

Clinical Perfusion Scientist Job Description and Person Specification

Page 2 - Senior Clinical Perfusion Scientist – Band 8a

Page 14 - Professional Manager Clinical Perfusion Scientist – Band 8b

Senior Clinical Perfusion Scientist – Band 8a

Job Description

Job Title	: Senior Clinical Perfusion Scientist
Department	: Clinical Perfusion Science & Research
Division	: Cardiovascular
Band / Grade	: Band 8A
Responsible to	: Consultant Clinical Perfusion Scientist
Accountable to	: General Manager Cardiovascular
Number of direct reports	: Up to Five
Budgetary Responsibility	: None
Location	: Kings College Hospital 2 nd Floor Hambledon Wing East

King's College Hospital NHS Foundation Trust is one of the UK's largest and busiest teaching Trusts with a turnover of c£1 billion, 1.5 million patient contacts a year and around 14,000 staff based across 5 main sites in South East London. The Trust provides a full range of local hospital services across its different sites, and specialist services from King's College Hospital (KCH) sites at Denmark Hill in Camberwell and at the Princess Royal University Hospital (PRUH) site in Bromley.

King's is committed to delivering Sustainable Healthcare for all via our Green Plan. In line with national Greener NHS ambitions, we have set net zero carbon targets of 2040 for our NHS Carbon Footprint and 2045 for our NHS Carbon Footprint Plus. Everyone's contribution is required in order to meet the goals set out in our Green Plan and we encourage all staff to work responsibly, minimising their contributions to the Trust's carbon emissions, waste and pollution wherever possible.

The trust-wide strategy Strong Roots, Global Reach is our Vision to be BOLD, Brilliant people, Outstanding care, Leaders in Research, Innovation and Education, Diversity, Equality and Inclusion at the heart of everything we do. By being person-centred, digitally-enabled, and focused on sustainability, we can take Team King's to another level

JOB SUMMARY

To take a lead role in supporting the Consultant Clinical Perfusion Scientist in the provision, management and monitoring of all perfusion and related services. To provide a comprehensive, highly skilled and autonomous Clinical Perfusion service/resource to patients and other members of the multi-disciplinary team within the Cardiovascular Care Group and ensure that contractual targets are met.

The role's core hours include evenings and weekends, however, due to the nature of the role there is an express requirement to work flexibly as the role will require the post-holder to cover uncovered theatre sessions and operating list over-runs. These will, at times require working outside of the core hours and should not prejudice participation in an emergency 'on call' rota including residential (at King's) and non-residential.

KEY DIMENSIONS

- Provide significant, highly advanced specialist, often expert, autonomously managed, direct care delivery.
- Provide highly specialist advice directly related to care delivery and technical aspects of treatment.
- Undertake significant out of hours commitment for autonomously managed, direct care delivery on a rota basis.
- Allocation of daily duties appropriate to skill mix in the absence of the Head of Clinical Perfusion Scientist and Professional Manager Clinical Perfusion Science (Consultant Level).
- Responsible for the development and delivery of specialist training packages to Trainee Clinical Perfusion Scientists and members of the multidisciplinary team i.e. medical and nursing staff.

1. CLINICAL PRACTICE

- 1.1 Gather, analyse and interpret a range of highly complex, occasionally incomplete or subjective information in order to make autonomous clinical and technical decisions regarding the choice of perfusion equipment and technique for planned and emergency procedures to optimise patient care and clinical outcome.
- 1.2 Work autonomously, drawing on knowledge of a range of theories to inform and advance clinical practice and where highly complex, emotive decisions have to be made with regard to patient treatment and the employment or otherwise of particular treatment modalities.
- 1.3 Implement evidence based best practice to maximise clinical effectiveness.
- 1.4 Inspect, prepare, assemble, prime and calibrate the Cardiopulmonary Bypass (CPB) machine, extracorporeal circuit and related equipment.
- 1.5 Ensure the availability, function, and accuracy, and calibration status of all near patient measurement devices to enable informed clinical decisions to be made during routine and emergency surgical procedures.
- 1.6 Initiate and maintain CPB, constantly monitoring, interpreting and manipulating multiple complex clinical parameters; taking autonomous corrective action including blood transfusion and drug administration.
- 1.7 Monitor and where necessary make appropriate autonomous corrections to blood gases, electrolytes, metabolites, acid-base balance, systemic vascular resistance, cardiac output, and anticoagulation status of the patient.
- 1.8 Autonomous administration of controlled drugs.

- 1.9 Perform a range of complex, myocardial preservation and cardiac venting techniques to protect the myocardium from damage due to ischemia, over-distension and minimise cerebral injury.
- 1.10 Advise on and perform deep hypothermic circulatory arrest in conjunction with continuous cerebral perfusion techniques in order to preserve neurological function during complex surgery or other emergency situations where the patient's systemic circulation may have to be temporarily suspended.
- 1.11 Initiate and clinically manage invasive cardiopulmonary support devices including para-corporeal assist devices (left, right and bi ventricular assist devices), Extracorporeal Membrane Oxygenation (ECMO) and Extracorporeal Carbon Dioxide Removal (ECCO₂R).
- 1.12 Advise on, clinically manage and troubleshoot intra-aortic balloon counter pulsation (IABP) therapy and Autologous Blood Recovery therapy throughout the Cardiac Care group and across the Trust. There is a requirement to give expert clinical advice related to insertion technique and catheter selection and positioning. A detailed working knowledge of Anatomy, Physiology and Medical Imaging is essential.
- 1.13 Perform a range of complex blood coagulation assays and draw upon knowledge and a range of theories to interpret and report results to optimise appropriate patient treatment (Thromboelastography).
- 1.14 Ensure that all duties and responsibilities are undertaken in accordance with the policies, practice and procedures of Kings College Hospital NHS Trust.

