**National Institute for Health and Care Excellence**

# Preoperative Tests (update)
# Scope Consultation Table
# 3rd - 31st March 2014

| Type | Stakeholder | Order No | Section No | Comments<br>Please insert each new comment in a new row. | Developer's Response<br>Please respond to each comment |
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| SH | Association for Clinical Biochemistry and Laboratory Medicine (ACB) | 1 | 4.1.1. (Diabetes comorbidity) | Our comments are as follows: The inclusion of diabetes as a co-morbidity needs to be carefully thought through. The spectrum of diabetes covers a range from poorly controlled type 1 diabetes through to more elderly type 2 patients controlled on diet alone. These patients will require significantly different management pre-operatively but it would be inappropriate to advise generic testing based on the worst case above. Indeed it could be argued that preoperative tests in a well controlled type 2 diabetic should not differ from a non-diabetic. | Thank you for your comment.<br>This has been noted and the spectrum of diabetes will be reviewed as part of the clinical evidence review process. |
| SH | Association for Clinical Biochemistry and Laboratory Medicine (ACB) | 2 | 4.3.2 (d) | Our comments are as follows: The use of HbA1c testing needs to concentrate on its use as a surrogate for hyperglycaemia. This means that evidence of the effect of hyperglycaemia on postoperative complications and outcomes will need to be examined and the HbA1c value which reflects a given level of hyperglycaemia determined. It is not the case that an HbA1c result above the non-diabetic range should affect preoperative management. In the case of diagnosed diabetics an HbA1c would be required only if none was available within the previous 60-90 days. | Thank you for your comment.<br>This has been noted and the threshold for HbA1c will be reviewed as part of the clinical evidence review process. |
| SH | Association for Clinical Biochemistry and Laboratory Medicine (ACB) | 3 | 4.3.2 areas that will be covered by formal consensus survey (c) urine tests | Our comments are as follows: In order to inform the consensus survey with regard to urine stick tests there is a requirement to provide up to date evidence on the performance of these tests in External Quality Assessment schemes, and their cost. Also the specific analytes being tested need to be considered rather than base the guideline on a "multipurpose stick" which may or | Thank you for your comment. Preliminary searches and the NICE review for update identified no new evidence for urine testing, including urine stick tests. |

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| | | | | may not measure appropriate analytes. | |
| SH | Association for Clinical Biochemistry and Laboratory Medicine (ACB) | 4 | General – ASA Grade 4 | Since ASA Grade 4 patients do have elective surgery there is a potential risk in excluding this group. No strong view on whether ASA Grades 3 and 4 should be kept separate. | Thank you for your comment. We will be making recommendations on grade 3 and above, therefore grade 4 will be included. |
| SH | Association of Anaesthetists of Great Britain & Ireland | 1 | General | There should be guidelines on WHEN recommended tests are done (eg Primary/ secondary care) as this could save the most cancelations/ delays | Thank you for your comment.<br>Decisions about how to implement our recommendations in the NHS are determined by local providers who are best placed to know what will be optimal for their region. |
| SH | Association of Anaesthetists of Great Britain & Ireland | 2 | General | 2003 Guidelines too complicated to use easily therefore support minimising the number of categories by excluding children and considering ASA 1+ 2 and 3+ 4 together | Thank you for your comment. We will review the appropriateness of the grouping of ASA grades with the guideline development group. |
| SH | Association of Anaesthetists of Great Britain & Ireland | 3 | 4.1.1 | Fully support adding diabetes & obesity | Thank you for your comment. |
| SH | Association of Anaesthetists of Great Britain & Ireland | 4 | | Grading of surgery based on Health Insurers scales and do not reflect modern surgical approaches. An example is 'Removal of cancerous glands from neck' is rarely major surgery | Thank you for your comment. We will review the appropriateness of the surgical grading with the guideline development group. |
| SH | Association of Anaesthetists of Great Britain & Ireland | 5 | 4.2.1 | Would include obstetric patients: Although few obstetric patients undergo non-obstetric surgery, when they do, they get overinvestigated and frequently the results of the tests are misinterpreted due to lack of knowledge of pregnant physiology | Thank you for your comment. As very few obstetric patients have elective non-obstetric-related operations, this was not considered to be a priority area for the guideline to address. |
| SH | Association of Anaesthetists of Great Britain & Ireland | 6 | 4.3.1 | Agree replace random blood glucose | Thank you for your comment. |
| SH | Association of | 2 | 4.3.2.d | The Association welcomes the inclusion of HbA1c as a | Thank you for your comment. |

