



SBRI Healthcare



The **AHSN** Network



Agenda

- 14.00 **Andy Burroughs**, Wessex AHSN (Chair) - Welcome and introduction to AHSNs
Karen Livingstone – National Director SBRI Healthcare - How SBRI works & what it has delivered?
- 14.20 **Stuart Monk**, Director of Innovation South West AHSN - Introduction to the Autumn 2017 calls
- 14.30 *A focus on Mental Health:*
Jane Rowland, Head of Planning & Business Development, Avon & Wiltshire Mental Health Partnership Trust
- 15.00 *A focus on surgery:*
Professor Robert Hinchliffe, Professor of Vascular Surgery, Bristol Centre for Surgical Research, University of Bristol.
- 15.30 **Karen Livingstone** How to make a successful SBRI application
- 15.50 Q&A
Networking
- 16.30 Close



SBRI Healthcare

Andy Burroughs, Director Wessex AHSN



The **AHSN** Network





The AHSN Network

Welcome from the AHSN Network



What do AHSNs do?

Focus on the needs of patients and local populations: support and work in partnership with commissioners and public health bodies to identify and address unmet health and social care needs, whilst promoting health equality and best practice

Speed up adoption of innovation into practice to improve clinical outcomes and patient experience – support the identification and more rapid uptake and spread of research evidence and innovation at pace and scale to improve patient care and local population health.

Build a culture of partnership and collaboration: promote inclusivity, partnership and collaboration to consider and address local, regional and national priorities

Create wealth through co-development, testing, evaluation and early adoption and spread of new products and services

What have we achieved?

Since 2013 AHSNs have:



Helped
introduce over
200 innovations



Benefited
6m
patients

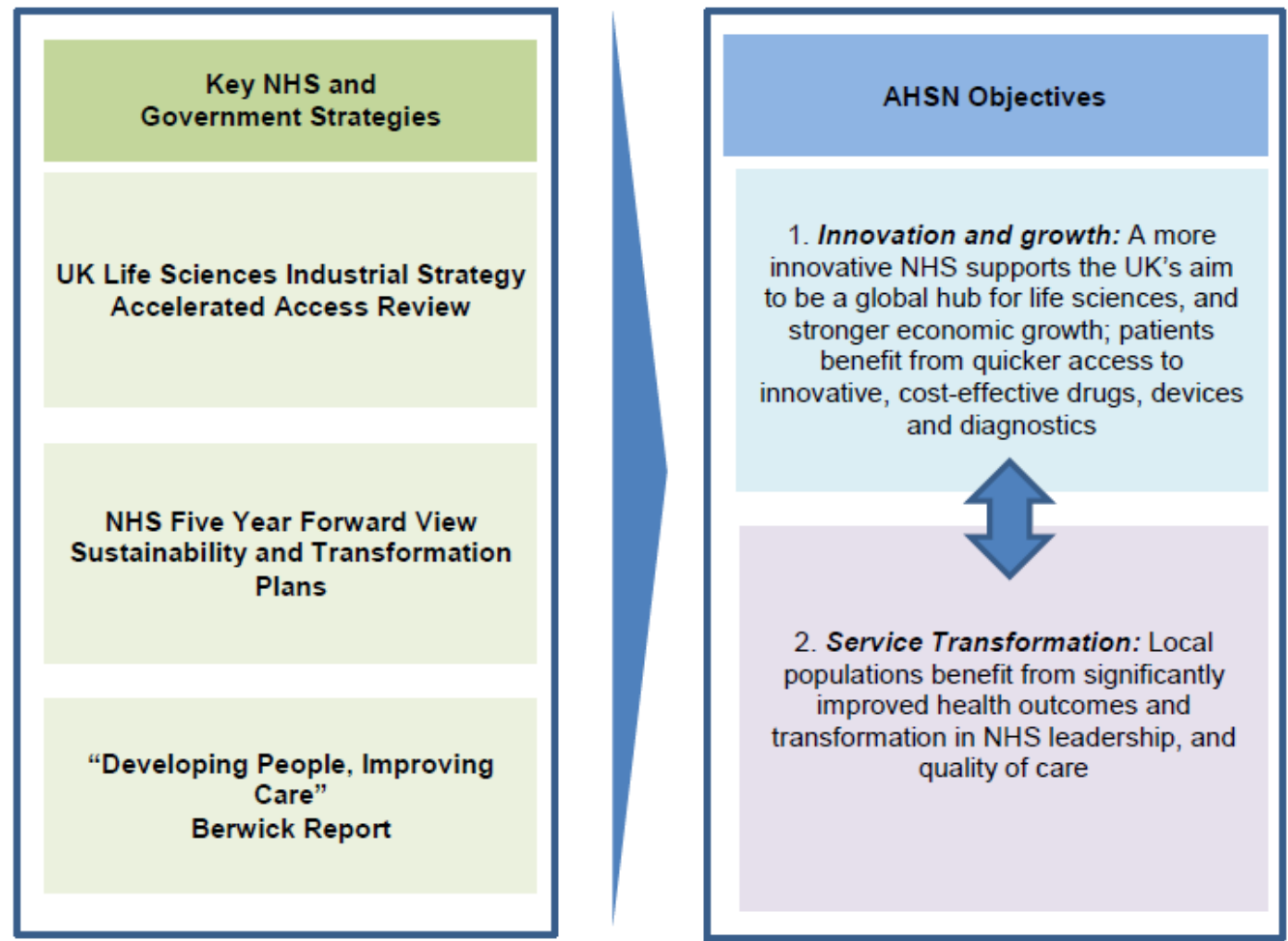


Implemented
innovations in
11,000 locations



Leveraged **£330m** to improve
health and stimulated
creation of **500** jobs

AHSN Objectives 2018 - 2023





SBRI Healthcare

Karen Livingstone, National Director SBRI Healthcare



*The***AHSN***Network*



England

SBRI is a pan-government, structured process enabling the Public Sector to engage with innovative suppliers:

- ✓ Helping the Public Sector address challenges
 - Using innovation to achieve a step change
- ✓ Accelerating technology commercialisation
 - Providing a route to market
- ✓ Support and the development of Innovative companies
 - Providing a lead customer/R&D partner
 - Providing funding and credibility for fund raising

SBRI Key features

- ✓ 100% funded R&D
- ✓ Operate under procurement rules rather than state aid rules
- ✓ UK implementation of EU Pre-Commercial Procurement
- ✓ Deliverable based rather than hours worked or costs incurred
- Contract with Prime Supplier
 - ✓ Who may choose to sub contract but remains accountable
- IP rests with Supplier
 - ✓ Certain usage rights with Public Sector – Companies encouraged to exploit IP
- Light touch Reporting & payments quarterly & up front

Things to Note

- Any size of business is eligible
- Other organisations are eligible as long as the route to market is demonstrated
- All contract values quoted **INCLUDE** VAT
- Applications assessed on Fair Market Value
- Contract terms are non-negotiable
- Single applicant (partners shown as sub contractors)
- Applicants must fully complete the application form

Eligible costs (all to include VAT)

- Labour costs broken down by individual
- Material Costs (inc consumables specific to the project)
- Capital Equipment Costs
- Sub-contract costs
- Travel and subsistence
- Other costs specifically attributed to the project
- Indirect Costs:
 - General office and basic laboratory consumables
 - Library services/learning resources
 - Typing/secretarial
 - Finance, personnel, public relations and departmental services
 - Central and distributed computing
 - Cost of capital employed
 - Overheads



SBRI Government challenges.
Ideas from business.
Innovative solutions.

www.innovateuk.org/sbri

website contains details of all SBRI competitions

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England



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Launch Autumn Competition 2017

