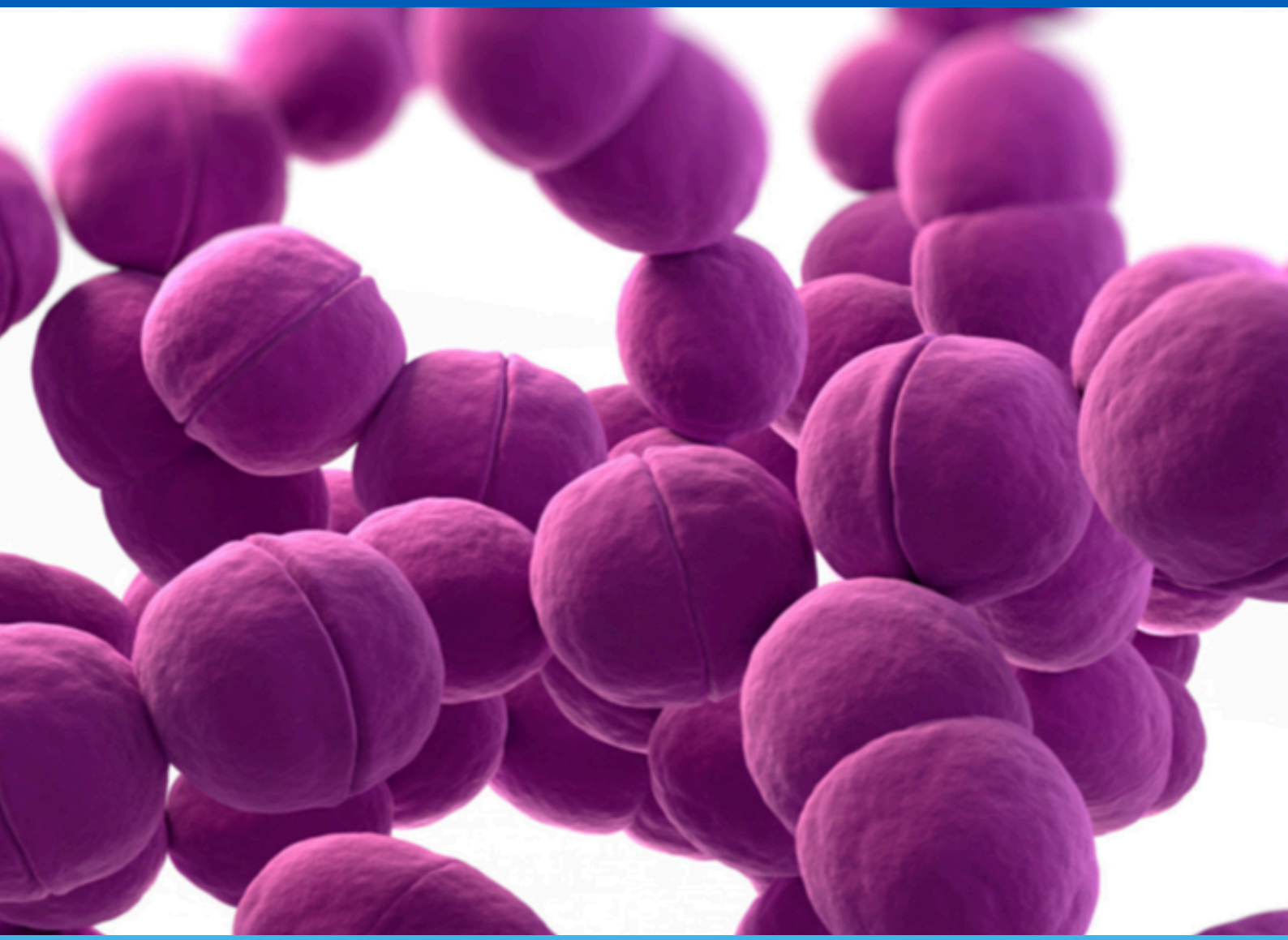
NHS England

GIRFT
GETTING IT RIGHT FIRST TIME

Preoperative decolonisation interventions and washes before elective surgery

August 2025



Supporting theatres, anaesthesia and perioperative medicine services

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Introduction

Why guidance on preoperative decolonisation and washes is necessary

This guidance focuses on the issuing of preoperative decolonisation interventions and washes before elective surgery. It is motivated by audit results showing wide variation in practice across POA services and operational feedback at provider level, and applies to both adult and children and young people (CYP) populations. In paediatric cases, risk assessments are recommended where skin preparation is usually adapted – for example, in neonates under 32 weeks or those with low birth weight.

This guidance aims to provide pragmatic indications for surgical patients who may require preoperative decolonisation interventions and washes but, more specifically, where patients may be offered a theatre date at short notice due to a late cancellation and the impact on patients who have been issued with treatment extending past that date. Theatre efficiency and utilisation of lists is key to ensuring a return to 18-week referral to treatment (RTT) for patients. Feedback from providers has shown that the preoperative decolonisation interventions and washes are a limiting factor in offering short notice cancellations due to variation in practice, impacting the ability to maximise theatre efficiency. The scenarios below illustrate how decolonisation interventions and washes can affect whether a patient is able to take up an operating slot made available by a short-notice cancellation.

Common scenario: Decolonisation protocols <u>prevent</u> the patient from backfilling a short-notice cancellation

Patient X stated during validation that they would be happy to take an operating slot created by short-notice cancellation. They are telephoned two days before an available theatre slot due to a patient cancelling their procedure. They have been issued a preoperative decolonisation wash to use for five days before the procedure. Patient X is therefore unable to come in and fill the operating slot.

Ideal scenario: Decolonisation protocols <u>enable</u> the patient to backfill a short-notice cancellation