2. MANAGERIAL RESPONSIBILITIES

- 2.1 Deputise for the Consultant Clinical Perfusion Scientist when necessary and appropriate.
- 2.2 Assist in the development and continual review of general policies and protocols relating to clinical perfusion to reflect best practice, current health and safety legislation and changing requirements for service provision.
- 2.3 Ensure own clinical paperwork is processed quickly and accurately by appropriate formatting of departmental spreadsheets, hospital electronic databases and data acquisition systems.
- 2.4 Generate and file patient reports, clinical audit reports and clinical governance compliance/ non-compliance reports with particular regard to the data protection act and Kings College Hospital NHS Trust policy.
- 2.5 Act as a resource/ advisor to junior colleagues in the delivery of care/ appropriate perfusion techniques to be employed during complex and/ or non -routine cardio thoracic surgery.
- 2.6 Manage the allocation of trainees and their short, mid- and long-term learning objectives via appropriate delegation.
- 2.7 Advise line managers on issues of service delivery including shortfall and activity.
- 2.8 Organise staff meetings and briefings for education working party.
- 2.9 Undertake department individual trainee appraisal/performance review.
- 2.10 Advise line managers on issues of service delivery.
- 2.11 Organise daily work duty rota and trainee placements

3. HUMAN RESOURCES

- 3.1 Responsible for the appropriate allocation of duties to junior colleagues based on determined competency
- 3.2 Respect the confidentiality of all matters that may relate to colleagues employment and other members of staff.
- 3.3 To assist in the recruitment of new staff and the development and maintenance of a workforce development plan.
- 3.4 Supervision of trainee clinical perfusion scientists.
- 3.5 Act as a mentor and supervisor to training staff, identify development needs through the use of feedback and discussion, creating an environment of support and growth through the appraisal and personal development plan.
- 3.6 Carry out regular individual performance reviews of trainees to provide ongoing review of progress, needs and achievement of the trainee.
- 3.7 Take responsibility and demonstrate effective delegation of responsibility to junior colleagues ensuring that delegation is accompanied by empowerment.

4. EDUCATION AND TRAINING RESPONSIBILITIES

- 4.1 Assist in the preparation of schedules for staff training /preparation of profession re-registration criteria. Prepare training and competency testing for non- perfusion scientific staff.
- 4.2 Assist in the organisation and implementation of education and training programmes, together with in-house training and lecturing / demonstrating responsibilities. Close liaison with multidisciplinary clinical facilitators is essential in order to draw up agreed learning outcomes and schedule tutorials.
- 4.3 Supervise the training of junior colleagues and trainee clinical perfusion scientist and determine action plan.
- 4.4 Promote reflective practice within the team.
- 4.5 Assist in the delivery of core and specialist training on a range of subjects relating to clinical perfusion sciences.
- 4.6 Facilitate the development of problem solving skills for all staff within the scope of the in house training and clinical skills workshops.
- 4.7 Design and implement the student training programme and its continued evolution.
- 4.8 Provide training as required to other staff groups and students on specific techniques.
- 4.9 Act as a resource/advisor to colleagues and students in the delivery of care.
- 4.10 Develop specialist training programmes across the range of procedures and practices to perfusion trainees, medical students, the cardiothoracic multidisciplinary team and Trust wide as required. Each programme is developed following assessment of specific individual or group requirements and needs.
- 4.11 Work closely with colleagues in alternative education establishments with regard to strategic planning of Post-Graduate Diploma/MSc/PhD Clinical Perfusion Sciences'

pathway, taking into account both the short and long term needs of the service and profession.

- 4.12 Development of an evaluation system to ensure a rigorous standard of supervision, teaching and learning of clinical skills for the trainees.
- 4.13 Organise and maintain the departmental library and education facilities. This includes the purchase of key texts, peer review journals and IT facilities.
- 4.14 Map and plan trainees' progress and needs.
- 4.15 Liaise with perfusion colleagues in order to draw up agreed learning contracts and provide timely theoretical and practical training.
- 4.16 Produce regular reports on training programmes and trainee progress to the Head of Clinical Perfusion Science.

5. RESEARCH AND DEVELOPMENT RESPONSIBILITIES

- 5.1 Develop specialised techniques and protocols based on research and best practice.
- 5.2 Develop and implement protocols and procedures within Clinical Perfusion. Where these impact on other professional groups negotiation may be required to achieve a favourable outcome.
- 5.3 Regularly evaluate, research and audit perfusion equipment testing as part of routine work.
- 5.4 Evaluate and contribute to changes in practice to improve quality of patient care.
- 5.5 Offer advice in conjunction with lead clinicians for research and development in the Care Group to promote perfusion research within a multidisciplinary team.
- 5.6 Liaise, co-ordinate and comply with other appropriate authorities and departments in the development work of research e.g. medical staff, R&D, Ethics committee, Raynes Institute FKT School of Medicine, suppliers and internal and external laboratories.
- 5.7 Critically review current literature to reflect current thinking of principles and practices of CPB that may ultimately lead to improvement in patient care.
- 5.8 Prepare written scientific manuscripts for publication in peer reviewed scientific journals
- 5.9 Make oral presentations of departmental scientific research at local, national and international scientific meetings and conferences.
- 5.10 Comply with the corporate governance structure in keeping with the principles and standards set out by the Trust.
- 5.11 Assist the Consultant Clinical Perfusion Scientist in organising local, national and international study days and conferences.

6. FREEDOM TO ACT

- 6.1 Draw on knowledge of a range of theories to inform practice. Assist in developing strategies for the management and delivery of care to the patient.
- 6.2 Work as an autonomous expert practitioner, taking responsibility for organising and delegating multiple techniques required during a single procedure e.g. CPB, cell salvage, blood gas analysis and intra-aortic balloon pumps.
- 6.3 Manage and prioritise own caseload/workload independently.

- 6.4 Monitor and evaluate own service delivery and that of others in the team.
- 6.5 Autonomous practitioner accountable for own professional action and recognise own professional boundaries through interpretation of clinical and professional policies.
- 6.8 Provide evidential action on own initiative as clinical circumstances indicate.
- 6.9 Administer selective cardiovascular and controlled drugs as clinically indicated and determined.

