NHS England

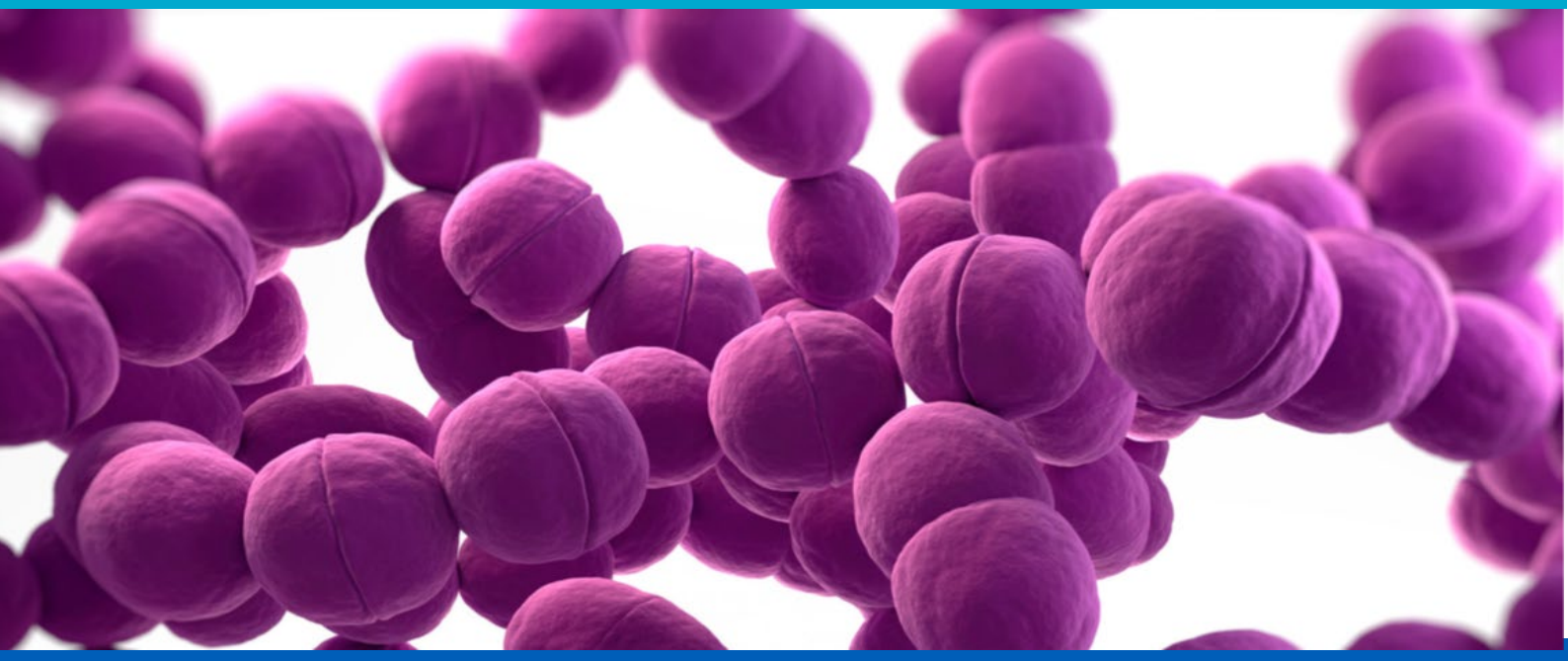
GIRFT GETTING IT RIGHT FIRST TIME

NHS IMPACT Improving Patient Care Together

Guide to preoperative testing: Adult MRSA screening and suppression/eradication prophylaxis for patients who are on an elective surgical pathway

May 2025

Supporting theatres, anaesthesia and perioperative medicine services



GIRFT is part of an aligned set of programmes within NHS England

Contents

Background 3

Context 3

About this guidance 3

Actions for services 3

Action 1:Patients should be screened for Methicillin-Resistant Staphylococcus Aureus (MRSA) in certain specific circumstances. 4

Actions 2: When screening for MRSA swab 2 sites, the nose and groin/perinium, by default. Additional sites should be screened where appropriate, on a case-by-case basis, e.g. open wounds or indwelling devices. 6

Action 3: The duration of validity of an MRSA screen is at least three months and can be extended to six months (or potentially longer where agreed locally). 7

Summary of current guidance on suppression therapy 10

Guidance regarding MRSA positive patients 10

Guidance regarding MRSA negative patients 11

Contributors 13

Background

Context

Infection prevention and control (IPC) guidance regarding MRSA screening has contributed to the development of local protocols tailored to individual sites and a considerable decrease in incidence since enhanced mandatory surveillance began (although recent figures have shown a relatively small increase).

