#### Form JE 5



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| 1. JOB IDENTIFICATION |
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| Job Title: | Deputy Lead Clinical Embryologist |
| Responsible to (insert job title): | Lead Clinical Embryologist |
| Department(s): | Assisted Conception Unit, Ninewells |
| Directorate: | Women, Children and Families Division  |
| Operating Division: |  |
| Job Reference: | **Sc06-3341(REV24)** |
| No of Job Holders: | 1 |

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| 2. JOB PURPOSE |
| To support the Lead Clinical Embryologist to direct and manage the laboratory and participate in the provision of laboratory services for assisted conception treatments, together with diagnostic andrology and cryobanking of gametes / embryos, according to all relevant professional codes of conduct. To ensure that full and proper records are maintained in compliance with prevailing legislation, as well as participating in data analysis and audit.To provide specialist training in Embryology and AndrologyTo participate in research and developmentTo provide a professional expert advisory roleTo undertake the roles and responsibilities of the Lead Clinical Embryologist in their absence |
| **3. DIMENSIONS** |
| Provide expert guidance, advice, and support to laboratory staff in scientific matters. Identify any variation from accepted standards, protocols and policies and suggest appropriate corrective action.Co-ordinate scientific issues for the ACU, taking into account both local and national best practice.To support the Lead Clinical Embryologist and the Quality manager to manage and deliver regular focused audit of laboratory services and maintain a comprehensive audit calendar.Collaborate closely with Senior Clinical Scientists to ensure that new procedures and equipment are validated/verified correctly and implemented into service in line with departmental and organisational policies. Participate in service development initiatives, formulating and implementing processes and policies that maintain or improve quality.Act autonomously within accepted professional guidelines to achieve expected outcomes, under the management of the Head of Laboratory.Maintain a watching brief for new legislation, EQA (External Quality Control) and guidelines relating to quality and health and safety that will affect the ACU.Take responsibility for their own workload, offering advice, support and supervision to other members of the ACU Service. |
| 4. ORGANISATIONAL POSITION  |
| Unit Management GroupPerson responsibleLead Clinical Embryologist Clinical Team**Deputy Lead Clinical Embryologist (Post holder)**Clinical EmbryologistTrainee Embryologist Clinical Support Worker |
| 5. ROLE OF DEPARTMENT |
| Clinical300 IVF treatment cyclesAssociated activities: checking consents and screening status, scheduling and preparation for the procedure, oocyte collection, sperm preparation, insemination, fertilisation check, embryo grading and embryo transfer, cryopreservation of embryos in 35% of cycles including hyperstimulated cycles. 2 patient consultations per cycle150 ICSI treatment cyclesAssociated activities: checking consents and screening status, scheduling and preparation for the procedure, oocyte collection, sperm preparation, cumulus stripping, ICSI procedure, fertilisation check, embryo grading and embryo transfer, cryopreservation of embryos in 25% of cycles including hyperstimulated cycles. 3 patient consultations per cycle.150 embryo thaw cyclesAssociated activities: checking consent, scheduling and preparation for the procedure. 40 Surgical Sperm Retrievals, including diagnostic proceduresProcessing and examination. Cryostorage of recovered sperm.80 Sperm freeze procedures for oncology patients25 Sperm freeze procedures for treatment back-up30 Sperm freeze procedures from sperm donors180 Sperm Analysis procedures40 Donor Sperm preparation for Intrauterine insemination procedures60 Husband Sperm preparation for Intrauterine insemination proceduresAdministrationCryostorage: 240 embryo storage letters, plus 50 recorded delivery letters that are required to be traced.320 sperm storage letters, plus 30 recorded delivery letters that are required to be traced.FinancialTo support the Lead Clinical Embryologist to ensure best use of monies that are made available for laboratory services in ACU. Amount varies, as set by tariff. |
| 6. KEY RESULT AREAS |
| **Legal responsibilities - continuous*** Works unsupervised within the Human Fertilisation and Embryology (HFEA) Code of Practice, Association of Clinical Embryologists (ACE), British Andrology Society (BAS) and British Fertility Society (BFS) national guidelines, COSHH and OHSAS regulations and Standard Operating Procedures
* Has thorough knowledge of, and ensures compliance with, the statutory requirements of the Human Fertilisation and Embryology (HFEA) Code of Practice and HF&E Act (1990)
* Ensures informed written consent is complete before licensed procedures are commenced
* Maintains Health Professions Council registration.