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| | British Clinical Diabetologists (endorsed by the Royal College of Physicians) | | | potentially useful preoperative test. However, we note that there is no agreed threshold, and would welcome guidance, perhaps defining tiers of risk, such that the test can be meaningfully deployed. | This has been noted and the threshold for HbA1c will be reviewed and assessed by the GDG as part of the clinical evidence review process. |
| SH | Association of British Clinical Diabetologists (endorsed by the Royal College of Physicians) | 1 | 4.3.1.d | The Association is in agreement with the proposal that the use of a random or fasting blood glucose is of little value as a preoperative test and could usefully be replaced by measurement of HbA1c | Thank you for your comment. |
| SH | British Cardiovascular Society | 1 | General | There is no mention of coronary angiography. This will apply to only a small percentage of patients undergoing non-cardiac surgery but the scope does include patients with cardiovascular disease and patients scheduled for major surgery so it is relevant, even to state that it is not justified routinely, and in which circumstances it is justified. | Thank you for your comment. Coronary angiography is not a preoperative test and management would be carried out within specialist cardiology services. Use of coronary angiography is covered by other NICE guidance: Chest pain of recent onset. CG95. 2010.<br>Management of stable angina. CG126. 2011. |
| SH | British Cardiovascular Society | 2 | General | There is no mention of pre-operative assessment/testing of pacemakers and other devices, an area which affects an increasing proportion of patients who undergo non-cardiac surgery. Its inclusion in the scope should be considered. | Thank you for your comment. Safety checking of pacemakers and other devices would be carried out if required but we do not believe this to be carried out as part of preoperative testing. |
| SH | British Cardiovascular Society | 3 | General | There is no mention of non-invasive measurement of arterial blood oxygen saturation. Its inclusion in the scope should be considered. | Thank you for your comment. Non-invasive measurement of arterial blood oxygen saturation is part of routine clinical observation (along with heart rate, blood pressure etc) and not a test. Therefore it is not within the remit of this guideline. |
| SH | British Geriatrics | 1 | General | The proposed main outcomes are all more likely to occur | Thank you for your comment. We will be |

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| | Society | | | in patients with physiological decline, multi-morbidity and frailty, i.e. the older population, with the possible exception of outcome (f).<br>This high risk group is most likely to be ASA 3 and 4.<br><br>(NCEPOD, Knowing the risk 2011<br>Documented ASA Proportion of patients classed high risk<br>1 <1%<br>2 8%<br>3 60%<br>4 90%)<br><br>By excluding ASA 4 many patients who are at highest risk of the proposed adverse outcomes will be excluded. The majority of ASA 4 patients are older and excluding them will also run the risk of producing an ageist guideline/approach.<br><br>Furthermore, the poor inter-user agreement of ASA grading is well recognised. In one study 22% of patients were graded at time of surgery as ASA 3 or 4 but on retrospective analysis 75% were defined as ASA 3 or 4. This runs the risk that reliance on ASA grading to inform pre-operative testing may result in inadequate pre-assessment and increased risk of adverse postoperative outcome.<br>(http://www.ncepod.org.uk/2011report2/downloads/POC_fullreport.pdf) | making recommendations on grade 3 and above, therefore grade 4 will be included.<br>We will review the appropriateness of the surgical grading with the guideline development group. |
| SH | British Geriatrics Society | 2 | 4.1.2 | Increasing numbers of older people are undergoing elective surgery and the guideline needs to cater for all age groups. Patients aged over 70years are more likely to have multi-morbidity (the presence of more than 3 coexisting co-morbidities) and have additional conditions known to be independent predictors of adverse | Thank you for your comment. Age would not be considered in the ASA grade however comorbidities would be reflected through the preoperative tests recommended for people presenting with other medical conditions.. |

