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Standards for Fertility Centers

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Health Regulation Sector

Dubai Health Authority

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INTRODUCTION

The Health Regulation Sector (HRS) plays a key role in regulating the health sector. HRS is mandated by the Dubai Health Authority (DHA) Law No. (6) of the year (2018) with its amendments pertaining to DHA, to undertake several functions including but not limited to:

- Developing regulations, policy, standards, guidelines to improve quality and patient safety and promote the growth and development of the health sector.
- Licensure and inspection of health facilities as well as healthcare professionals and ensuring compliance to best practice.
- Managing patient complaints and assuring patient and physician rights are upheld
- Governing the use of narcotics, controlled and semi-controlled medications.
- Strengthening health tourism and assuring ongoing growth.
- Assuring management of health informatics, e-health and promoting innovation.

The Standard for fertility centers aims to fulfill the following overarching Dubai Health Sector

Strategy 2026:

- Pioneering Human-centered health system to promote trust, safety, quality and care for patients and their families.
- Make Dubai a lighthouse for healthcare governance, integration and regulation.
- Strengthening the economic contribution of the health sector, including health tourism to support Dubai economy.





EXECUTIVE SUMMARY

The purpose for the standard for fertility centers is to regulate and ensure high-quality standard of care provided in fertility centers. The standards have been developed in alignment with the enforced UAE federal legislations and local DHA regulations released, which include but not limited to:

- Ministerial decision No. (117) of 2024 Concerning Medical and Technical Healthcare Professionals Required in Fertility Centers.
- Ministerial decision No. (115) of 2024 Concerning Quality Control Measures in Fertility Centers.
- Federal Law by Decree No. (17) of 2023 Amending Some Provisions of Federal Law No. (7) of 2019
 regarding Medical Assistance in Reproduction.
- Federal Law by Decree No. (18) of 2023 Amending Some Provisions of Federal Law No. (4) of 2016
 regarding Medical Liability.
- Federal Law by Decree No. (49) of 2023 Regulating the Use of the Human Genome.
- Ministerial decision No. (236) of 2022 Concerning Records of Operations in Assisted Reproduction Centers.
- Ministerial Decision No. (235) of 2022 Concerning Criteria for Evaluating Assisted Reproduction Centers.
- Ministerial Decision No. (233) of 2022 Concerning Required Medical Equipment and Devices in Assisted Reproduction Centers.
- Ministerial Decision No. (21) of 2022 Concerning the Approval of The Annual Report Template for Assisted Reproduction Centers.
- Ministerial Decision No. (101) of 2022 Concerning the Amendment of the Unified Healthcare





Professional Qualification Requirements (PQR).

- Ministerial Decision No. (134) of 2021 Concerning the Identification of Medical Assisted Reproductive Technologies.
- Ministerial Decision No. (51) of 2021 Concerning the Health Data and Information Which May be Stored or Transferred Outside the Country.
- Ministerial Decision No. (14) of 2021 Concerning the Patient Rights and Duties Charter.
- Cabinet Decision No. (64) of 2020 Concerning the Executive Regulations of Federal Law No.

(7) of 2019 Regarding Medical Assistance for Childbearing.

- Cabinet Decision No. (32) of 2020 Concerning Federal Law no. (2) of 2019 on Information and Communication Technology in the Health Field.
- Federal Law by Decree No. (7) of 2019 Concerning Assisted Reproduction.
- Federal Law by Decree No. (4) of 2016 on Medical Liability.
- DHA Pharmacy Guidelines.
- DHA Policy for Clinical Privileging.
- DHA Policy for Clinical Trials.
- DHA Policy for Clinical Laboratory Accreditation.
- DHA Policy for Collection and Cryopreservation of Oocytes.
- DHA Policy for Communicable Disease Notification.
- DHA Policy for Emergency Medication.
- DHA Policy for Health Data Quality.
- DHA Policy for Health Informational Assets Management.





- DHA Policy for Health Screening and Immunization of Healthcare Professionals.
- DHA Policy for Role and Responsibilities of Medical Director.
- DHA Policy for Patient Referral and Interfacility Transfer.
- DHA Standards for Clinical Laboratory Services.
- DHA Standards for Medical Equipment Management.
- DHA Standards for the Management of Mortality and Morbidity in Health Facilities.
- DHA Standards for Sentinel Events Notification and Management in Health Facilities.

The standard will reflect various important chapters of which are licensing requirements of the fertility center, terms and condition for the medical assisted procedures, approved Assisted Reproductive Technology (ART) procedures, genetic testing and other crucial process provided within the standard for guided implementation. The standard for fertility centers was developed in alignment with the best global applicable practices and an intention of enhancing the quality of healthcare provided and placing Dubai as a destination for infertility treatment.





DEFINITIONS

Artificial Oocyte Activation: Activating the oocyte artificially (using Ca⁺² ionophore or other methods) as to increase the calcium in the oocyte and therefore improves the chance of fertilization.

Assisted Reproduction Technologies: Medical/ART Laboratory procedures that aid in conception, encompassing methods like in vitro fertilization (IVF) and artificial insemination to assist couples in achieving pregnancy when traditional methods are unsuccessful.

Assisted Zone Hatching (AZH): A procedure used to facilitate embryo hatching from its protective shell (zona pellucida) by creating a small opening in its zona as to help embryo implantation in the uterus and as a prerequisite for embryo biopsy procedure.

Embryo Biopsy: An assisted reproductive technique which involves the removal of one cell or few cells from an embryo for the purposes of genetic testing.

Embryo Culture Media Analysis: Evaluation of certain biomarkers in the media in which embryos are cultured.

Embryo Pre-implantation Genetic Testing: Removal of one or few cells from an embryo as to assess its chromosomal consistency with regards to carrier mutation status, karyotyping, Human Leukocyte Antigen (HLA) matching etc.

Concerned Parties: The person from whom sperm or unfertilized eggs are extracted from.

Conventional In Vitro Fertilization (IVF): The process of in vitro fertilization by manually placing sperm and oocyte together in a laboratory dish in the ART laboratory.

Embryo transfer: The last step in the process of assisted reproduction in which embryos are

placed into the uterus with the intent to establish a pregnancy.





Fertility Center: A licensed standalone center or unit within a facility where assisted reproduction procedures are carried out.

Frozen Embryo Transfer: Process in which frozen/thawed embryos are placed into the uterus with the intent to establish a pregnancy.

Frozen Oocytes Intracytoplasmic Sperm Injection: A procedure in which a single sperm cell is injected directly into the cytoplasm of a frozen/thawed oocyte.

Gamete and Embryo Freezing: A procedure that involves use of cryopreservation materials in order to maintain gametes and embryos in their original state while in storage for later use.

Gamete and Embryo Thawing: A procedure that involves thawing materials in order to recover previously frozen gametes/embryos.

Hyaluronan Based Media or Implantation Enhancing Medium: An embryo transfer medium with increased amount of Hyaluronan which may promote embryo implantation.

Intracytoplasmic Morphologically Selected Sperm (IMSI): A technique used to examine and select sperm using high magnification digital imaging microscope for microinjection into the oocyte.

Intra-cytoplasmic Sperm Injection (ICSI): A procedure in which a single sperm cell is injected directly into the cytoplasm of oocyte.

Intra-Uterine Insemination (IUI): Fertility treatment that involves placing sperm inside a women's

uterus to facilitate fertilization in-vivo.

Micro-surgical Testicular Sperm Extraction (Micro-TESE): A surgical procedure which involves the use of surgical microscope for extracting sperm directly from the testis.





Oocyte In Vitro Maturation (IVM): A procedure in which oocytes are collected and matured outside the body under special conditions, using special media in the ART laboratory.

Ovarian Tissue Cryo-preservation: A technique used for ovarian tissue cryopreservation as to

keep the tissues and organs in low temperature for future use.

Ovulation Induction: the stimulation of ovulation by use of medication.

Percutaneous Epididymal Sperm Aspiration (PESA): A surgical procedure which involves aspirating sperm from the epididymis using a surgical needle.

Preconception, preimplantation, prenatal genetic services: Genetic services related to fertility treatment like Preimplantation Genetic Testing, carrier mutation screening, karyotyping, HLA matching etc.

Polar Body Biopsy: An assisted reproductive technique which involves the removal of polar body from an oocyte as to assess its chromosomal status.

Surgical Correction for Obstructive Azoospermia: Microsurgical Reconstruction of the vas and/or epididymis or in cases of ejaculatory duct obstruction by transurethral resection of the ejaculatory duct.

Testicular Sperm Aspiration (TESA): A surgical procedure which involves aspirating tissue/sperm from the testes using a surgical needle.