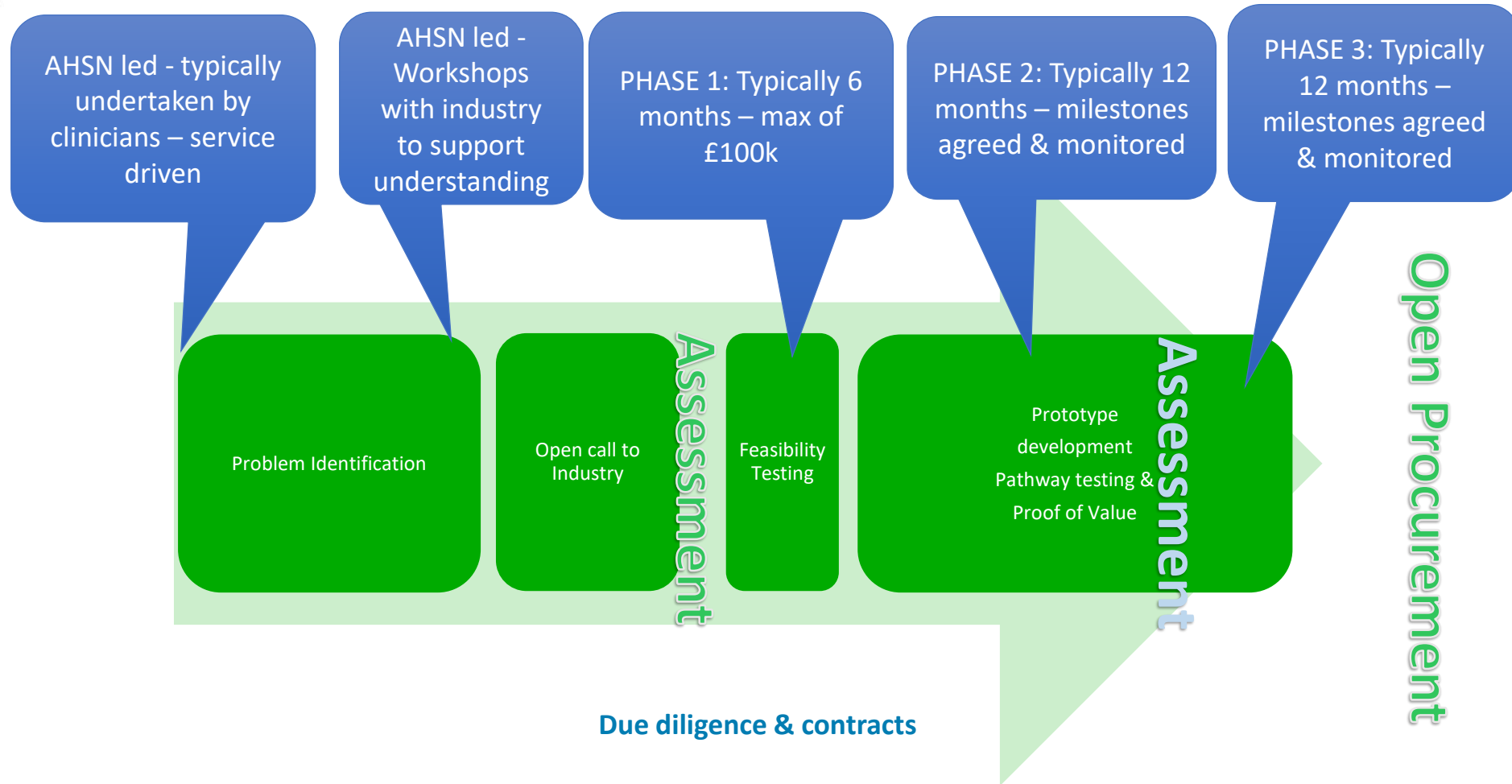
Mental Health
Surgery



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SBRI Process





New Competition October 2017

- Competition launch:** 18th October 2017
- Closing Date:** **Noon 29th November**
- Briefing Events:**
 - Bristol 24th October**
 - Nottingham 31st October**
 - Liverpool 3rd November**
- Assessments:** December/January 2017/18
- Interview panels:** January 2018
- Contracts awarded:** March 2018

How do we add value?

OUR YEAR IN NUMBERS

£10.9m



39 Phase 1 contracts awarded with a total value of £3.12m



12 Phase 2 contracts awarded with a total value of £7.75m

8

8 new clinically-led competitions where NHS needs have been articulated for business to respond to



433



applications from industry assessed and supported or feedback given

FIVE YEARS OF DELIVERY

£69m

£69m total funds awarded

153

Phase 1

71

Phase 2

8

Phase 3



135 patents, copyrights, trademarks and scientific publications applied for or awarded

382 finalised agreements with UK and foreign companies

382

18

18 companies exporting their products to international markets



Benefit for patients

- 704k patients impacted to date
- Potential to impact 59.5m
- Reduced harm evidenced.
- Reduced length of stay and no. of GP appointments
- Improved PROMs reporting – from <2% to >40%



*“I’m no longer worried about losing my driving licence, no longer worried about losing my house or my job. My last eye check up at the hospital confirmed that for the first time in over two years, BOTH my retinas are stable once again...with no signs of any small bleeds at all”
(Polyphotnix patient)*



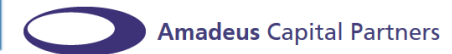
Benefit for the NHS and wider health system

- £17.8m cash releasing savings secured to the NHS and social care to date
- Estimated cumulative future savings to the NHS expected to be of the order of £300- £440m in five years (2022), rising to between £1,100m - £1,800m in 10 years
- 135 IP applications: Five NICE approvals submitted
- 778 different NHS/care settings involved to date

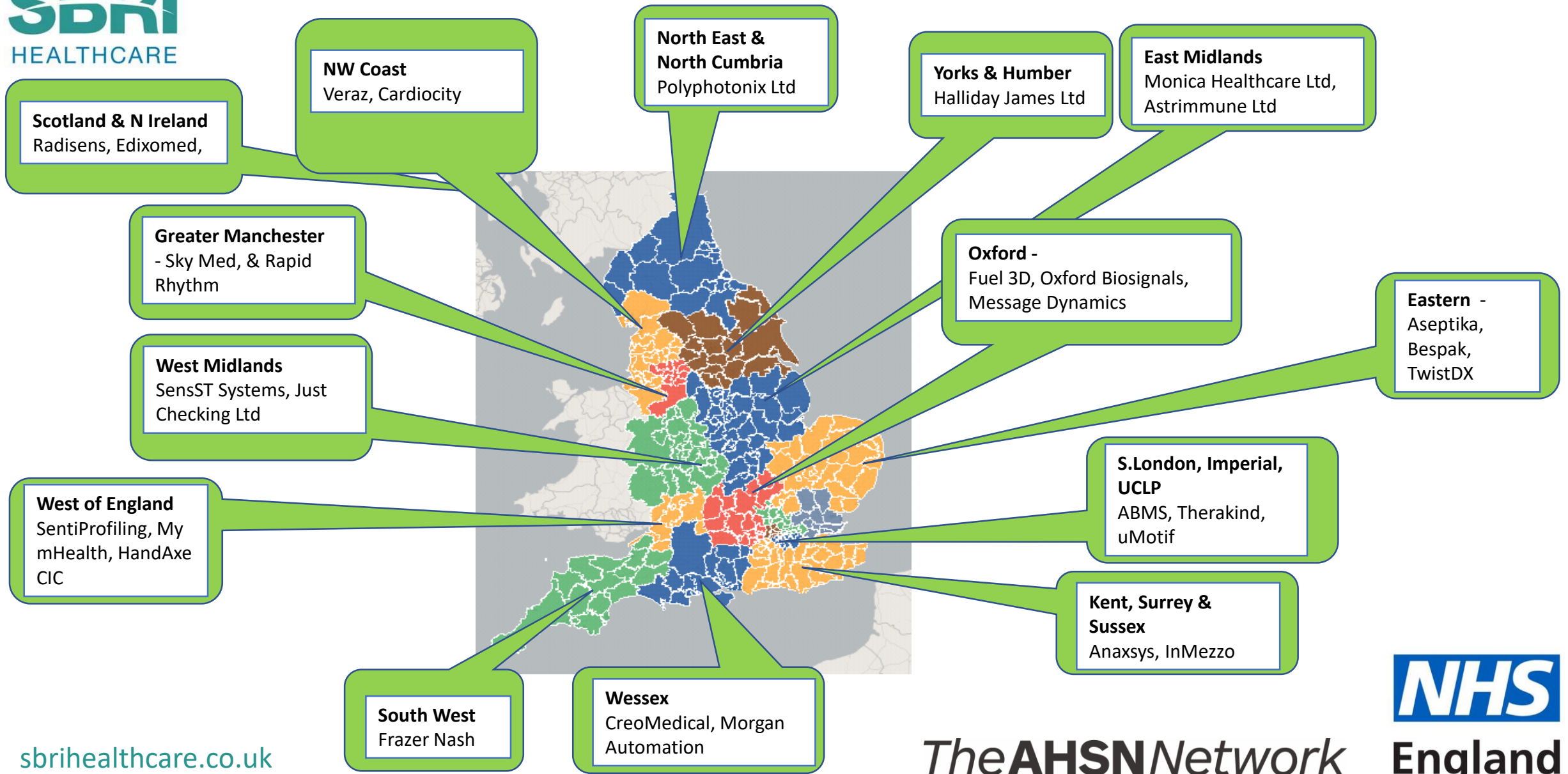


Benefit for business and the economy

- £140m private investment secured by SBRI Healthcare backed companies
- 788 jobs created or safeguarded with £47m economic impact
- 50 products on the market and available to purchase – 18 companies are exporting & 3 have secured sales in excess of £500k
- Companies have been created and have only survived as a consequence of SBRI funding



AHSN/SBRI companies





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Launch Autumn Competition 2017

Stuart Monk, Director of Innovation, South West
AHSN



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England



Mental Health

- The Five Year Forward View for Mental Health reports that mental health problems account for 25% of all ill health in the UK
- One in four adults will experience mental health problems each year
- Mental illness is the UK's single largest cause of disability.
- Mental health problems have an estimated economic and social cost of £105 billion a year – approximately the cost of the entire NHS.
- Nearly 1/3 of all people with a long-term physical health condition also have a mental health problem, typically depression or anxiety
- The effect of poor mental health on physical illnesses has been estimated to cost the NHS at least £8 billion a year.



Mental Health Themes

- Children and Young Peoples' Mental Health
- Suicide/Depression
- Operational Productivity and New Models of Care

Technology in Surgery

- Increasing pressure on the cost of delivering surgery and patient waiting times.
- In the last 10 years, the number of surgical admissions to secondary care increased by 27%, from 3.7 million in 2003/04 to 4.7 million in 2013/14 .
- There are over three thousand NHS operating theatres in England
 - 19% of which are dedicated day case theatres
 - Annual expenditure on surgery in the NHS has been estimated at £4.5 billion (2013).
- The 92% target for all patients to be seen within 18 weeks has not been met since February 2016.
- NHS Improvement today! Believes operating theatres could be saving 2 hours a today through increased efficiency

Technology in Surgery Themes

- Technologies to assist with surgical procedures
- Preoperative surgical simulation technologies



SBRI Healthcare

Jane Rowland, Head of Planning and Business Development, Avon and Wiltshire Mental Health Partnership NHS Trust

A focus on Mental Health



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England

Mental Health

24th October 2016

Jane Rowland - Head of Planning and Development

Mental health today



World Mental Health Day 2016

Good mental health throughout life

Mental health of young people



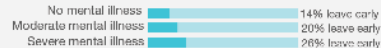
Mental illness starts early. The median age of onset for any **mental illness is 14 years-old** and for **anxiety disorders** as low as **11 years-old**

Disadvantages early in life have long-term implications:

- Poorer educational outcomes
- Higher risk of dropping out of school
- Bigger problems finding work after school



Percentages of young people leaving school early



Mental health and work

People with a mental disorder are **more likely to be dismissed and typically 2-3 times more often unemployed.**



Employees with mental ill-health are also less productive at work, and more likely to take sick leave. **Between one-third and one-half of all sickness and disability caseloads in OECD countries are related to mental-health problems.**

Workplaces need a three-pronged response:
1/ prevention of psychosocial workplace risks
2/ action to retain workers with mental health problems
3/ action to help those off sick return to work



Employment services need to tackle mental health of jobseekers, as it is a major barrier to finding work.

