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Trial of MRSA decolonisation treatment in adult hospital in-patients

Submission date
12/04/2022

Recruitment status
Stopped

Registration date
06/06/2022

Overall study status
Stopped

Last Edited
20/10/2023

Condition category
Infections and Infestations

[X] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[_] Results
[_] Individual participant data
[_] Record updated in last year

Plain English summary of protocol

Background and study aims
Bacteria such as Staphylococcus aureus (S. aureus) live on and around us without causing harm. Patients coming into hospital who carry S. aureus in the nose and skin are at increased risk of developing infections if the bacteria access areas such as the site of surgery or a drip to give fluid or drugs. These infections are difficult to treat when a resistance to penicillin has built up, known as meticillin-resistant S. aureus (MRSA). To reduce the risk of getting an infection while in hospital, many patients are routinely “decolonised” of the S. aureus bacteria. This usually involves the patient applying a nasal ointment, mupirocin (a type of antibiotic), three times daily for 5 days and using a body wash. Some S. aureus is resistant to mupirocin so it is not good to rely on a single treatment. This study will look at two alternatives to find out if they are as effective as mupirocin. The different treatments are already used in the NHS.

Who can participate?
In-patients aged 16 years or over who are found to carry MRSA after a routine screening swab on admission

What does the study involve?
Participants will be put in one of three groups at random. One group will be given the usual treatment of nasal mupirocin, the second will use an antiseptic and the third group an antibiotic. This is a randomised study and neither the patient nor the clinician will choose the group. All three groups will use body wash for 5 days. Nasal swabs will be taken 48 hours and 4 weeks after finishing treatment and the number of successful nasal decolonisations will be compared.

What are the possible benefits and risks of participating?
The researchers plan to include participants who are unable to give consent for themselves, such as people with dementia. This is a vulnerable group, but it is important to ensure they are included as they make up a large proportion of those at risk.
The results will be shared throughout the NHS, charities and those who write guidelines for doctors. The researchers will write a summary of the results for patients, families, carers and all those who help deliver the trial in NHS hospital.
In the context of a lack of robust evidence to determine the best intervention for patients with MRSA colonisation, the risks are not increased through trial participation. However, there are

risks associated with this study, which are associated with all study treatments.
Patients will be screened for MRSA upon admission, in line with routine hospital policy. There will be no additional baseline swab, however, patients will be required to have two additional follow up nasal swabs for the study.
The participant information sheets (PISs) will be developed with the involvement of our Patient Advisory Group (PAG) and will give a balanced account of the possible benefits and known risks of the interventions. It will state explicitly that quality of care will not be compromised if the individual decides not to enter the trial or to withdraw their consent. The researchers will make it clear that there is no obligation to participate.

Where is the study run from?
South Tees Hospitals NHS Foundation Trust (UK)

When is the study starting and how long is it expected to run for?
April 2022 to October 2024

Who is funding the study?
NIHR Health Technology Assessment Programme (UK)

Who is the main contact?
1. Liz Cook, liz.cook@york.ac.uk
2. Prof. Mike Reed, mike.reed@nhs.net

Study website
https://www.york.ac.uk/healthsciences/research/trials/ytutrialsandstudies/trials/tide/

Contact information

Type(s)
Public

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Additional identifiers

EudraCT/CTIS number
2021-006732-96

IRAS number
1004425

ClinicalTrials.gov number
Nil known

Secondary identifying numbers
IRAS 1004425, CPMS 51774

Study information

Scientific Title
A multi-centre, randomised controlled, non-inferiority and cost-effectiveness trial comparing polyhexanide and chlorhexidine with neomycin to mupirocin for nasal methicillin-resistant Staphylococcus aureus (MRSA) decolonisation amongst adult hospital in-patients

Acronym
TIDE

Study objectives

Primary Objective:
To undertake a multi-centre, three-arm parallel-group, non-inferiority randomised controlled trial (RCT) to determine whether nasal polyhexanide gel or nasal chlorhexidine with neomycin cream is not inferior to nasal mupirocin ointment when each is accompanied with chlorhexidine body wash or wipes, for early nasal decolonisation of methicillin-resistant Staphylococcus aureus (MRSA) amongst adult hospital in-patients

1. Undertake a 9-month internal pilot to confirm the feasibility of the study, in particular recruitment rate and completeness of follow-up.
2. Undertake an embedded qualitative study during the internal pilot study to optimise recruitment and consent processes with a particular focus on underserved and vulnerable populations.
3. Undertake a cost-effectiveness analysis of the three interventions from the NHS perspective to identify the most efficient provision of future NHS care.
4. Undertake an analysis of secondary outcomes.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 01/06/2022, East Midlands - Derby Research Ethics Committee (Equinox House, City Link, Nottingham, NG2 4LA, UK; Tel: not available; derby.rec@hra.nhs.uk), ref: 22/EM/0096

Study design
Randomized controlled open parallel-group trial

Primary study design
Interventional

Secondary study design
Randomised controlled trial

Study setting(s)
Hospital

Study type(s)
Treatment

Participant information sheet
Not available in web format, please use the contact details to request a participant information sheet

Health condition(s) or problem(s) studied
Methicillin-resistant Staphylococcus aureus (MRSA) positive colonisation

Interventions
This is a multi-centre, pragmatic, randomised controlled non-inferiority trial, with an internal pilot phase to check the assumptions about recruitment and provide guidance on optimising the trial processes. This study will be carried out in up to 25 NHS hospitals within the UK with

facilities to support research activity. A total of 3000 (1000 in each of three arms) male and female patients will be recruited for the study. Prior to study involvement, patients will be given a participant information sheet to read and be given sufficient time to consider this information.