Patient Y has also been offered a short-notice cancellation. They have also been given a preoperative wash to use but only for the day before the procedure and on the morning of the procedure. Unlike patient X, patient Y can therefore come in and fill the operating slot.

Our other preoperative assessment guidance

This guidance is the 6th in a series aimed at ensuring preoperative processes are streamlined, including the issuing of preoperative advice to reduce unwarranted variation. We intend to evaluate the impact of this guidance and will collaborate with appropriate sites.

Indications for and timing of preoperative decolonisation interventions and/or washes

This section sets out **who** should receive preoperative decolonisation interventions and/or washes and **when** they should be started. It summarises the nationally agreed patient categories warranting treatment and the recommended timing regimen so providers can apply a consistent, evidence-based approach while still tailoring practice to locally defined “at risk” groups.

The indications described are applicable to patients who have **NOT** been identified as positive for MRSA or MSSA at preoperative assessment. Special consideration is required for those patients and providers should consult the guidance signposted below.

Elective surgical patients requiring preoperative decolonisation interventions and/or washes

1.	All patients who are having surgery that require an implantable device (see appendix 1).
2.	All patients undergoing major orthopaedic (e.g. arthroplasty and spinal operations) and cardiothoracic surgery (e.g. coronary artery bypass graft).
3.	All patients where there is surgical concern of increased risk of surgical site infection (SSI) which should be locally defined ‘at risk’ groups (see appendix 2).

Timing of decolonisation interventions/washes before elective surgery

1.	Patients from above categories should be issued with preoperative decolonisation interventions and/or washes from POA to use the day before and on the day of surgery. All patients should be advised to bathe or shower the day before and on the day of surgery.

Special consideration for patients identified as positive for MRSA/MSSA

Decolonisation interventions will differ for patients who have tested positive for MRSA or MSSA following screening at preoperative assessment.

Providers should refer to our existing guidance on MRSA screening for the appropriate steps in these cases. Please note that the duration and type of decolonisation treatments and washes may vary from those outlined in this guide.

