

SBRI Healthcare – Competition 18 Delivering a Net-Zero NHS

Welcome to the Webinar, we will start shortly









13:00	Welcome and introductions	Dr Fanny Burrows
13:10	Introduction and overview of the SBRI Healthcare Programme and competition 18	Ms Rhanda Tajdeen
13:25	Delivering a Net-Zero NHS - Overview of the priorities and challenges	Dr Nick Watts Dr Cliff Shelton Alexandra Hammond
13:55	Clinical Q&A session	
14:20	The AHSNs	Kathy Scott
14:30	The application and assessment process	Ms Ami Hodges
14:40	Q&A session	
14:55	Closing remarks	Dr Fanny Burrows





Housekeeping

- Thank you all for taking the time to join
- Feel free to ask questions in the Q&A box as we go along, and we will answer them in the Q&A sessions
- Please flag any technical issues in the chat
- The slides and the recording will be uploaded on SBRI Healthcare website next week
- For further enquiries: sbri@lgcgroup.com





Small Business Research Initiative

SBRI Healthcare Programme

Ms Rhanda Tajdeen







SBRI Healthcare

- Pan-government, structured process enabling the public sector to engage with innovative suppliers.
- NHS England and NHS Improvement programme managed by LGC Group (since April 2019), supported by the Academic Health Science Network (AHSN)



Improve patient care



Increase efficiency in the NHS



Enable the NHS to access new innovations through R&D that solve identified healthcare challenges and unmet need

Bring economic value and wealth creation opportunity to the UK economy



The **AHSN** Network



The Academic Health Science Network (AHSNs)

A connected 'Network of Networks'







SBRI Healthcare – Key features



Themed competitions to address identified unmet NHS challenges

For any size organisation from the private, public and third sector (including charity)

- Particularly suitable for SMEs (covers 100% costs), but any size of businesses is eligible
- Other organisations are eligible as long as the route to market is demonstrated
- Based anywhere in Europe



- Programme has a 2-phased development approach:
- Phase 1, feasibility project (6 months, up to £100K)
- Phase 2, development project (12 months, up to £1m)







SBRI Healthcare – Things to note

What we fund



- 100 % SME costs / incl. VAT
- Labour costs
- Material costs (incl. consumables)
- Capital Equipment Costs
- Sub-contract costs
- Travel and subsistence
- Other costs specifically attributed to the project
- Indirect costs
- Applications assessed on Fair Market Value

Contracting



- UK implementation of EU Pre-Commercial Procurement
- IP rests with supplier with certain usage rights with Public Sector
- Contract terms are nonnegotiable
- Single applicant (partners are sub-contractors)
- Milestone driven payments (quarterly upfront)

Monitoring



- Light touch monitoring
- Risk-based approach

The **AHSN**Network

• Written reports and face-toface meeting



SBRI Healthcare Portfolio

229 Products supported

£99m+ Total invested





SBRI Healthcare Metrics



The AHSNNetwork





SBRI Healthcare – Portfolio

Medical devices





Digital Health





Diagnostics









SBRI 18 - Briefing

Delivering a Net-Zero NHS

Specific Criteria

- Supply Chain
- Carbon reduction: methodology / framework

Categories

- 1) Reducing emissions from care miles
- 2) Reducing emissions from surgical pathways
- 3) Reducing nitrous oxide emissions
- 4) Tools to support low-carbon decision making



The **AHSN**Network



Delivering a Net Zero NHS

Competition for development funding

NHS England NHS Improvement SBRI Healthcare

July 2021



SBRI Healthcare 18 - Competition Dates

Briefing: Delivering a Net-Zero NHS

SBRI 18 Launch 13 July 2021

Phase 1 deadline 24 August 2021

Assessment September 2021

Selection Panel October 2021

Contract award November 2021





SBRI Healthcare

Delivering a Net-Zero NHS Overview of the priorities and challenges

Dr Nick watts Dr Cliff Shelton Alexandra Hammond





The AHSN Network





Dr Nick Watts Chief Sustainability Officer, NHSEI

Dr Watts is the Chief Sustainability Officer of the NHS, responsible for its commitment to deliver a world-class net zero emission health service. Based in London, he leads the Greener NHS team across the country, which focuses on improving the health of patients and the public through a robust and accelerated response to climate change and the broader sustainability agenda.