Managerial responsibilities * Membership of the Unit Management Group, representing the laboratory in matters of service planning and development, finance and setting of tariffs and policy making
* Provision of embryology and scientific services to the unit; extent of responsibility and authority to be discussed periodically and agreed with the post holder
* Day to day supervision of the embryology laboratory, ensuring the maintenance of the highest standards of care and service, including development of standard operating procedures.
* Planning and implementation of new laboratory services, or development of existing services, in line with unit strategies and objectives and quality assurance of all laboratory services
* Deployment of embryology staff, including organisation of rotas and allocation of workload to ensure adequate cover at an appropriate level at all times – includes out of hours working and provision of telephone support
* Organisation of and participation in an emergency on call rota to ensure that in the event of an out of hours activation of the alarm system triggered by a failure of a culture incubator, a cryostorage dewar or reservoir and resultant/ liquid nitrogen release, there is immediate initiation of appropriate emergency procedures
* Prioritisation of laboratory activities
* Supervision of techniques and procedures and deviation from standard operating procedures.
* Ensuring appropriate laboratory services are provided to accredited standards, facilitating the provision of licensed assisted conception treatments, namely I*n Vitro Fertilisation* (IVF) Intra-Cytoplasmic Sperm Injection (ICSI) Intra-Uterine Insemination (IUI) and including gamete and embryo cryostorage
* Ensuring that samples from patients screened for blood-borne viruses are separated from those from un-screened patients, in accordance with the HFEA Code of Practice.
* Carrying out wishes of the patient or couple regarding their frozen samples, i.e. continue to store the samples, arrange for the samples to be used, or thaw them and allow them to perish.
* Where the consent for storage has expired, thawing and perishing of embryos and sperm in accordance with the HFEA Code of Practice
* Coordination of microbiological monitoring of the laboratory, liaising with QA pharmacists
* Maintenance of financial records for laboratory consumables, overseeing stock control and ordering
* Overseeing equipment service contracts
* Maintaining and improving the quality of the service through audit and the quality management system, troubleshooting and implementing corrective measures
* Management of sperm availability including recruitment of sperm donors, management of stocks of donor sperm, management the waiting list for IUI with donor sperm and buying in donor sperm from other licensed centres when required.
* Export of embryos and sperm to other centres, both within the UK and internationally, when requested by patients and importing embryos and sperm from other UK centres, again on patient request.
* Provision of support, training and professional development of embryology team members including supervision of staff undertaking postgraduate qualifications (Certificate and Diploma) in Clinical Embryology and pre and post registration (Health Professions Council) training
* Participation in investigation on complaints.
* Ensuring adherence to NHS Tayside policies on Health & Safety and Adverse Incident Management

**Clinical Responsibilities – 60-70% of time*** Development of embryology procedures
* Performance of all aspects of laboratory procedures, working to standard operating procedures and Health and safety legislation, for HFEA licensed treatments and other andrology procedures necessary to provide a comprehensive assisted conception service, namely but not exclusively: -
	+ Microscopic gamete identification and culture
	+ Microscopic semen analysis and preparation for treatment (IUI, IVF, ICSI including the highly skilled preparation of surgically recovered sperms)
	+ ICSI (gamete micromanipulation) and related procedures
	+ IVF insemination
	+ Detailed microscopic assessment of fertilisation
	+ Embryo culture
	+ Microscopic embryo grading and selection for embryo transfer and cryopreservation
	+ Sperm and embryo cryopreservation
* Completion of detailed and accurate records of all laboratory activities
* Provision of information to patients regarding the progress of their treatment, including numbers of eggs fertilising and timing of embryo transfer, where necessary including discussing changes in treatment options (e.g. based on semen quality) and imparting bad news and arranging follow-up appointments with medical staff.
* Discussion with referring clinicians, includes interpretation of results or embryology data and advice on further management, drawing upon scientific literature when required.

**Data Collection, Audit and Research Responsibilities*** Collection and maintenance of laboratory data as part of the unit’s clinical database
* Audits of cryopreserved material, including gametes and embryos as part of HFEA requirements i.e. Annual audit of all material in storage, each sample being checked and witnessed by a second embryologist and samples in storage being reconciled with the paper record. A written report must be provided to the HFEA on these findings and any identified issues acted upon.
* Participation in regular audit meetings and clinical reviews
* Provision of support to research staff in managing limited supplies of gametes and embryos donated for use in research projects, ensuring all donations into the research programmes have the appropriate consent
* Participation in, and where appropriate, leadership of the unit’s research and audit programmes.