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| | | | | postoperative outcome (cognitive impairment, frailty, malnutrition). Only concentrating individually on "cardiovascular, respiratory, renal, diabetes and obesity" lacks applicability to older people with a mix of multiple diseases. This is likely to make adherence to the guidelines more difficult unless a more 'holistic' approach is undertaken<br><br>If it is felt that these older, high risk patients with multi-morbidity are too complex to be covered by this guidance, then the guidance should include<br>- a statement about older people being at higher risk<br>- a statement on the expected place for assessment of older and higher risk patients as suggested by the British Geriatric Society eg. Pre-assessment and optimisation clinics run by clinicians with specialist knowledge of multi-morbidity and ageing eg. geriatricians with interest in perioperative medicine. (http://www.bgs.org.uk/index.php/popsresources/2509-bpg-pops, and endorsed by the AAGBI guidelines on perioperative care for older people)<br>- a review of methods for selecting higher risk patients beyond ASA eg. Gait speed or frailty scoring | |
| SH | British Geriatrics Society | 3 | General | We were disappointed to note that the guideline group did not co-opt a geriatrician on to the guideline group.<br>It is important that the proposed NICE guideline for preoperative tests does reflect the needs of older surgical patients for a number of reasons;<br>a) An increasing proportion of patients undergoing surgery are older (and the guideline will be used for this group)<br>b) Ageing is associated with physiological decline, | Thank you for your comment. We agree the needs of older surgical patients are important and an expert in this area will be recruited onto the the Guideline Development Group. |

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| | | | | multimorbidity and frailty, all of which are independent predictors of adverse postoperative outcome and require appropriate pre-operative testing<br>c) Older people are still more likely to be delayed for surgery on the basis of pre-operative testing and often this is unnecessary<br>d) Older people are more likely to be cancelled on the day of surgery as pre-operative testing has not identified a specific medical/anaesthetic/surgical issue<br>e) Older people are more likely to have adverse postoperative outcome (medical/surgical/anaesthetic morbidity, functional decline and mortality), which is predictable using appropriate pre-operative testing<br>f) Older people constitute the majority of high risk patients (ASA 3 and above) and they should be identified by preoperative assessment and testing with subsequent planned proactive approach to the surgical pathway<br>g) With appropriate pre-operative testing and assessment adverse pre and postoperative outcome in this high risk is potentially avoidable<br>h) Many of the tests used in pre-operative assessment settings need to be interpreted in the context of the age of the patient (eg Hb) whilst other tests have limited evidence in the older population (eg CPET – the majority of trials have recruited patients with median ages less than 75years - this raises the possibility of patients being inappropriately denied surgery on the basis of test results). Interpretation of the literature/evidence base for the guideline would be enhanced by the presence of a geriatrician. | |

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| | | | | For these reasons we would strongly advocate including a geriatrician on the guideline group. This will allow a in-hospital generalist view alongside primary care expert opinion from the community | |
| SH | British Nuclear Cardiology Society | 1 | 4.3.2 (b) Noninvasive cardiac testing | "Preop tests" column: the order of tests would be more logical as resting echo, then stress echo, then MPS | Thank you for your comment. We have changed the order of the tests to resting echo, then stress echo, then MPS. |
| SH | British Nuclear Cardiology Society | 2 | 4.3.2 (b) Noninvasive cardiac testing | "Description and rationale" column: rationale for evaluating resting echo is that it was not evaluated a few years ago but is very commonly requested in practice, even though the evidence that it predicts perioperative risk is weak (ie not because there is major new evidence). | Thank you for your comment. This has been clarified. |
| SH | British Nuclear Cardiology Society | 3 | 4.3.2 (b) Noninvasive cardiac testing | "Description and rationale" column: rationale for evaluating stress echo and MPS is that they are commonly used, there is a large evidence base indicating that either test predicts perioperative and longer-term cardiac events, but they were simply not evaluated before. I am not sure that the data are truly "new". | Thank you for your comment. This has been clarified. |
| SH | British Orthopaedic Association | 1 | 4.1 | Diabetics should be a different group | Thank you for your comment. Evidence for people with diabetes will be presented separately. |
| SH | British Orthopaedic Association | 2 | 4.1 | Children should be in a different group | Thank you for your comment. Children will not be covered in this guideline. |
| SH | British Orthopaedic Association | 3 | 4.1 | ASA 1nad 2 should be grouped together ASA 3 and 4 grouped together | Thank you for your comment. We will review the appropriateness of the grouping of ASA grades with the guideline development group. |
| SH | British Orthopaedic Association | 4 | 4.1 | Surgical groups need a new definition. Minor , intermediate and major or even 2 groups day cases and in patients | Thank you for your comment. We will review the appropriateness of the surgical grading with the guideline development group. |
| SH | British Orthopaedic | 5 | 4.3 | Consider should mean yes | Thank you for your comment. We are unclear as to what this refers to in section 4.3. |