Nick is a medical doctor licensed in Australia and the UK, and has trained population health and public policy. He is a Member by Distinction of the Royal College of Physicians' Faculty of Public Health, and an Honorary Associate Professor of University College London's Institute for Global Health.

Prior to the National Health Service, Nick worked internationally as the Executive Director of the Lancet Countdown and the Lancet Commission on Health and Climate Change, a collaboration of UN agencies and academic centres across the world. He has also focused on engaging the health profession on the links between public health and climate change, having founded both the Global Climate and Health Alliance and the UK Health Alliance on Climate Change.





Dr Clifford Shelton Consultant Anaesthetist, Wythenshawe Hospital

Cliff Shelton is a consultant anaesthetist at Wythenshawe Hospital and senior clinical lecturer in anaesthesia at Lancaster Medical School. His clinical interests include anaesthesia for hip fracture repair, obstetrics, and emergency surgery. His academic interests include sustainable healthcare, quality and safety, and medical education.

Cliff is clinical lead for sustainability for the Department of Anaesthesia at Wythenshawe Hospital, and a co-opted member of the Association of Anaesthetists Environment and Sustainability Committee. He has been involved in developing environmental sustainability content for undergraduate medical education since 2011 and continues to deliver teaching on this topic to student and trainee doctors. He supervises several sustainable healthcare fellows in the North West School of Anaesthesia, and is currently leading "Greener Operations", a James Lind Alliance research priority setting partnership on sustainable peri-operative practice.





Nitrous Oxide

Cliff Shelton

Consultant and senior clinical lecturer in anaesthesia Wythenshawe Hospital and Lancaster Medical School

Objectives

- 1) A brief background to nitrous oxide
- 2) Why we use it in clinical practice, and why we should stop
- 3) An overview of the "triple threat":
- Systems
- Clinical Use
- Emissions



Ether day, 16th October 1846, Morton...

Two years earlier, Wells...



- 'Laughing gas' roadshow
- Noted painkilling properties
- Began performing 'painless' dental extractions



"It's not good because it's old, it's old because it's good."

- Anonymous

What does nitrous do well?

- Painkiller
- Fast-acting
- Easy to administer (no IV access needed)
- Cheap
- Safe (for the individual)
- Accessible



Where is nitrous used?



What does nitrous not do well?

- Reliant on proper use
- Makes patients feel sick
- Sedating / hallucinogenic
- Hazardous to staff (COSHH: 100 ppm / 25 ppm)
- Destroys ozone
- Contributes to global warming



What does nitrous not do well?





- ~ 50 miles per hour of (low flow) anaesthesia....
- ~ ¹/₄ mile per breath in maternity / emergency

. . .

Credit: Association of Anaesthetists Anaesthetic Gas Calculator

Triple threat: general approaches

01 Systems: Waste it less 02

Clinical: Use it less 03

Emissions: Make it less polluting



Clinical

Anaesthesia:

• Not many! Straightforward swap (in the UK)

Emergency:

• Speed of onset, availability, ease of administration, but alternatives available





Clinical

Maternity:

• More effective options available, but all have significant drawbacks, e.g.,

Epidural: needs admission to a consultant-led unit, IV access, placement by an anaesthetist, intrapartum monitoring, not suitable for some patients.

- *Remifentanil:* needs admission to a consultant-led unit, IV access x2 intrapartum monitoring, constant one-to-one care, not suitable for some patients.
- Methoxyflurane: safety in maternity not definitively established, would need medical prescription.



Emissions

NORDIC KNOW-HOW 2020



BEST PRACTICES OF SUSTAINABLE HEALTHCARE IN THE NORDICS

REPORT SERIES BY NORDIC CENTER FOR SUSTAINABLE HEALTHCARE





Summary

- We have a historic attachment to nitrous oxide
- It's a good drug...
- ... some of the time
- Replacements exist
- ... but not all are straightforward
- Clinical use may not be the biggest problem!





Alexandra Hammond Head of Sustainable Procurement and Supply Chain, NHSEI



Alexandra is Head of Sustainable Procurement and Supply Chain at NHS England and NHS Improvement, has a range of public and private sector experience.

