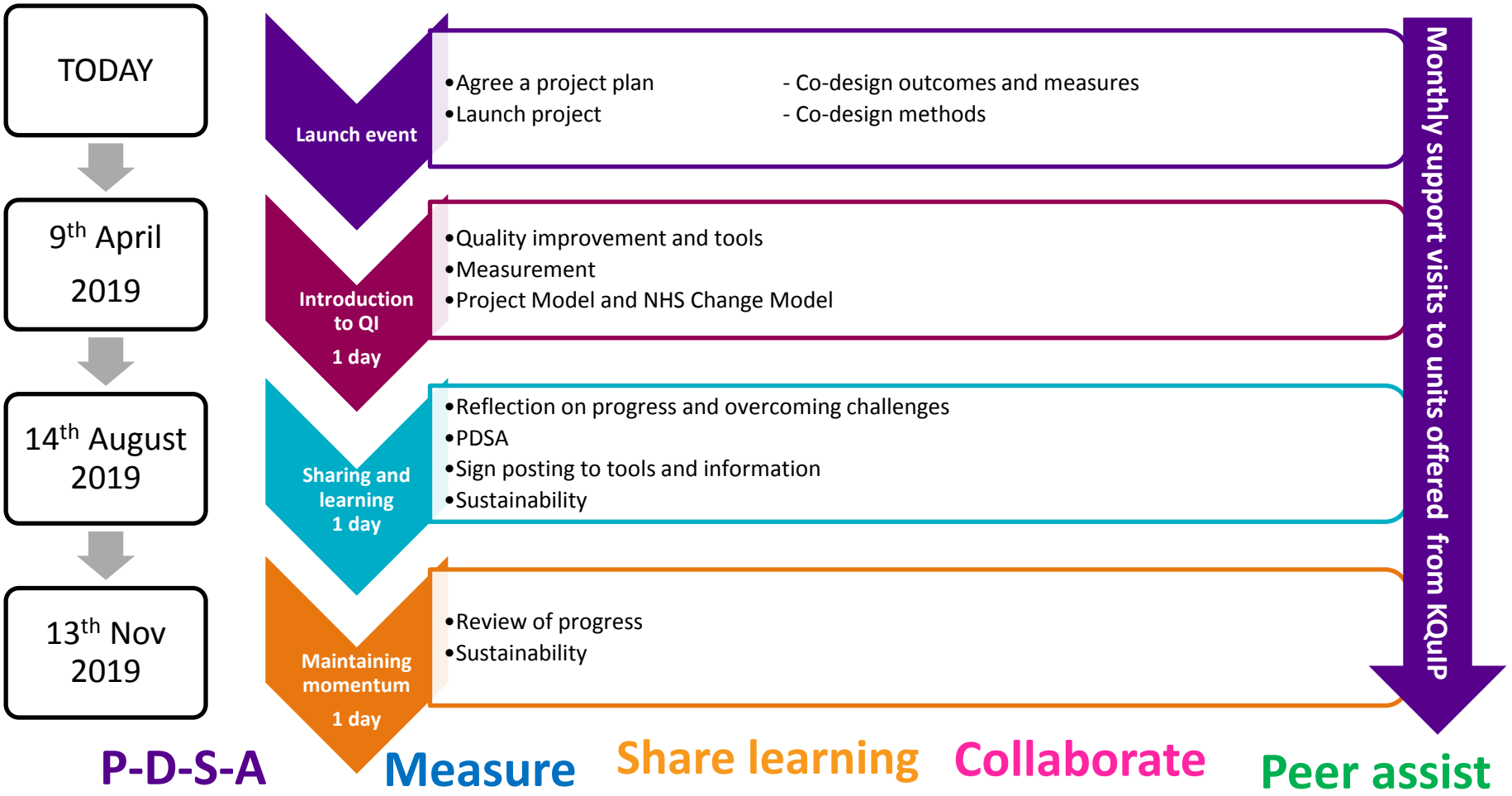
Preparation phase

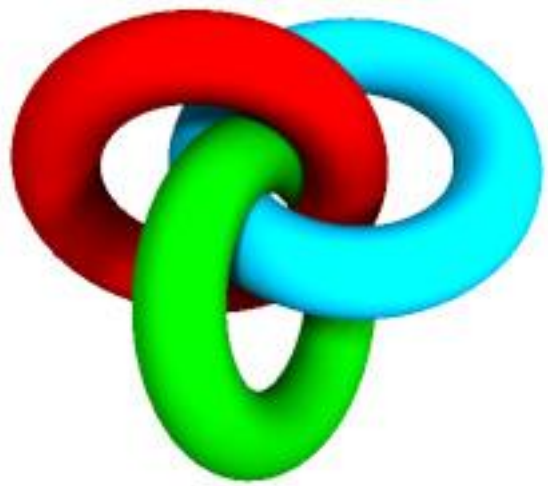


Project phase




HELP

My role…



- Support to connect teams – collaboration
- Assimilate and communicate learning between KQUIP training days – action learning sets, webinars
- Website resources and communications
- Support for organising and providing training /meeting venues / sponsorship