7. COMMUNICATION & WORKING RELATIONSHIPS

- 7.1 Ability to build and maintain key working relationships with colleagues, particularly where there is a need to provide and receive highly complex, highly sensitive and potentially highly contentious information and where clinical issues need to be discussed.
- 7.2 Ability to use developed persuasive, motivational, negotiating, empathic or re-assurance skills when required and communicate unambiguously and concisely with patients, consultants and other members of the multidisciplinary team. This may require frequent, rapid and direct instruction in the use of particular devices, and/or the use of unfamiliar or infrequently used techniques of a highly specialist nature.
- 7.3 Offer pre-operative advice to medical staff on the suitability of equipment and devices for specific procedures, taking into account changes/deterioration in patient condition and any concomitant disease processes, laboratory data, near patient test results and other technically limiting factors. Resistance to implementation of particular techniques due to differences in expert opinion, inexperienced surgeon/anaesthetist must be overcome by tactful, clear and concise explanation.
- 7.4 Liaise with other departments e.g. Medical Equipment Management Service to ensure the maintenance and safe function of all equipment. Maintain records of work/service carried out.
- 7.5 Liaise closely with multidisciplinary colleagues to agree optimum peri-operative care pathways to facilitate patient treatment.
- 7.6 Utilise a variety of strategies to communicate highly complex, sensitive information about the service area to staff, the Consultant Clinical Perfusion Scientist, other organisations and the general public.
- 7.7 Accomplished presentation skills required to promote multidisciplinary and inter-departmental liaison, collaborative practice and understanding of specialist clinical area to broad range of audiences, including other professionals and stakeholders.
- 7.8 Contribute to clinical teams, both multi-disciplinary and uni-disciplinary, by discussing own and others input around patient needs ensuring a well co-ordinated care plan.

8. KNOWLEDGE, TRAINING AND EXPERIENCE

- 8.1 Attend national and international conferences to maintain, develop and contribute towards continuing professional development and enhancement of clinical skills in own area of expertise.

- 8.2 Assist in the development of evidence based guidelines for practice within own clinical specialty.
- 8.3 Attend relevant professional development seminars required of practicing Clinical Perfusion Scientist in order to maintain appropriate registration with the College of Clinical Perfusion Scientists of Great Britain and Ireland, and the Health Professions Council.
- 8.4 Demonstrate in depth knowledge of clinical practice guidelines and clinical governance directives issued by relevant professional bodies.
- 8.5 Apply the principals of clinical governance to professional practice.
- 8.6 Identify personal/professional development evidenced by personal development plan, professional portfolio developed within an appraisal framework, including objectives relating to clinical specialty.
- 8.7 Reflect on practice, particularly atypical procedures to consolidate understanding and knowledge.
- 8.8 Maintain a current knowledge base of conditions and disease processes relevant to the conduct of CPB.
- 8.9 Deliver specialist training formal and informal to others locally, regionally, nationally and internationally, where necessary in area of clinical expertise.
- 8.10 Maintain a current knowledge base of pharmacokinetics and pharmacodynamics of relevant cardiovascular drugs employed during and affecting CPB.
- 8.11 Maintain update of new techniques and developments for the promotion and maintenance of good practice in clinical perfusion.
- 8.12 Be familiar with departmental and Trust Blood Transfusion policies.
- 8.13 Participate in individual appraisal/performance review ensuring that objectives set reflect the trust plans including specific objectives related to clinical specialty and college requirements.

9. ANALYTICAL AND JUDGEMENT SKILLS

- 9.1 Interpretation of clinical results from diagnostic testing procedures and accurately reporting of these results and advise on best treatment modalities.
- 9.2 Discuss and evaluate options for the management of peri-operative care delivery with consultants and other colleagues.
- 9.3 Use advanced knowledge as a basis for informed clinical judgement/decision making to ensure best practise for highly complex clinical procedures often in the absence of the full clinical picture and assist other members of the multidisciplinary team.
- 9.4 Anticipate potential communication breakdown and/or conflict situations seeking to encourage those involved to suggest alternatives and facilitate resolutions.
- 9.5 Demonstrate reflective practice to assist in professional development and enhancement of care delivery.
- 9.6 Adapt to meet changes in patient condition or circumstances.
- 9.7** Develop clear plans based upon best practice

10. INFORMATION RESOURCES

- 10.1 Ensure that all data acquisition and other patient related records are complete, and appropriately filed/stored in line with Kings College Hospital NHS Trust and professional body guidelines.
- 10.2 Create own clinical perfusion reports by employing clinical perfusion data acquisition software and manage own data acquisition database.
- 10.3 Maintain accurate paperwork and database records of clinical data and add appropriate data to PATS in accordance to local Trust policies.
- 10.4 Records should be easily accessible by all for the purpose of audit, stock control, finance, performance management, professional registration and bench marking purposes.
- 10.5 Maintain valve registry forms as these are required for national statistics produced by Imperial College (London).
- 10.6 Generate and file patient reports, clinical audit reports and clinical governance compliance/non-compliance reports with particular regard to the Data Protection Act.

11. FINANCIAL AND PHYSICAL RESOURCES

- 11.1 Responsible for careful use of all aspects of perfusion equipment. Ensure that equipment is in safe working order prior to use. All faults should be reported.
- 11.2 Responsible for costing/sourcing suppliers as and when required.
- 11.3 Plan for the delivery of essential clinical equipment ensuring adequate storage space is available without compromising fire regulations.
- 11.4 Maintaining and ordering supplies of all disposables and hardware required for effective service provision, utilising the electronic ordering database to requisition moderate/high cost disposable items as required.

12. PLANNING AND ORGANISATIONAL SKILLS

- 12.1 Autonomously manage personal case/work load.
- 12.2 Implement education and training programmes to facilitate continuing professional development within the department.
- 12.3 Assist in the organisation of a broad range of complex activities within Clinical Perfusion and recognise the changing requirements of service provision.
- 12.4 Plan and organise ahead for several eventualities whilst maintaining flexibility should the course of work change.
- 12.5 Contribute to the development of innovative and specialist techniques within the Cardiac Care Group and Trust wide.

13. PHYSICAL SKILLS

- 13.1 Provide highly specialist clinical and technical skills during the delivery of direct patient care.
- 13.2 Demonstrate highly developed auditory, visual and perceptive skills in dealing with multiple strands of complex data/information on a second to second basis during the delivery of routine and specialist perfusion techniques.