Testicular Sperm Extraction (TESE): A surgical procedure in which a small portion of tissue is removed from the testicle and any viable sperm cells from that tissue are extracted for use in further procedures.

Varicocele Repair: A surgery performed to remove a varicocele to restore proper blood flow. A

varicocele is an enlargement of the veins within the scrotum.





ABBREVIATIONS

ART	:	Assisted Reproductive techniques
AZH	:	Assisted Zone Hatching
DHA	:	Dubai Health Authority
HEPA	:	High-Efficiency Particulate Air
HFG	:	Health Facility Guideline
HLA	:	Human Leukocyte Antigen
HRS	:	Health Regulation Sector
ICSI	:	Intra-cytoplasmic Sperm Injection
IMSI	:	Intracytoplasmic Morphologically Selected Sperm
IUI	:	Intra- Uterine Insemination
IVF	:	In Vitro fertilization
IVM	:	Oocyte In Vitro Maturation
МОНАР	:	Ministry of Health and Prevention
OPU	:	Ovum Pick-Up.
PESA	:	Percutaneous Epididymal Sperm Aspiration
PGT	:	Pre-implantation Genetic Testing
TESA	:	Testicular Sperm Aspiration
TESE	:	Testicular Sperm Extraction
voc	:	Volatile Organic Compounds





1. BACKGROUND

According to a report published by the WHO on infertility prevalence, which estimates about 17.5% of the adult population – roughly 1 in 6 worldwide- experience infertility, regardless of where they live and what resources they have, which portrays the urgent need to increase access to affordable and high-quality fertility care for those in need. Understanding the magnitude of infertility is critical for developing appropriate Standards, evidence-based interventions, monitoring the quality of fertility care, mitigating risk factors and consequences of infertility. The Health regulation sector in Dubai plays a crucial role in developing these standards in alignment with UAE laws and legislations to ensure safety and providing best practice services in fertility centers. Fertility centers offer a range of evidence-based services to help couples achieve pregnancy. These services are typically supported by scientific research and clinical evidence, offering services in fertility centers such as In Vitro Fertilization (IVF). IVF is a fertility treatment that involves the process of retrieving the eggs from the ovaries, then fertilizing with sperm in a laboratory setting, and transfer of embryos into the uterus where it can hopefully implant, by following structured steps by highly professional healthcare providers in order to increase the success of the procedure and lead to a healthy and successful pregnancy.

Healthcare professionals providing assisted reproductive techniques (ART) should consider the mental and physical strain the process may have on the couple and accommodate accordingly to ensure their health and safety throughout the journey.

ART has become one of the most commonly used and effective treatments for infertility.





Global applications and ongoing technological evolvement encourage research in this field as the outcomes of research studies will be used to enhance and improve success rates, enhance quality of care, reduce risks, update regulations and increase access to care, placing Dubai in a leading position for infertility treatment worldwide.





2. SCOPE

2.1. ART services in DHA licensed hospitals and standalone fertility centers.

3. PURPOSE

3.1. To assure provision of the highest levels of safety and quality ART services in Dubai Health Authority (DHA) licensed health facilities.

4. APPLICABILITY

4.1. DHA licensed healthcare professionals and health facilities providing fertility services.

5. **STANDARD ONE**: REGISTRATIONS AND LICENSURE PROCEDURES

- 5.1. Fertility centers seeking to provide fertility services must first obtain a license by submitting a form approved by the DHA with all the required documents attached in order to be licensed under the category of fertility center.
- 5.2. Register through the online facility licensing service (SHERYAN).
- 5.3. The fertility center is prohibited from providing any medical services until it obtains a license.
- 5.4. To complete obtaining the license, the following shall be required:
 - 5.4.1. Employ the authorized health and professional employees.
 - 5.4.2. Appoint a director for the fertility center.
 - 5.4.3. Submit a statement of the registered medical devices and equipment.
 - 5.4.4. Submit a certificate that the fertility center has passed the requirements of public safety and security and environment.
 - 5.4.5. Provide a copy of the policies and procedures approved by the facility to





receive and to treat patients.

- 5.4.6. Submit a copy of medical waste disposal contract.
- 5.4.7. Submit a copy of valid commercial license issued by the concerned authority.
- 5.4.8. Provide location details along with the Makani number.
- 5.4.9. The fertility center shall comply with the DHA Health facility Design Guidelines (HFG), employing requirements and layout/floor plan designed and approved by prequalified HF design consultants, with room and bed count specifications as per DHA HFG Part B- Health Facility Briefing & Design 210 – IVF Unit.
 - a. <u>https://eservices.dha.gov.ae/CapacityPlan/HealthFacilityGuidelines/</u> <u>Guidelines/Index/DHAHFG</u>
- 5.4.10. Pass DHA inspection.
- 5.5. As per the DHA policy for patient referral and interfacility transfer, all fertility centers must have a written agreement for patient referral and emergency transfer of critical cases to a nearby hospital setting. The transfer agreement shall detail the transfer plan/protocol of patients and meet the transfer timeframes for emergency patients with appropriate follow up plans for referred patients.
 - 5.5.1. In the case of request for frozen specimen transfer by the patient, the fertility center should guide patients to abide by the internal policies and procedures of the fertility center. The fertility center must fill the "Request of Frozen Specimen Transfer" form and submit to DHA. Refer to <u>Service</u>





Description (dha.gov.ae).

- 5.6. The fertility center shall have in place internal policies and procedures including but not limited to:
 - 5.6.1. policy for sample collection, storage, and transportations.
 - 5.6.2. Service Description and Scope of Services.
 - 5.6.3. Laboratory and diagnostic services policy that includes turn-around timeframes for reporting noncritical and critical results.
 - 5.6.4. Infection control policy to include management, prevention and surveillance in relation to patient, employees, infection control and frozen specimen safety.
 - 5.6.5. Reprocessing of reusable equipment, safe use of chemicals used for cleaning and disinfecting.
 - 5.6.6. Medication management and pharmacy services as per DHA Guidelines for Pharmacy.
 - 5.6.7. Narcotic Handling Policy which covers all the steps from ordering until discard to ensure that narcotics are not misused.
 - 5.6.8. Laundry and housekeeping services.
 - 5.6.9. Medical and hazardous waste management policy as per the Dubai Municipality (DM) Requirements.
 - 5.6.10. There should be an allocated medical waste storage and collection area that is well ventilated, temperature controlled, monitored and secured from public and patient access.





- 5.6.11. The medical waste storage and collection area shall be adequately labelled with a hazard sign to prevent unexpected entry from patients or the public.
- 5.6.12. Policy for sample collection, storage, sample transportations and the fate of non-mature collected samples.
- 5.6.13. Contingency plan in the case of emergency as to where the gametes/ embryos will be transferred to in agreement with the receiving facility with a clear exit strategy.
- 5.6.14. Patient assessment, acceptance, admission and referral criteria.
- 5.6.15. Patient belongings.
- 5.6.16. Patient education, communication and informed consent.
- 5.6.17. Patient health record, confidentiality and privacy as per DHA Policy for Health Information Assets Management.
- 5.6.18. Staffing plan, employee management and clinical privileging.
- 5.6.19. Violence against Staff/Zero Tolerance.
- 5.6.20. Clinical Audit including Quality, Performance Management and Learning System.
- 5.6.21. Incident reporting.
- 5.7. All fertility centers shall have a business continuity plan to ensure the center's services are uninterrupted.

6. STANDARD TWO: FERTILITY CENTER REQUIREMENTS

6.1. The fertility center must be accredited by a globally recognized accreditation body





that is approved by DHA within a period of three years.

- 6.2. Fertility center director shall assure the submission of an annual report to DHA as per monitoring requirements (Refer to Standard Eleven).
- 6.3. The Fertility center shall ensure the treatment environment is accessible and supports patient needs, safety, privacy and confidentiality for all patient groups.
- 6.4. Fertility centers shall abide by offering their services to all clients including people of determination.
- 6.5. The fertility center shall always have the appropriate equipment and qualified trained multidisciplinary healthcare professionals to perform the necessary diagnostics, patient assessments, management, surgery, resuscitations and stabilization as per this standard and regulations.
- 6.6. Availability of electronic medical records system as per DHA policy for Health Information Assets Management.
- 6.7. The ART lab should be accredited-by a recognized accreditation body that has specific ART lab standards as per DHA's clinical lab accreditation policy.
- 6.8. HRS must be informed and approve changes to existing or new services or staffing levels.
- 6.9. Fertility centers should have a contingency plan in the case of emergency or center closure as to where the gametes/embryos will be transferred to in agreement with the receiving facility, which should be included in their internal policies and procedures with proper documentation. In addition, all ART laboratories must have a clear exit strategy that includes a logical way to keep the storage tanks containing





the cryopreserved specimens safe during transfer.