Treatment and outcomes

Treatment for mild and moderate mental illness is often unavailable, or patients have to wait a long time, or face high costs.



Only 23% of people with a severe mental disorder, and less than 10% of people with a moderate disorder, are in specialist treatment, e.g. with a psychiatrist or psychologist.

Undertreatment contributes to poor outcomes. In the typical OECD country, people with bipolar disorder or schizophrenia have a **mortality rate 4-6 times higher than the general population.**

Improvements are needed: effective diagnosis and coordination by GPs, access to psychological therapies, and good community services should be secured.



Mental health of older people



27% of the OECD population will be 65 or older by 2050.



With old age come risks to mental health linked to the transition from work to retirement, social isolation and loneliness, declining physical health and bereavement.

In high income countries at least **12% of older people are affected by clinically significant levels of depression** at any one time.

Health professionals, carers, family and friends and older people themselves should watch out for mental ill-health, and make accessing appropriate treatment a priority.

© www.euro.who.int/en/communicable-diseases/prevention/illustrator

Recommendation of the OECD Council on Integrated Mental Health, Skills and Work Policy



An issue that is still stigmatised in most OECD countries and can only be addressed through a coordinated policy approach.



OECD Member countries want to push action and improve outcomes by adhering to an agreed Recommendation of the OECD Council and measuring progress continuously.

4

An issue that needs concerted action towards a common goal in four policy areas: Youth policy; Health policy; Workplace policy; Social and employment policy.

For more information visit:
www.oecd.org/employment/mental-health-and-work.htm
www.oecd.org/health/mental-health-systems.htm



FUNDING FOR MENTAL HEALTH



report having been diagnosed with at least one mental health problem¹

£600 MILLION

REAL-TERM FALL IN NHS MENTAL HEALTH FUNDING



(8.25%)

over the course of the last parliament³



45.6% OF NHS MENTAL HEALTH TRUSTS REPORTED A DEFICIT

BY 30/9/15⁴



Mental Health Taskforce report 2016 said: "WE HAVE IDENTIFIED THE NEED TO INVEST AN ADDITIONAL BILLION IN 2020/21"⁵

A RECENT SURVEY SHOWS

90%

MENTAL HEALTH TRUSTS

60%

COMMISSIONERS

DO NOT FEEL CONFIDENT £1 BILLION ADDITIONAL TASKFORCE INVESTMENT WILL BE ENOUGH TO MEET MENTAL HEALTH SERVICE CHALLENGES.⁶

FOR MORE INFORMATION, PLEASE VISIT:

www.nhsconfed.org/mhn

¹ Health & Social Care Information Centre (2015), Health survey for England, 2014 ² Mental Health Foundation (2015), Starting today: future of mental health services ³ McNeill A (2015), 'Mental health trust funding down 8 per cent from 2010 despite coalition drive for parity of esteem', Community Care, 20/5/15 ⁴ TDA (2011/15), Performance of the NHS trust sector six months ended 30/9/15; Monitor (20/11/15), Performance of the NHS foundation trust sector six months ended 30/9/15 ⁵ Mental Health Taskforce (2016), The Five Year Forward View for Mental Health ⁶ HFMA and NHS Providers (2016), Funding mental health at local level: unlocking the variation, 27 trusts and 18 commissioners responded to this question.

Change is happening..

Avon and Wiltshire
Mental Health Partnership NHS Trust



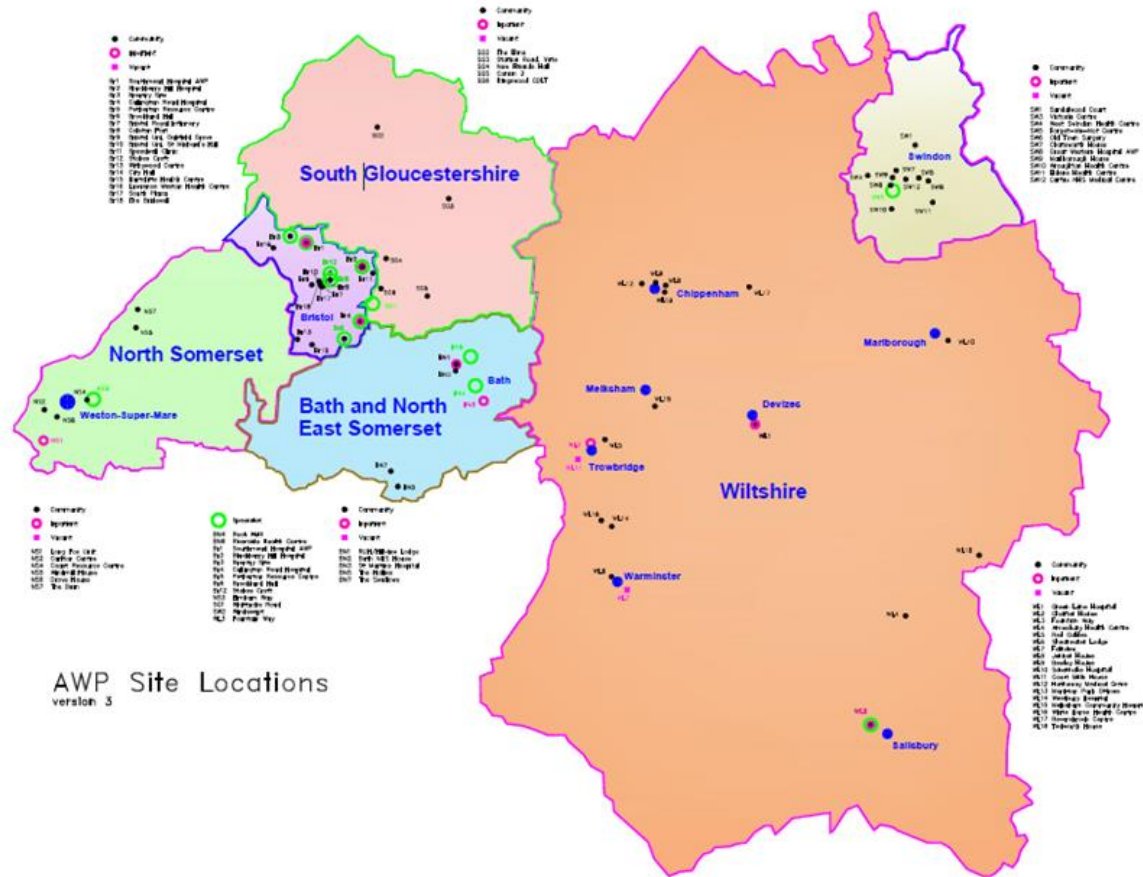
THE FIVE YEAR FORWARD VIEW FOR MENTAL HEALTH



- **CAMHS** – Better access to local services for children and young people, including specialist provision
- **Perinatal mental health** – community teams to support more women, close to home
- **Adult mental health** – improve access to lower level mental health services and crisis response when needed
- **Secure care** – enable more people to be treated closer to home
- **Health and Justice** – improvements in Liaison and Diversion
- **Suicide Prevention** – reducing the number of suicides by 10%
- **New care models** – for specialist services, including Eating Disorders, CAMHS and Secure Care

The ask for mental health...

- An increasingly ‘tech savvy’ population but....a health system that doesn’t make best use of it
- Engaging service users – at every age and stage
- Making use of the technology we have available to us
- Joining up with other providers and commissioners
- Using big data to track patterns and changes we need to make



General Services

- PCLS
- IAPT
- Acute Liaison
- Rehabilitation
- Drug and Alcohol Services (Psychosocial)
- CAMHS Tier 2 & 3
- CMHT
- Rehabilitation and Recovery services

Intermediate Services

- Acute Inpatient
- Older Adult Inpatient
- Learning Disabilities (Community); ASD; ADHD
- Drug and Alcohol Services (Prescribing)
- Prison Healthcare (Specialist MH provision)

Highly Specialised Provision:

- Secure
- Tier 4 CAMHS
- PICU
- Learning Disabilities (IP)
- Eating Disorders
- Mother and Baby Unit

Eating Disorders: 10 bedded unit located in Bristol, adjacent to Southmead Hospital

CAMHS: 9 bedded unit, on the Blackberry Hill site in Bristol

Secure: 112 bedded unit – both medium and low secure at Fromeside Hospital, Blackberry Hill

Perinatal: 4 bedded Mother and Baby Unit, adjacent to Southmead Hospital

Other units
across the south
west



- Relatively, south west has fewer specialist beds than rest of England
- When beds are not available, service users have to travel out of area for treatment
- NHS England track all service users through the Specialist Mental Health database (SMH)
- Service users are repatriated back to in area beds when possible

- We need data to:
 - Understand our service users
 - Know where service users are in their treatment pathway
 - Case manage their care
- What we don't have is:
 - A joined up system
 - Shared oversight of all service users
- What this leads to:
 - Lots of manual data entry and validation
 - Potential for inaccuracy/omission

- A solution that sits between RiO (the Trust operating system) and the SMH Database
- Integrity of information – without lots of data checking and analysis
- Case managers who are able to concentrate on clinical pathways, not reconciliation

But.....