Eligible and consenting patients will be randomly allocated to one of three treatments:
1. Mupirocin (2%) nasal ointment (3 g): applied to the inner surface of each nostril three times a day for 5 days.
2. Polyhexanide (0.1%) nasal gel (30 ml): applied to the inner surface of each nostril three times a day for 5 days.
3. Chlorhexidine (0.1%) with neomycin (0.5%) nasal cream (15g): applied to the inner surface of each nostril four times a day for 10 days.

All the nasal products will be provided in conjunction with chlorhexidine (4% body wash or 2% skin wipes dependent on existing recruiting Trust practices) for bathing/ showering/ washing for five days. Participants will be informed of their treatment allocation. Participants will receive all other medical care as per standard of care. The researchers will assess outcomes at the start of the study, then at 48 hours and 4 weeks after treatment has been completed. The associated costs of the three treatments to the NHS will also be evaluated.

Intervention Type
Mixed

Primary outcome measure
Successful early nasal decolonisation, defined as a negative trial-specific nasal MRSA swab taken 48 hours following treatment completion

Secondary outcome measures
1. Successful early nasal decolonisation of MRSA not fully susceptible to mupirocin; sensitivities will be determined from a routine swab taken at baseline
2. Successful early nasal decolonisation of MRSA not fully susceptible to gentamicin (used as a marker of neomycin); sensitivities will be determined from a routine swab taken at baseline
3. Successful late nasal decolonisation, defined as a negative trial-specific nasal MRSA swab taken 4 weeks following treatment completion
4. Acceptability of treatment to patients measured using a Likert scale at 48 hours following the completion of treatment
5. MRSA infections: any confirmed MRSA infections (e.g., skin and wound infections, joint infections, endocarditis, pneumonia and bacteraemia), obtained from patient medical records or patient self-report up to 4 weeks following completion of treatment
6. Total length of hospital in-patient stays, obtained from patient medical records, up to 4 weeks following completion of treatment
7. Total length of hospital in-patient stays for patients diagnosed with an MRSA infection, obtained from patients' medical records, up to 4 weeks following completion of treatment
8. Hospital readmissions, obtained from patients' medical records, up to 4 weeks following completion of treatment
9. Adverse events obtained from patients' medical records or patient self-report up to 4 weeks following completion of treatment
10. Mortality obtained from patients' medical records up to 4 weeks following completion of treatment

Overall study start date
08/04/2022

Completion date
31/10/2024

Reason abandoned (if study stopped)
Objectives no longer viable

Eligibility

Key inclusion criteria
1. Adult in-patient (aged 16 years old or over)
2. Eligible for MRSA screening on admission, based on the local hospital infection control policy, who are found to be colonised with MRSA

Participant type(s)
Patient

Age group
Adult

Lower age limit
16 Years

Sex
Both

Target number of participants
3000

Total final enrolment
32

Key exclusion criteria
1. Known hypersensitivity to study treatment(s) or excipients
2. Allergy to peanut and/or soya
3. Day-case admissions
4. Patients identified to be colonised with MRSA in the outpatient setting
5. Previous participation in the TIDE trial or current participation in another trial of a medicinal product that does not allow co-enrolment
6. Patients actively undergoing another decolonisation treatment at the time of recruitment
7. Medical history that might, in the opinion of the attending clinician, put the patient at significant risk if they were to participate in the trial

Date of first enrolment
31/10/2022

Date of final enrolment
31/07/2023

Locations

Countries of recruitment
England

Scotland

United Kingdom

Study participating centre
James Cook University Hospital
Marton Road
Middlesbrough
United Kingdom
TS4 3BW

Study participating centre
North Tyneside General Hospital
Rake Lane
North Shields
United Kingdom
NE29 8NH

Study participating centre
Kings Mill Hospital
Mansfield Road
Sutton-in-ashfield
United Kingdom
NG17 4JL

Study participating centre
Pinderfields Hospital
Aberford Road
Wakefield
United Kingdom
WF1 4DG

Study participating centre
Western General Hospital
Crewe Road South
Edinburgh

Lothian
United Kingdom
EH4 2XU

Study participating centre
Musgrove Park Hospital
Taunton
United Kingdom
TA1 5DA

Study participating centre
Milton Keynes University Hospital NHS Foundation Trust
Standing Way
Eaglestone
Milton Keynes
United Kingdom
MK6 5LD

Study participating centre
York and Scarborough Teaching Hospitals NHS Foundation Trust
York Hospital
Wigginton Road
York
United Kingdom
YO31 8HE

Study participating centre
Mid and South Essex NHS Foundation Trust
Prittlewell Chase
Westcliff-on-sea
United Kingdom
SS0 0RY

Sponsor information

Organisation
South Tees Hospitals NHS Foundation Trust

Sponsor details

Durham Tees Valley Research Alliance (DTVRA)
The James Cook University Hospital
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TS4 3BW
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Sponsor type
University/education

Website
http://southtees.nhs.uk/

ROR
https://ror.org/02js17r36

Funder(s)

Funder type
Government

Funder Name
Health Technology Assessment Programme

Alternative Name(s)
NIHR Health Technology Assessment Programme, HTA

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
United Kingdom

Results and Publications

Publication and dissemination plan
1. Peer-reviewed scientific journals
2. Internal report
3. Conference presentation

4. Publication on website
5. Other publication
6. Other

Intention to publish date
31/10/2025

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study (fully anonymised) will be available upon request after the publication of the study results from Prof. Catherine Hewitt (catherine.hewitt@york.ac.uk). Participants will be informed that information collected about them may be shared anonymously with other researchers and will be asked to consent to this.

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
HRA research summary			28/06/2023	No	No