- 13.3 Think and act, quickly and clearly, often under acute time constraints to resolve unforeseen events and emergency situations during the conduct of direct care delivery.
- 13.4 Developed computer literacy and advanced keyboard skills for data management, administration and report writing.

14. PHYSICAL EFFORT

- 14.1 Have due regard for personal safety and that of others with respect to relevant health and safety legislation and moving and handling policies.
- 14.2 Dismantling and removal of cumbersome, potentially infected, clinical waste from treatment areas.
- 14.3 Move very heavy (>250kg), cumbersome equipment between clinical areas, including the transfer of patients on specialist devices between treatment, diagnostic imaging and critical care areas.

15. MENTAL EFFORT

- 15.1 Maintain intense levels of concentration for protracted periods, occasionally for several hours, during the direct delivery of routine and specialist perfusion techniques. In particular, the monitoring of multiple strands of complex data from various sources during CPB.
- 15.2 Flexible to the demands of the clinical environment, including but not limited to unpredictability of workload, emergency procedures, deadlines and catastrophic clinical situations.
- 15.3 Summarise disparate information effectively within demanding time constraints i.e., report writing after clinical incidents of atypical procedures.

16. EMOTIONAL EFFORT

- 16.1 Maintain calm during emergency and high-pressure situations whilst continuing to communicate clearly and effectively with other members of the multi-disciplinary team.
- 16.2 Maintain respect for and the dignity of, all patients under-going treatment whether as an emergency or otherwise and in the event of a patient fatality during the procedure.
- 16.3 Engage and interact with patients (and their relatives) when they are on mechanical assist devices, often where patient prognosis is poor.
- 16.4 Employ counselling skills to allow feedback from staff after difficult or traumatic events.
- 16.5 Develop appropriate strategies for dealing with stress and stressful situations that occur on a regular basis.

17. WORKING CONDITIONS

- 17.1 Work within infection control and health and safety guidelines in order to prevent cross infection of patients, contamination of clinical areas and prevent contaminated sharps injuries etc.
- 17.2 Daily exposure to patient body fluids and other potentially infectious/hazardous material and pathogens eg, Hepatitis Viruses, HIV and other blood borne diseases, whilst managing highly invasive, specialist devices during the direct delivery of patient care.
- 17.3 Take effective precautions to prevent the cross contamination of patients and colleagues and reduce the general spread of infection within the workplace.

18. GENERAL

- 18.1 The post holder has a general duty of care for their own health, safety and well- being and that of work colleagues, visitors and patients within the hospital, in addition to any specific risk management or clinical governance accountabilities associated with this post.
- 18.2 To observe the rules, policies, procedures and standards of King's College Hospital NHS Foundation Trust together with all relevant statutory and professional obligations/ codes of conduct.
- 18.3 To observe and maintain strict confidentiality of personal information relating to patients and staff.
- 18.4 To be responsible, with management support, for their own personal development and to actively contribute to the development of colleagues.
- 18.5 This job description is intended as a guide to the general scope of duties and is not intended to be definitive or restrictive. It is expected that some of the duties will change over time and this description will be subject to review in consultation with the post holder.
- 18.6 The post holder has an important responsibility for and contribution to infection control and must be familiar with the infection control and hygiene requirements of this role. These requirements are set out in the National Code of Practice on Infection Control and in local policies and procedures which will be made clear during your induction and subsequent refresher training. These standards must be strictly complied with at all times.
- 18.7 Responsible for up-date of own knowledge on areas surrounding policies and ensure that the relevant information is distributed to the appropriate individuals.
- 18.8 This job description is intended as a guide to the general scope of duties and is not intended to be definitive or restrictive. It is expected that some of the duties will change over time and this description will be subject to review in consultation with the post holder.
- 18.9 All employees must hold an 'nhs.net' email account which will be the Trust's formal route for email communication.

PERSON SPECIFICATION
Professional Manager Clinical Perfusion Scientist – Band 8a

	Essential	Desirable
Education and Qualifications		
• A minimum of 1 years' post SCPS accreditation and experience	X	
• Accreditation by Society of Clinical Perfusion Scientists of Great Britain and Ireland.	X	
• Licentiate registration with College of Clinical Perfusion Scientists of Great Britain and Ireland.	X	
• PgDip / MSc	X	
• Postgraduate knowledge of routine and highly specialised techniques e.g. Extracorporeal Membrane Oxygenation.	X	
• Full member of the Society of Clinical Perfusion Scientists of Great Britain and Ireland.	X	
Knowledge and Experience		
• Advanced computer literacy and keyboard skills, including specialist Perfusion specific equipment.	X	
• Evidence of policy and/or protocol development and post incident reporting.	X	
• Conversant with the equipment and devices used for the delivery of routine and specialist clinical perfusion techniques to patients	X	
• Demonstrate continuing professional development, practice and experience enable re-accreditation and re-registration with the College of Clinical Perfusion Scientists of Great Britain and Ireland and the Health Professions Council.	X	
• A knowledge of the NHS plan, relevant National Service Frameworks, national directives and clinical governance.		X
• Research experience, methodology and demonstrable aptitude for statistical analysis, presentation and publication of findings	X	
• Published author or co-author of peer reviewed scientific literature.		X
Skills and Competencies		
• Familiar with a wide range of specialist and routine clinical perfusion techniques.	X	
• Conscientious in all aspects of clinical and professional work.	X	
• High level of organisational skills and ability to lead others	X	
• Ability to work calmly, efficiently and effectively in stressful or emotive situations for prolonged periods maintaining intense levels of concentration.	X	
• Able to communicate highly complex and detailed information often in extremely difficult circumstances, using negotiation and diplomacy.	X	
• Provides leadership, mentoring, support, motivation and education for trainees and junior members of Clinical Perfusion and different staff groups to ensure learning outcomes are met.	X	
• Autonomous practitioner, accountable for own professional action and recognise own professional boundaries	X	
• Ability to facilitate change by discussion and implementation of emerging best practice.		X

Professional Manager Clinical Perfusion Scientist – Band 8b

Job Description

Job Title	: Professional Manager Clinical Perfusion Scientist
Department	: Clinical Perfusion Science & Research
Division	: Cardiovascular
Band / Grade	: Band 8B
Responsible to	: Consultant Clinical Perfusion Scientist
Accountable to	: General Manager Cardiovascular
Number of direct reports	: Up to Ten
Budgetary Responsibility	: None
Location	: Kings College Hospital 2 nd Floor Hambledon Wing East

King's College Hospital NHS Foundation Trust is one of the UK's largest and busiest teaching Trusts with a turnover of c£1 billion, 1.5 million patient contacts a year and around 14,000 staff based across 5 main sites in South East London. The Trust provides a full range of local hospital services across its different sites, and specialist services from King's College Hospital (KCH) sites at Denmark Hill in Camberwell and at the Princess Royal University Hospital (PRUH) site in Bromley.