To support NHS Tayside values of quality, teamwork, care and compassion, dignity and respect, and openness, honesty and responsibility through the application of appropriate behaviors and attitudes.**Responsibility for Records Management**All records created in the course of the business of NHS Tayside are corporate records and are public records under the terms of the Public Records (Scotland) Act 2011. This includes email messages and other electronic records. It is your responsibility to ensure that you keep appropriate records of your work in NHS Tayside and manage those records in keeping with the NHS Tayside Records Management Policy and with any guidance produced by NHS Tayside specific to your employment. |
| 7a. EQUIPMENT AND MACHINERY |
| The post holder will use:* Complex expensive equipment: - microscopes and micromanipulators used for gamete and embryo assessment and manipulation.
* Embryo programmable freezer and storage inventory.
* Gassed culture incubators.
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| **7b. SYSTEMS** |
| The post holder will use:* Standard operating procedures
* Quality Management Systems.
* Electronic databases
* Email
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| 8. ASSIGNMENT AND REVIEW OF WORK |
| * Working autonomously, the post holder will make decisions and judgments based on complex and highly specialised information and data. They will be responsible for analysing complex data, planning and delivering solutions to problems as they arise or as anticipated. Although accountable to the Head of Laboratory, they will make their own decisions regarding the most efficient functioning of the Quality Management and Health and Safety System for the ACU.
* They will be responsible for planning and prioritising their own workload and delegating tasks to other members of the Service. There will be a requirement to mentor and review the work of others.
* The post holder will be required to develop creative and pragmatic solutions to ensure that the ACU complies with accreditation standards and best practice.
* The Deputy Lead Clinical Embryologist must make evidence-based decisions on whether a particular course of action has proved effective and devise and implement strategies to maintain and improve quality and health and safety.

The post-holder must use their judgment to decide when and how to raise issues that may prevent the ACU from meeting quality and health and safety standards with senior managers, including managers from elsewhere within NHS Tayside. |
| **9. DECISIONS AND JUDGEMENTS** |
| No direct supervision, working with great level of discretion and autonomy.Interpretation of guidelines such as ACE accreditation standards, HFEA Code of Practice, EU directives.Working to broad range of standard operating procedures; freedom to devise and agree alternative procedures when parameters deviate from standard criteria. Responsible for own decisions and advice to junior staff and subsequent decisions of junior staff.Propose changes to practices and procedures. Developing Unit and laboratory policies and their implementation. Judgment to apply appropriate treatment, based on assessment of gamete quality. This may result in a change to the treatment plan that is discussed and consented to with the couple, and the consultant informed. Embryo selection for transfer and embryo selection for cryostorage. |
| 10. MOST CHALLENGING/DIFFICULT PARTS OF THE JOB |
| Prioritising supervision and management responsibilitiesTechnical proficiency including the manipulation of surgically recovered sperms.Communicating adverse/poor outcome events to patients/couples, including clinical incidents.Balancing service provision, multitasking with frequent interruptionsEnsuring scientific discipline and scientific interpretation of embryology/Andrology is respected within the clinical environment. |
| **11. COMMUNICATIONS AND RELATIONSHIPS** |
| Clear timely communication with all members of the clinical team within the IVF unit, discussing, advising and challenging clinicians on the best treatment option using reasoned argumentDelivery of highly sensitive information to patients, including oncology patients, and staff. Updating patients with respect to all aspects of embryology and andrology including gamete and embryo quality, changes in treatment options, fertilisation outcome and frequently delivering information concerning adverse outcome such as poor sperm parameters, failed fertilisation, poor embryo quality, failed embryo thaw etc. (including the arrangement of follow-up appointment with medical staff). It is routine to speak to patients in person although fertilisation results are given over the phone. If fertilisation has been unsuccessful treatment is terminated. Likewise following a failed embryo thaw or failure to isolate sperm following surgical sperm recovery, treatment is halted. This may be unexpected and often results in patients seeking an explanation. Communication of such highly sensitive and complex issues with patients requires the embryologist to demonstrate a developed sense of empathy, not only to cope with the distress experienced by patients but also the ‘blame factor’ and occasional hostile reaction.Communication with Urology specialists to arrange diagnostic procedures that require specialist skills provided by embryologist/andrologistsTeaching/training of junior staff. Teaching as required: - Embryology/andrology updates to Nursing team and Sub-specialty Clinical trainee.Supervision and guidance of research projects for undergraduate medical students.Delivery of formal presentations to patients (as many as 30 couples) at a ‘patient information meeting’ (presented by clinical embryologist on a rotational basis, currently resulting in twice per year per post holder)Delivery of scientific presentations, based on research and/or data analysis, to a local audience of up to 30 people, and at national/international meeting to an audience of up to 500 people.Development and periodic review of patient information leaflets regarding embryology laboratory procedures, communicating the embryology aspects of the treatment and helping to improve patient understanding.Liaison with Estates and Medical Physics departments for equipment repair and maintenance etc, OHSAS and Tayside Fire Service for planning of emergency procedures.Attendance at the Scottish Embryologists meetings, and the Scottish Infertility Group (SIG) meetings twice per year; SIG is a group of senior staff representing each discipline in each of the Scottish assisted conception units.Informing, in the event of adverse incidents, the patient, Tayside Person Responsible to the HFEA, the patient’s consultant and the HFEA of the event, including a detailed written report.In the absence of the Lead Clinical Embryologist, represent NHS Tayside ACU at local and national meetings. |
| **12. PHYSICAL, MENTAL, EMOTIONAL AND ENVIRONMENTAL DEMANDS OF THE JOB** |
| **Physical:*** Highly specialised embryology skills such as handling and manipulation of gametes and embryos requiring developed dexterity; developed microscopic observational skills to score sperm parameters, normal fertilisation and embryo quality.
* Highly developed micromanipulation skills to perform ICSI (Intra-Cytoplasmic Sperm Injection of human eggs) results of which are audited for assessment by the regulator, the HFEA.
* Embryology activities require periods of prolonged and intense concentration of up to two hours per procedure during which speed and precision are crucial. For example: -
* An oocyte retrieval theatre procedure takes an average of 20 minutes (plus 10 minutes preparation and post procedure cleaning) during the procedure the male partner is usually in attendance and requires an explanation and commentary of the procedure in addition to the dialogue with the clinician performing clinical procedure. During this it is crucial to stay focused on the microscopic examination of the recovered samples. Average of one morning per week.
* Sperm preparation per sample may take 45 minutes including patient identification, when allocated to sperm preparation the duration of this task may span over a morning. Average of one day per week, with some multitasking.
* An ICSI treatment cycle will take 3-4 hours, taking account of patient consultation, surgical sperm preparation (where required), enzymatic/mechanical removal of cumulus cells, isolation of individual sperms and injection of each egg with a sperm.
* Fertilisation checks take an average of 20 minutes per procedure and require intense concentration, followed by follow up of the information by ‘phone to the patient. This will average two hours per week.
* Embryo grading requires concentration for 5-10 minutes per treatment cycle, with an additional 20 minutes if embryos are to be frozen and stored. Average of one hour per week.
* Each embryo transfer will take an average of 45 minutes including the patient consultation and clinical procedure. 4-5 performed by each embryologist per week.
* The need to perform embryo transfers in an awkward position.
* Data management requires 4 - 5 hours at the computer per week
* Laboratory maintenance, necessitating the handling of liquid nitrogen (on average twice per week) maintenance of equipment (weekly) and replacement of gas cylinders (bimonthly)