The guidance, quite understandably, allows significant room for interpretation and some of the variation that has naturally emerged over time is impacting elective recovery (e.g. contributing to repeated patient visits, postponements, and on-the-day cancellations).

In this context, and as we move to new models for providing elective care such as surgical hubs, and mutual aid across both the independent and NHS sectors, GIRFT has received feedback that further supplementary guidance would help standardise practice.

About this guidance

GIRFT reviews, along with a recent audit and work with the preoperative assessment (POA) non-medical network, have shown that high levels of preoperative testing are slowing surgical pathways and increasing demand on POA services. This guidance addresses the key areas of unwarranted variation found through regional and local audits regarding MRSA screening:

1. Indications for MRSA screening
2. Mode of swab
3. Duration of validity

It also summarises current guidance on suppression therapy for completeness.

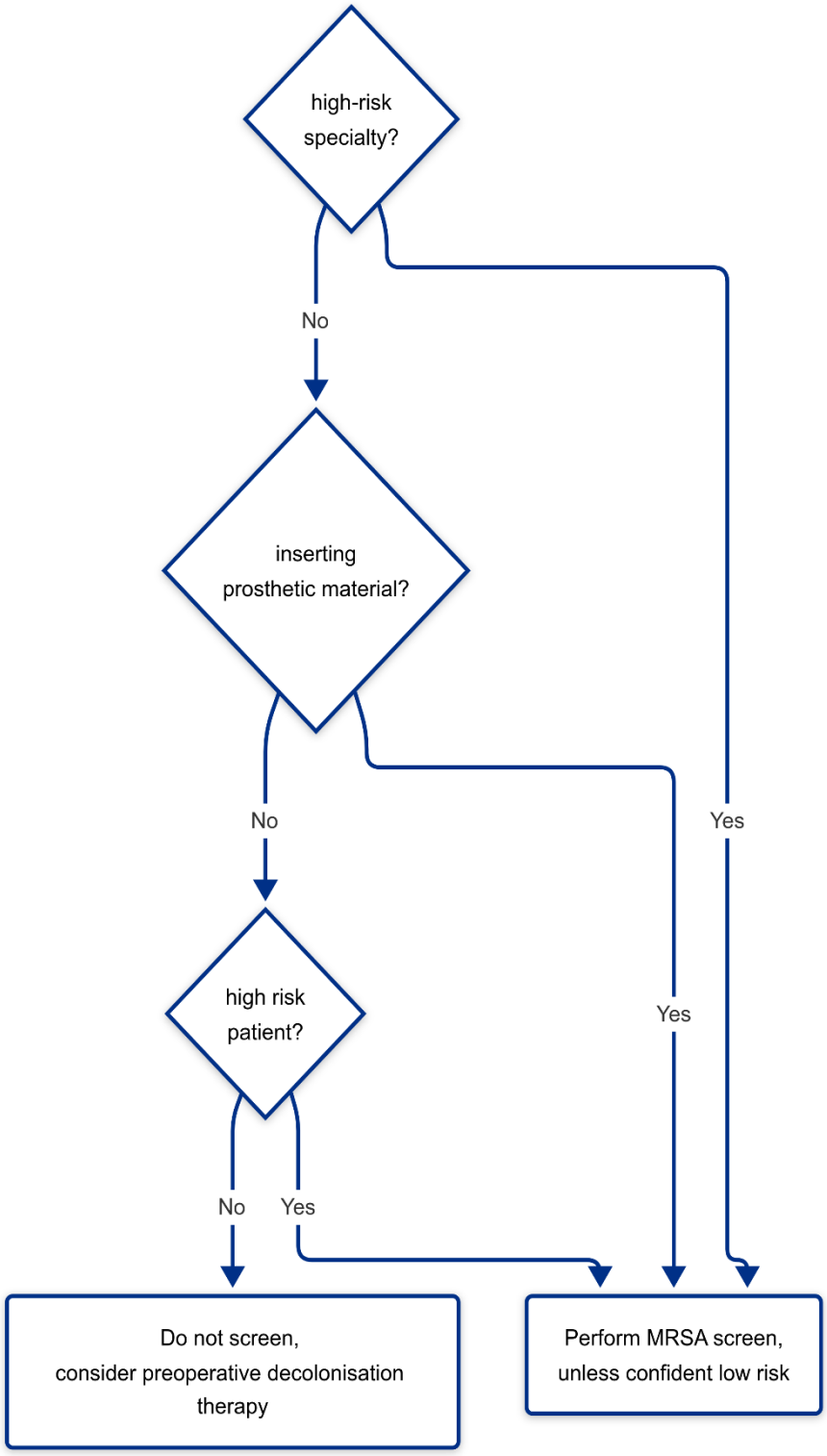
The guidance has been developed in collaboration with the National Perioperative Collaborative, the National Clinical Directors (NCDs) for Perioperative Medicine and Critical Care, and Infection Prevention and Control, as well as the GIRFT workstream and relevant clinical and nursing leads with expertise in infection prevention and control (IPC). The remainder of the document describes the background specific to indications, mode and duration.