- Integration engines are expensive to design and implement
- Management of any system has to be simple



SBRI Healthcare

Prof Robert Hinchliffe, Professor of Vascular Surgery,
Bristol Centre for Surgical Research, University of
Bristol

A focus on Surgery



The **AHSN** Network



England

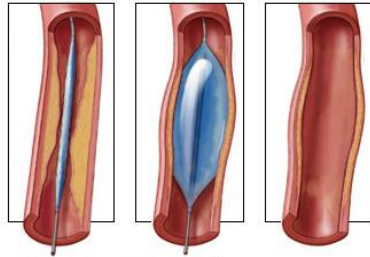
Clinical Presentation – Technology in Surgery

Professor Robert Hinchliffe
Professor of Vascular Surgery
University of Bristol &
Bristol, Bath & Weston Vascular Network

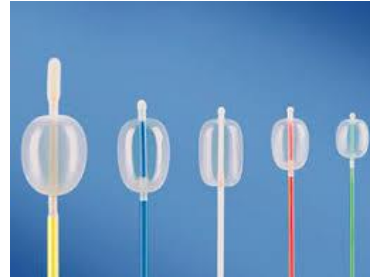
Overview

- Innovations
- Desirables
- Current climate
- Evaluating new technology and procedures

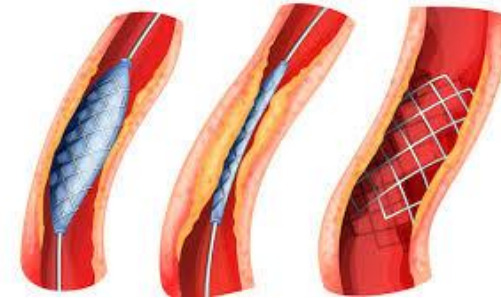
Innovations in vascular surgery



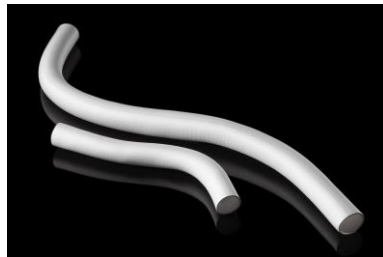
Balloon angioplasty



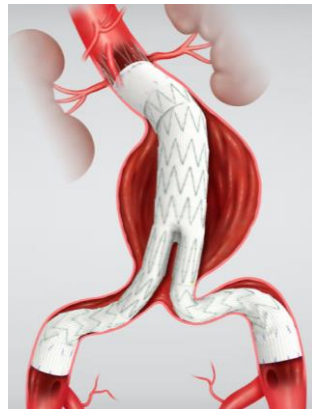
Embolectomy balloon catheters



Stents



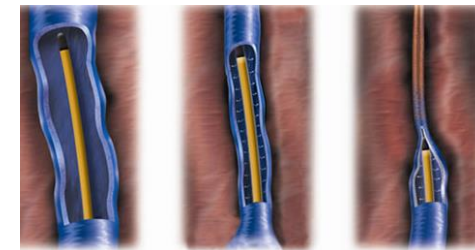
Prosthetic grafts



Stent-grafts



Branch stent-grafts



Endovenous ablation

What I (any surgeon) would like

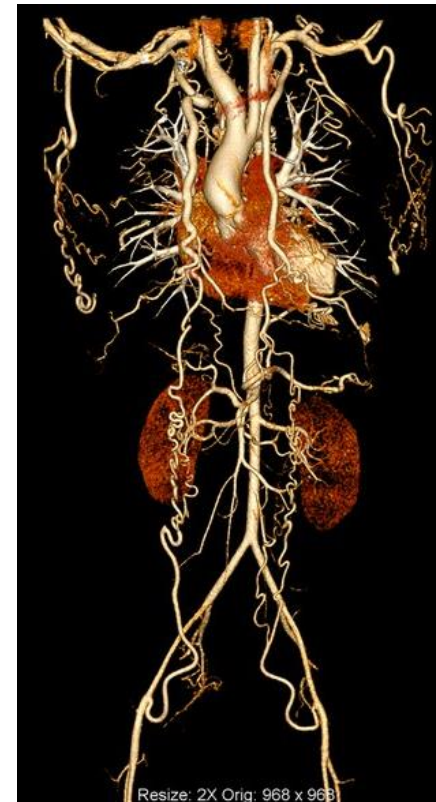
- Augment my senses
- Understand where I am + help to get somewhere else
- Familiar environment (standard operating theatre)
- Improve outcomes (standardise)
- Limited resources (standard kit)

Please – no more ‘robots’



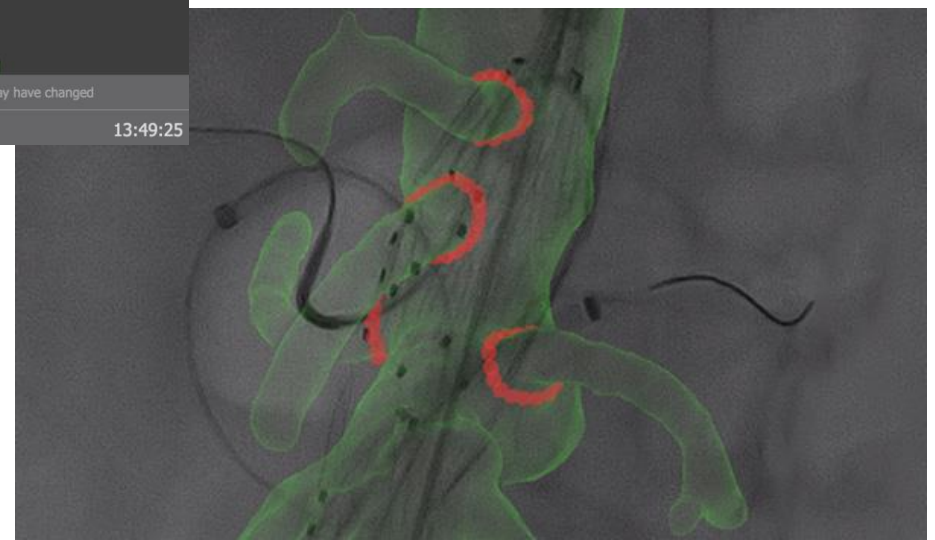
Surgery – pre-operative planning

- Anticipate problems
- Management strategy
- Alternative solutions



Technologies to assist the surgical procedure





Cydar Medical



Innovation, evolution & adoption poorly regulated & reported



Phases 0-1: Pharmacodynamics & safety screening

Phases 2-3: Testing & full evaluation



Phase 4: Post approval surveillance



The IDEAL Collaboration

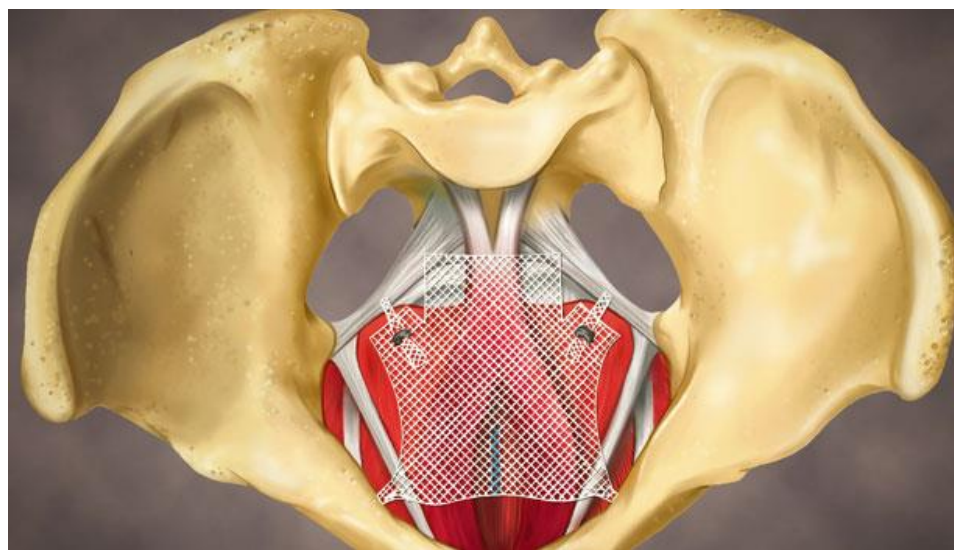
Idea, Development, Exploration, Assessment, Long-term follow-up

	1 Idea	2a Development	2b Exploration	3 Assessment	4 Long-term study
Purpose	Proof of concept	Development	Learning	Assessment	Surveillance
Number and types of patients	Single digit; highly selected	Few; selected	Many; may expand to mixed; broadening indication	Many; expanded indications (well defined)	All eligible
Number and types of surgeons	Very few; innovators	Few; innovators and some early adopters	Many; innovators, early adopters, early majority	Many; early majority	All eligible
Output	Description	Description	Measurement; comparison	Comparison; complete information for non-RCT participants	Description; audit, regional variation; quality assurance; risk adjustment
Intervention	Evolving; procedure inception	Evolving; procedure development	Evolving; procedure refinement; community learning	Stable	Stable
Method	Structured case reports	Prospective development studies	Research database; explanatory or feasibility RCT (efficacy trial); diseased based (diagnostic)	RCT with or without additions/modifications; alternative designs	Registry; routine database (eg, SCOAP, STS, NSQIP); rare-case reports
Outcomes	Proof of concept; technical achievement; disasters; dramatic successes	Mainly safety; technical and procedural success	Safety; clinical outcomes (specific and graded); short-term outcomes; patient-centred (reported) outcomes; feasibility outcomes	Clinical outcomes (specific and graded); middle-term and long-term outcomes; patient-centred (reported) outcomes; cost-effectiveness	Rare events; long-term outcomes; quality assurance
Ethical approval	Sometimes	Yes	Yes	Yes	No
Examples	NOTES video ⁶	Tissue engineered vessels ⁷	Italian D2 gastrectomy study ⁸	Swedish obese patients study ⁹	UK national adult cardiac surgical database ¹⁰

RCT=randomised controlled trial. SCOAP=Surgical Clinical Outcomes Assessment Programme. STS=Society of Thoracic Surgeons. NSQIP=National Surgical Quality Improvement Program. NOTES=natural orifice transluminal endoscopic surgery.