Since the release of the 'Delivering a Net Zero Report' Alexandra has led the development and implementation of activities to achieve a net zero supply chain.

Alexandra holds a Master's in Environmental Policy from Edinburgh University, she graduated with honours from Boston College in the USA, and has previously led the award-winning sustainability programme at Guy's and St Thomas' NHS Foundation Trust.





The circular economy of sustainable procurement



Alexandra Hammond Head of Sustainable Procurement and Supply Chain July 2021

NHS England and NHS Improvement



Background

In October 2020, the Greener NHS Team* published the NHS's bold new climate targets.

Net Zero



Direct emissions: net zero by 2040 Indirect (carbon footprint plus): 2045

*Formerly the Sustainable Development Unit (SDU)

Modern Slavery

With the publication of the NHS Net Zero report, Delivering a 'Net Zero' National Health Service, the NHS affirmed the need to

take action on climate change and committed to ambitious reduction targets. The NHS is also committed to transparency across the supply chain to eliminate Modern Slavery and facilitate local economic growth in-line with the Social Value Policy.

Modern Slavery manifests in supply chains, and no country is immune. Targeted action is needed in the supply chains as they have greatest risk and leverage.

UK government sourcing NHS PPE from company repeatedly accused of forced labour

Exclusive: Gloves from Malaysian company Top Glove found in NHS supply chain despite multiple allegations of worker exploitation

Social Value Policy

PPN issued in June 2020 states that a minimum weighting of 10% of the total score for social value should be applied in central government procurements.





Interventions to reduce supply chain emissions



In the Net Zero report, there are 13 interventions that were identified within the Supply Chain workstream. These form the foundation of the Supply Chain workstream programme plan for the next five years.



The 5 Rs of Sustainable Procurement Good Practice



We have developed the 5Rs to guide sustainable procurement good practice.

As a general rule, consider the '5 Rs' of sustainable procurement in this order:


Bringing the 5Rs to Life



The following examples illustrate some of the innovative work in each of these areas:



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Reprocess

Device remanufacturing Supplier A uses product-specific methods to restore medical devices to "as new" functional and safety standards, with matching warranty.

X

Key Impact

In 2020, Supplier A supported Leeds General Infirmary in reprocessing medical devices, resulting in 102kg waste being diverted, £12,120 saving and 69kg (50.4%) CO₂ reduction.

Benefits

- Medical remanufacturing enables a circular economy within the medical device sector
- Remanufacturing extends the 2. product life cycle of medical devices
- Medical remanufacturing can result in cost savings of up to 50 per cent



Biopolymer aprons Skåne region healthcare negotiated and invested in market/supplier engagement to procure biopolymer aprons which were not previously readily available.

Kev Impact

Skåne region's healthcare system reduced the number of disposable aprons, where they previously disposed of five million protective disposable aprons every year.

Benefits

- Bio-based protective aprons with 1. 91% renewable content
- 2. Savings of 250 tonnes per year of CO2 emissions
- 3. Improved quality and design in aprons
- Materials were locally sourced 4.
- 5. Increased procurement capability amongst buyers







Automedi, funded by InnovateUK A smart on-site manufacturing machine to make healthcare equipment directly at the point-of-care.

The NHS alone generates 133,000 tonnes of plastic care waste per year with 5% being recycled.

Kev Impact

Removes all delivery emissions, increases plastic recycling and reduces shortages of equipment.

Benefits

- Uses 100% recyclable plastics 1.
- Collects pre-use waste during 2. maintenance visits. which is recycled into new raw materials
- Eradicates all delivery emissions 3.
- 4. Novel bioplastics used are made from crop-waste, increasing crop yield and reducing land required.

'Gloves are off' campaign Great Ormond Street Hospital NHS Foundation Trust (GOSH) addressed the over-use of non-sterile gloves through education and training.

Key Impact

Improved patient safety and experience. Staff are now following evidence-based practice rather than wearing gloves out of habit.

Benefits

- 1. 30% reduction in examination gloves
- 1. Clinicians trained on appropriate use of non-sterile gloves
- For a Greener NHS



In-hospital walking aid reuse Mid-Essex Hospital Trust – The Therapies Department, being the main issuer of crutches, led and coordinated the reuse scheme.