- 6.10. Collective transfer of stored gametes to another facility as per contingency should be as follows:
 - 6.10.1. The fertility center which is closing down should ensure that in case of shutdown of the facility, proper process as per contingency plan is followed and DHA Process for Fertility Center Closure (refer to appendix 6). The closing facility should provide an official letter to DHA with detailed information about the closure of the center, expected closure timeframe, followed by comprehensive patient details and quantity of gametes stored and to be exported, defined frozen samples types of (oocytes/semen/embryos/tissue) and sample parameters.
 - 6.10.2. It is the responsibility of the closing fertility center to notify its patients regarding the transfer of the frozen samples, and the requirement to submit mandatory documents and essential medical records including repeating of investigations at the importing facility, and clearance of all outstanding dues related to storage of gametes.
- 6.11. The fertility center shall install and operate equipment required for the provision of proposed services in accordance with the manufacturer's specifications.
 - 6.11.1. Monitoring medical, electrical and mechanical equipment, visual inspections for apparent defects and maintenance by the competent entity with valid testing certificates as per DHA Standards for Medical Equipment





Management.

6.11.2. Assure medical equipment and devices are in place for emergency scenarios.

7. **STANDARD THREE:** HEALTHCARE PROFESSIONALS REQUIREMENT

- 7.1. All fertility centers shall have the required healthcare professionals in accordance with Ministerial decision No. (117) of 2024 Concerning Medical and Technical Healthcare Professionals Required in Fertility centers and Ministerial Decision No. (101) of 2022 Concerning the amendment of the Unified Healthcare Professional Qualification Requirements (PQR).
- 7.2. Required healthcare professionals include:
 - 7.2.1. The Medical Director: DHA licensed consultant in Obstetric and gynecologist specialized in Reproductive Medicine and Infertility or Reproductive Endocrinology and Infertility with minimum of 10 years of experience in fertility treatment.
 - 7.2.2. Minimum of one full time DHA licensed Specialist or Consultant obstetrics and gynecology specialized in Reproductive Medicine and Infertility or Reproductive Endocrinology and Infertility with minimum of 3 years of experience in fertility treatment.
 - 7.2.3. Minimum of one DHA licensed consultant or specialist urologist with andrology subspecialty or at least 2 years of experience in male reproductive health services which can be available inhouse or outsourced.
 - 7.2.4. Minimum of one full time DHA licensed consultant or specialist Anesthesiologist.





- 7.2.5. Laboratory director: full-time DHA licensed Embryologist with minimum of6 years of experience.
- 7.2.6. Minimum of two full time DHA licensed embryologist working under the supervision of the laboratory director.
 - i. The number of embryologists should reflect the number of cycles performed per year. As an approximate guide, clinics that perform up to 150 retrievals and/or cryopreservation cycles per year should always have a minimum of two qualified embryologists.
 - ii. The initial number will increase depending not only on the number of cycles, but also on the complexity of the procedures, techniques and tasks undertaken within the ART Lab.
- 7.2.7. DHA licensed Medical Laboratory Technologist with Andrology certification or at least 2 years of experience in andrology services which can be available inhouse or outsourced.
- 7.2.8. Minimum of one full time DHA licensed Anesthesia technologist or technician that corresponds to the minimum number of consultant or specialist Anesthesiologist in the fertility center.
- 7.2.9. Minimum of two full time DHA licensed Radiographer/Sonographer /Radiography technologist or technician.
- 7.2.10. Minimum of five, DHA licensed registered nurses of which include those experienced in operation rooms.
- 7.3. Inhouse or Outsourced healthcare professionals/ Services:





- 7.3.1. DHA licensed Genetic counsellor.
- 7.3.2. Psychologist.
- 7.3.3. Biomedical engineer
- 7.3.4. Central Sterile Services technician.
- 7.4. Additional Required Support Employees:
 - 7.4.1. Administrative and Financial manager.
 - 7.4.2. Customer Service.
 - 7.4.3. Medical Record Clerk.
 - 7.4.4. Storage Supervisor.
 - 7.4.5. Security Personnel.
 - 7.4.6. Cleaner.
 - 7.4.7. Quality Officer.
- 7.5. Only DHA licensed fertility specialists shall be permitted to perform assisted medical reproductive procedures.
- 7.6. Healthcare Professionals shall perform medical assisted reproduction procedures in accordance to UAE legislations.
- 7.7. The fertility center employees are responsible for maintaining confidentiality of information and treatments provided in the facilities and in accordance with the relevant UAE laws and decrees.
- 7.8. ART laboratory employees shall comply and refer to the DHA standards of Clinical Laboratory services when applicable.

8. STANDARD FOUR: FERTILITY CENTER MEDICAL DIRECTOR RESPONSIBILITIES





- 8.1. The medical director shall:
 - 8.1.1. Ensure fertility center's compliance to quality and safety control measures as per Ministerial Decision No (115) of 2024 Concerning Quality Control Measures in Fertility Centers for compliance to the quality and safety measures.
 - 8.1.2. Shall privilege the physician aligned with his/her education, training, experience and competencies as per DHA Clinical Privileging Policy.
 - 8.1.3. Ensure the fertility center has in place a quality management system which guarantees the highest form of care delivered and includes but not limited to the following:
 - 8.1.4. Oversee and monitor the quality of work at the fertility center, as specified in this standard and UAE legislations.
 - 8.1.5. Develop and raise the efficiency of all ART healthcare professionals working at the fertility center through continuous educational programs, specifically ART technologist (Embryologist), medical laboratory technologist (Andrologist/ ART Lab scientists), nurses, clinicians and anesthesiologist according to training programs approved by DHA.
 - 8.1.6. Maintain and ensure the privacy of health records of all procedures related to medically assisted reproduction.
 - 8.1.7. Set in place a risk assessment and management system.
 - 8.1.8. Set and overlook the implementation of internal policies and standard operating procedures before starting any treatment, provided that it





includes the standards and mechanisms of internal control, and monitoring Key Performance Indicators in accordance with the provisions of related law and its executive decree and any law or regulation issued in this regard.

- 8.1.9. Meet with fertility center's management team on regular basis to discuss KPI results, targets and action plans to improve the services.
- 8.1.10. Assure the accreditation of the fertility center and ART laboratory is carried out by an accreditor specialized in ART Accreditation.

9. STANDARD FIVE: MEDICAL EQUIPMENT AND DEVICES

- 9.1. All Medical equipment and devices must be monitored and controlled as per Ministerial decision No. (115) of 2024 Concerning Quality Control Measures in Fertility.
- 9.2. The laboratory must include all essential items required for ART services.
- 9.3. Materials used in laboratory construction, painting, flooring and furniture should be appropriate for clean room standards, minimizing Volatile Organic Compounds (VOC) release and embryo toxicity.
- 9.4. The fertility center must contain the following minimum medical equipment and devices that are approved by MOHAP, which includes the following:
 - 9.4.1. Refer to minimum equipment in ART laboratory and andrology unit **Appendix 1**.
 - 9.4.2. Refer to minimum machinery with preferred backup in case of emergency

Appendix 2.

- 9.4.3. Refer to minimum operating room equipment **Appendix 3**.
- 9.4.4. Refer to minimum additional equipment must be available in OT room Appendix 4.
- 9.4.5. UPS Generator.





- 9.5. Incubator numbers should be calculated according to incubator capacity and facility cycle numbers as culture conditions fluctuate by frequent opening of doors and can negatively impact gamete/embryo development and viability.
 - 9.5.1. Gametes and embryos should be conveniently distributed across incubators to minimize door openings.
- 9.6. Equipment must be adequate for optimal laboratory work, easy to disinfect and kept clean to avoid contamination.
- 9.7. All equipment must be validated as fit for its purpose and performance verified by calibrated instruments.
- 9.8. Equipment should preferably be CE-marked.
- 9.9. Gas cylinders should be located outside the laboratory, there should be an automatic change over system and sufficient cylinders stocked for immediate replacement. High purity gas and inline HEPA and VOC filters are highly recommended.
- 9.10. The fertility center shall maintain a copy of operator and safety manuals of all medical equipment and inventory list with equipment location. All Medical Equipment should be registered and documented properly in the inventory which will be updated every time a new equipment arrives prior to use. To follow the Standards for Medical Equipment Management.
- 9.11. Equipment validation, calibration, maintenance and repair must be documented and records retained.
- 9.12. Employ a biomedical engineer or maintain a service contract with a certified maintenance company to ensure safety, reliability, validity and efficiency of medical





devices and mechanical equipment.