King's is committed to delivering Sustainable Healthcare for all via our Green Plan. In line with national Greener NHS ambitions, we have set net zero carbon targets of 2040 for our NHS Carbon Footprint and 2045 for our NHS Carbon Footprint Plus. Everyone's contribution is required in order to meet the goals set out in our Green Plan and we encourage all staff to work responsibly, minimising their contributions to the Trust's carbon emissions, waste and pollution wherever possible.

The trust-wide strategy Strong Roots, Global Reach is our Vision to be BOLD, Brilliant people, Outstanding care, Leaders in Research, Innovation and Education, Diversity, Equality and Inclusion at the heart of everything we do. By being person-centred, digitally-enabled, and focused on sustainability, we can take Team King's to another level

JOB SUMMARY

To take a lead role in supporting the Consultant Clinical Perfusion Scientist in the provision, management and monitoring of all perfusion and related services. To provide a comprehensive, highly skilled and autonomous Clinical Perfusion service/resource to patients and other members of the multi-disciplinary team within the Cardiovascular Care Group and ensure that contractual targets

are met. To provide a lead role in the provision of Education and Training, Equipment and Blood conservation management needs to Clinical perfusion and the Trust as required.

The role's core hours include evenings and weekends, however, due to the nature of the role there is an express requirement to work flexibly as the role will require the post-holder to cover uncovered theatre sessions and operating list over-runs. These will, at times require working outside of the core hours and should not prejudice participation in an emergency 'on call' rota including residential (at King's) and non-residential.

KEY DIMENSIONS

- Provide significant, highly advanced specialist, often expert, autonomously managed, direct care delivery.
- Provide highly specialist advice directly related to care delivery and technical aspects of treatment.
- Undertake significant out of hours commitment for autonomously managed, direct care delivery on a rota basis.
- Allocation of daily duties appropriate to skill mix in the absence of the Head of Clinical Perfusion Scientist and Professional Manager Clinical Perfusion Science (Consultant Level).
- Responsible for the development and delivery of specialist training packages to Trainee Clinical Perfusion Scientists and members of the multidisciplinary team i.e. medical and nursing staff.

19. CLINICAL PRACTICE

- 19.1 Gather, analyse and interpret a range of highly complex, occasionally incomplete or subjective information in order to make autonomous clinical and technical decisions regarding the choice of perfusion equipment and technique for planned and emergency procedures to optimise patient care and clinical outcome.
- 19.2 Work autonomously, drawing on knowledge of a range of theories to inform and advance clinical practice and where highly complex, emotive decisions have to be made with regard to patient treatment and the employment or otherwise of particular treatment modalities.
- 19.3 Implement evidence based best practice to maximise clinical effectiveness.
- 19.4 Inspect, prepare, assemble, prime and calibrate the cardiopulmonary bypass (CPB) machine, extracorporeal circuit and related equipment.
- 19.5 Ensure the availability, function, and accuracy, and calibration status of all near patient measurement devices to enable informed clinical decisions to be made during routine and emergency surgical procedures.
- 19.6 Initiate and maintain CPB, constantly monitoring, interpreting and manipulating multiple complex clinical parameters; taking autonomous corrective action including blood transfusion and drug administration.

- 19.7 Monitor and where necessary make appropriate autonomous corrections to blood gases, electrolytes, metabolites, acid-base balance, systemic vascular resistance, cardiac output, and anticoagulation status of the patient.
- 19.8 Autonomous administration of controlled drugs.
- 19.9 Perform a range of complex, myocardial preservation and cardiac venting techniques to protect the myocardium from damage due to ischemia, over-distension and minimise cerebral injury.
- 19.10 Provide expert advice on and perform deep hypothermic circulatory arrest in conjunction with continuous cerebral perfusion techniques in order to preserve neurological function during complex surgery or other emergency situations where the patient's systemic circulation may have to be temporarily suspended.
- 19.11 Initiate and clinically manage invasive cardiopulmonary support devices including para-corporeal assist devices (left, right and bi ventricular assist devices), Extracorporeal Membrane Oxygenation (ECMO) and Extracorporeal Carbon Dioxide Removal (ECCO₂R).
- 19.12 Provide expert advice on, clinically manage and troubleshoot intra-aortic balloon counter pulsation (IABP) therapy and Autologous Blood Recovery therapy throughout the Cardiac Care group and across the Trust. There is a requirement to give expert clinical advice related to insertion technique and catheter selection and positioning. A detailed working knowledge of Anatomy, Physiology and Medical Imaging is essential.
- 19.13 Perform a range of complex blood coagulation assays and draw upon knowledge and a range of theories to interpret and report results to optimise appropriate patient treatment (Thromboelastography).
- 19.14 Ensure that all duties and responsibilities are undertaken in accordance with the policies, practice and procedures of Kings College Hospital NHS Trust.