Key Impact

Over a three year programme, the Mid-Essex Hospitals Trust reached a 40% return rate for crutches in their hospital.

Benefits

- 1. Typically around 40 walking aids are recycled each week
- 2. 21 percent of crutches and 61 percent of frames returned
- 3. Resulted in more than 2.000 pieces of equipment being reused and saved around £25,000
- 4. Refurbishment time: 5-10 minutes
- 1.





39

For more information or to keep in touch email england.ptomsustainability@nhs.net

Thank you!

NHS England and NHS Improvement





Delivering a Net Zero NHS

Challenge & Experts Q&A sessions

Please use the Q&A box, we will answer you via the chat box and live







Kathy Scott Director of Operations and Deputy CEO for the Yorkshire & Humber AHSN



Kathy joined the AHSN after a leading role within NHS England Research and Innovation where she was an integral part of NHS England's management of AHSNs.

As Director of Operations, Kathy has executive responsibilities for ensuring that Yorkshire & Humber AHSN delivers on its contracted programmes of work, including management of the Project Management Office. Kathy also deputises for Richard Stubbs, Chief Executive Officer of Yorkshire & Humber AHSN.





Transforming Lives Through Innovation

The AHSN Network: supporting the SBRI programme





AHSN Shared Mission and Priorities

Our continuing mission is to spread healthcare innovation at pace and scale



Adoption & Spread Programmes



Delivery of Patient Safety Collaboratives

Delivery of SBRI Healthcare



Delivery of NHS Innovation Accelerator



Supporting uptake of products on Medtech Funding Mandate (MTFM) and AAC Rapid Uptake Products (RUP)



Stimulating economic growth: the Innovation Exchange



Transforming digital health and maximising potential of AI



Working with researchers



Supporting the environmental sustainability agenda

AHSN Network industry and economic growth impacts 20-21





companies



companies created long-term strategic partnerships







How do we support innovators?

The AHSN Network



Identify and communicate need



Support spread and adoption



Signpost and connect to the right people



Validate in a real world setting



Yorkshire & Humber AHSN

Case Study: innovative technologies to help carers and those they look after.



- 3 years into our work supporting UK based company Bridgit Care
- Supports carers and those they look after through development of new technologies and service models
- Support is tech based and also holistic supporting the practical and emotional needs
- Early stage support around information and expertise, connections into the NHS and knowledge sharing
- Support for successful phase 1 and 2 SBRI bids

Case Study: Smartphone self-care for people with diabetes

3 years into our work with awardwinning Israeli innovators Healthy.io

- Helping people with diabetes monitor their kidney health remotely using a smartphone
- Traditional healthcare models fail to engage up to 60% of at-risk people
- Compliance up to 72% in Hull, Airedale and Wharfedale
- Our independently commissioned evaluation estimates costs savings of £472 per patient over 5 years
- NHSx award and further roll-out in Leeds CCG



HeartFlow



9x increase in trust adoption since

> 17,621 patients benefitted since April 2018

6,394 patients benefitted since April 2020

PIGF based testing

Placental growth factor (PIGF) based blood tests help predict the risk of pre-eclampsia quickly so that pregnant women receive the most appropriate care



NHS Policy is to reach Net Zero by 2040



Innovation has an important role in supporting the NHS to reach carbon neutral, contributing to the slowing of News climate change.

NHS becomes the world's first national health system to commit to become 'carbon net zero', backed by clear deliverables and milestones

Classification: Official



NHS staff urged to help service tackle climate change

Delivering a 'Net Zero' National Health Service

vork



SBRI Healthcare

The Application and Assessment Process

Ami Hodges SBRI Senior Programme Manager, LGC Group







SBRI Healthcare – Process



TheAHSN*Network*



Assessment Criteria

- 1. What will be the effect of this proposal on the challenge outlined in the brief? **20%**
- 2. Is the project plan, deliverables and risk mitigation strategy appropriate? **15**%
- 3. Will the technology/device/solution have a competitive advantage over existing and alternative solutions, how innovative is the proposal and are the arrangements surrounding the use and development of Intellectual Property appropriate? 15%
- 4. Does the proposed project have appropriate commercialisation and implementation plans? **20%**
- 5. Does the project include consideration towards patient and public involvement? **5%**
- 6. Does the proposed technology have potential to enhance equity of access and contribute to net-zero emission? 5%
- Does the company and project team appear to have the right skills and experience to deliver the project? 15%
- 8. Are the costs justified and appropriate? 5%