- 9.13. Accepted ranges of use for all measured parameters should be determined and recorded. If measures are out of range, correction should be made and their effectiveness verified.
- 9.14. For every item of equipment, the instruction manual and the simplified instructions should be available.
- 9.15. Malfunctioning equipment and those under maintenance should be labelled out of use to avoid its usage and stored in a proper allocated area.
- 9.16. Critical equipment such as incubators, fridges, freezers and liquid nitrogen cryostorage units should be continuously monitored and equipped with alarm systems.
- 9.17. An automatic emergency backup power system must be in place for all critical equipment. e.g.: includes incubator, fridge, and freezers.
- 9.18. Cryopreservation storage units should be continuously monitored and equipped with alarm systems, detecting any out of range temperature and/or levels of liquid nitrogen (LN2).
 - 9.18.1. Personal low oxygen alarms are recommended as an additional security measure.

10. STANDARD SIX: MEDICAL ASSISTED REPRODUCTION PROCEDURES TERMS AND CONDITIONS/ PRE-REQUISISTES

10.1. The fertility center shall ensure that medical assisted reproduction is the most appropriate medical intervention after confirming that pregnancy through natural contact cannot happen naturally or due to medical indication, after ensuring adequate





time for allowing natural pregnancy was given.

- 10.2. A written consent from the spouses or concerned parties must be obtained in-person at the fertility center before every and any procedure including cryopreservation. Refer to DHA Guideline for Patient Consent and Federal Decree No. (17) of 2023 Amending Some Provisions of regarding Medical Assistance in Reproduction.
- 10.3. The fertility center must obtain all the mandatory documents from spouses and concerned parties before admitting the patient to start treatment as per the Federal Law No. (7) of 2019 and Decree No. (17) of 2023 Amending Some Provisions of regarding Medical Assistance in Reproduction.
- 10.4. Comprehensive Clinical Assessment by the concerned physician should be conducted before starting the treatment to ensure patient has no contraindications or risk factors and is fit for the procedure and medical journey.
- 10.5. The assisted reproductive techniques are specified and decided by the Ministry of Health and Prevention and listed in Standard Seven.
- 10.6. All healthcare professionals must work with extreme caution and abide by the internal policies and protocols when dealing with gametes during ART procedures.
- 10.7. The fertility center must abide by the law and regulation placed when conducting any assisted reproductive procedures, especially when dealing with the following:

10.7.1. Number of fertilized oocytes that were implanted.

- 10.7.2. Cryopreservation of fertilized and unfertilized oocytes and sperm for future use.
- 10.7.3. Agreement of both spouses on preserving the frozen fertilized oocytes,

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agreement of the concerned partied on preserving the frozen unfertilized oocytes and sperms.

- 10.8. Provision of medical assisted reproduction procedures is limited to physicians licensed in this field.
- 10.9. Centers must hold the highest controls when handling fertilized or unfertilized oocytes and frozen sperms, and provide the upmost caution and precaution to preserve them and prevent their use in unauthorized ways, such as exploitation, replacement, or mixing.

11. STANDARD SEVEN: APPROVED MEDICAL ASSISTED PROCEDURES

- 11.1. The number of times of oocytes (egg retrieval procedures) for the purpose of fertilization should not exceed six times per year per patient.
 - 11.1.1. Patient health risks such as poor responder patients and physician assessment must be taken into consideration.
- 11.2. Embryo transfer should not exceed two embryos at one time.
- 11.3. High risks patients and/ or patients with chronic disease that are associated with an increased risk of complications to the mother or fetus require a medical report from a specialized treating physician indicating the safety of fertility treatment before commencing the fertility treatment.
- 11.4. It is permissible to fertilize oocytes that are sufficient for multiple implantations, according to the conditions and controls determined by the executive decree.
- 11.5. The fertility center shall ensure the highest medical, administrative, safety and other accuracy measures when fertilizing a number of eggs for multiple implantation in order to prevent eggs from mixing with others or using them in ways beyond the





permissible procedures by providing the following:

- 11.5.1. A clear policy and procedure identifying the steps taken to preserve gametes and embryos.
- 11.5.2. A detailed process that will ensure the correct and approved steps taken to ensure traceability of the gametes and ensuring the time and place of collection.
- 11.5.3. A confirmatory report detailing the number of preserved gametes/ embryos mentioning the duration of time the gametes/ embryos will be preserved for.
- 11.5.4. A clear process for the separation of gametes/embryos of the viral positive parents from other gametes/embryos originating from viral negative parents.
- 11.6. Fertility centers are required to comply with main and associated procedures as per Ministerial Decision no. (134) of 2021 concerning the identification of medical assisted reproductive technologies. Refer to **appendix 5**.
- 11.7. Any procedures other than the approved procedures as per Ministerial Decision No. (134) of
 2021 including ART research procedures shall subjected to DHA approval. (Refer to Standard
 Ten: Research and Medical Trials)
- 11.8. Preservation and disposal:
 - 11.8.1. Fertilized eggs may be preserved, for a period of five years subject to extension for the same period upon on a written request by the spouses.
 - 11.8.2. Unfertilized eggs or frozen sperms may be kept for a period of five years, subject to extension for same period upon a written request by the

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concerned parties.

- 11.8.3. The fertility center shall have in place evidence of contacting the concerned parties or the spouses in the case of cryo-storage expiry with frequent reminders decided by the fertility center as per internal policies and procedures.
- 11.8.4. Fertilized eggs that were not implanted into the wife should be disposed (left without medical care until they naturally perish, unless concerned parties request otherwise) with clear documentation in the medical file in the following cases:
 - a. The death of one of the spouses.
 - b. Ending of the marital relationship.
 - c. Spouses request.
 - Expiry of the preservation period without a request for extension (after five years) with evidence of contacting the concerned parties.
 - e. Where there is no need for the rest of the fertilized eggs, or in cases where a legal or a medical reason prevents their implantation.
- 11.8.5. Unfertilized eggs and frozen sperms should be allowed to perish in the following cases:
 - a. The request of the concerned parties.
 - b. Expiry of the preservation period without a request for extension as per agreement and signed consent with evidence of contacting the concerned party.
- 11.9. It is prohibited to take samples of unfertilized or fertilized eggs or frozen sperms that

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were prepared inside the country and send them outside, or to bring these samples into the country if they were prepared outside, except in accordance with the controls and procedures determined by Cabinet Decision no. (64) of 2020 concerning the executive regulations of Federal Law no. (7) of 2019 regarding Medical Assistance for Childbearing.

- 11.10. Fertilized or unfertilized eggs or frozen sperms that were kept for the purpose of medical assisted reproduction may not be transferred from one fertility center to another except upon the consent of the spouses or concerned parties, and upon the approval of DHA.
 - 11.10.1. In the case of request for transfer, patients must abide by the internal policies and procedures of the fertility center. Facilities must fill the "Request of Frozen Specimen Transfer" form and submit to DHA. Refer to Service Description (dha.gov.ae).

12. STANDARD EIGHT: PATIENT SAFETY

- 12.1. To ensure patient safety, the fertility center shall ensure the availability of electronic medical records for patients is documented as per the DHA Policy for Health Data Quality with the following but not limited to:
 - 12.1.1. Patient Emirates I.D or Passport
 - 12.1.2. Medical history and family history
 - 12.1.3. Evidence of consultation, physical examination and confirmatory Laboratory diagnostics.
 - 12.1.4. No emerging issues since the last pre-op assessment.





- 12.1.5. Informed consent for the procedure.
- 12.2. The fertility center shall ensure providing the following to guarantee patient safety in the fertility center:
 - 12.2.1. Adequate employee qualifications, experience and levels for the procedure.
 - 12.2.2. Emergency training and preparedness of employees.
 - 12.2.3. Up to date medical records.
 - 12.2.4. Confirmation of functioning equipment and a backup plan.
 - 12.2.5. Fully functional and maintained medical devices.
 - 12.2.6. Control of concentrated electrolyte solutions.
 - 12.2.7. Assuring medication availability, accuracy and safe dosing as per DHA pharmacy guidelines.
 - 12.2.8. Infection control program,
 - 12.2.9. Single use of injection devices and insert of the IV line.
 - 12.2.10. Mandatory Emergency Medication.
 - a. Class C Emergency medication as per DHA Policy for Emergency Medication.
 - 12.2.11. Stopping the procedure in the event if the patient health deteriorates.
 - 12.2.12. Patient recovery plan.
 - 12.2.13. Falls management plan.
 - 12.2.14. International patient safety goals.
 - 12.2.15. Communication of employees before and during patient hand over.
 - 12.2.16. Patient post-op instructions, discharge and follow up.