20. MANAGERIAL RESPONSIBILITIES

- 20.1 Deputise for the Consultant Clinical Perfusion Scientist when necessary and appropriate.
- 20.2 Assist in the development and continual review of general policies and protocols relating to clinical perfusion to reflect best practice, current health and safety legislation and changing requirements for service provision.
- 20.3 Ensure own clinical paperwork is processed quickly and accurately by appropriate formatting of departmental spreadsheets, hospital electronic databases and data acquisition systems.
- 20.4 Generate and file patient reports, clinical audit reports and clinical governance compliance/ non-compliance reports with particular regard to the data protection act and Kings College Hospital NHS Trust policy.
- 20.5 Advise junior colleagues of appropriate perfusion techniques to be employed during complex and/ or non -routine cardio thoracic surgery.
- 20.6 Manage the allocation of trainees and their short, mid- and long-term learning objectives via appropriate delegation.
- 20.7 Advise line managers on issues of service delivery including shortfall and activity.
- 20.8 Organise staff meetings and briefings for education working party.

- 20.9 Undertake department individual trainee appraisal/performance review.
- 20.10 Advise line managers on issues of service delivery.
- 20.11 Organise daily work duty rota and trainee placements

21. HUMAN RESOURCES

- 21.1 Responsible for the appropriate allocation of duties to junior colleagues based on determined competency
- 21.2 Respect the confidentiality of all matters that may relate to colleagues employment and other members of staff.
- 21.3 To assist in the recruitment of new staff and the development and maintenance of a workforce development plan.
- 21.4 Supervision of trainee clinical perfusion scientists.
- 21.5 Act as a mentor and supervisor to training staff, identify development needs through the use of feedback and discussion, creating an environment of support and growth through the appraisal and personal development plan.
- 21.6 Carry out regular individual performance reviews of trainees to provide ongoing review of progress, needs and achievement of the trainee.
- 21.7 Take responsibility and demonstrate effective delegation of responsibility to junior colleagues ensuring that delegation is accompanied by empowerment.

22. EDUCATION AND TRAINING RESPONSIBILITIES

- 22.1 Assist in the organisation and implementation of education and training programmes, together with in-house training and lecturing / demonstrating responsibilities. Close liaison with multidisciplinary clinical facilitators is essential in order to draw up agreed learning outcomes and schedule tutorials.
- 22.2 Prepare schedules for trainee clinical perfusion staff, prepare training and competency testing for non- perfusion scientific staff.
- 22.3 Supervise the training of junior colleagues and trainee clinical perfusion scientist and determine action plan.
- 22.4 Promote reflective practice within the team.
- 22.5 Assist in the delivery of core and specialist training on a range of subjects relating to clinical perfusion sciences.
- 22.6 Facilitate the development of problem solving skills for all staff within the scope of the in house training and clinical skills workshops.
- 22.7 Design and implement the student training programme and its continued evolution.
- 22.8 Provide training as required to other staff groups and students on specific techniques.
- 22.9 Act as a resource/advisor to colleagues and students in the delivery of care.
- 22.10 Develop specialist training programmes across the range of procedures and practices to perfusion trainees, medical students, the cardiothoracic multidisciplinary team and Trust wide as required. Each programme is developed following assessment of specific individual or group requirements and needs.

- 22.11 Work closely with colleagues in alternative education establishments with regard to strategic planning of Post-Graduate Diploma/MSc/PhD Clinical Perfusion Sciences' pathway, taking into account both the short and long term needs of the service and profession.
- 22.12 Development of an evaluation system to ensure a rigorous standard of supervision, teaching and learning of clinical skills for the trainees.
- 22.13 Organise and maintain the departmental library and education facilities. This includes the purchase of key texts, peer review journals and IT facilities.
- 22.14 Map and plan trainees' progress and needs.
- 22.15 Liaise with perfusion colleagues in order to draw up agreed learning contracts and provide timely theoretical and practical training.
- 22.16 Produce regular reports on training programmes and trainee progress to the Head of Clinical Perfusion Science.

23. RESEARCH AND DEVELOPMENT RESPONSIBILITIES

- 23.1 Develop specialised techniques and protocols based on research and best practice.
- 23.2 Develop and implement protocols and procedures within Clinical Perfusion. Where these impact on other professional groups negotiation may be required to achieve a favourable outcome.
- 23.3 Regularly evaluate, research and audit perfusion equipment testing as part of routine work.
- 23.4 Evaluate and contribute to changes in practice to improve quality of patient care.
- 23.5 Offer advice in conjunction with lead clinicians for research and development in the Care Group to promote perfusion research within a multidisciplinary team.
- 23.6 Liaise, co-ordinate and comply with other appropriate authorities and departments in the development work of research e.g. medical staff, R&D, Ethics committee, Raynes Institute FKT School of Medicine, suppliers and internal and external laboratories.
- 23.7 Critically review current literature to reflect current thinking of principles and practices of CPB that may ultimately lead to improvement in patient care.
- 23.8 Prepare written scientific manuscripts for publication in peer reviewed scientific journals
- 23.9 Make oral presentations of departmental scientific research at local, national and international scientific meetings and conferences.
- 23.10 Comply with the corporate governance structure in keeping with the principles and standards set out by the Trust.
- 23.11 Assist the Consultant Clinical Perfusion Scientist in organising local, national and international study days and conferences.

24. FREEDOM TO ACT

- 6.1 Draw on knowledge of a range of theories to inform practice. Assist in developing strategies for the management and delivery of care to the patient.

- 6.2 Work as an autonomous expert practitioner, taking responsibility for organising and delegating multiple techniques required during a single procedure e.g. CPB, cell salvage, blood gas analysis and intra-aortic balloon pumps.
- 6.3 Manage and prioritise own caseload/workload independently.
- 6.4 Monitor and evaluate own service delivery and that of others in the team.
- 6.5 Autonomous practitioner accountable for own professional action and recognise own professional boundaries through interpretation of clinical and professional policies.
- 6.8 Provide evidential action on own initiative as clinical circumstances indicate.
- 6.9 Administer selective cardiovascular and controlled drugs as clinically indicated and determined.