SBRI Healthcare – Success rate





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Application Process - www.sbrihealthcare.co.uk







Competition Documents



Supporting Documentation:

Invitation to Tender Applicant and Portal Guidance Challenge Brief Template Application Form FAQs

Key Dates:

Competition Launch – 13 July 2021 Deadline for Applications – 24 August 2021 Assessment – September 2021 Panel Meeting – October 2021 Contracts awarded - November 2021







Application Portal



Application Portal – Log in Page

Programme Management Office Research Management System	
Existing Users	New users
Please log in to access your account.	Please register with us to create your account using your institutional email address.
Email	Please note that all new users require validation by the Programme Management prior to receiving access to the system. We will endeavour to complete this validation process as soon as possible (within standard working hours) following completion of your initial registration
Password	Register System Help 落
Login Forgot Password?	





Click here to start Grant Application

Programme Mana Research Managem	
Dr Aayesha Hassan	Welcome to Programme Management Office Research Management System, Dr Aayesha Hassan.
Home	
My Applications	Please update your CV. Your CV was last updated on 30 April 2020.
My Co-applications	Please check that your CV details are up-to-date as it assists us when assessing grant applications and assigning external reviewers.
My Grants	To update your CV, go to Manage My Details.
My Research Outputs	
My Reviews	New Grant Application
My Tasks	To apply for funding from one of our grant streams click here.
Manage My Details	
Contact Us	
Logout	
System Help 🛸	





Select funding round required

Programme Mana Research Managem					
Mr Ken Middleton	Logged in as Console account - Mr Ken Middleton - ken.mi	ddleton@nihr.ac.uk do not use f	or testing as an applicant	or reviewer	
Home			5		
New Application	Open funding rounds				
My Applications	Open runding rounds				
My Research Outputs	The table below shows all the funding rounds currently acce	enting applications			
My Tasks	The table below shows an the funding founds currently acce	pung applications.			
Manage My Details	Click More info to view additional information about each fu Click Apply to access the online application form for the typ				
Contact Us	click Apply to access the online application form of the typ	e of grant you wish to apply for.			
Logout	Grant Type	Funding Round	Submissions Window	Closing Date	wore mis Apply
System Help 코	SBRI Phase 1 SBRI Healthcare, an NHS England & NHS Improvement				
	initiative that aims to promote UK economic growth whilst addressing unmet health needs and enhancing the take up of known best practice. SBRI supports a programme of competitions inviting companies to come forward with their ideas on novel MedTech and digital innovations that can address specific NHS challenges.	SBRI 18 Phase 1 – Delivering a Net Zero NHS		24 August 2021	More info Opening 13/07/2021





Start application form

Programme Management Office

Research Management System



Delivering a net zero

NHS

Introduction

Details...

- Introduction Section 1: Application Summary
- Section 2: Company Details
- Section 3: Plain English Summary
- Section 4: Project Plan
- Section 5: Team
- Gection 6: Budget
- Section 7: Supporting information
- Section 8: Administrative contact
- details
- Section 9: Validation
- Summary

There are a number of online guidance prompts (marked as a ?) available to you throughout the online form to help you when completing an application. It is strongly advised that you also read the relevant Guidance for Applicants before completing your application.

Please keep the use of acronyms to a minimum. Only use acronyms where a term is used frequently throughout the application. If you do choose to use an acronym, do not assume that the reader knows what it means, and be sure to define it when first used.

You are strongly advised to structure the longer sections of the application form (particularly the Project Description and Breakdown) in such a way that they can be read easily by reviewers. The use of long passages of dense, unstructured text should be avoided.

Schematics, tables, illustrations, graphs, and other types of graphics can be embedded to clarify the project plan but they should not clutter the central narrative. Images do not count towards the overall word count but inclusion of them to overcome word limits is not permitted. Images may only be included within the Project description and breakdown. Images included in other sections will be removed from the application and not seen by reviewers.