Actions for services

1	Patients should be screened for Methicillin-Resistant Staphylococcus Aureus (MRSA) in certain specific circumstances
2	When screening for MRSA swab 2 sites, the nose and groin/perinium, by default. Additional sites should be screened where appropriate, on a case-by-case basis, e.g. open wounds or indwelling devices
3	The duration of validity of an MRSA screen is at least three months and can be extended to 6 months (or potentially longer where agreed locally)

Action 1:Patients should be screened for Methicillin-Resistant Staphylococcus Aureus (MRSA) in certain specific circumstances.

- **When** undergoing surgery within a high-risk specialty (Vascular, Renal/Dialysis, Neurosurgery, Cardiothoracic Surgery, Trauma and Orthopaedics, Oncology, Haematology, Bone Marrow Transplant) **OR**
- **When** the procedure involves the insertion of prosthetic material **OR**
- **When** the patient is identified as being at higher risk of MRSA carriage (e.g., healthcare worker, recently admitted to hospital within the last year, previously had MRSA, working in farming and agriculture[1], currently residing in a nursing care home or other care facility).
- **Unless** the local team, after careful consideration, is confident that the procedure and admission area is sufficiently low risk to render MRSA screening unnecessary, despite the specialty being high risk (For example, arthroscopy, in a low risk patient, performed as a day case away from primary arthroplasty patients).



Rationale

Over the last ten years, and since the publication of the MRSA screening guidance 2014[4], there have been significant developments in elective surgery. This includes the advancement of surgical techniques, movement of patients between hospital providers, digitally enabled pathways, and an increase in surgery being delivered as a day case in line with the BADS Directory of Procedures & National Dataset.

The 2014 MRSA screening guidance states that screening should be performed on:

- ***All patients admitted to high-risk specialities/units.***
- ***All patients previously identified as colonised with or infected by MRSA.***

And to include:

- ***Local risk assessment to define other potential high MRSA risk units/specialties according to provision of specialised services and units with a history of high endemicity of MRSA.***