Table: Stages of surgical innovation

Surgical innovation



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Girl died during spleen operation

A girl died during an operation to remove her spleen when surgeons used a new piece of equipment without her parents' knowledge, an inquest heard.

Bethany Bowen, five, from Cricklade, Wiltshire, "collapsed" during the procedure at the John Radcliffe Hospital in Oxford on 27 July 2006.

A new type of bladed coring device was used and severed a major blood vessel.

Bethany's father Richard Bowen said he and his wife assumed the morcellator used was a standard piece of equipment.

Oxford Coroner's Court heard that Bethany suffered from a hereditary condition called spherocytosis - it involves the body producing the wrong-shaped red blood cells which are attacked and destroyed by the spleen.

The condition causes anaemia which can only be cured by removing the spleen.

Mr Bowen said that despite her condition Bethany was a "happy and lively" little girl who had a "whale of a time" during her first year at school.

The court heard that one of Bethany's two brothers also had the condition and had his spleen successfully removed when he was two years old.

Mr and Mrs Bowen had signed a consent form but the operation went wrong and Mr Bowen and his wife were told by doctors that "they had cut through a blood vessel and she had died".

He told the inquest: "It was too much of a shock to take in."

Internal injuries

VIDEO AND AUDIO NEWS
Bethany Bowen from Cricklade died during an operation.
[▶ Watch](#)

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Sport, travel, weather, things to do, features and much more

BBC Wiltshire
Sport, travel, weather, things to do, features and much more

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NEW CLINICAL INTERVENTION / PRACTICE - INTRODUCTION

CG23

This policy can only be considered valid when viewed via the NBT Intranet policies page. If this policy is printed into hard copy or saved to another location, you must check that the version number on your copy matches that of the one online.

Specific Staff groups to whom this policy <u>directly</u> applies	Likely frequency of use	Other staff who may need to be familiar with the policy:
Consultants and all clinical staff who want to introduce a new practice	As required	Managers, Directorate Accountants

Owner	Dr Chris Burton, Lesley Le-Pine
Consultation Route:	Clinical Effectiveness Committee, Clinical Directors, Medical & Nursing Directors
Approved Clinical Effectiveness Committee:	January 2010
Next Review date:	January 2013
Key Words:	Intervention, practice

Introducing new interventional procedures into routine clinical practice

Document Data		
Subject:	Procedural Documents	
Document Type:	Policy	
Document Status:	Draft	
Document Owner:	Stuart Metcalfe, Clinical Audit & Effectiveness Manager	
Executive Lead:	Medical Director	
Approval Authority:	Clinical Quality Group	
Estimated Reading Time:	10 Minutes ¹	
Review Cycle:	36	
Next Review Date:	Date of First Issue:	Date Version Effective From:
31/07/2017	31/07/2014	31/07/2014

Document Abstract

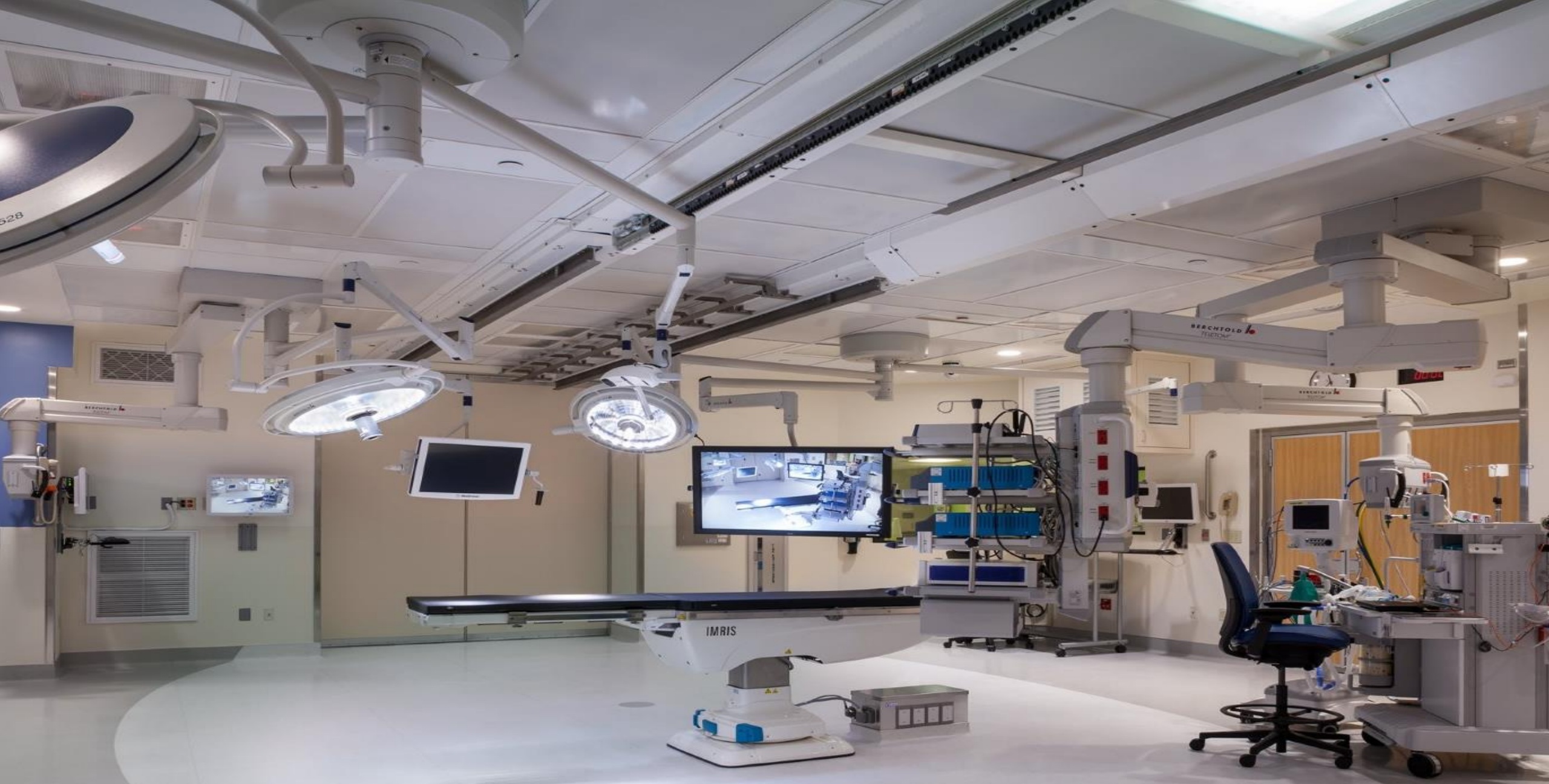
This policy outlines the Trust's expectations on the appropriate implementation of new interventional procedures into routine clinical practice. The policy outlines the necessary processes around application, review and approval processes. The Clinical Effectiveness Group is the lead body for this Policy.

NHS patients are missing out on life-saving robot surgery

(Guardian 13th April 2014)

“New treatments are being introduced in a haphazard fashion, says surgeon's body (Royal College of Surgeons)”





Evaluation of innovation: Safe, efficient & transparent



Design & optimise interventions & co-interventions

NIHR Bristol Biomedical Research Centre



The screenshot shows the website for the NIHR Bristol Biomedical Research Centre. The header includes the NHS logo and 'University Hospitals Bristol NHS Foundation Trust'. A navigation menu contains links for Home, Patients and visitors, About us, Research & Innovation, Work for us, For clinicians, and Contact us. The main content area features a sidebar with a menu for 'NIHR Bristol Biomedical Research Centre' including links for About NIHR Bristol BRC, Research Themes, Patient and Public Involvement, Industry, News & Events, and Contact us. The main content is organized into six grid items, each with a photo and a 'Click here' button: 'About NIHR Bristol BRC', 'Research Themes', 'Patient and Public Involvement', 'Industry', 'News & Events', and 'Contact us'. The footer contains a mission statement, additional navigation links, social media icons, and a copyright notice for 2012.