25. COMMUNICATION & WORKING RELATIONSHIPS

- 25.1 Ability to build and maintain key working relationships with colleagues, particularly where there is a need to provide and receive highly complex, highly sensitive and potentially highly contentious information and where clinical issues need to be discussed.
- 25.2 Ability to use developed persuasive, motivational, negotiating, empathic or re-assurance skills when required and communicate unambiguously and concisely with patients, consultants and other members of the multidisciplinary team. This may require frequent, rapid and direct instruction in the use of particular devices, and/or the use of unfamiliar or infrequently used techniques of a highly specialist nature.
- 25.3 Offer pre-operative advice to medical staff on the suitability of equipment and devices for specific procedures, taking into account changes/deterioration in patient condition and any concomitant disease processes, laboratory data, near patient test results and other technically limiting factors. Resistance to implementation of particular techniques due to differences in expert opinion, inexperienced surgeon/anaesthetist must be overcome by tactful, clear and concise explanation.
- 25.4 Liaise with other departments e.g. Medical Equipment Management Service to ensure the maintenance and safe function of all equipment. Maintain records of work/service carried out.
- 25.5 Liaise closely with multidisciplinary colleagues to agree optimum peri-operative care pathways to facilitate patient treatment.
- 25.6 Utilise a variety of strategies to communicate highly complex, sensitive information about the service area to staff, the Consultant Clinical Perfusion Scientist, other organisations and the general public.
- 25.7 Accomplished presentation skills required to promote multidisciplinary and inter-departmental liaison, collaborative practice and understanding of specialist clinical area to broad range of audiences, including other professionals and stakeholders.
- 25.8 Contribute to clinical teams, both multi- disciplinary and uni-disciplinary, by discussing own and others input around patient needs ensuring a well co-ordinated care plan.

26. KNOWLEDGE, TRAINING AND EXPERIENCE

- 26.1 Attend national and international conferences to maintain, develop and contribute towards continuing professional development and enhancement of clinical skills in own area of expertise.
- 26.2 Assist in the development of evidence based guidelines for practice within own clinical specialty.
- 26.3 Attend relevant professional development seminars required of practicing Clinical Perfusion Scientist in order to maintain appropriate registration with the College of Clinical Perfusion Scientists of Great Britain and Ireland, and the Health Professions Council.
- 26.4 Demonstrate in depth knowledge of clinical practice guidelines and clinical governance directives issued by relevant professional bodies.
- 26.5 Apply the principals of clinical governance to professional practice.
- 26.6 Identify personal/professional development evidenced by personal development plan, professional portfolio developed within an appraisal framework, including objectives relating to clinical specialty.
- 26.7 Reflect on practice, particularly atypical procedures to consolidate understanding and knowledge.
- 26.8 Maintain a current knowledge base of conditions and disease processes relevant to the conduct of CPB.
- 26.9 Deliver specialist training formal and informal to others locally, regionally, nationally and internationally, where necessary in area of clinical expertise.
- 26.10 Maintain a current knowledge base of pharmacokinetics and pharmacodynamics of relevant cardiovascular drugs employed during and affecting CPB.
- 26.11 Maintain update of new techniques and developments for the promotion and maintenance of good practice in clinical perfusion.
- 26.12 Be familiar with departmental and Trust Blood Transfusion policies.
- 26.13 Participate in individual appraisal/performance review ensuring that objectives set reflect the trust plans including specific objectives related to clinical specialty and college requirements.

27. ANALYTICAL AND JUDGEMENT SKILLS

- 27.1 Interpretation of clinical results from diagnostic testing procedures and accurately reporting of these results and advise on best treatment modalities.
- 27.2 Discuss and evaluate options for the management of peri-operative care delivery with consultants and other colleagues.
- 27.3 Use expert knowledge as a basis for informed clinical judgement/decision making to ensure best practise for highly complex clinical procedures often in the absence of the full clinical picture and assist other members of the multidisciplinary team.
- 27.4 Anticipate potential communication breakdown and/or conflict situations seeking to encourage those involved to suggest alternatives and facilitate resolutions.

- 27.5 Demonstrate reflective practice to assist in professional development and enhancement of care delivery.
- 27.6 Adapt to meet changes in patient condition or circumstances.
- 27.7 Develop clear plans based upon best practice

28. INFORMATION RESOURCES

- 28.1 Ensure that all data acquisition and other patient related records are complete, and appropriately filed/stored in line with Kings College Hospital NHS Trust and professional body guidelines.
- 28.2 Create own clinical perfusion reports by employing clinical perfusion data acquisition software and manage own data acquisition database.
- 28.3 Maintain accurate paperwork and database records of clinical data and add appropriate data to PATS in accordance to local Trust policies.
- 28.4 Records should be easily accessible by all for the purpose of audit, stock control, finance, performance management, professional registration and bench marking purposes.
- 28.5 Maintain valve registry forms as these are required for national statistics produced by Imperial College (London).
- 28.6 Generate and file patient reports, clinical audit reports and clinical governance compliance/non-compliance reports with particular regard to the Data Protection Act.

29. FINANCIAL AND PHYSICAL RESOURCES

- 29.1 Responsible for careful use of all aspects of perfusion equipment. Ensure that equipment is in safe working order prior to use. All faults should be reported.
- 29.2 Responsible for costing/sourcing suppliers as and when required.
- 29.3 Plan for the delivery of essential clinical equipment ensuring adequate storage space is available without compromising fire regulations.
- 29.4 Maintaining and ordering supplies of all disposables and hardware required for effective service provision, utilising the electronic ordering database to requisition moderate/high cost disposable items as required.

30. PLANNING AND ORGANISATIONAL SKILLS

- 30.1 Autonomously manage personal case/work load.
- 30.2 Implement education and training programmes to facilitate continuing professional development within the department.
- 30.3 Assist in the organisation of a broad range of complex activities within Clinical Perfusion and recognise the changing requirements of service provision.
- 30.4 Plan and organise ahead for several eventualities whilst maintaining flexibility should the course of work change.
- 30.5 Contribute to the development of innovative and specialist techniques within the Cardiac Care Group and Trust wide.

31. PHYSICAL SKILLS

- 31.1 Provide highly specialist clinical and technical skills during the delivery of direct patient care.
- 31.2 Demonstrate highly developed auditory, visual and perceptive skills in dealing with multiple strands of complex data/information on a second to second basis during the delivery of routine and specialist perfusion techniques.
- 31.3 Think and act, quickly and clearly, often under acute time constraints to resolve unforeseen events and emergency situations during the conduct of direct care delivery.
- 31.4 Developed computer literacy and advanced keyboard skills for data management, administration and report writing.