13. STANDARD NINE: INFECTION CONTROL





- 13.1. There shall be written policies and procedures in the fertility center regarding infection control program to include management, prevention and surveillance.
- 13.2. Policy for infectious diseases screening notification and protocols healthcare professionals should abide by for patients who test positive for specific diseases such as COVID, and HIV, Hepatitis B and C as per DHA Policy for Communicable Diseases Notification.
- 13.3. Policy and procedures to ensure employee safety and prevent cross-contamination should be established to prevent the transmission of pathogens across the fertility center:
- 13.4. The infection control program shall support safe practice and ensure a safe environment for patients, health workers and fertility center visitors. The infection control system shall address factors related to the spread of infections among professional/patient and prevention which includes:
 - a. The clinical procedures for safe patient care and minimizing risks by /cleaning/disinfection/sterilization.
 - b. Use of standard precautions which are the infection prevention and control practices that must be used at all times for all patients in all situations and additional precautions in certain cases.
 - c. The essential measures for infection control such as hand hygiene, the personal protective equipment, the safe use and disposal of sharps, the use of aseptic "non-touch" technique for all invasive procedures, reprocessing of reusable instruments and equipment, routine environmental cleaning, waste

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management, respiratory hygiene and cough etiquette, appropriate handling of linen.

- d. Healthcare professional vaccination and immunizations as per DHA's policy for health screening and Immunization of healthcare professional.
- e. Frequent monitoring auditing of demonstrated or suspected spread of infection and of working practices within the fertility center.
- f. Environmental cleaning, single use items and reprocessing of sterile instruments.
- g. Recommended cleaning, disinfectant and sterilization in the healthcare for procedure and non-procedure areas as per municipality's approved list and prepared as per manufacturer's instructions and the handling is by trained employees.
- h. Sterilization may be outsourced and is subject to DHA approval.
 - i. In case sterilization is not outsourced then there should be a sterilizing area, which can be located near the procedure room with an adequate high-speed autoclave machine. Cleaning and sterilizing medical tools should be done in a sterilizing area next to the cleaning room for the tools to be cleaned, sterilized and then received from the cleaning room, preferably through a window passage.
- i. An active infection prevention surveillance program and ongoing





educational competency evaluation of employees regarding activities pre- procedure, intra-procedure and post procedure phases that are necessary for employee and patient safety.

- j. Prevent pathogen transmission resulting from improper use or reuse of syringes, multiple dose drug vials and IV equipment which shall be adhered to the following:
 - i. Preparing medications for multiple patients shall be done in an area away from direct patient care or procedure rooms.
 - ii. All medications shall be appropriately labelled, including those used for sedation, unless the medication is for immediate use (prepared and administered directly without leaving the provider's hand).
 - iii. Medications either marked on the container or noted in the package as "single patient use" shall be used for a single patient only, and any remaining drug should be discarded.
 - iv. New fluid administration sets units shall be used for each patient.
 - v. A single dose vial is preferred over multiple-dose vials, particularly when medications are administered to multiple patients.
- 13.5. Treatment of viral-positive patients should only be performed in ART laboratories with dedicated areas and equipment.
- 13.6. Whenever biological material is imported into the ART laboratory from another clinic, full screening results should be obtained in advance.





14. STANDARD TEN: RESEARCH AND MEDICAL TRIALS

- 14.1. All research and medical trials conducted in the fertility center should be as per Federal Law by Decree No. (4) of 2016 on Medical Liability and DHA policy for Clinical Trials.
- 14.2. All research concerning medical assisted reproductive procedures and other subjects relating to assisted reproduction require approval from DHA and Dubai Ethical Committee as per Clinicals Trials Policy.

14.2.1. Proposals should be submitted to <u>Medical Research (dha.gov.ae)</u>

- 14.3. Obtain a written consent of each of the spouses and concerned parties.
- 14.4. The consent to the spouses or the concerned parties should include the following information:
 - 14.4.1. Clarify to the spouses that refusal from agreeing to the research will not negatively impact their treatment at the fertility center.
 - 14.4.2. Clarify the purpose and impact of the scientific research.
 - 14.4.3. The expected period it will take to complete the research.
- 14.5. Fulfil the clinical trial and research requirements as per local laws and regulations.
- 14.6. The spouses or the concerned parties have the right to reject or revoke from participating in the research at any stage of the clinical trial. This decision should not affect the treatment plan of the concerned parties at the fertility center.
- 14.7. The principal researcher and the fertility center must ensure that there is no conflict of interest between the fertility center and the concerned parties financial or otherwise.
- 14.8. The fertility center is allowed to conduct research for the following purposes:

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- 14.8.1. Increase the knowledge regarding certain cases or diseases.
- 14.8.2. Developing medications for certain cases or diseases.
- 14.8.3. Improving or developing fertility treatments.
- 14.8.4. Increase knowledge regarding causes of miscarriage.
- 14.8.5. Develop methods for detecting chromosomal abnormalities, genetic or mitochondrial disorders in the embryo prior to implantation into the uterus.
- 14.8.6. Increase knowledge on embryo development.
- 14.8.7. Increase knowledge on the procedures of freezing gametes or embryos.
- 14.8.8. Develop methods for detecting chromosomal abnormalities or genetic or epigenetic disorders in gametes/ embryos.
- 14.9. The fertility center is prohibited from conducting research or experiments on the following:
 - 14.9.1. Reproductive cloning.
 - 14.9.2. Selective genetic features.
 - 14.9.3. Commercial purposes.
 - 14.9.4. Alteration to human genome
- 14.10. When using gametes or embryos in research, the following should be taken into consideration:
 - 14.10.1. Refraining from using them for other than the specific purpose of the search.
 - 14.10.2. The consent of the spouses or the concerned parties to conduct the research should not be a result of any financial or other compensation, nor the result of physical or moral persuasion, nor that the consent is based on





fraud or deception.

14.11. Any other conditions and controls decided by DHA.

15. STANDARD ELEVEN: MONITORING AND EVALUATION

- 15.1. The fertility centers shall ensure the following as per related laws and this standard:
 - 15.1.1. Availability of the minimum required medical and paramedical employees available in the fertility center.
 - 15.1.2. The availability of required policies and procedures in relation to processes, patients, employees, infection control and frozen specimen safety.
 - 15.1.3. Availability of documentation on all frozen specimen (gametes/embryos).
 - 15.1.4. Availability of documentation of full details of the patient's cycle from the point of egg collection to the conclusion of the treatment inclusive the fate of each of the oocytes collected as well as the remaining of the semen sample collected.
 - 15.1.5. Availability of electronic medical records system.
 - 15.1.6. Availability of training and continuous medical education programs.
 - 15.1.7. The availability of minimum equipment required, machinery and all medical necessities in the fertility center with its size and number of cases conducted using the respective equipment as well as routine maintenance as per manufacturer specification.
 - 15.1.8. Compliance to the UAE legislations in conducting medical research/experiments on gametes/embryos. (if applicable).
 - 15.1.9. Compliance with the legislations and regulations about transferring frozen

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oocytes, embryos, seminal fluid inside or outside the country.

- 15.2. The following performance measures shall be reported to DHA (<u>MonitoringKPIs@dha.gov.ae</u>) annually as per UAE legislations:
 - 15.2.1. Positive Pregnancy rate.
 - 15.2.2. Number of Cycles performed (IVF, ICSI, split IVF/ICSI procedures).
 - 15.2.3. Total number and Percentage of Clinical Pregnancy from total number of embryos transferred.
 - 15.2.4. Total number and Percentage of Live births from total number of embryos transferred.
 - 15.2.5. Total number and Multiple Pregnancy Rate (Twins or Triplets) from total number of embryos transferred.
 - 15.2.6. Number of FER (Frozen Embryo Replacement) Procedures.
 - 15.2.7. Number of FE-ICSI (Frozen eggs Intracytoplasmic Sperm Insemination) Procedures.
 - 15.2.8. Number of IUI (Intrauterine Insemination) Procedures.
 - 15.2.9. Total number of cases with Positive fetal hearts as confirmed by ultrasound2-4 weeks after positive pregnancy test following ART procedure.
 - 15.2.10. Total number of cases with embryo transfer performed.
 - 15.2.11. Total number and percentage of incomplete ART cycle from total number of ART cycles.
 - 15.2.12. Total number of frozen samples:
 - a. Frozen Oocytes.