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| | Association | | | | |
| SH | British Orthopaedic Association | 6 | 4.3 | Random Blood sugar should be replaced by HbA1c | Thank you for your comment. Evidence for both random blood glucose and HbA1c will be reviewed. |
| SH | British Orthopaedic Association | 7 | 4.3 | Morbid obesity should be treated as a separate group | Thank you for your comment. Obesity, including morbid obesity, will be reviewed when the evidence for obesity is reviewed. |
| SH | British Orthopaedic Association | 8 | 4.3 | ECHO is overused | Thank you for your comment. |
| SH | British Orthopaedic Association | 9 | 2 | Two surgeons should be on the group | Thank you for your comment. We have advertised for 2 surgeons to be on the guideline Development Group. |
| SH | Department of Health | 1 | General | This organisation had no comments for this consultation. | Thank you for your comment. |
| SH | NHS England | 1 | General | This organisation had no comments for this consultation. | Thank you for your comment. |
| SH | Royal College of Nursing | 1 | General | This organisation had no comments for this consultation. | Thank you for your comment. |
| SH | Royal College of Paediatrics and Child Health | 1 | General | This organisation had no comments for this consultation. | Thank you for your comment. |
| SH | Royal College of Pathologists | 1 | 4.3.1 and 4.3.2 | I suggest the term glycated rather than glycosylated haemoglobin is used as it is the scientifically correct term. | Thank you for your comment. We have changed this to glycated. |
| SH | Royal College of Pathologists | 2 | general | I think it would be valuable if NICE did not just say that tests were recommended but why they are recommended and what action should be taken on the basis of the results | Thank you for your comment. The rationale for recommending a preoperative test will be fully explained in the guideline. Consideration will be given to subsequent management changes as a result of giving the preoperative test, however ongoing management strategies based on the results of these tests are outside the remit of this guideline. |

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| SH | Royal College of Pathologists | 3 | 4.3.1 | Kidney function tests: should eGFR be included? | Thank you for your comment. eGFR will be included as part of urea & electrolyte testing. |
| SH | Royal College of Pathologists | 4 | general | NICE PH 46 recommends that patients should have waist circumference measured. NICE should consider whether an assessment of under and over-weight should be included in the pre-operative assessment of patients. | Thank you for your comment. The guideline will include those already diagnosed with obesity. The diagnosis of obesity is already addressed in the Obesity guideline CG 43. |
| SH | Royal College of Pathologists | 5 | general | Pre-operative laboratory tests represent a major cost across the health system. It would be useful to have a sliding scale of cost-effectiveness of these tests across the age range. | Thank you for your comment. We will prioritise original cost-effectiveness analyses based on the availability of clinical evidence. |
| SH | The Royal College of Anaesthetists | 1 | 2 | We have no objection to use "formal consensus methods"; the consensus panel should be made up of people who have or who will carry the direct impact of those blood test results in an operating theatre. To include more anaesthetists on "guideline development group" rather than one anaesthetist. | Thank you for your comment.<br>The consensus panel will include registered stakeholders. The GDG includes more than one anaesthetist. |
| SH | The Royal College of Anaesthetists | 2 | 3.1 - g | It is time to include new preoperative tests for use in elective surgery (cardiopulmonary exercise testing, stress ECHO etc) for better patient outcomes. | Thank you for your comment. These are included in the scope. |
| SH | The Royal College of Anaesthetists | 3 | 4.1.1 a | Fully agree with the comment about including OBESITY and Diabetes in the present update. | Thank you for your comment. |
| SH | The Royal College of Anaesthetists | 4 | 4.1.1 b Grades of surgery | For simplicity, better to divide into Minor and Major surgery. | Thank you for your comment. We will review the appropriateness of the grades of surgery when reviewing the evidence and through formal consensus. |
| SH | The Royal College of Anaesthetists | 5 | 4.3.1 - e | ECG: Disagree with this comment. At present in the NHS many surgeries are being done, as day cases in ASA 2 and 3 patients, hence there is no connection between ECG and day case surgery.<br>The evidence says to do ECG on any patient above 50 years of age. | Thank you for your comment.<br>Preliminary searches of clinical evidence identified that there was limited evidence for ECG with the exception of when this is performed as a preoperative assessment for day case surgery. However, we will be reviewing all the evidence for ECG in the development of this guideline. |