KQuIP…

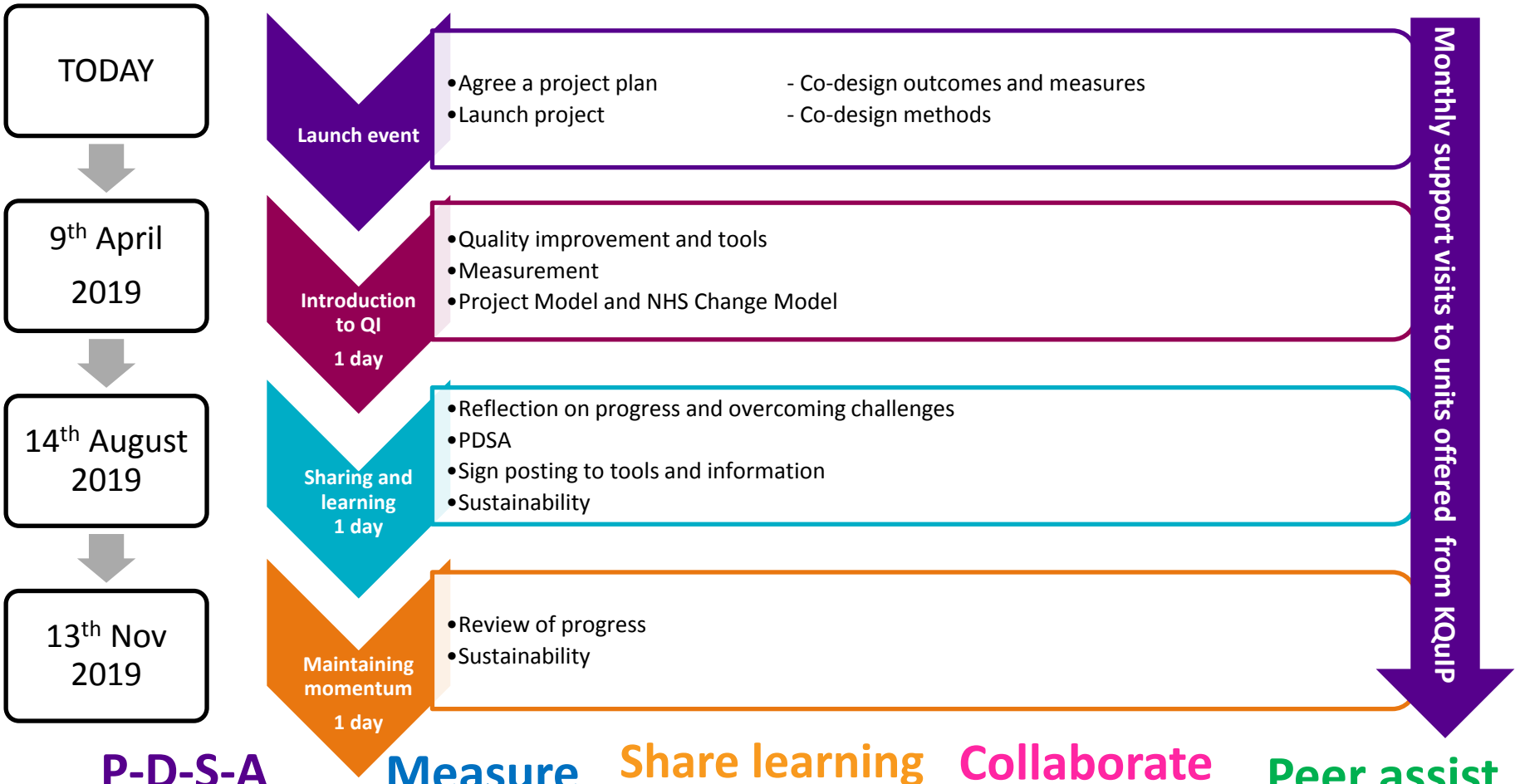
IS…

- Facilitative
- Enabling
- Local ownership - teams are responsible for the decisions, results and actions
- Keeping the energy, momentum, drive
- Tailored support

IS NOT…

- The subject matter expert or owner of the project
- Directive
- Inflexible or rigid

Project phase



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Thank you and travel safe

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