Type of decolonisation intervention and washes

The key aim of this guidance is not to be prescriptive in the type of decolonisation intervention and wash offered before surgery (where there are already significant research and evidence-based papers outlining their use), but to enable a more pragmatic approach on the timing of decolonisation treatments. Types of decolonisation intervention and washes include nasal mupirocin ointment 2%[1], chlorhexidine 4%, and Octenisan, all of which are used widely and decided on locally. A randomised control trial for this area would be welcomed. When issuing the type of decolonisation intervention and washes, risk of treatment and interventions within both adults and CYP should be reviewed based on the considerations outlined below, including shared risks for adults and CYP, as well as additional considerations for each.

Risks to consider when selecting decolonisation interventions and washes

Shared risks (adults & CYP):

Risk	Details
Allergic reactions	Skin irritation, rashes, or contact dermatitis from chlorhexidine or mupirocin.
Antimicrobial resistance	Overuse of mupirocin has the potential to lead to resistance; use should be targeted when possible.

Additional considerations – adults:

- **Comorbidities:** Skin integrity may be compromised (e.g., skin conditions).
- **Polypharmacy:** Risk of interaction or cumulative sensitisation.

Additional considerations – CYP:

- **Skin sensitivity:** Children's skin is more permeable, increasing risk of irritation or systemic absorption.

Providing patients with information about decolonisation interventions and washes

Where decolonisation interventions and washes have been issued, accessible and tailored patient (and carer) information and instructions should be given and individualised to patient needs. An example of information given to a patient is shown below.

Illustrative advice for patients: skin decolonisation before surgery

To reduce the risk of infection after your operation, you may be asked to follow a simple skin decolonisation routine. This helps reduce bacteria (like *Staphylococcus aureus*, including MRSA) on your skin.

1. Use of antiseptic body wash

- **Product**: Use an antiseptic wash, usually **chlorhexidine gluconate 4%.**
- **When**: Once on the day before and then again on the morning of surgery.
- **How to use**:
    - Wet your body, apply the antiseptic wash like a shower gel.
    - Pay special attention to areas such as the armpits, groin, and around your nose.
    - Leave it on for **1 minute**, then rinse off thoroughly.
    - Pat dry with a clean towel.
    - Do not dilute product.

2. Hair washing

- Wash your hair at least **once** using the same antiseptic wash or a regular shampoo.
- If you use chlorhexidine on your scalp, avoid getting it in your eyes or ears.

3. Other tips

- Use a **clean towel and fresh clothes** each day.
- Change **bed linen and pillowcases** during the decolonisation period.
- Do not use moisturisers or other skin products during this time, as they may reduce the effect of the antiseptic wash.

Auditing and researching practice on decolonisation interventions and SSI

Auditing and researching practice on surgical site infection (SSI), including the role of preoperative decolonisation, is essential to improving patient outcomes and ensuring consistent standards across providers. The checklist below is designed to support providers in reviewing and strengthening local practice around decolonisation and SSI prevention. We also recognise that further research on the duration of decolonisation interventions and SSI incidence is needed, and we may support that in the future as resource allows.

Audit and research checklist

- ☑ Providers should ensure that local audit of SSI infections are regularly monitored by developing methodologies to provide assurance around SSI.
- ☑ SSI rates should be benchmarked whenever possible with comparable or national centre data. It is important that rates and not number of infections are used as a comparator, and that post-discharge surveillance of infection is extended beyond the 30-day period for relevant categories.
- ☑ Care bundles to minimise the incidence of SSI are common practice across the surgical pathway and should be regularly reviewed.
- ☑ Patients who are at high risk of SSI, and where surgical teams want to initiate extended duration of preoperative decolonisation interventions and washes before the ‘to come in’ (TCI) date, should not be part of the patient ‘pool’ for short notice cancellations. Data on SSI must be collected in these situations and used to review local guidance[2].