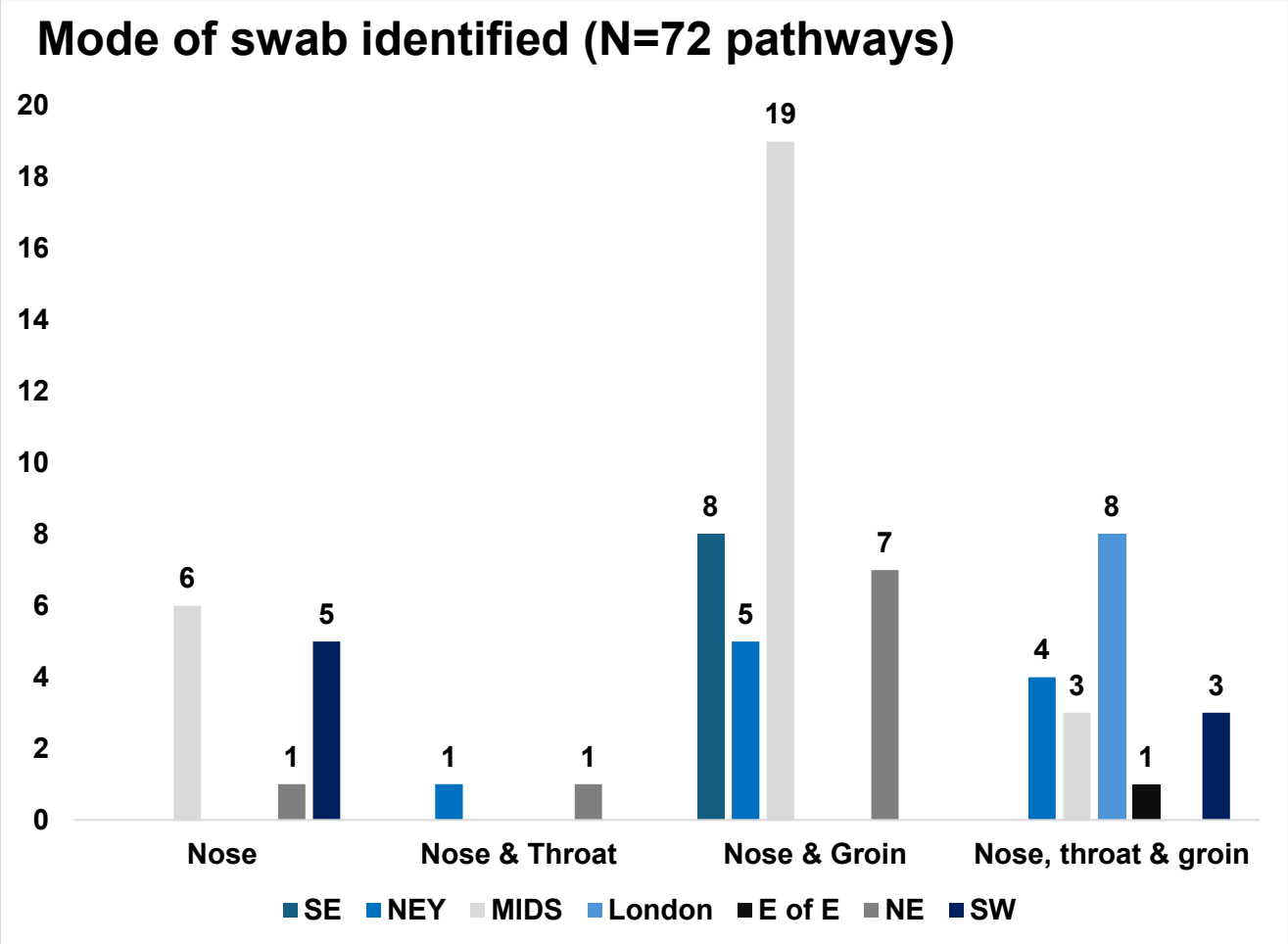
There is no differentiation of day case or inpatient within the 2014 publication, but we know from providers that the development of specified day case units had led to targeted MRSA testing for certain procedures and in some areas, omission of some day case procedures from requiring MRSA screening. The development of pathways in high volume, low complexity (HVLC) surgery is facilitating surgical procedures historically done as an overnight stay into day case procedures (i.e. primary hip and knee replacements) in addition to procedures moved to treatment rooms in line with the Right Procedure Right Place initiative (RPRP). It is therefore essential that guidance is focused on high-risk specialities and specific patient risks rather than intended type of admission. It is not the purpose of this document to list all surgical procedures and indicate if screening should be performed, but to give clear guidance as a basis for local IPC considerations applicable to both day case and inpatient procedures. We were able to do this by examining several MRSA local policy documents across all regions.

Action 2: When screening for MRSA swab 2 sites, the nose and groin/perinium, by default. Additional sites should be screened where appropriate, on a case-by-case basis, e.g. open wounds or indwelling devices.

Rationale

The most frequently sampled body sites included in current MRSA screening, as identified in the NOW Study (i.e. as practised by at least 75% of trusts), are the nose and groin/perineum. Through the non-medical preoperative assessment (POA) network, we collated evidence of practice in the mode of swabs and found this to be reflective of the 2014 guidance[4] (figure 1).

Figure 1: Mode of swab



This chart illustrates the variation in MRSA screening practices across 72 pathways, highlighting differences in the number and combination of sites swabbed. The data shows that screening both the nose and groin/perinium is the predominant practice, with the highest number of pathways following this approach. We recommend defaulting to this nose and groin two-site approach. It aligns with IPC guidance, saves time and cost compared to a third swab, and acknowledges that throat is not recommended in IPC guidance.

Action 3: The duration of validity of an MRSA screen is at least three months and can be extended to six months (or potentially longer where agreed locally).

When duration of validity can be extended to six months or longer:

- **The patient is not having major surgery (including major orthopaedic surgery i.e. hip or knee replacement/revision or major abdominal surgery). The minimum duration of validity for these procedures should be three months and in line with the recommended timing of preoperative assessment[2].**
- **There is a contact at three months after the initial test to identify any new changes in relation to patient/surgical risk (this should be in line with local IPC policy and capture any IPC relevant changes). Changes should initiate a further MRSA screen where appropriate i.e. If the patient will now be admitted to a high risk specialty or following a recent hospital admission. In order to minimise multiple contacts for both patient and hospital, this should be incorporated into validation and/or 'keeping in touch' contacts which are recommended in national guidance[3].**
- **The patient is not in one of the high-risk speciality groups but where universal screening is the preferred method for MRSA screening.**

