**NHS GREATER GLASGOW & CLYDE**

# JOB DESCRIPTION

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| 1. **JOB IDENTIFICATION**

**Job Title: Clinical Andrologist / Embryologist****Band: 7****Responsible to: Lead Clinical Embryologist and Consultant Clinical Embryologist** **Department: Assisted Conception Service** **Directorate: Women’s & Children’s Health** |
| **2. JOB PURPOSE** |
| The Clinical Andrologist / Embryologist provides andrology services for the assessment and treatment of infertility including: semen analysis and sperm preparation techniques, in vitro fertilisation (IVF), intracytoplasmic sperm injection (ICSI), assessment of fertilisation and other micromanipulation techniques. The Clinical Andrologist / Embryologist also oversees the day to day management of recruitment, assessment and screening of donors, authorisation and clinical interpretation of semen analysis, sperm cryopreservation and surgical sperm retrieval, all within the regulations defined by the Human Fertilisation & Embryology Authority. The division of management of donation programme and other duties will be flexible to meet the needs of the service.The Clinical Andrologist / Embryologist will also:* Interpret and report highly complex and specialised patient treatment and diagnostic procedures
* Work autonomously within professional guidelines, supporting the Consultant Embryologist in delivery of service
* Implement service developments and support specialist research within the ACS laboratory, as directed by the Consultant Clinical Embryologist
* Provide support in the day to day management of the laboratory
* Participate in the scheduling of annual maintenance and servicing of all high value and specialised equipment required for the provision of IVF treatment and undertake validation as required
* Provide expert training of Trainee Clinical Scientists and support staff
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| **3. ROLE OF DEPARTMENT** |
| The Assisted Conception Service (ACS) at Glasgow Royal Infirmary was established in 1984 and provides a comprehensive range of infertility treatment for all Health Boards in the West of Scotland. In addition, self-funding patients can be treated through the Reproductive Medicine Unit of the University of Glasgow. The ACS facilities were part of a major refurbishment programme in 2014 which increased the overall capacity of the ACS, and provides state of the art laboratory equipment and clinical procedures to achieve the highest standard of fertility service to all patients.The Unit is licensed by the Human Fertilisation and Embryology Authority (HFEA) and provides semen analysis, surgical sperm retrieval (SSR), sperm cryopreservation, ovulation induction, intrauterine insemination (IUI), in vitro fertilisation (IVF), intracytoplasmic sperm injection (ICSI), embryo cryopreservation, donor insemination, oocyte donation, oocyte cryopreservation, and preimplantation genetic testing (PGT). The ACS Scientific Service delivers approximately 1100 cycles of IVF/ICSI, 600 frozen embryo transfers and 300 IUIs with both partner’s and donor sperm annually. The Unit obtained an HFEA licence for clinical PGT in 2001 and was awarded National Service Division funding to provide a Scotland wide PGT service in April 2005. The ACS delivers approximately 75 cycles of PGT annually.  |
| **4. ORGANISATIONAL POSITION** |
| Clinical Services ManagerClinical DirectorLead Nurse/MidwifeLead Consultant for ACSConsultantClinical Embryologistand HFEA PRQuality ManagerLeadClinical Embryologist**Clinical Embryologist/ Andrologist****(this post)**Healthcare Science Support WorkerScientific Admin AssistantEmbryology PractitionersTrainee Embryologists |
| 1. **SCOPE AND RANGE**
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| The Clinical Andrologist / Embryologist works as part of the scientific team and supports the Lead Clinical Embryologist and Consultant Embryologist in providing a high standard of laboratory service. In addition to laboratory duties, the post holder has day to day responsibility for the sperm donation programme and surgical sperm retrieval. The post holder will also play a key role in audit and quality within the ACS service. The post holder is expected to provide weekend cover for the embryology and andrology laboratories on a rotational basis and is expected to apply appropriate scientific knowledge, skill and expertise at the required professional level for the provision of a high quality service to patients. The Clinical Andrologist / Embryologist operates within a multi-disciplinary team including Consultant Gynaecologists, Nursing, and Counselling and Administrative staff. The Clinical Andrologist / Embryologist has a role in supervision and training of junior embryologists and in assisting the Consultant Embryologist and Lead Clinical Embryologist in developing laboratory policies and maintaining high standards through regular review of Standard Operational Procedures. |
| **6. MAIN TASKS, DUTIES AND RESPONSIBILITIES** |
| **Clinical Andrology and Embryology**To perform laboratory duties including:* Perform all diagnostic and therapeutic procedures associated with Andrology in GRI ACS. This will include basic semen analysis (including internal and external quality control) in accordance with World Health Organisation (WHO) standards.
* Preparation of fresh and cryopreserved semen for IVF, ICSI and IUI using discontinuous gradient or washing techniques as appropriate
* Assessment, preparation and cryopreservation of epididymal and testicular biopsied sperm
* Preparation, assessment and injection of oocytes using ICSI
* Handling and manipulation of oocytes and embryos
* Assessment of fertilisation and embryo development
* Communication with patients about aspects of their treatment including fertilisation results and embryo survival after thaws. This may include giving bad news and arranging follow up with clinical staff
* Cryopreservation of sperm prior to cancer treatment
* Responsible for management and coordination of gamete donor programme
* Responsible for the import of donor sperm and the associated administrative duties
* To ensure the correct identification and disposal of samples with expired consent ensuring that all methods of patient contact have been adhered to.
* Completion and computation of records in accordance with the Human Fertilisation and Embryology Authority requirements
* Consultation with medical and nursing staff during assessment of ongoing and past treatment cycles
* Responsible for SSR service including provision of relevant information and consenting of patients
* Preparation and cryopreservation of surgically retrieved sperm