<http://www.uhbristol.nhs.uk/research-innovation/our-research/nihbristolbrc/>

Bristol Centre for Surgical Research

Surgical Innovation Theme

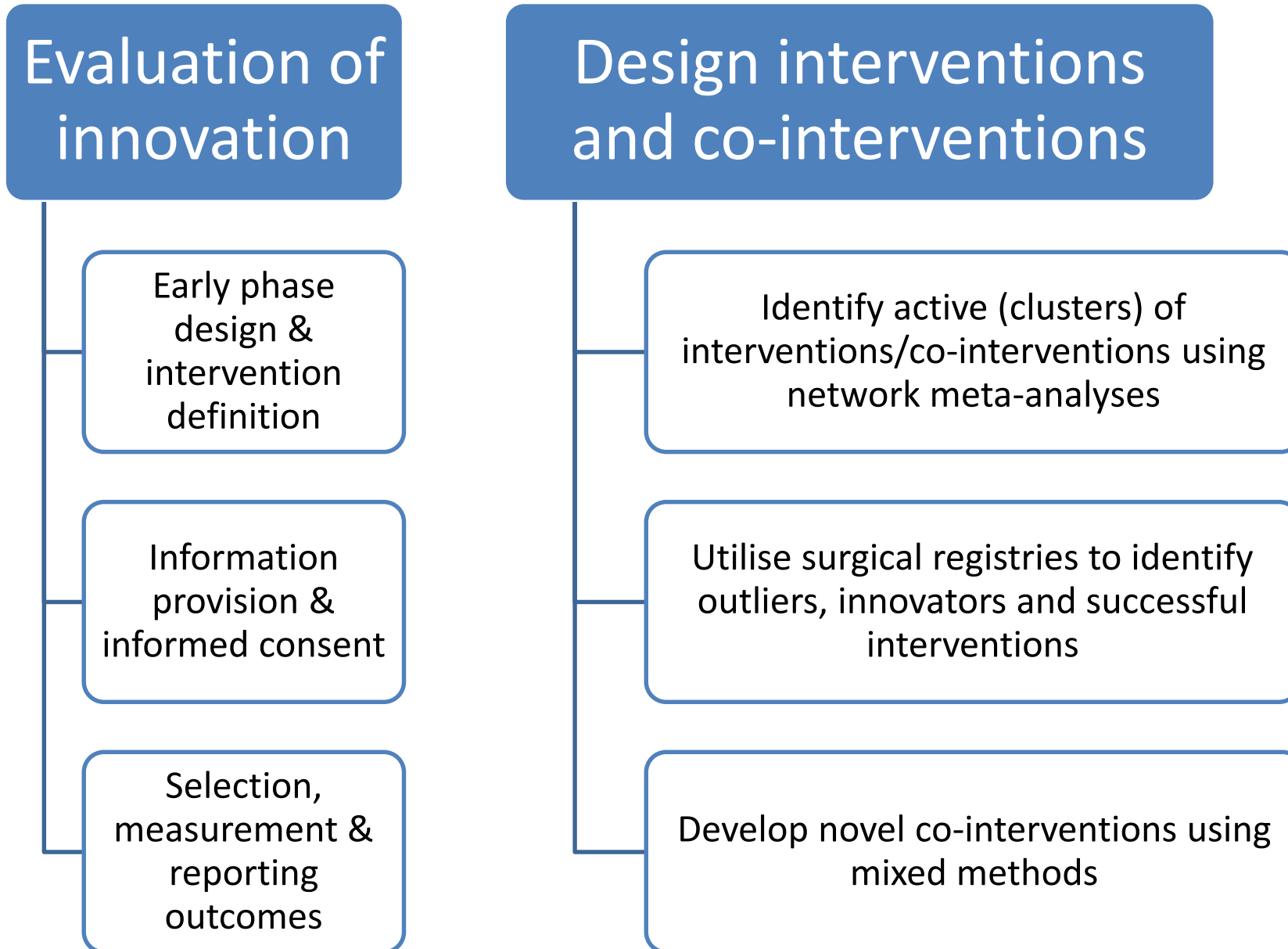


Aim: to transform early phase study design

- New methods for safe & transparent translation of innovation
- Expedition of rejection of ineffective techniques
- Efficient trial design

Ultimately inform evidence-based surgical practice

Overview of the theme





Core Outcome Measures in Effectiveness Trials

<http://www.comet-initiative.org/home/>



@COMETinitiative

***‘Clinical trials are only as credible as their
outcomes’ Tugwell 1993***

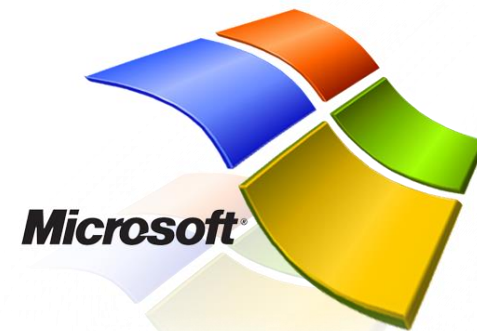
Why are outcomes important?

“...a method of gauging the effectiveness of an intervention”

Patient reported outcomes also important

“You need to know about customer feedback that says things should be better.”

Bill Gates



***.... and information used in practice
to inform decision-making***

Problems with outcomes

Heterogeneity of outcomes

Outcomes definition & measurement

Outcome reporting bias



Identify potential outcomes



Comprehensive outcome list



Create a questionnaire survey



Identify key stakeholders



Delphi surveys



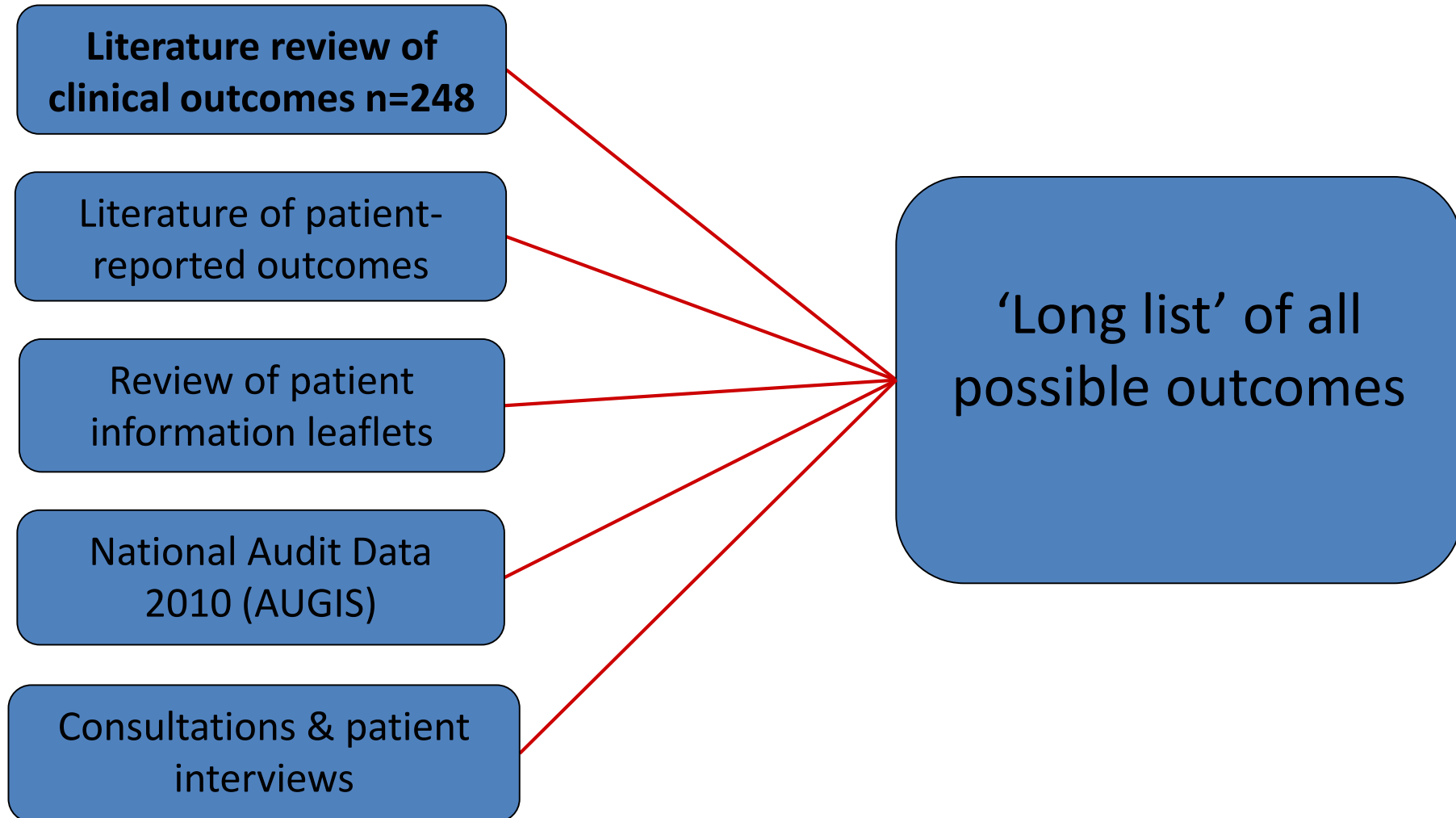
Consensus meeting (s)



Core outcome set

Methods

Oesophageal surgery for cancer



Reporting of Short-Term Clinical Outcomes After Esophagectomy

A Systematic Review

Natalie S. Blencowe, MRCs,*† Sean Strong, MRCs,* Angus G.K. McNair, PhD,*† Sara T. Brookes, PhD,† Tom Crosby, FRCR,† S. Michael Griffin, MD,§ and Jane M. Blazeby, MD*†

Objective: This review summarizes reporting of complications of esophageal cancer surgery.

Background: Accurate assessment of morbidity and mortality after surgery for cancer is essential to compare centers, allow data synthesis, and inform clinical decision-making. A lack of defined standards may distort clinically relevant treatment effects.