Further information and background: evidence base regarding SSI and decolonisation practise

National and international guidance on SSI prevention

The National Institute for Health and Care Excellence (NICE) guidance for prevention and treatment of surgical site infections (SSI) was updated in 2019[3]. This guidance advises all patients to have a bath or shower using soap the day before or on the day of surgery. It also asks providers to *consider* use of decolonisation interventions, nasal mupirocin ointment 2% in combination with a chlorhexidine body wash, before procedures in which *Staphylococcus aureus* is a likely cause of an SSI.

The World Health Organisation (WHO) from 2022[4] also recommends preoperative bathing before elective surgery and the use of nasal mupirocin ointment 2% with or without decolonisation washes, specifically for cardiothoracic and orthopaedic surgical procedures.

In 2023, Infection Control and Hospital Epidemiology published a paper that summarised recommendations to prevent SSI, which included the administration of decolonisation interventions preoperatively for orthopaedic and cardiac surgery and included recommendations for antimicrobial prophylaxis across other surgical specialities[5].

Local variation in infection control practice

Providers have formulated local infection prevention and control (IPC) guidance as part of their localised procedures and policies but there is significant variation, in particular to the duration of decolonisation treatments and washes prior to elective surgery.

Evidence from the non-medical POA network

The national non-medical POA network have been key stakeholders in bringing operational challenges to the national team and identifying areas of variation. Preoperative decolonisation interventions and washes have been identified as an area where there is an opportunity to streamline pathways specifically relating to short-notice cancellations. 39 POA leads were able to give some information about their provider processes for the issuing of decolonisation treatment and washes noting the surgical speciality and timing of treatments (see appendix 3).

Timing of treatment

Using the existing data of short-notice cancellations and ‘standby’ patients, it is sufficient to offer decolonisation treatment and washes the day before and on the day of surgery.

The World Health Organisation looked at the timing of decolonisation interventions and washes before surgery, with most of the literature suggesting the day before and on the day of surgery as an acceptable timeframe, apart from a US Institute of Healthcare Improvement bundle for hip and knee arthroplasty which suggests three days.[6]

Orthopaedic contributors to this guide advised us that a question was raised in the use of decolonisation treatments to reduce the incidence of SSI undergoing major orthopaedic surgery at the third meeting of international consensus for orthopaedic research and practice. The meeting concluded that they should be used (with a 79% consensus), but that further research was needed on the question of duration.

In conclusion, the evidence on any extended untargeted skin decolonisation prior to surgery is weak. This is reflected in the NICE guidance. However, there is variation in practice seen across the country. This is in response to an emerging evidence base that we should use additional skin decolonisation in higher risk surgery. This is recognised via the stakeholder reference group but with significant variation in practice, which is impacting on theatre efficiency, and the consensus is to recommend a more standardised approach. This will improve POA flow, which is likely to be a significant contributor to positive patient outcome and reducing cancellation and postponement. There is better evidence for targeted skin decolonisation when patients are found to be carriers of MRSA/MSSA, and providers should refer to the MRSA screening guidance and local policies when considering duration of treatment.

Operational pressures and the role of POA services

Changes to the perioperative pathway to ensure that patients are being carefully risk stratified at decision to consider surgery followed by POA at the right time has seen increased demand for POA services, resulting in high rates of postponements at POA[7] and cancellations within 72 hours of surgery. Teams at national, regional and provider level are working to ensure best practice is implemented to support patients on the waiting list by improving theatre efficiency and productivity to return to RTT. This includes looking at all components of the perioperative pathway to reduce the risk of avoidable postponements and cancellations and ensuring patients on a non-urgent pathway are only offered a ‘to come in’ (TCI) date after a decision of being ‘fit to proceed’ from POA[8]. For some patients, cancellation close to the TCI date is unavoidable so offering a patient a short-notice TCI date is advocated to ensure full utilisation of theatre lists.