32. PHYSICAL EFFORT

- 32.1 Have due regard for personal safety and that of others with respect to relevant health and safety legislation and moving and handling policies.
- 32.2 Dismantling and removal of cumbersome, potentially infected, clinical waste from treatment areas.
- 32.3 Move very heavy (>250kg), cumbersome equipment between clinical areas, including the transfer of patients on specialist devices between treatment, diagnostic imaging and critical care areas.

33. MENTAL EFFORT

- 33.1 Maintain intense levels of concentration for protracted periods, occasionally for several hours, during the direct delivery of routine and specialist perfusion techniques. In particular, the monitoring of multiple strands of complex data from various sources during CPB.
- 33.2 Flexible to the demands of the clinical environment, including but not limited to unpredictability of workload, emergency procedures, deadlines and catastrophic clinical situations.
- 33.3 Summarise disparate information effectively within demanding time constraints i.e., report writing after clinical incidents of atypical procedures.

34. EMOTIONAL EFFORT

- 34.1 Maintain calm during emergency and high-pressure situations whilst continuing to communicate clearly and effectively with other members of the multi-disciplinary team.
- 34.2 Maintain respect for and the dignity of, all patients under-going treatment whether as an emergency or otherwise and in the event of a patient fatality during the procedure.
- 34.3 Engage and interact with patients (and their relatives) when they are on mechanical assist devices, often where patient prognosis is poor.
- 34.4 Employ counselling skills to allow feedback from staff after difficult or traumatic events.

- 34.5 Develop appropriate strategies for dealing with stress and stressful situations that occur on a regular basis.

35. WORKING CONDITIONS

- 35.1 Work within infection control and health and safety guidelines in order to prevent cross infection of patients, contamination of clinical areas and prevent contaminated sharps injuries etc.
- 35.2 Daily exposure to patient body fluids and other potentially infectious/hazardous material and pathogens eg, Hepatitis Viruses, HIV and other blood borne diseases, whilst managing highly invasive, specialist devices during the direct delivery of patient care.
- 35.3 Take effective precautions to prevent the cross contamination of patients and colleagues and reduce the general spread of infection within the workplace.

36. GENERAL

- 36.1 The post holder has a general duty of care for their own health, safety and well- being and that of work colleagues, visitors and patients within the hospital, in addition to any specific risk management or clinical governance accountabilities associated with this post.
- 36.2 To observe the rules, policies, procedures and standards of King's College Hospital NHS Foundation Trust together with all relevant statutory and professional obligations/ codes of conduct.
- 36.3 To observe and maintain strict confidentiality of personal information relating to patients and staff.
- 36.4 To be responsible, with management support, for their own personal development and to actively contribute to the development of colleagues.
- 36.5 This job description is intended as a guide to the general scope of duties and is not intended to be definitive or restrictive. It is expected that some of the duties will change over time and this description will be subject to review in consultation with the post holder.
- 36.6 The post holder has an important responsibility for and contribution to infection control and must be familiar with the infection control and hygiene requirements of this role. These requirements are set out in the National Code of Practice on Infection Control and in local policies and procedures which will be made clear during your induction and subsequent refresher training. These standards must be strictly complied with at all times.
- 36.7 Responsible for up-date of own knowledge on areas surrounding policies and ensure that the relevant information is distributed to the appropriate individuals.
- 36.8 This job description is intended as a guide to the general scope of duties and is not intended to be definitive or restrictive. It is expected that some of the duties will change over time and this description will be subject to review in consultation with the post holder.
- 36.9 All employees must hold an 'nhs.net' email account which will be the Trust's formal route for email communication.

PERSON SPECIFICATION
Professional Manager Clinical Perfusion Scientist – Band 8b

	Essential	Desirable
Education and Qualifications		
• Accreditation by Society of Clinical Perfusion Scientists of Great Britain and Ireland.	X	
• Licentiate registration with College of Clinical Perfusion Scientists of Great Britain and Ireland.	X	
• PgDip / MSc	X	
• Postgraduate knowledge of routine and highly specialised techniques e.g. Extracorporeal Membrane Oxygenation.	X	
• Society of Clinical Perfusion Scientists of Great Britain and Ireland Accreditation Certificate.	X	
• Foundation NHS management certificate.		X
• Foundation clinical teaching certificate.		X
• Full member of the Society of Clinical Perfusion Scientists of Great Britain and Ireland.	X	
Knowledge and Experience		
• Advanced computer literacy and keyboard skills, including specialist Perfusion specific equipment.	X	
• Evidence of policy and/or protocol development and post incident reporting.	X	
• Conversant with the equipment and devices used for the delivery of routine and specialist clinical perfusion techniques to patients	X	
• Demonstrate continuing professional development, practice and experience to enable re-accreditation and re-registration with the College of Clinical Perfusion Scientists of Great Britain and Ireland and the Health Professions Council.	X	
• Paediatric, ECMO, ECCO2R experience.		X
• A knowledge of the NHS plan, relevant National Service Frameworks, national directives and clinical governance.		X
• Research experience, methodology and demonstrable aptitude for statistical analysis, presentation and publication of findings	X	
• Published author or co-author of peer reviewed scientific literature.		X
Skills and Competencies		
• Familiar with a wide range of specialist and routine clinical perfusion techniques.	X	
• Conscientious in all aspects of clinical and professional work.	X	
• High level of organisational skills and an ability to lead others	X	
• Ability to work calmly, efficiently and effectively in stressful or emotive situations for prolonged periods maintaining intense levels of concentration.	X	
• Able to communicate highly complex and detailed information often in extremely difficult circumstances, using negotiation and diplomacy.	X	
• Provides leadership, mentoring, support, motivation and education for trainees and junior members of Clinical Perfusion and different staff groups to ensure learning outcomes are met.	X	
• Autonomous practitioner, accountable for own professional action and recognise own professional boundaries	X	
• Ability to facilitate change by discussion and implementation of emerging best practice.		X



King's College Hospital
NHS Foundation Trust