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| SH | The Royal College of Anaesthetists | 6 | 4.3.2 a,b | Full support for developing guidelines for CPET and Nov-invasive cardiac testing. | Thank you for your comment. |
| SH | The Royal College of Anaesthetists | 7 | 4.3.2 c | Polysomnography: With obesity epidemic at our doors, it is indicated in any obese ASA 2 and above patient (once they are obese they won't be ASA 1) with a history of snoring, history of apnoeic episodes, increased day time somnolascence and Epworth score $\geq$ 8. | Thank you for your comment. The scope now specifies the population as ASA 2 and 3 for polysomnography which would include obese people with a history of snoring, history of apnoeic episodes, increased day time somnolascence and Epworth score $\geq$ 8. |
| SH | The Royal College of Anaesthetists | 8 | 4.3.2 d | In full agreement for testing of HbA1c instead of random blood sugar in a preoperative setting. But fasting blood sugar is still very relevant test in a primary care setting. | Noted. Thank you for your comment. |
| SH | The Royal College of Anaesthetists | 9 | 4.1 ASA grades | STAKEHOLDER DISCUSSIONS ON 14TH FEB 2014 comments<br>ASA 4 with so many morbidities, we need to do all the investigations, there is very little space for guidance or guidelines.<br>It is better to concentrate ASA 1, 2, 3.<br>Groups' (1,2,3) comments about grouping of ASA grades are not acceptable (grouping ASA 1 & 2 together and ASA 3&4 together).<br>ASA 1 and 2 are completely different populations.<br>Eg. ASA 1 male coming in for hernia operation the only investigation to do is MRSA screening.<br>ASA 2 (hypertension) male coming in for hernia operation, we need to do MRSA, U&Es, ECG.<br>Hence we cannot group ASA 1 and 2 together. | Thank you for your comment. We will review the appropriateness of the grouping of ASA grades with the guideline development group. |
| SH | The Royal College of Anaesthetists | 10 | 4.1 Grade of surgery | In some Trusts, preoperative testing will depend mostly on associated co-morbidities or ASA grade not on grade of surgery. ASA 1 having Major surgery, we need to do all the tests, ASA 3/4 having minor surgery, we need to do all the tests.<br>The only test that will depend on the grade of surgery is | Thank you for your comment. We will review the appropriateness of the grouping of ASA grades and the surgical grading with the guideline development group. |

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| | | | | Group and Save or Cross match. | |
| SH | The Royal College of Anaesthetists | 11 | 4.2 Setting | Tests in Primary care: That is the way forward. Even the 18-week programme has suggested the same. GPs have to do FBC, U&Es, Clotting screen, ECG, and HbA1c using the guidelines, before the referral to secondary care. This will help the secondary care to start treatment immediately. Otherwise secondary care will send the patients back to Primary care for low Hb, undiagnosed atrial fibrillation etc. | Thank you for your comment.<br><br>Decisions about how to implement our recommendations in the NHS are determined by local providers who are best placed to know what will be optimal for their region. |
| SH | The Royal College of Anaesthetists | 12 | 4.1 Population | It may be appropriate for children to have their own separate guidance rather than be included in the current guidance. | Thank you for your comment. Please see the NICE website for information on how new topics are selected for guidance production. |