Appendices

Appendix 1: Definition of an implantable device

For the purpose of this guide, an implantable device is defined as:

- any device including those that are partially or wholly absorbed, which is intended to be introduced into the human body; or
- any device intended to be partially introduced into the human body by clinical intervention and intended to remain in place after the procedure for at least 30 days.

Examples include:

- ✓ Implantable cardiac defibrillator
- ✓ Joint replacement (hip/knee/shoulder)
- ✓ Breast implants
- ✓ Surgical mesh (i.e. for hernia repair)

For further guidance, please visit https://digital.nhs.uk/about-nhs-digital/corporate-information-and-documents/directions-and-data-provision-notices/data-provision-notices-dpns/medical-devices-outcomes-registry-mdor

Appendix 2: Definition of at-risk patient groups

Defining at-risk groups is open to interpretation and should be categorised locally by using nationally collected data on SSI to determine which patients should receive decolonisation interventions and washes.

The terms major, intermediate and minor surgery are open to interpretation. SSI national data lists the patient risk factors and surgical procedures that have the most increased risk of SSI and can be found here https://www.gov.uk/government/publications/surgical-site-infections-ssi-surveillance-nhs-hospitals-in-england[8]

Appendix 3: Survey evidence demonstrating variation in decolonisation practice

The figures overleaf illustrate findings from a 2025 survey of 39 POA services across England, conducted via the national non-medical POA network. Please note that not all surgical specialties may have been captured in every response.

Figure 1: Do patients without a positive MRSA/MSSA test receive preoperative decolonisation washes? (Number of services reporting 'Yes' and 'No', N = 39)

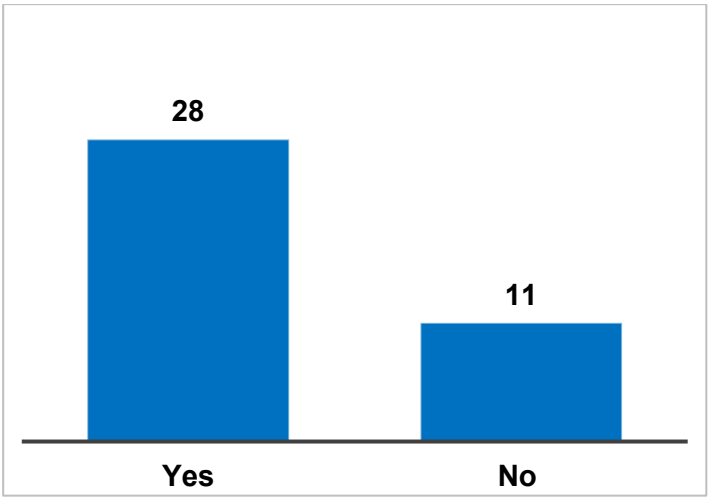


Figure 2: Timing of decolonisation washes before elective surgery (number of services reporting each period as their standard practice, N = 30)