- b. Frozen Embryos.
- c. Frozen semen sample.
- 15.2.13. Percentage and number of complications resulted from ART from all cases.
- 15.2.14. Total number of research studies conducted or participated in.
- 15.2.15. Patient satisfaction rate.

16. STANDARD TWELVE: MEDICAL RECORDS

- 16.1. Fertility centers should keep the medical records of the medical assisted reproduction procedures and patient information as per the following conditions.
- 16.2. Patients' identification in the medical records (Electronic or Physical), as per Ministerial decision No. (236) of 2022 Concerning Records of Operations in Assisted Reproduction Centers shall include, but not limited to the following:
 - 16.2.1. Fertility center name and logo.
 - 16.2.2. Name of the spouses or concerned parties with pictures and copy of Emirates IDs or passports for both spouses or concerned parties.
 - 16.2.3. Nationality of spouses/concerned parties.
 - 16.2.4. Date of birth.
 - 16.2.5. Medical record number.
 - 16.2.6. Dates of visit.
 - 16.2.7. Name of treating physician.
 - 16.2.8. Address, phone number and email address of spouses/ concerned parties.
 - 16.2.9. Date of first registration of patient.
 - 16.2.10. Confirmation of receiving a copy of the passport or Emirates ID, recent





pictures of each of the spouses or concerned parties and a copy of attested marriage certificate (for spouses).

- 16.3. Patient Medical record shall include all the patient identification information in addition but not limited to the following:
 - 16.3.1. Current health status of the spouses (or concerned parties).
 - 16.3.2. Medical history.
 - 16.3.3. Presence of chronic and/or genetic diseases.
 - 16.3.4. Clinical and physical examination results.
 - 16.3.5. Medical test results.
 - 16.3.6. Management plan and selected assisted reproduction technique.
 - 16.3.7. Sperm characteristics and status/fate of every sperm sample unused.
 - 16.3.8. Number of eggs retrieved from the patient.
 - 16.3.9. Number of fertilized eggs.
 - 16.3.10. Each embryo characteristics (number of cells and types).
 - 16.3.11. Fate/ status and use of each embryo (transfer, freezing, disposal, use for research).
 - 16.3.12. Treating physician's notes following each visit.
 - 16.3.13. Results of ultrasound following each visit.
 - 16.3.14. Medication information (number and type of medications) for each treatment cycle.
 - 16.3.15. Record of the name and signature of the embryologist and treating physician handling the procedures.





- 16.3.16. Traceability records of media and consumables are recorded in the ART Laboratory Records of the patient.
- 16.3.17. Coordination between the laboratory team and the treating physicians' team for updates on the fate of the embryos and recording the results in the medical files.

16.3.18. Copy of all required consents and approvals for each treatment cycle.

- 16.4. ART Laboratory records, shall include all the information in the identification card, in addition to, but not limited to the following:
 - 16.4.1. Place, date and time of specimen/sample collection.
 - 16.4.2. Record of identification code and specimen/sample reference.
 - 16.4.3. Evidence records of manual or electronic witnessing that has taken place during all critical steps in the ART Laboratory journey of the gametes (collection, processing, mixing of gametes, transferring from container to container, cryopreserving, thawing and transferring back to the patient). In case of pre-implantation genetic testing and biopsy these steps should be witnessed as well.
 - 16.4.4. Sperm characteristics or report of sperm examination and diagnosis.
 - 16.4.5. Results of specimen/sample tests.
 - 16.4.6. Number of eggs retrieved from the patient.
 - 16.4.7. Fate/ status of all the retrieved eggs.
 - 16.4.8. Number of fertilized eggs.
 - 16.4.9. Records/Traceability of all ART consumables that come into contact with





the gametes/embryos.

- 16.4.10. Each embryo characteristics (number of cells and grades).
- 16.4.11. Fate/status of each embryo (transfer, freezing, disposal, use for research).
- 16.4.12. Incubator details and location of specimen/samples in all the incubators. Records of media and plasticware as part of ART consumables.
- 16.4.13. Documentation of procedures outcomes for all the fertility center procedures.
- 16.4.14. All ART laboratory records above shall be signed by the laboratory operator.
- 16.5. Laboratory records when receiving the seminal fluid shall include:
 - 16.5.1. Time of receiving semen fluid sample.
 - 16.5.2. Method used to procure the sample.
 - 16.5.3. Days of abstinence.
 - 16.5.4. Room/incubator temperature.
 - 16.5.5. If sample not received as per standards i.e. uncapped, not labelled, leaking etc. to be rejected and patient to be requested to produce a second sample.
 - 16.5.6. Presence of any viscosity and/ or gelatinous material in the semen sample.
- 16.6. Patient file /record shall include all the information recorded in the ART laboratory.
- 16.7. Store record should include all the information about fertility center assets including but not limited to furniture, machines, equipment, solutions, medications and dates of productions and expiry.
- 16.8. Employees' record should include names of all employees working in the fertility center, each separately, with their identification, roles, responsibilities, reporting





manager and all related human resource information including their performance evaluation and employee's immunizations as per DHA policy for Health Screening and Immunization of Healthcare professionals.

17. STANDARD THIRTEEN: PROHIBITED ACTIONS

- 17.1. Fertility centers are prohibited and should refrain from conducting the following actions:
 - 17.1.1. In the case of married couples, fertilization of a sperm taken from the husband and an egg taken from a woman who is not his wife.
 - 17.1.2. In the case of married couples, fertilization of an egg taken from the wife and a sperm taken from a man who is not her husband.
 - 17.1.3. Performing in vitro fertilization of a sperm taken from the husband or concerned party and an egg taken from the wife or concerned party, then implanting the fertilized egg in the uterus of another woman.
 - 17.1.4. Performing in vitro fertilization of a sperm taken from a man and an egg taken from a woman, then implanting the fertilized egg in the uterus of another woman.
 - 17.1.5. Using fresh or frozen gametes/embryos for commercial purposes, or making non-therapeutic genetic modifications to them, or using them for others.
 - 17.1.6. Using fresh or frozen gametes/embryos for other not approved purposes/procedures even if there was a consent from the spouses.
- 17.2. Any other case determined by a decision of the Cabinet.





18. STANDARD FOURTEEN: LABORATORY REQUIREMENTS AND SAFETY CONTROLS

- 18.1. The fertility center must comply and refer to Ministerial decision No. (115) of 2024 Concerning Quality Control Measures in Fertility for quality and safety control measures in ART laboratories.
- 18.2. The laboratory director shall ensure the fertility center's quality management system is implemented and monitored in ART laboratories of which include but not limited to:
 - 18.2.1. Defining job descriptions, responsibilities and ensuring all personnel are qualified and competent.
 - 18.2.2. Having validated, written instructions for each process (SOP), including management of adverse events.
 - 18.2.3. Ensuring full traceability of cells and tissues, materials, equipment and personnel involved in specific laboratory activities, with records maintained accordingly.
 - 18.2.4. Documentation system should be in place when dealing with noncompliance, emergencies, errors, adverse events and complaints. Corrective and preventive actions, implementation dates and assessments of their effectiveness should be documented.
 - 18.2.5. Confirming that all media/reagents/disposables are tested for quality and have appropriate quality certificates as well as are from any form of bacterial infection to produce valid and reliable results.
 - 18.2.6. Ensuring proper and periodic equipment maintenance, service and





calibration-verifying conformance to specifications.

- 18.2.7. Quality Control records should be maintained and reviewed, including documentation of results and any corrective action taken.
- 18.2.8. Reviewing performance (KPIs) to ensure continuous and systematic QMS improvement. In addition to laboratory and clinical performance, operator performance should be checked regularly to ensure competence, compliance and consistency.
- 18.2.9. Participation in Internal Quality Control (IQC) and External Quality Assurance (EQA) programs.
- 18.3. Every ART laboratory should have an up-to-date disaster preparedness or emergency plan.
 - 18.3.1. Andrology and embryology laboratories need to have an exit strategy that includes a sensible way to salvage the storage tanks with the cryopreserved specimens.
- 18.4. The ART laboratory must have adequate functionalities to minimize any damaging effects upon reproductive cells an ensure good laboratory practice.
 - 18.4.1. All ART involve handling of biological material and pose a potential hazard -9 of transmitting diseases to personnel and other patients' biological material (cross-contamination). Procedures to ensure personnel safety and prevent cross-contamination should be established, taking national and international safety regulations into consideration.

18.5. The ART Laboratory should be adjacent to the operating room where clinical





procedures are performed.