**Mental:*** Maintaining knowledge of current developments through literature search.
* Assessment and interpretation of clinical results, and performance indicators and develop ideas to improve laboratory function/practice.
* Development of service evaluation, audit and troubleshooting.
* Frequent requirement for prolonged periods of concentration, often interrupted by juniors or clinical staff requiring specialist advice or interpretation of results.

**Emotional:*** There is an occasional need to challenge clinical or managerial opinions/decisions.
* Frequent experience of imparting information to a couple regarding adverse treatment outcome in terms of fertilisation, embryo quality or failed thawed embryos. Each post holder would expect to experience one of these events, on average, per week.

**Environmental:*** Prolonged periods at a microscope using micromanipulation instruments.
* Working with body fluids; semen and follicular fluid.
* Working with samples from patients with a known Blood Borne Virus.
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| 13. KNOWLEDGE, TRAINING AND EXPERIENCE REQUIRED TO DO THE JOB |
| * B.Sc. in life science
* Postgraduate (ACE) certificate and diploma in clinical embryology
* Extensive experience post clinical registration in embryology
* MSc in Reproductive Embryology, or working towards
* ICSI licence and/or embryo biopsy licence
* Member of the Association of Clinical Embryologists
* Fellowship of the Royal College of Pathology, or working towards
* Registration with the Health Professions Council (HPC) as a Clinical Scientist
* Participation in a Continuing Professional Development Scheme, administered by the ACE to maintain HPC registration and satisfy QMS.
* High level of competence in all highly specialised embryology skills
* Thorough knowledge and understanding of the HF&E Act (1990) and the HFEA Code of Practice
* Commitment to life-long learning and ongoing professional development
* Knowledge of Health and Safety legislation and COSHH, and employment rights
* Substantial leadership qualities and experience, able to gain and hold the respect of the multi-disciplinary team.
* Must have knowledge of team working, team building and maximizing the team contribution to achieving agreed team objectives.
* Planning and organisational skills
* Teaching, presentation and facilitation skills training
* Computing skills
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| **14. JOB DESCRIPTION AGREEMENT** |
| A separate job description will need to be signed off by each job holder to whom the job description applies.Job Holder’s Signature:Head of Department Signature: **(I confirm this Job Description accurately reflects the duties and** **responsibilities of the postholder and does not impact upon any other** **postholders role)**  | Date:Date: |