Rationale

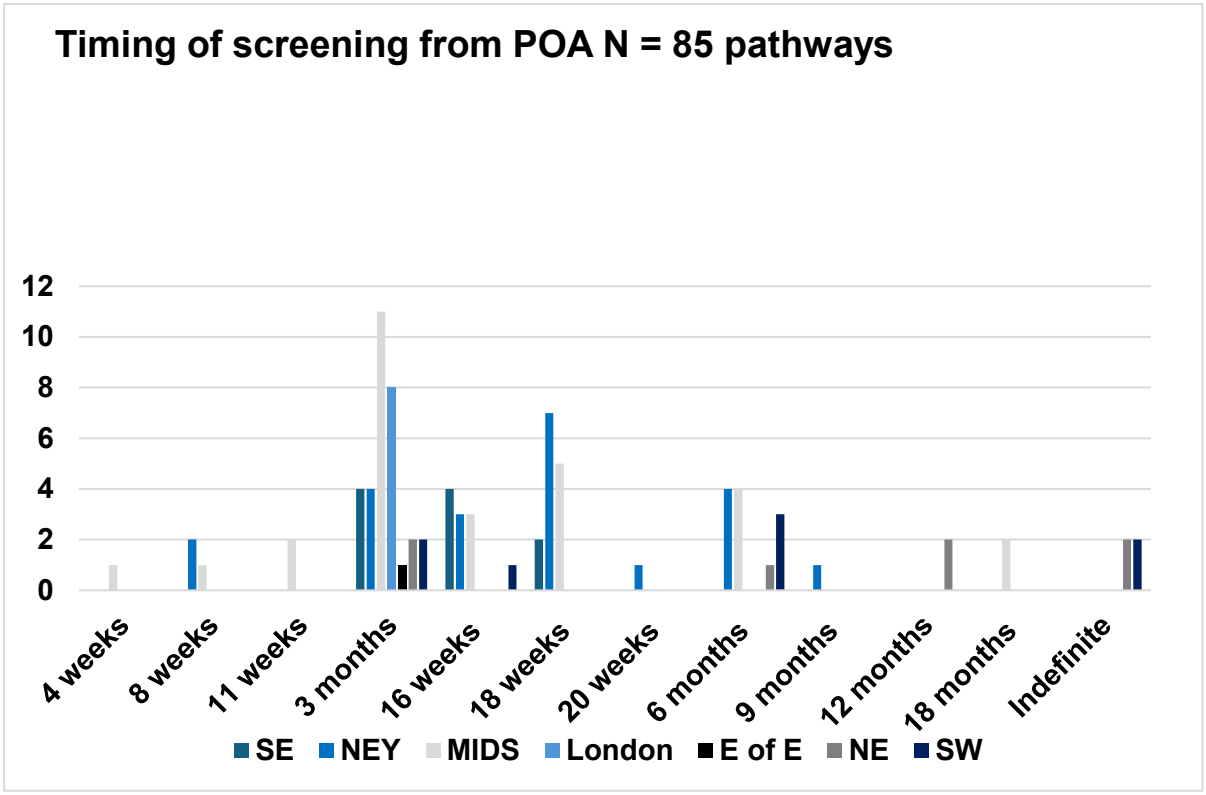
The 2014 guidance states that the frequency of (repeat) screening should be determined locally and made explicit in local guidance[3].

The duration and timing of MRSA screening has been open to interpretation with local policies in providers showing variation in the acceptable timeframe of an MRSA screen to admission date for surgery. We examined 85 patient pathways looking at timing of screening (see figure 2) which was often associated with the timing (and expiry) of a repeat preoperative assessment (POA) i.e. the expiry of the POA was often determined by the MRSA screening policy and was in line with patients who were generally on an 18-week pathway (pre COVID-19).

Best practice is to ensure that the POA appointment has an appropriate timeframe to the estimated 'to come in' date (TCI date) for surgery in line with national guidance to support early risk assessment and screening. The GIRFT existing recommendation for timely POA based on surgical procedure and patient risk factors in relation to comorbidity[8] suggest that POA for **non-urgent** cases should not exceed validity of 12 weeks if early screening and optimisation is embedded into practice, and a minimum of six weeks for effective scheduling. It is at this point that preoperative testing inclusive of MRSA screening should take place. Where providers choose to refer patients to full POA early in the pathway (i.e. to create a patient pool), consideration needs to be around maintaining contact with patients at 3-month intervals to ensure there are no changes that would affect MRSA screening considerations.

There is national recognition that perioperative pathways are still undergoing transformation to ensure that national policy is followed[6]. In some areas, POA are still seeing patients close to TCI date while they manage the new patient flow and the existing waiting list. Others are doing preoperative testing far in advance creating duplicate POA appointments across the patient pathway.