**Other Duties and Responsibilities*** To perform all duties in accordance with the Human Fertilisation and Embryology Act and the Code of Practice issued by the Human Fertilisation and Embryology Authority and Association of Clinical Embryologists
* To perform all duties effectively and to the highest possible standard, with meticulous attention to detail
* To take part in the rota of duties, including on-call and weekend work, and to work flexibly to perform tasks as and when necessary including ‘out of normal working hours’
* To ensure that appropriate written consent is obtained for all embryology, andrology, research and training procedures
* To inform patients of the progress of their treatment, including the number of eggs which have fertilised normally and the outcome of thaw procedures
* To counsel patients regarding implications of treatment options to ensure accurate information is given and informed choices made
* To give andrology and scientific advice to clinical colleagues as required
* To collect accurate and complete data for laboratory procedures and to critically analyse and audit laboratory performance
* To participate in daily meetings and weekly review meetings as required
* To support the Lead and Consultant Clinical Embryologist in the ongoing training and professional development of junior scientific staff
* To participate in a recognised Professional Development scheme such as that operated by the Association of Reproductive and Clinical Scientists
* To perform required administrative duties associated with the efficient running of the scientific service
* To take a lead role in audits and the quality management system

**Donor Recruitment*** To lead local egg, sperm and embryo donation campaigns and support national campaigns
* To lead recruitment, screening and assessment of donors
* To coordinate donor pathways and undertake provision of information and consent
* To represent GGC at national level for donor recruitment
* To coordinate transport and receipt of donor samples between NHS Scotland central storage
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| **7a. EQUIPMENT AND MACHINERY** |
| Laboratory Equipment* + Incubators – controlling pH, temperature and humidity
	+ Independent monitoring equipment for incubators (gas analysers and thermocouples)
	+ Safety cabinets – providing sterile environment for embryo culture
	+ Temperature control units for microscopes, bench-tops and safety cabinets – various models
	+ Microscopes – stereo, inverted and compound
	+ Micromanipulation equipment for ICSI and embryo biopsy
	+ Laser equipment – used to ‘drill’ holes in the outer coating of embryos during PGT (fitted to microscope and under computer control)
	+ Alarm and autodial equipment fitted to dewars containing cryopreserved gametes and embryos
	+ Oxygen monitors for areas where liquid nitrogen is used
	+ Liquid nitrogen storage vessels
	+ Gas regulator equipment and changeover units
	+ Cameras – still and video
	+ Embryo manipulation equipment – specialised hand held units
	+ Pipetting devices – various
	+ Heat sealing equipment - used during preparation for cryopreservation

