



## **MAGIC in Yorks and Humber**

### **Objectives**

**MAGIC AIM:** To promote good cannulation practice and improve the patient experience of cannulation

To increase the prevalent rate of AVF and AVG use

### **MAGIC Objectives**

Currently these objectives do not have targets, but following the baseline measurement phase, targets can be set by units locally, with support of MAGIC. A template to do this is on the following page.

- 1) To maximise the use of rope ladder and / or buttonhole cannulation and minimise the use of area puncture cannulation
- 2) To minimise the number of 'missed cannulation' (more than 1 attempt to insert a needle at one cannulation site)
- 3) To minimise the level of pain related to cannulation
- 4) To minimise infection in AVF & AVGs
- 5) To introduce / increase the use of pre-cannulation assessment prior to cannulation
- 6) To introduce planning of cannulation with new AV fistulae, including the patient in this process
- 7) To evaluate the impact and content of MAGIC project materials

### **Local Long Term Objectives**

These objectives are not feasible to achieve during the timescale of MAGIC, but can be the focus for local QI following MAGIC and may improve over a longer timescale following MAGIC.

- 1) To increase the prevalent rate of AVF and AVG use to consistently above the Renal Association Standards of 80%
- 2) To reduce the rate of AVF and AVG loss of use
- 3) To minimise the use of central venous catheters for haemodialysis to less than 20% in the prevalent haemodialysis population

## Measurement Strategy

**Patient Level** – to be taken from a minimum of 10 patients weekly in each main unit. Satellite units may capture less. Each month, randomly pick 10 chronic haemodialysis patients from the one chosen main or satellite unit, where MAGIC will be implemented. Do not use the same 10 patients each month.

- 1) **Needling Technique** - number of patients using buttonhole and rope ladder needling for the haemodialysis session you observe.

**Buttonhole** is defined as 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** is defined as 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** is defined as cannulation in a different site each time that does not progress up the vein in a systematic manner AND/OR one cannulation site's needle marks cover less than 5cm.

- 2) **Missed Cannulation** - number of patients that experienced more than one attempt to insert a needle at one needling site for the haemodialysis session you observe.

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 needling once taped in place after the first insertion.

- 3) **Mean Patient Experience of Needling** - ask the 10 patients you observe to complete the PREM needling question. Use the excel spreadsheet to work out the mean score.

This question should be asked using a written questionnaire and patients should be able to return answer anonymously via a box at the nurses' station. It must NOT be asked verbally by staff.

- 4) **Use of Pre-Cannulation Assessment**

Was a pre-cannulation assessment performed. Once Phase 1 is launched this can be measured by completion of the scoring tool. Prior to this, this can only be measured by observation of the cannulation procedure.

- 5) **Score of Pre-Cannulation Assessment**

Use the BRS VA / VASBI AVF/AVG Scoring Tool to assess the function of each fistula / graft. Count the number of patients with scores of 0 - 1.

**Unit Level** - data from the total haemodialysis population on the designated day, inclusive of patients not actually dialysing that day, but dialysing the day before or after i.e. total chronic HD population

- 6) **Rates of AVF/G** - % of the haemodialysis population using AVF, AVG or hybrid 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  
 Patients who use more than one type of access score in both categories, except for AVF / AVG dual use.

- 7) **Numbers of AVF/G Lost** - % of AVF/G in the current chronic haemodialysis population that were cannulated for haemodialysis 1 month ago and are no longer cannulated for haemodialysis.

This should exclude patients who have changed modality to peritoneal dialysis, those transplanted, deaths and haemodialysis withdrawals in the last month. This is purely for active haemodialysis patients who are part of the haemodialysis population.

- 8) **Numbers of New AVF/G** - % of new AVF/G in the current chronic haemodialysis population, cannulated and used for, either fully or partially for the specified haemodialysis session, that were not in use 1 month ago.

Any AVF/G cannulated and used for haemodialysis alongside CVC or only used for the partial treatment is counted in this number. New patients to haemodialysis using an AVF/G count in this number.

- 9) **Infection** - number of patients who have experienced a VA infection in the last month

Infection includes any haemodialysis patient who has received IV antibiotics &/or a positive blood culture in the last month, for an infection directly attributed to the vascular access (including CVC) **or** an infection with no other identified cause, even if there are no signs of infection on the vascular access.

**Action Plan**

	<b>Deadline</b>	<b>Person</b>
Gain log in details for Life QI and join MAGIC in the North West group on Life QI	Launch day	MAGIC QI Leads Leeanne Lockley
Identify other team members who need log in details and invite to Life QI and MAGIC in the Yorkshire and Humber group	Launch day	MAGIC QI Leads
Introduce baseline measures collection	Launch day	MAGIC QI Leads
Communicate with team members who need to collect baseline measures	Launch day	MAGIC QI Leads



**BRS** VASCULAR ACCESS  
Special Interest Group

**MAGIC**  
Managing Access by  
Generating Improvements in Cannulation



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