**These organisations were approached but did not respond:**

Academy of Medical Royal Colleges
Association for Respiratory Technology and Physiology
Association of British Healthcare Industries
Association of Paediatric Anaesthetists of Great Britain and Ireland
Association of Surgeons of Great Britain and Ireland
Barking and Havering Health Authority
Barnsley Hospital NHS Foundation Trust
Betsi cadwaladr
British Association of Day Surgery
British Association of Oral and Maxillofacial Surgeons
British Dietetic Association
British Gynaecological Cancer Society
British Heart Foundation

British Medical Association
British Medical Journal
British National Formulary
British Psychological Society
British Red Cross
British Society of Echocardiography
British Society of Gastroenterology
British Thoracic Society
BUPA Foundation
Cambridge University Hospitals NHS Foundation Trust
Care Quality Commission (CQC)
Community District Nurses Association
Cumbria and Lancashire Cardiac and Stroke Network
Department for Communities and Local Government
East and North Hertfordshire NHS Trust
Faculty of Dental Surgery
Faculty of Intensive Care Medicine
General Medical Council
Great Western Hospitals NHS Foundation Trust
Health & Social Care Information Centre
Health and Care Professions Council
Health Protection Agency
Healthcare Improvement Scotland
Healthcare Infection Society
Healthcare Inspectorate Wales
Healthcare Quality Improvement Partnership
Infection Control Nurses Association

King's College Hospital NHS Foundation Trust
Lifeblood: The Thrombosis Charity
Maidstone and Tunbridge Wells NHS Trust
Medicines and Healthcare products Regulatory Agency
Ministry of Defence (MOD)
National Clinical Guideline Centre
National Collaborating Centre for Cancer
National Collaborating Centre for Mental Health
National Collaborating Centre for Women's and Children's Health
National Deaf Children's Society
National Institute for Health Research, Health Technology Assessment Programme
National Institute for Health Research
National Patient Safety Agency
National Public Health Service for Wales
NHS Clinical Knowledge Summaries
NHS Connecting for Health
NHS Direct
NHS Health at Work
NHS Improvement
NHS Plus
NHS Sheffield
NHS Sheffield CCG
North East London Cancer Network
Nottingham City Council
Nursing and Midwifery Council
PERIGON Healthcare Ltd
Pharmacosmos

PHE Alcohol and Drugs, Health & Wellbeing Directorate
Public Health England
Public Health Wales NHS Trust
Royal Brompton Hospital & Harefield NHS Trust
Royal College of Anaesthetists Patient Liaison Group
Royal College of General Practitioners
Royal College of General Practitioners in Wales
Royal College of Midwives
Royal College of Obstetricians and Gynaecologists
Royal College of Ophthalmologists
Royal College of Psychiatrists
Royal College of Radiologists
Royal College of Speech & Language Therapists
Royal College of Surgeons of England
Royal College of Surgeons Patient Liaison Groups
Royal Pharmaceutical Society
Royal Society of Medicine
Scarborough and North Yorkshire Healthcare NHS Trust
Scottish Intercollegiate Guidelines Network
Sheffield Teaching Hospitals NHS Foundation Trust
Social Care Institute for Excellence
Society and College of Radiographers
Society for Vascular Technology of Great Britain and Ireland
Society of Chiropodists & Podiatrists
South London & Maudsley NHS Trust
South West Yorkshire Partnership NHS Foundation Trust
Staffordshire and Stoke on Trent Partnership NHS Trust

Surrey Heart & Stroke Network
The Association for Perioperative Practice
The British In Vitro Diagnostics Association
The Rotherham NHS Foundation Trust
UK Anaemia
UK Clinical Pharmacy Association
UK Ophthalmic Pharmacy Group
UK Pain Society
United Lincolnshire Hospitals NHS
University of Glasgow
Vifor Pharma UK Ltd
Welsh Government
Welsh Scientific Advisory Committee
Western Sussex Hospitals NHS Trust
York Hospitals NHS Foundation Trust