Computer Equipment and Programmes* + Computers and printers
	+ Specialist commercial database for all aspects of treatment, embryology and outcomes
	+ Access and Dbase programmes
	+ Specialist image analysis software for embryology
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| **7b. SYSTEMS** |
| The post holder should adhere to the regulations set out in HFEA code of practice and all professional guidelines set out by the Association of Reproductive and Clinical Scientists.The post holder should adhere to all local polices as defined by NHS Greater Glasgow & Clyde.  |
| **8. DECISIONS AND JUDGEMENTS** |
| The daily organisation of the job is determined by clinical workload. The Clinical Andrologist / Embryologist must prioritise and organise their work to meet the needs of the Department. This includes the need to work flexibly and to perform tasks as and when necessary including ‘out of normal working hours’ and weekends.Typical Judgements* To suggest changes to patient treatment to offer the highest chance of successful treatment
* To provide expertise scientific input to management of male factor infertility
* To assess suitability of gametes donors
* Reorganising junior staff duties in the event of unexpected workload pressures
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| **9. COMMUNICATIONS AND RELATIONSHIPS** |
| The post holder works as part of a multi-disciplinary team within the Assisted Conception Service. On a daily basis there are scheduled meetings to discuss patients undergoing treatment; embryology, medical, and nursing staff participate. A weekly review of patients who have completed treatment has additional input from administration staff. Ad hoc discussions regarding individual patients are conducted by telephone.The post holder is expected to play a part in in-house teaching, information and research presentations. All embryology and andrology staff have daily contact with patients, both in person and by telephone and are responsible for:* informing patients how many eggs have successfully fertilised after IVF and ICSI treatments
* giving the results of hormone assays and arranging subsequent tests
* telling patients when, and how many embryos will be thawed during frozen / thawed cycles
* informing patients how many embryos have survived thawing
* informing patients whether embryos or semen samples are suitable for cryopreservation or must be discarded
* providing prospective gamete donors information on recruitment, screening and assessment
* making appointments for patients to produce semen samples

The above tasks may involve giving bad news, for example, all eggs have failed to fertilise or a prospective sperm donor is not suitable to progress with donation. The andrologist / embryologist must give this information sensitively and ensure that distressed patients/donors have understood the information given. Dealing with men and adolescents who have recently been diagnosed with cancer can be very emotionally demanding, especially when their illness results in failure to produce a semen sample with the potential to allow them to have a family in the future. Andrologists / Embryologists liaise with:* the Urology department, theatre and ward prior to surgical sperm retrieval
* hospital trades and external maintenance contractors
* other Licensed Centres to organise the transfer of cryopreserved sperm, eggs and embryos
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| **10. PHYSICAL, MENTAL, EMOTIONAL AND ENVIRONMENTAL DEMANDS OF THE JOB** |
| Clinical embryology and andrology is a highly specialised profession requiring prolonged periods of intense concentration and the precise manipulation of gametes and embryos, in a controlled environment, using microscopes and micromanipulation equipment. Tasks include:* the identification and movement of eggs during the retrieval procedure
* preparation of semen samples
* removal of cells from eggs prior to ICSI and before fertilisation assessments
* performing ICSI – selection and immobilisation of a single sperm, correct orientation of an egg and injection of the sperm into the egg. The time taken for this process is dependent on the number of eggs and sperm quality.
* detailed assessments of embryo normality and quality
* sperm cryopreservation
* manipulation of ampoules and straws under liquid nitrogen
* handling hazardous materials e.g. body fluids and liquid nitrogen
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| **11. MOST CHALLENGING/DIFFICULT PARTS OF THE JOB** |
| Intellectually – maintaining quality within the IVF programme. Human embryo culture is one of the most sensitive systems in tissue culture and any deterioration may not be identified until a drop in pregnancy rates two to three weeks later. Emotionally – giving bad news to patients; failure of fertilisation may represent the last chance of having a familyPhysically – performing ICSI requires prolonged periods of mental concentration to ensure minimal chance of damage to patients’ gametesManagerially – increasing workload and regulatory burden without an equivalent increase in personnel. |
| **12, KNOWLEDGE, TRAINING AND EXPERIENCE REQUIRED TO DO THE JOB** |
| A Clinical Andrologist / Embryologist must have:* A recognised life sciences degree 2;1 or above and MSc or equivalent experience is essential.
* Post graduate qualification in Clinical Embryology or Andrology is essential
* Registration with the Health and Care Professions Council as a Clinical Scientist. Applicants working towards this registration may be considered
* Previous clinical embryology and andrology experience is essential
* ICSI experience desirable
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