Methods: Systematic literature searches identified articles published between 2005 and 2009 reporting morbidity and mortality after esophagectomy for cancer. Data were analyzed for frequency of complication reporting and to check whether outcomes were defined and classified for severity and whether a validated system for grading complications was used. Information about reporting outcomes adjusting for baseline risk factors was collated, and a descriptive summary of the results of included outcomes was undertaken.

Results: Of 3458 abstracts, 224 full papers were reviewed and 122 were included (17 randomized trials and 105 observational studies), reporting outcomes of 57,299 esophagectomies. No single complication was reported in all papers, and 60 (60.6%) did not define any of the measured complications. Anastomotic leak was the most commonly reported morbidity, assessed in 80 (80.1%) articles, defined in 28 (28.3%), but 22 different descriptions were used. Five papers (5.1%) categorized morbidity with a validated grading system. One hundred fifteen papers reported postoperative mortality rates, 25 defining the term using 10 different definitions. In-hospital mortality was the most commonly used term for postoperative death, with 6 different interpretations of this phrase. Eighteen papers adjusted outcomes for baseline risk factors and 60 presented baseline measures of comorbidity.

Conclusions: Outcome reporting after esophageal cancer surgery is heterogeneous and inconsistent, and it lacks methodological rigor. A consensus approach to reporting clinical outcomes should be considered, and at the minimum it is recommended that a “core outcome set” is defined and used in all studies reporting outcomes of esophageal cancer surgery. This will allow meaningful cross study comparisons and analyses to evaluate surgery.

(*Ann Surg* 2012;255:658–666)

recent evidence that short- and long-term outcomes are improving, esophagectomy remains a procedure associated with major complications and a significant risk of in-hospital death.^{2–4}

Rates of complications after esophagectomy reflect a combination of factors including appropriate selection for surgery, technical expertise, and standards of perioperative care. Accurate measurement of postoperative complications is necessary to allow comparisons between surgeons and centers to be made, to inform data synthesis (eg, meta-analyses) and to provide patients with information for decision making. If outcomes are not accurately defined, measured, and reported, estimates may be misleading resulting in outcome reporting bias. Outcome reporting bias occurs when a subset of originally recorded outcomes are selected for publication on the basis of the results. This may influence the overall recommendations from trials.⁵ Outcome reporting bias may be avoided by preselecting trial outcomes and ensuring that all are reported, irrespective of the magnitude of effect sizes observed in the final data set as is recommended by the updated CONSORT guidance for reporting standards in randomized controlled trials (RCTs).⁶

Validated methods of measuring surgical outcomes include the Clavien-Dindo⁷ and Accordion systems,⁸ which classify complications according to severity. The Clavien-Dindo classification was first published in 1992 but despite the provision of this valuable resource, which has been updated, it is not widely used leading to poor quality evidence in the surgical literature.^{9,10} In addition, it is not specific for defining and measuring surgical outcomes after esophagectomy.

The aim of this article, therefore, was to summarize reporting of short-term morbidity and mortality in studies of esophageal cancer surgery and to consider methods for standardizing outcome reporting.

METHODS

Search Strategy

The OVID-SP version of MEDLINE and the Cochrane Cen

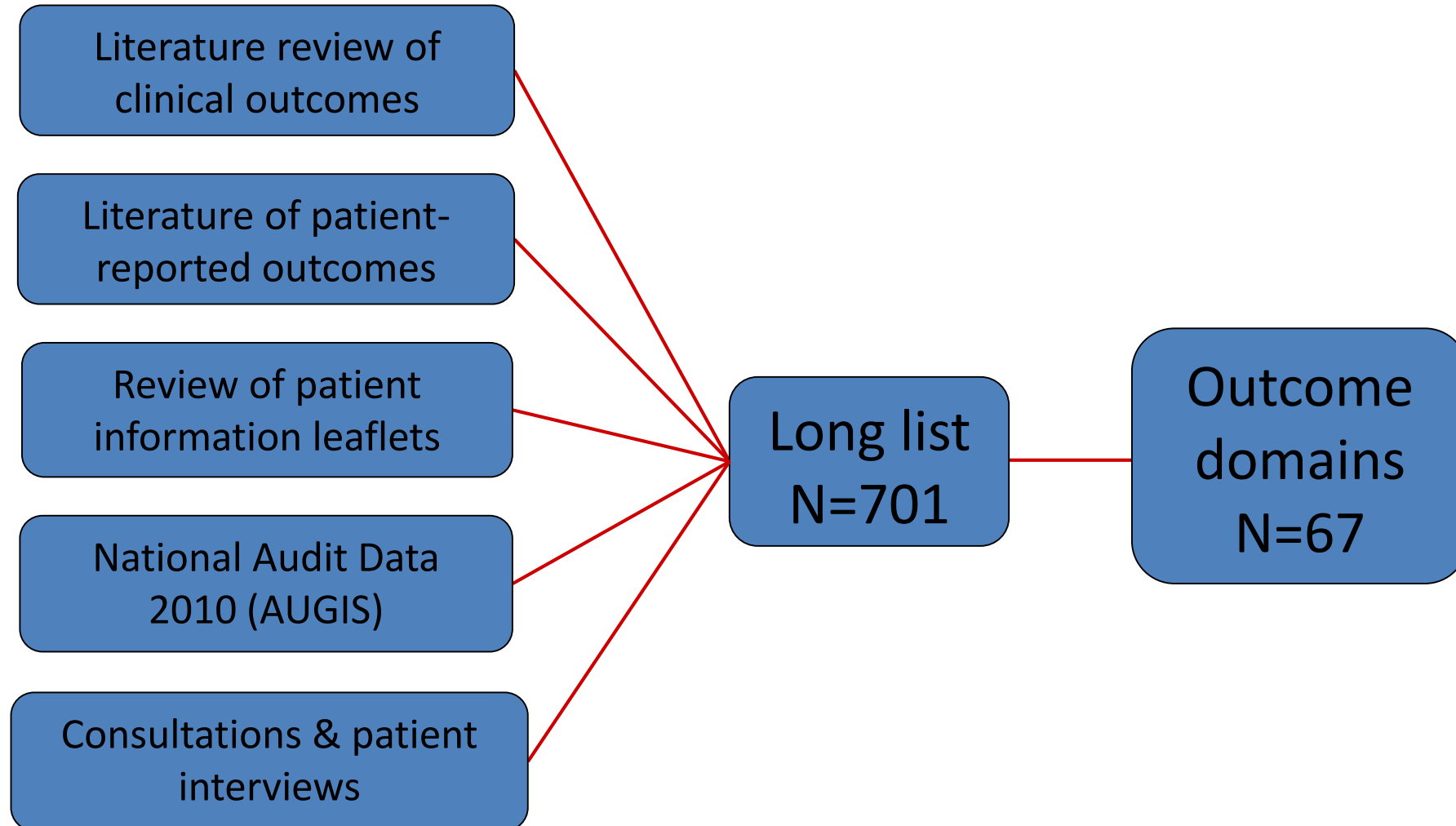
Listed them all verbatim

Activities of daily living
Activity level
Anger-Hostility
Anxiety
Appetite loss
Bloating
Bodily pain
Body image
Bowel & bladder function
Bowel habits
Breathing
Choking
Cognitive function
Confusion-Bewilderment
Constipation
Cough
Deglutition
Deglutition disturbances
Depression
Depression-Dejection

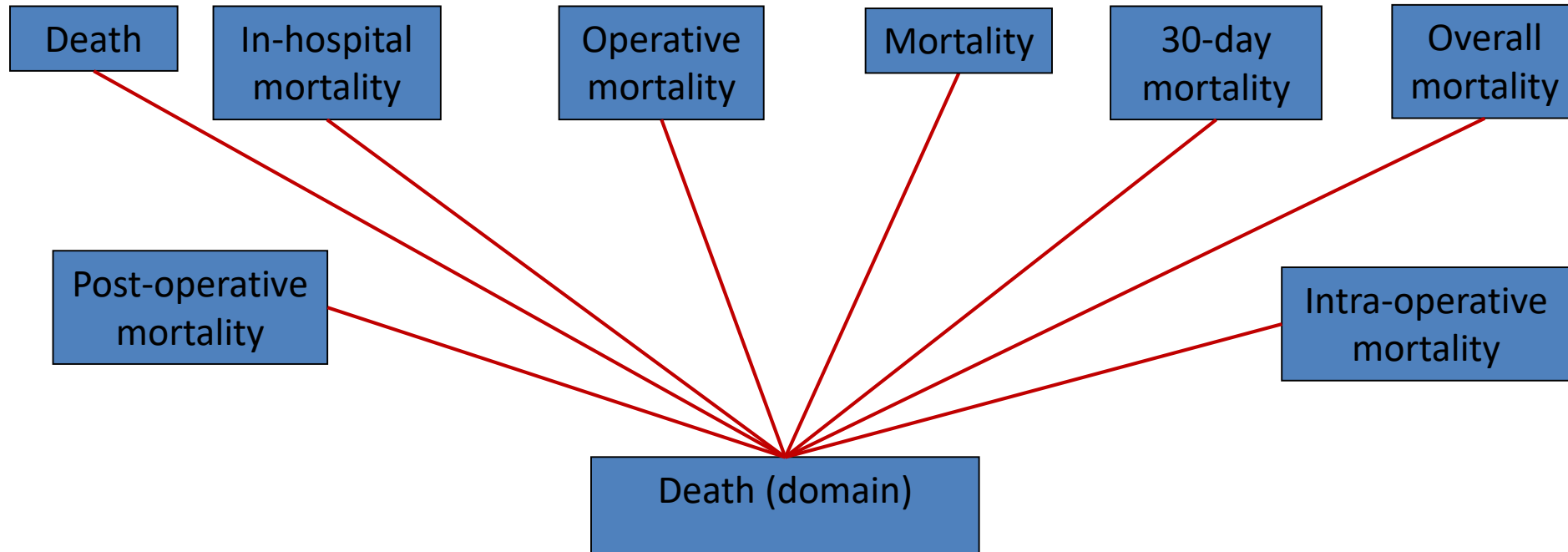
Diarrhoea
Diarrhoea/Constipation
Difficulty in swallowing
Domestic environment
Dry mouth
Dumping
Dysphagia
Dyspnoea
Eating
Eating & drinking
Eating restrictions
Eating with others
Emotion
Emotional function
Emotional problems (anxiety)
Emotional well-being
Employment status & finances
Energy
Esophageal cancer scale
Extended family relationships
Fatigue