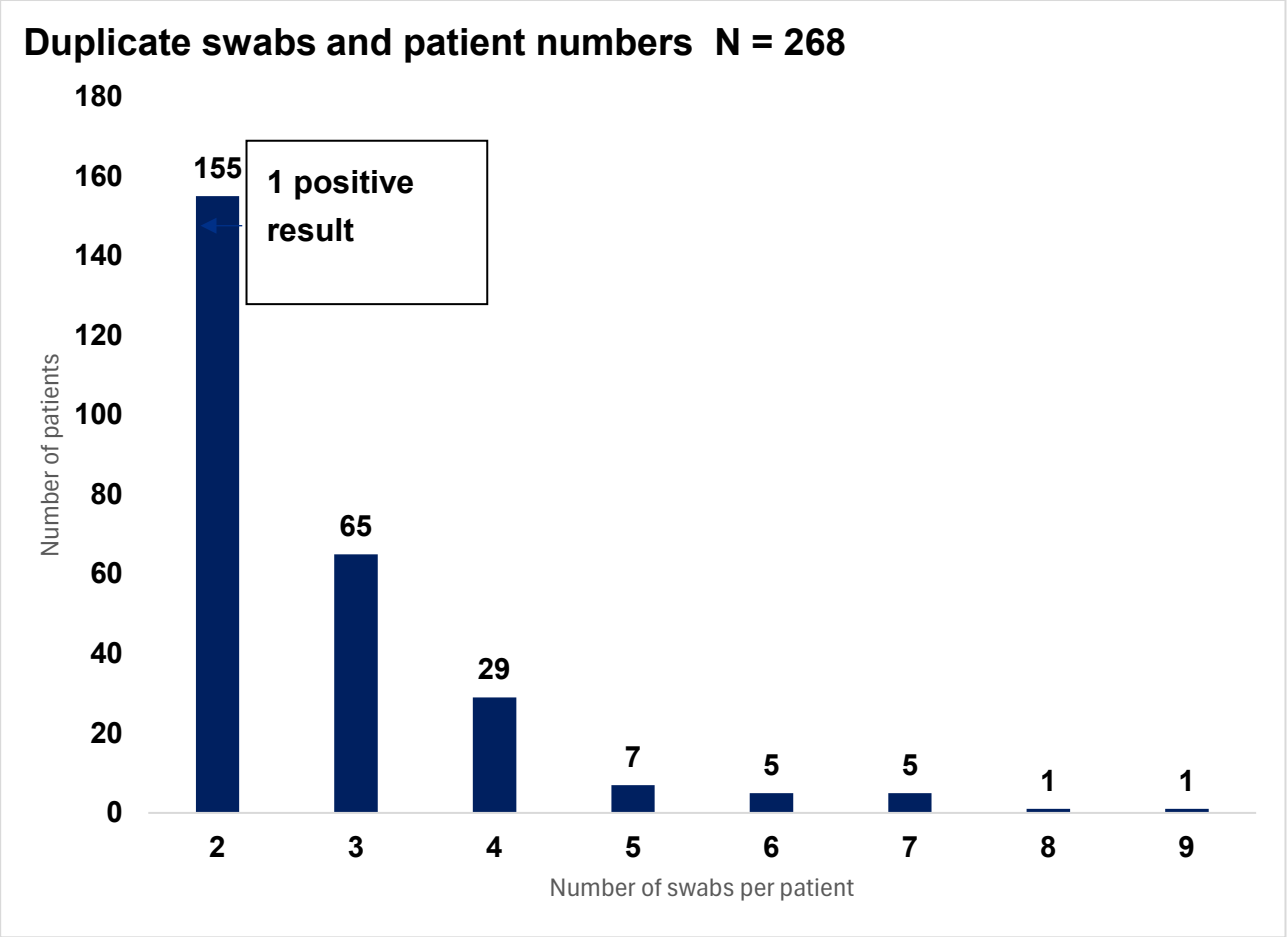
Figure 2: Timing of screening from POA



Prevalence of MRSA in repeated screening

A local audit in one trust looked at the prevalence of MRSA (i.e. a positive result) on duplicate screening (two or more) and the number of patients who went from a negative screen to a positive screen. One patient was identified from duplicate testing of going from negative to positive screen but had been in hospital prior so would have been included for screening (see figure 3). This finding, that there was minimal prevalence of MRSA on a repeated screening, is reassuring and congruent with the action in this guidance to consider MRSA screening results as valid for a minimum of three, and potentially six or more, months.