- 18.6. Operating rooms must maintain positive pressure while keeping in consideration monitoring the air changes per hour based on ISO 100 instructions and standards.
- 18.7. Materials used in laboratory construction, painting, flooring and furniture should be appropriate for clean room standards, minimizing Volatile Organic Compounds (VOC) release and embryo toxicity.
 - 1.1.2. Air supply vents should be located in the ceiling and return ducts should draw from close-to-floor level. Attention must be paid to the possibility of drafts from incoming air vents affecting the operation of some pieces of equipment.
 - a. To optimize environmental conditions, laboratory air should be subjected to high-efficiency particulate air (HEPA) and VOC control (Grade A environment with a background of at least GMP Grade D)
 - Positive pressure is recommended to minimize air contaminationapart from cryopreservation room where negative pressure is required to protect from liquid nitrogen (LN2) leakage.
- 18.8. Laboratory access should be restricted to authorized personnel.
- 18.9. Laboratory design should ensure optimal workflow over small distanced while handling gametes/embryos during the whole treatment phase.
- 18.10. Rooms for changing clothes should be separate from the laboratory.
- 18.11. Hand washing facilities should be placed outside and within the laboratory.
- 18.12. Office spaces for administrative work should be available separately outside the





laboratory while in close proximity of the ART laboratory.

- 18.13. Area for cleaning and sterilization of materials should be separate from the laboratory.
- 18.14. All body fluids (blood, follicular fluid, semen, etc.) should be treated as potentially contaminated.
- 18.15. Mandatory Protective measures for laboratory employees to ensure aseptic conditions for tissue, gametes and embryos include:

18.15.1. Strict adherence to employees' hygiene regulations and aseptic techniques.

- 18.15.2. Use of protective laboratory clothing, preferably with low particle shedding.
- 18.15.3. Use of hairnets and nontoxic, non-powdered gloves and masks where appropriate.
- 18.15.4. Use of appropriate Biological Class II flow hood cabinet in order to protect sample and operator.
- 18.15.5. Use of mechanical pipetting devices.
- 18.15.6. Disposal of single-use consumables immediately into proper waste containers.
- 18.15.7. Potentially infectious materials must be disposed of in a manner that protects laboratory workers and other employees from exposure. Viralpositive waste segregated into a separate bin, labelled and disposed of according to biosafety policies).
- 18.15.8. Needles, glassware and other sharp objects should be handles with extreme caution and discarded into sharps containers.





- 18.15.9. Disinfectants with proven compatibility and efficacy for an ART laboratory should be used.
- 18.15.10. Food, gum, drinks and tobacco are strictly forbidden within the ART Laboratory.
- 18.15.11. Use of cosmetics and perfumes should be avoided within the ART Laboratory.
- 18.15.12. Employees should be appropriately attired to diminish possible sources of contamination.
- 18.16. Precautions that are encountered in ART laboratories related to samples/specimen that carry the risk of disease transmission include semen, blood and follicular fluid. Blood samples from patients with gametes/embryos destined to be cryopreserved should be tested for infectious diseases before cryopreservation.
- 18.17. Sanitation should occur when there is a spill and at the end of every shift.
- 18.18. Facilities should be available to cryopreserve and store biological material.
- 18.19. During storage and handling of cryopreserved material, high care should be taken to maintain adequate and safe conditions, temperatures should never rise above -130 C.
- 18.20. The protocols should be present and clear for employees to avoid any form of exploitation, mixing or replacement of gametes with incorrect ones and they include:
 18.20.1. Presence of approved infection control processes, sanitation and sterilization processes for equipment and fertility center, and separation of viral positive gametes/embryos from others in the ART laboratory.
 - 18.20.2. Evaluate and record number of mature oocytes and have a clear policy and





procedure on the fate of the non-mature oocyte collected.

- 18.20.3. Evaluate and document semen fluid parameters.
- 18.21. Cryopreservation documentation on biological materials include the following:
 - 18.21.1. Labelling of devices.
 - 18.21.2. Cryopreservation method.
 - 18.21.3. Date and time of cryopreservation.
 - 18.21.4. ART Laboratory Operator.
 - 18.21.5. Embryo quality and stage of development.
 - 18.21.6. Number of oocytes or embryos per device.
 - 18.21.7. Number of devices stored per patient.
 - 18.21.8. Location of stored samples.
- 18.22. Different cryopreservation approaches can be used according to the biological material, which include slow freezing and vitrification. The different types of slow freezing and vitrification are as follows:
 - 18.22.1. Sperm: slow freezing is the method of choice but rapid cooling is a possible alternative.
 - 18.22.2. Oocytes: vitrification has been reported to be highly successful and is recommended.
 - 18.22.3. Tissues: slow freezing is the method of choice, but vitrification of ovarian tissue is an option.
- 18.23. Every ART laboratory should have in place an effective system to uniquely identify,





- 18.23.1. Before starting any procedure, the Laboratory must be given each patient's unique identification code which clearly identifies and refers to the patient's documentation. Each treatment cycle must be assigned a unique code.
- 18.23.2. Consent forms, clinical data and blood tests should be made available to the laboratory employees.
- 18.23.3. Rules concerning the correct identification and processing of reproductive cells must be established in the laboratory by a system of codes and checks including:
 - c. Direct verification of patient identity and correspondence with their assigned unique identification code is required at every critical step. Patients should be directly asked to give their own identifying information (full name and date of birth) before artificial insemination/embryo transfer.
 - d. All devices containing biological material must be clearly and permanently labelled with the unique patient identification code and date of treatment.
 - e. Biological material from different patient must not be processed in the same working area at the same time.
 - f. Incubators and cryo- storage systems should be organized to ensure easy access and identification of the biological materials inside.
 - g. Products and material used with biological materials must be traceable.

18.24. Identity check before the oocyte retrieval is mandatory.





- 18.25. Timing of oocyte retrieval, number of collected oocytes and the operator should be documented.
- 18.26. Semen samples should be collected in non-spermicidal sterile, plastic containers with clear labelling and identification confirmed by the patient.
- 18.27. Records should be kept of the type of container used, the time and place of collection as well as the time between collection and analysis/preparation.
- 18.28. The following data on sperm preparation should be documented:

18.28.1. Sample origin (ejaculate, epididymal/testicular, fresh/frozen).

- 18.28.2. Preparation method.
- 18.28.3. Pre- and post-preparation sperm parameters and any dilution carried out.
- 18.29. All ART laboratory should have an emergency plan in place with specific procedures in case of failure of infrastructure and facilities.
- 18.30. The plan should describe actions related to the following:
 - 18.30.1. Safety of personnel and patients.
 - 18.30.2. Protection of all fresh and cryopreserved human material.
 - 18.30.3. Limitation of damage to equipment and medical records.
- 18.31. Information to be provided to Laboratory personnel working with chemicals include:
 - 18.31.1. The signs and symptoms associated with exposures to hazardous chemicals used in the laboratory.
 - 18.31.2. The location and availability of known reference materials on the hazards, safe handling, storage and disposal of hazardous chemicals found in the laboratory including, but not limited to, the Material Safety Data Sheets





received from the chemical supplier.

- 18.31.3. The circumstances under which a particular laboratory operation, procedure or activity requires prior approval from the employer or the employer's designee before being implemented.
- 18.32. Laboratory training should include in addition to all other trainings methods and observations that may be used to detect presence or release of hazardous chemicals like:
 - 18.32.1. Continuous monitoring devices.
 - 18.32.2. Visual appearance, color and odor of hazardous chemicals when released.
 - 18.32.3. Measures required of Laboratory workers to take to protect themselves from chemical hazards.
 - 18.32.4. Training Laboratory employee on use and handling of gases, specifically Liquid Nitrogen Gas.

19. STANDARD FIFTEEN: GENETIC SCREENING AND TESTING

- 19.1. Genetic Screening of Gametes and Embryos may be performed at fertility centers based on the approval of a licensed Specialist Physician and after the consent of the person from whom the sperm and the unfertilized eggs are extracted from, provided that the screening is being conducted for the purpose of identifying and preventing hereditary diseases.
- 19.2. It is permissible to conduct genetic testing using Pre-implantation Genetic Testing (PGT) processes before implanting the embryo in the mother's uterus based on the following conditions:





- 19.2.1. Defining the need to conduct the genetic testing before implanting the embryo in the mother's uterus from the fertility center's genetic counsellor or an affiliated genetic Laboratory to the fertility center.
- 19.2.2. Provision of multi-disciplinary team from the fertility center to conduct the genetic which includes:
 - h. Reproductive Medicine and Infertility Specialist or Reproductive Endocrinology and Infertility Specialist.
 - i. Embryologist.
 - j. Genetic counsellor.
- 19.2.3. Approval and signed consent forms from married couple and non-married concerned parties who wish to conduct the genetic testing.
- 19.2.4. Fertility centers should provide the couple with information detailing the genetic testing process with specific emphasis on the following points:
 - Presence of a medical genetic concern in the family or from either spouse that requires further testing to the embryo.
 - I. The process that will take place and its side effects.
 - m. The genetic test does not guarantee pregnancy success as well as does not prevent miscarriage from happening in the case of pregnancy.
 - n. The financial cost and the mental health strain that could occur in the case of unsuccessful pregnancy even though genetic testing was conducted pre-implantation.
 - o. The average rate of false diagnosis in the genetic testing.