Members of the project team will need to invited through the RMS via email to participate as team members, after which they must both confirm and approve their participation. Please ensure that all team members invited to collaborate on this application have confirmed their involvement and approval of the application form content before submission.

Although confirming and approving an application can be done at any time during the submission of an application, you are strongly advised to do this well in advance of the deadline.

If you have any queries with your application, you can contact the SBRI Healthcare Programme Management Office on 020 8843 8125 or SBRI@LGCGroup.com.



The AHSN Network

Next

Save And Close



Co-applicant/grant participant

Programme Mana Research Managem						5	Dr Aayesha aayesha.hassan@ccf-pi	
Dr Aayesha Hassan	My Co-applica	itions						
Home My Applications		application awaiting submissi						
My Co-applications	To view more of	details please select an applica	ation from the grid below.					
My Grants	Reference	Title	Main Applicant	Role	Confirmed	Last Updated	Application Status	
My Research Outputs My Reviews	26808		Dr Ade Adenle	Co Applicant	N	14/07/2020 14:19:28	Pre-Submission	
My Tasks								
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Co-applicant/grant participant

Dr Aayesha Hassan						
lome		nfirm' your participation before the application can be submitted by the Lead up to date (this can be updated in the manage my details section).	Role: Co Applicant Actions shown below are for your involvement as a			
My Applications	Lead Applicant	Dr Ade Adenle	Co Applicant			
My Co-applications	Title					
SBRI Phase 1 Ref: 26808	Reference Status	Pre-Submission	Confirm your participation I have read the terms and conditions under			
Details	Total Requested	£0.00	which grants are awarded, and, if this application is successful, I agree to abide by them. I shall be			
My Grants My Research Outputs	Corganisation Grant Type SBRI Phase 1 Funding Round Closing Date	CDDI Direct 4	actively engaged in the day-to-day management and control of the project and this proposal.			
My Reviews My Tasks			Confirm			
Manage My Details Contact Us	Participants	<u>Co Applicant</u>	Reject your participation If you do not wish to participate in this			
Logout		Ade Adenle Confirmed	application or think that this approach was in error please click the reject button below. This			
System Help 코	s	Submission approval Approval required	will send an email to the lead applicant and remove you from the application.			
		Ms Aayesha Hassan Confirmed No participation Submission approval status	Reject			
		Dr Aayesha Hassan Confirmed				

participation Submission approval

status

Approval required







Dr Aayesha Hassan Home My Applications

SBRI Phase 1 Ref: 26819 Details View History Journal (0) Sign-off Status

My Co-applications My Grants My Research Outputs My Reviews My Tasks Manage My Details Contact Us

Logout System Help 🧊

Title Reference Status Pre-Submission Total Requested £0.00 Organisation Grant Type SBRI Phase 1 Funding Round Delivering a Net Zero NHS Closing Date Created On 14 July 2020 Last Updated 14 July 2020 Validated Not Complete Applicant Submitted

Submitted On

Lead Applicant Dr Aayesha Hassan

Role: Lead Applicant Actions shown below are for your involvement as a Lead Applicant

Edit the application Please click on the 'Edit' button if you wish to make any changes to your application.

PDF the application (Print) Please click on the 'View/Print' button to generate this application form as a PDF file.

Please note: if your browser blocks the file download, please follow the instructions to allow the file to be downloaded.

PDF Formatting Problems?

Validate the application

To validate the application click 'Validate' and then 'Validate Form' within the application form.

Validate

View/Print

Edit

Submit the application

The application form cannot be submitted until it has been validated to ensure that all required fields have been entered, and the data meets our submission requirements.

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SBRI Healthcare

LGC Ltd Grant Management Group **15 Church Street** Twickenham TW1 3NL

Contact us for advice and specific guidance: T 020 8843 8125

E sbri@lgcgroup.com

W https://www.sbrihealthcare.co.uk



@SBRIHealthcare





SBRI PMO will organise a drop-in Q&A session on <u>15th July 2021</u>

from 13:00 to 14:30

Registration on www.sbrihealthcare.com





Thank you for attending our launch Webinar

www.sbrihealthcare.com