Figure 3: Duplicate swabs and patient numbers



Summary of current guidance on suppression therapy

Guidance regarding MRSA positive patients

All patients identified as MRSA positive must receive decolonisation/suppression therapy as per local guidance and policies. Suppression therapy may vary by provider, but every effort should be made to:

- Standardise the suppression therapy given within a provider site and where possible across an Integrated Care System (ICS).
- Have robust policies in place for the management of positive results including MRSA rescreening and subsequent treatments. Provider feedback appears to have a standardised approach to five days of decolonisation/suppression therapy and weekly screens BUT this is dependent on urgency and type of surgery and should be guided by local IPC/surgical teams. For some areas, a positive MRSA result will result in treating patients with decolonisation/suppression only up until the day of surgery and potentially during their hospital stay.
- Ensure persistent positive results are discussed with the local IPC and surgical teams for ongoing management inclusive of risk-based discussions that are adequately communicated to the patient (and their carers).
- When (and if) rescreening for MRSA, careful consideration should be given to where the rescreen can be done closer to home i.e. exploring Community Diagnostic Centres (CDCs) or ability to use postal service. This will need localised agreement, and ability to share information about results.
- Timely and appropriate antibiotic prophylaxis (where indicated) should follow a specific pathway for patients having surgery recognising the urgency of surgery and any associated risk.

Providers must ensure the following based on the 2014 IPC guidance[4]:

- Patients are informed on the result of their MRSA screen if positive. It is important that patients are informed at the time of screening that they will normally only be contacted if they have a positive result. Suggested wording: ‘Your MRSA swabs will be sent to a laboratory, which test them for MRSA. The results usually take between 3-5 days but may be sooner. You will not normally be informed unless the result is positive to MRSA’.
- Information needs to be provided in an individualised way dependent on patient needs.
- Staff need to be sufficiently knowledgeable and confident to invite questions from patients and their carers and communicate information in a sensitive way.
- Specific and comprehensive guidelines for home-based decolonisation are required including addressing any perceived difficulties from the patient or their carer. Alternatives to treatment must be considered based on individualised patient need.
- Patients expect to see that the standards of cleanliness and IPC, such as hand hygiene, are practised.
- Measuring and acting on feedback from the patient experience is essential.

- Patients are informed of the next steps after a positive result including any delays in surgical procedures after a risk-based decision with the surgical teams (this may depend on urgency of surgery).

Guidance regarding MRSA negative patients

Providers may choose to give decolonisation treatment for patients who have been screened as MRSA negative to reduce any potential of IPC risk for certain procedures.

NICE guidance[5] gives recommendations that include:

Preoperative showering

1.2.1

Advise patients to shower or have a bath (or help patients to shower, bath or bed bath) using soap, either the day before, or on the day of, surgery. [2008]

Nasal decolonisation

1.2.2

Consider nasal mupirocin in combination with a chlorhexidine body wash before procedures in which Staphylococcus aureus is a likely cause of a surgical site infection. This should be locally determined and take into account:

- the type of procedure;
- individual patient risk factors;
- the potential impact of infection [2019].

Providers should consider the impact of surgical site infections and decide on decolonisation therapy. Consideration should be taken when listing patients at short notice for procedures that are in the high risk specialities.

Compliance and Audit

Based on the 2014 guidance, providers should:

• Make every effort to ensure very high levels of screening in the patient groups identified within this guidance.

• Regular measurement/audit should be carried out to demonstrate compliance with local MRSA screening policies.

• Audit should specifically include measurement of the appropriateness of decolonisation (correct agents/dosages for correct time) and follow up.

• Providers should make performance/compliance data on MRSA screening and decolonisation widely available within their organisations.

• The Director of Infection Prevention and Control should provide assurance to the Trust Board on the level of compliance with the local policy on MRSA screening /decolonisation.

Additional advice from GIRFT

Where possible, providers should ensure that results of MRSA screens are visible to other provider sites when patients are offered surgery elsewhere such as in an elective hub. This holds significant value for minimising patient appointments and travel if the MRSA screen has already been completed and is within the specified time frame.