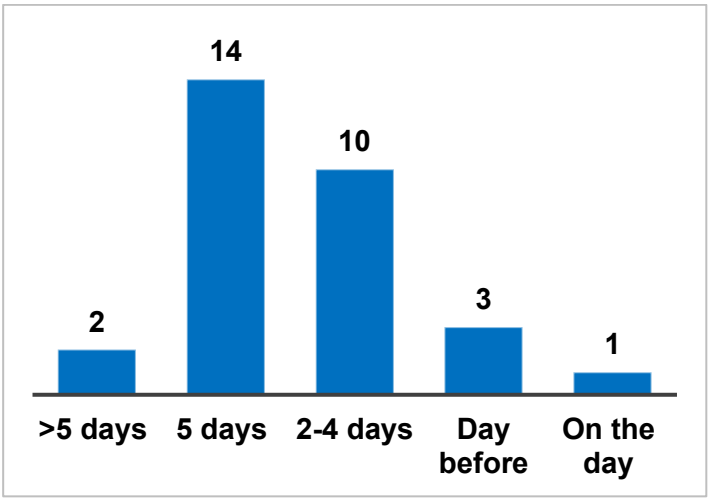
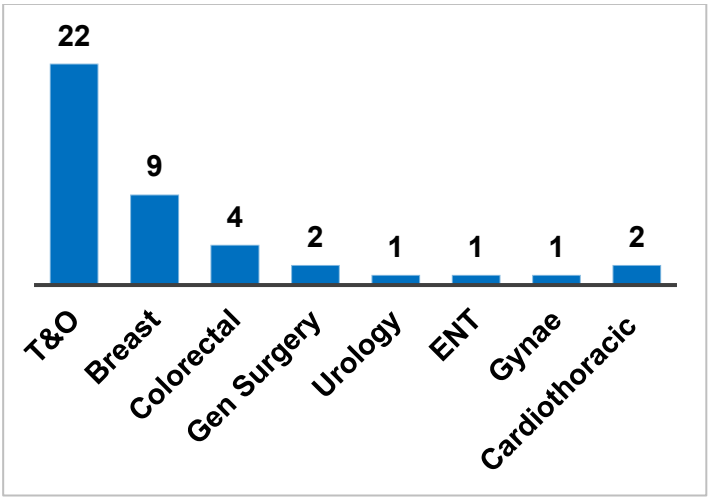


Figure 3: Specialty breakdown for issuing decolonisation washes (number of services issuing decolonisation washes in each specialty, N = 42)



References

#	Recommended document	Author	Overview
1	Efficacy of mupirocin, neomycin and octenidine for nasal *Staphylococcus aureus* decolonisation: a retrospective cohort study	Antimicrobial Resistance & Infection Control	Cohort study comparing three nasal agents for effective *S. aureus* decolonisation prior to surgery.
2	Surgical site infections (SSI) surveillance: NHS hospitals in England	UK Health Security Agency	Annual national surveillance report presenting SSI incidence data and trends across NHS hospitals.
3	Surgical site infections: prevention and treatment (NG125)	NICE	National guideline covering prevention and treatment of SSIs, including recommendations on pre-operative bathing and nasal decolonisation.
4	Global guidelines for the prevention of surgical site infection (2nd edition)	World Health Organisation	Detailed evidence tables underpinning WHO SSI guidance, including recommendations on pre-operative bathing.
5	Strategies to prevent surgical site infections in acute-care hospitals: 2022 update	SHEA / Infection Control & Hospital Epidemiology	Expert guidance summarising practical SSI-prevention strategies for acute-care hospitals.
6	Global guidelines for the prevention of surgical site infection — Evidence-based recommendations	World Health Organisation	Detailed evidence tables underpinning WHO SSI guidance, including recommendations on pre-operative bathing.
7	Variation in surgery postponement rates in the NHS in England	British Journal of Surgery	Analyses of elective surgery postponement rates across NHS trusts and factors driving cancellations.
8	Publication of the plan to reform elective care for patients	NHS England	Sets out a national plan to reduce elective waiting times and improve theatre efficiency and utilisation.

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With thanks to all members of the preoperative assessment (POA) national non-medical network group.

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.

For the latest version of this document, please see www.gettingitrightfirsttime.co.uk or Getting It Right First Time - FutureNHS Collaboration Platform

GIRFT and a greener NHS

Climate change is one of the greatest health threats and opportunities of the 21st century. The NHS is acting now to mitigate and adapt to this threat in order to protect the health of current and future generations. Doing so will not only protect the environment but will also bring many health, social and financial benefits. As the largest employer in the UK, contributing 4.6% of national emissions, the NHS is both part of the challenge and the solution.

Through its endeavour to improve the quality of care within the NHS by reducing unwarranted variation, GIRFT can play an important role in reducing the carbon emissions associated with care delivery. Through the GIRFT model, there is the opportunity to identify changes that will help reduce the NHS carbon footprint and therefore improve patient care now and in the future.

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