19.3. Conducting genetic testing to the embryos for the purpose of Human Leukocyte Antigen (HLA) matching the fertility center must acquire a medical report from the physician treating the patient asking for the necessity of this test.





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 - 5. DHA Policy for Clinical Privileging.
 - 6. DHA Policy for Clinical Trials
 - 7. DHA Policy for Clinical Laboratory Accreditation.
 - 8. DHA Policy for Collection and Cryopreservation of Oocytes.
 - 9. DHA Policy for Communicable Disease Notification.
- 10. DHA Policy for Emergency Medication.
- 11. DHA Policy for Health Data Quality,
- 12. DHA Policy for Health Informational Assets Management.
- 13. DHA Policy for Health Screening and Immunization of Healthcare Professionals.





- 14. DHA Policy for Role and Responsibilities of Medical Director.
- 15. DHA Policy for Patient Referral and Interfacility Transfer.
- 16. DHA Policy for Sentinel Event Notification and Management.
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- 21. Federal Law no. (7) of 2019 concerning Assisted Reproduction.
- 22. Federal Law by Decree No. (17) of 2023 Amending Some Provisions of Federal Law No.

(7) of 2019 regarding Medical Assistance in Reproduction.

- 23. Federal Law by Decree No. (49) of 2023 Regulating the Use of the Human Genome.
- 24. Ministerial decision No. (117) of 2024 Concerning Medical and Technical Healthcare Professionals Required in Fertility Centers.
- 25. Ministerial decision No. (115) of 2024 Concerning Quality Control Measures in Fertility Centers.
- 26. Ministerial Decision No. (31) of 2024 Concerning Crash Cart Management.
- 27. Ministerial Decision No. (21) of 2022 Concerning the Approval of the Annual Report Template for Assisted Reproduction Centers.
- 28. Ministerial Decision no. (235) of 2022 concerning criteria for evaluation Assisted

Reproduction Centers.





- 29. Ministerial Decision no. (134) of 2021 concerning the identification of medical assisted reproductive technologies.
- 30. Ministerial Decision no. (233) of 2022 concerning Required Medical Equipment and Devices in assisted Reproduction Centers.
- 31. Ministerial Decision no. (236) of 2022 concerning Records of Operations in Assisted reproduction Centers.
- 32. Unified Healthcare Professional Qualification Requirements (PQR).





APPENDIX

APPENDIX 1: MINIMUM EQUIPMENT IN ART LABORATORY AND ANDROLOGY UNIT

Machine	Quantity	Backup	
TRI-GAS/CO2 incubator	2	no	
BIOLOGICAL CLASS II	3 (2 in embryology Laboratory	1	
HOOD	and 1		
	in Andrology Laboratory)		
Stereomicroscope	3 (the number should match	1	
	the biological class II hood		
	ratio 1:1)		
Air filtration tower	1		
Phase contrast microscope	1		
Tube heater	1		
Thermometer	1		
ANTIVIBRATION TABLE	1		





portable incubator	1	
Continuous Monitoring System	1	
(24hrs)		
O2 Sensor	2	
Laboratory Oven	2	
	2	
Gas Automatic Manifold	2	
Laser System (if fertility center	1	1
offers embryo genetic testing)		





APPENDIX 2: MINIMUM MACHINERY WITH PREFERRED BACKUP IN CASE OF EMERGENCY

Machine	Quantity	Backup
Inverted Microscope	1	1
Micromanipulator	1	1
Centrifuge	1	1
Freezing Tanks	2	1
Electrical pipettes	2	1
Variable pipettes	2	1
O2/CO2 GAS ANALYZER (the	1	1
machine name must be the		
same name as stated)		
Pharmaceutical fridge	2	
Camera and monitor	1 of each	
Computer	1	
UPS BACKUP	1	
Backup warm plate	1	1
Digital weighing media	1	





APPENDIX 3: MINIMUM OPERATING ROOM EQUIPMENT

Machine	Quantity	Backup
IVF Vacuum pump	1	1
Suction Unit	1	
Laparoscopy Unit (optional	1	
for hysteroscopy)		
Tele-cam	1	
Endoflater (optional for	1	
hysteroscopy)		
Light source XEN (optional	1	
for hysteroscopy)		
Monitor	1	
Anesthesia machine	1	
OR table	1	
cardiac monitor O2 monitor	2	
Crash cart & defibrillator along	1	
with Intubation Kit		
(laryngoscope with different		
sized blades, ETT Tubes		
different sizes, LMA different		
sizes)		





and AMBU Bag with different		
sizes Ambu masks.		
ultrasound	1	
OR lamp	1	1 portable standby
Examination table	1	
Hormone immunoassay	1	
(optional)		





APPENDIX 4: MINIMUM ADDITIONAL EQUIPMENT IN MUST BE AVAILABLE IN OT ROOM

Machine	Quantity	Backup
Water bath or bottle holder	1	
heater for flush		
Block heater for tubes	2	
Surgical light	1	
Anesthesia pen tents	1	
Anesthesia cart	1	
Patient shifting trolley	1	-
nursing trolley	1	
Surgical chair	1	
Instrumental trolley	1	
IV pole	1	
Wormer	1	





APPENDIX 5: LIST OF APPROVED MAIN AND ASSOCIATED ART PROCEDURES.

- 1. Main ART procedures:
 - p. Ovulation induction and ovarian stimulation.
 - q. Fertilization Conventional In Vitro (IVF).
 - r. Intra-cytoplasmic Selected Sperm Injection (ICSI).
 - s. Intra-Uterine Insemination (IUI).
- 2. ART Associated Procedures:
 - t. Artificial Oocyte Activation.
 - u. Embryo Biopsy.
 - v. Embryo culture media analysis.
 - w. Embryo transfer (ET).
 - x. Frozen Embryo Transfer (FET).
 - y. Frozen Oocytes Intracytoplasmic Sperm Injection.
 - z. Gamete and embryo freezing.
 - aa. Gamete and embryo thawing.
 - bb. Intracytoplasmic Morphologically Selected Sperm Injection (IMSI).
 - cc. Microsurgical Testicular Sperm Extraction (Micro-TESE).
 - dd. Oocyte In Vitro Maturation (IVM).
 - ee. Ovarian and Testicular Tissue Cryo-preservation.
 - ff. Percutaneous Epididymal Sperm Aspiration (PESA).
 - gg. Polar Body Biopsy.
 - hh. Preconception, preimplantation and prenatal genetic services.





- ii. Surgical Correction for Obstructive Azoospermia.
- jj. Testicular Sperm Aspiration (TESA).
- kk. Testicular Sperm Extraction (TESE).
- II. Oocyte Retrieval (Ultrasound guided).

mm. Use of Hyaluronan based media.

- nn. Varicocele repair.
- oo. Zone assisted hatching.





APPENDIX 6: DHA PROCESS FOR FERTILITY CENTER CLOSURE.

Steps	Subject	Requirements	Responsibility
1. Prior to	Patient Notification	- Provide a written notice to patients	
Closure		at least 90 days before closure date	
		as per DHA Policy for Health	
		Informational Assets Management.	
		The notice should include the	
		closure date, reasons for closure and	
		contact information for inquiries.	
		The Facility should utilize multiple	Exporting
		channels for notifying the patients	Facility
		including email, SMS, and phone	
		calls to ensure receipt as well as a	
		record of all provided	
		communication.	
		- Inform patients of their options	
		regarding discharge of their samples	
		in case of expiration, as well as	
		receive their approval and written	
		consent of transfer	













	- Electronic Medical record details and	
	File number.	
	- OPU Date.	
	- Screened Tanks.	
	- Viral Markers.	
	- Vitrification Sheet.	
	- Medical Report.	
	- Virology Screening Result.	
	- Marriage Certificate (if applicable).	
	If no instructions are provided by the	
	patient, the exporting facility is responsible	
	on ensuring that all specimens are stored in	
	the agreed upon receiving facility.	
3. Facility	The Closing Facility must follow SHERYAN	Exporting
Closure	process for Facility closure.	Facility