Contributors

Emma McCone	National GIRFT POA lead
Toni Bell	National GIRFT POA advisor, non-medical national network for POA
Ramani Moonesinghe	National Clinical Director for Perioperative Care
Chris Snowden	National GIRFT clinical lead for APOM
Mike Swart	National GIRFT clinical lead for APOM
Dan Pearce	GIRFT Head of Specialist Implementation, Theatres, and APOM
Niamh Whittome	Head of Infection Prevention and Control, South East, NHS England
Deborah Ludwell	POA lead nurse, Royal Devon and Exeter Hospital
Rebecca Bridges	Elective Care Programme and Improvement Lead, South West, NHS England
Lawrence Mudford	Centre for Perioperative Care (CPOC) and patient representative
Janine Patrickson-Daly	Head of IPC , North East and Yorkshire, NHS England
Mark Cheetham	National clinical GIRFT lead for general surgery
Chris Tulloch	Orthopaedic surgeon and North East and Yorkshire clinical lead for orthopaedics
Samantha Moore	Anaesthetist and CPOC fellow
Judith Hendley	Assistant director, elective recovery and transformation, NHS England
Adam Foster	Programme manager, elective recovery and transformation, NHS England
Christina Reihill	Lead POA nurse, University Hospitals Birmingham NHS Foundation Trust and Preoperative Association representative
Mark Bowditch	President, British Orthopaedic Association

With thanks to the national non-medical POA network for providing information around MRSA screening pathways, and British Orthopaedic Association for providing orthopaedic surgical feedback on the draft.

References

#	Recommended Document	Author	Overview
	Guidelines and research		
1	Preoperative MRSA screening using a simple questionnaire prior to elective total joint replacement - PubMed (nih.gov)	Fidelius Von Rehlingen-Prinz et al.	Study evaluating the management of a standardised protocol for preoperative identification of MRSA colonisation.
2	GIRFT Pre-operative assessment guidance FINAL V1 July 2023 - Getting It Right First Time - FutureNHS Collaboration Platform	GIRFT	Preoperative assessment guidance published by GIRFT.
3	Earlier screening, risk assessment and health optimisation in perioperative pathways: guide for providers and integrated care boards	NHS England	Official guidance providing standards regarding early screening, risk assessment, and optimisation.
4	MRSA screening guidance (publishing.service.gov.uk)	Department of Health	Official guidance outlining a focused and cost effective approach to MRSA screening.
5	Recommendations: Surgical site infections – prevention and treatment	NICE	National guidance outlining evidence-based recommendations for the prevention and treatment of surgical site infections.
6	Joint Healthcare Infection Society (HIS) and Infection Prevention Society (IPS) guidelines for the prevention and control of Methicillin-Resistant Staphylococcus aureus (MRSA) in healthcare facilities	J.E. Coia et al.	Comprehensive guidelines detailing strategies for the prevention and control of MRSA in healthcare settings, emphasising infection prevention and control measures.
7	Quarterly epidemiological commentary: mandatory Gram-negative bacteraemia, MRSA, MSSA and C. difficile infections (data up to July to September 2024) - GOV.UK	UK Health Security Agency	A report providing analysis and trends of various infections, including MRSA, within healthcare facilities in England.
8	Support Guide for the implementation of Early Screening, Risk Assessment & Optimisation	GIRFT	A guide aimed at assisting healthcare providers in implementing early screening, risk assessment, and optimisation.

About GIRFT and the GIRFT Academy

Getting It Right First Time (GIRFT) is a clinically led national programme designed to identify and minimise unwarranted variation in treatment and care delivered. It undertakes clinically led reviews of specialties, combining wide-ranging data analysis with the input and professional knowledge of senior clinicians to examine how things are currently being done and how they could be improved.

The programme has the backing of the Royal Colleges and professional associations and has a significant and growing presence on the Model Health System portal, with its data-rich approach providing the evidence for hospitals to benchmark against expected standards of service and efficiency.

The GIRFT model has now been applied in more than 50 different areas of clinical practice. It consists of five key strands:

1. Data gathering – a broad data gathering and analysis exercise, generating a detailed picture of current national practice and outcomes.
2. Peer reviews – direct clinical engagement via visits or virtual meetings between clinical leads and trust teams; an opportunity to examine trust behaviour in the context of the national picture, enabling teams to understand where they are performing well and what they can do better.
3. National report and Academy resources – production of national reports that draw on data analysis and discussions with provider teams to identify opportunities for improvement, locally, regionally and nationally, alongside - clinical resources such as best practice pathways and guides.
4. Support to deliver – the implementation phase where the GIRFT team supports trusts, commissioners and integrated care systems to deliver the improvements recommended.
5. Research – GIRFT fellowships support resident doctors, nurses and allied health professionals to develop their research and clinical improvement skills, delivering research projects and GIRFT identified improvements in their host provider, system or region.

GIRFT Academy has other published pathways and case studies which are available via NHS England's collaborative platform, FutureNHS. These are available at:
Anaesthesia and Pre-Operative Medicine (APOM) - Getting It Right First Time - FutureNHS Collaboration Platform

To see all Academy resources visit the GIRFT website here>

GIRFT Academy contact: girft.academy@nhs.net