General Health
Global Evaluations
Global QOL
Global Satisfaction
Global life satisfaction
Hair loss
Health perceptions
Healthcare Orientation
Heartburn
Height
Hoarseness
Indigestion
Information needs
Insomnia
Knowledge / communication
Location of dysphagia
Loss of independence
Loss of weight
Meal and snack frequency
Medical Treatment

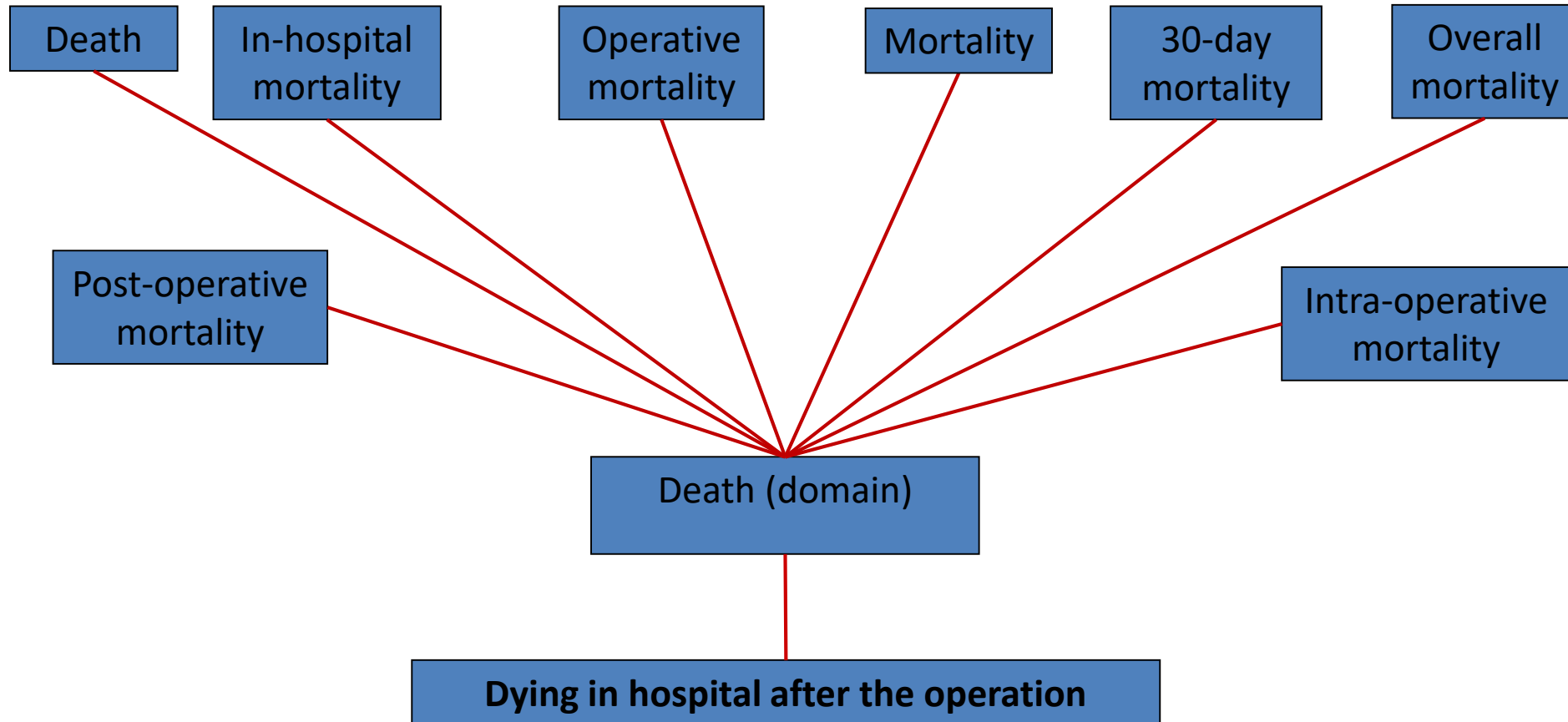
Oesophageal surgery for cancer



🔥 An example – outcomes to domain



🔥 E.g. Outcomes to domain to item



Why are single items needed?



Conclusions

- Surgical innovation – augmentation (simple)
- Heightened time of caution / fiscal control
- Rigorous assessment
- Bristol NIHR BRC – evaluation methodology
- ***Standardised outcome measures in ALL new surgical technology***



Save the
date...

IDEAL
international
conference

Promoting innovation and
evaluation in surgery

13th-14th Sept 2018
Bristol, UK

Further information available soon

 @CSR_Bris



SBRI Healthcare

Karen Livingstone, National Director SBRI Healthcare



*The***AHSN***Network*



England



The application process

www.sbrihealthcare.co.uk

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Application Process

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Competition Now Open!
SBRI Healthcare 9 - Improve Outcomes for Older People with Multiple-Morbidities

The Small Business Research Initiative for Healthcare (SBRI Healthcare) is an NHS England initiative, championed by the newly formed Academic Health Science Networks (AHSNs), who aim to promote UK economic growth whilst addressing unmet health needs and enhancing the take up of known best practice.

SBRI FUNDING MAP

Use the map to see how the SBRI Healthcare contracts have been awarded in each AHSN area.



COMPETITION OVERVIEW
Keep up to date with developments in previous and future competitions...

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PAST COMPETITIONS []

PRESENT COMPETITIONS []

- Addressing functional needs in the elderly []
- Faecal and urinary incontinence in frail elderly people []
- Minimising the impact of falling []

- Addressing functional needs in the elderly []
- Faecal and urinary incontinence in frail elderly people []
- Minimising the impact of falling []

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A-0014 (A-0014)

This submission is in stage **Active Applications** with a status of **Active**
It was last updated at: 06/16/2015 01:55:24 PM.

Active Applications

Task	Status	Actions
Download of Application Guidance	INCOMPLETE	Start
Application Summary	INCOMPLETE	Start


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- [Complete task "Download of Application Guidance"](#)
- [Complete task "Application Summary"](#)
- [Complete task "Company Details"](#)
- [Complete task "SBRI Application Form"](#)
- [Complete task "Declaration"](#)
- [Submit](#)

Members

 Nicholas Offer (Owner)

 [Add Member](#)

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Language

English

Go

0%

Required fields are noted with an *

1) Description of Proposed Idea/Technology *

Please provide a brief description of your proposed idea/technology and how this addresses the customer need, market and patient problems. Include how you plan to engage key stakeholders in Phase 1. Please consider defining the market/patient you plan to address; the implications, size, cost of the problem and market. Outline your solution and how it meets the market/patient needs, including the needs described in the competition category brief, how it could be implemented, cost of doing so and any other matters arising from its adoption. To support this description you may upload an image file by using 'Upload Proposal Document(s)' Task, which is available from the Main Application task menu. (500 word limit)

2) Technical Project Summary *

Please give a short assessment of the key technical challenges that will be overcome. List the key technical deliverables and how they will be met. In addition, please provide a short summary of the project (500 word limit).

Save Progress

Check Form & Next Page



Application Summary	INCOMPLETE	Start
Company Details	INCOMPLETE	Start
SBRI Application Form	INCOMPLETE	Start
Upload Attachment (optional)	PREREQUISITES NOT MET	
Upload 2nd Proposal Document (optional)	PREREQUISITES NOT MET	
Declaration	INCOMPLETE	Start
Submit your application	PREREQUISITES NOT MET	

- [Add Member](#)
- [Edit Members](#)
- [Withdraw Application](#)



Assessment Phase Timelines

Assessment Criteria

1. What will be the effect of this proposal on the challenge addressed?
2. What is the degree of technical challenge? How innovative is the project?
3. Will the technology have a competitive advantage over existing/alternate technologies that can meet the market needs?
4. Are the milestones and project plan appropriate?
5. Is the proposed development plan a sound approach?
6. Does the proposed project have an appropriate commercialisation plan and does the size of the market justify the investment?
7. Does the company appear to have the right skills and experience to deliver the intended benefits?
8. Does the proposal look sensible financially? Is the overall budget realistic and justified in terms of the aims and methods proposed?

Key Points to Remember

- Research and define the market/patient need
- Review the direct competitor landscape and make sure you define your USP
- Consider your route to market, what is the commercialisation plan? Do you know who your customer will be, how will you distribute, how much will you charge for the product/service?
- How will the project be managed (what tools will you use, how will the team communicate etc)
- Provide a clear cost breakdown
- Make sure you answer all of the questions in sufficient detail
- Try not to use too much technical jargon, sell the project in terms the NHS will understand (outcomes, benefits to patients etc)



Contact Us

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*The***AHSN***Network*



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Any Questions?



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