

# COMPETENCY GUIDELINES

## Preamble

The clinical treatment of infertility in Canada has evolved rapidly since the early 1980s when new technologies such as In Vitro Fertilization were being developed and improved worldwide. IVF clinics started to appear across Canada, somewhat independently, and each with their own approach to clinical ART treatments.

ART laboratory professionals work in the fields of embryology, andrology and endocrinology. In Canada, there is currently no comprehensive educational programme which can provide specialized training in these areas, and a diploma in medical laboratory technologies or a university degree in the sciences has often been stipulated as a minimum requirement for an entry-level position. This was generally followed by on-site training during a probationary period. This competency profile for Canadian ART laboratory professionals has been developed in response to the new initiatives by the federal government to regulate the laboratory-based aspects in the field of Assisted Human Reproduction.

ART laboratory science continues to undergo profound changes with health reform and technological change evolving at a rapid pace. The competencies proposed here create a vision of an ART laboratory professional who can not only apply basic principles but also communicate, evaluate and extend learned principles through research, critical thinking, and continuous learning in their interaction with patients, clients, and other health care professionals to meet the needs of this changing profession.

## Code of Conduct for ART Laboratory Professionals

1. ART laboratory professionals are dedicated to servicing the reproductive health needs of the public and promoting the welfare of the patient and resulting offspring.
2. ART laboratory professionals shall respect and protect the integrity of the reproductive material.
3. ART laboratory professionals work with other health care professionals, to provide effective patient care.
4. ART laboratory professionals shall promote the image and status of their profession by demonstrating honesty, integrity and high standards in their professional practice through active support of their professional bodies.
5. ART laboratory professionals shall protect the confidentiality of all patient information.
6. ART laboratory professionals shall practise within the scope of their professional competence and take responsibility for their actions.
7. ART laboratory professionals shall endeavour to maintain and improve their skills and knowledge and keep current with scientific advances.
8. ART laboratory professionals shall share their knowledge with colleagues and promote learning.
9. ART laboratory professionals shall be aware of the laws and regulations governing ART laboratory technology and shall apply them in practice.
10. ART laboratory professionals shall practise safe work procedures at all times to ensure the safety of reproductive materials and the protection of the environment and colleagues.

## **Competency Guidelines for ART Laboratory Professionals**

It is expected that a competent ART Laboratory professional shall have all of the following competencies.

### **1. Safe Work Practices**

The ART laboratory professional conducts professional practice according to established protocols, safety guidelines and existing legislation.

- 1.01 Applies the principles of standard precautions
- 1.02 Uses appropriate personal protective equipment e.g. gloves, gowns, masks
- 1.03 Applies appropriate laboratory hygiene and infection control practices
- 1.04 Minimizes possible dangers from biological specimens, laboratory supplies, and equipment
- 1.05 Operates laboratory equipment in a correct and safe manner
- 1.06 Complies with WHMIS legislation.
- 1.07 Handles and disposes of biological material and “sharps” according to existing legislation
- 1.08 Utilizes the appropriate method for items to be disinfected/sterilized
- 1.09 Applies appropriate spill containment and clean up procedures for biological and other hazardous materials
- 1.10 Responds appropriately to fire emergencies
- 1.11 Responds to and reports incidents related to safety and personal injury (e.g. needle stick injuries), in a timely manner

### **2. Obtaining and processing of gametes and embryos**

The ART laboratory professional applies appropriate standard operating procedures (SOPs) to obtain and process gametes and embryos in a timely, accurate manner that contributes to successful outcomes.

- 2.01 Performs scheduled ART procedures only at the written or electronic request of an authorized person
- 2.02 Organizes workflow to accommodate changes in priorities.
- 2.03 Provides information to the client on specimen collection, transportation and storage.
- 2.04 Verifies that patient identifier on requisition corresponds with the specimen.
- 2.05 Identifies discrepancies in specimen procurement and/or documentation and initiates corrective action as required.

- 2.06 Assesses the suitability of the sample for requested ART procedure, and initiates corrective action if required.
- 2.07 Selects the most appropriate SOP to perform the requested procedure according to the Centre's established policies.
- 2.08 Processes gametes and embryos according to selected SOP, thereby ensuring the integrity and identity of the specimens.
- 2.09 Verifies that specimen identification is traceable throughout analysis/procedure.
- 2.10 Evaluates the quality of gametes and embryos against set criteria using a standardized grading, rating, or scoring system.
- 2.11 Ensures procedures are performed to achieve expected outcomes.
- 2.12 Identifies implausible results and takes appropriate action.
- 2.13 Recognizes possible specimen deficiencies and takes appropriate action.
- 2.14 Accounts for all obtained sperm samples, oocytes and embryos.
- 2.15 Maintains a complete laboratory record for each ART procedure.
- 2.16 Verifies that all requested procedures have been completed.
- 2.17 Protects the patient's confidentiality throughout the ART process.

### **3. Communication**

The ART laboratory professional, using scientific knowledge as the basis, interprets, communicates and documents confidential data.

- 3.01 Ensures that laboratory results are accurately documented and retained in accordance with existing legislation.
- 3.02 Demonstrates the ability to communicate clearly, effectively and promptly within the laboratory team.
- 3.03 Enters data into laboratory information system.
- 3.04 Liaises effectively with other members of the clinical team.
- 3.05 Releases results of laboratory analyses/procedures that meet internal quality control criteria in a timely and efficient manner.
- 3.06 Communicates with patients with sensitivity and empathy.
- 3.07 Recognizes the implications of laboratory findings on outcomes.

### **4. Quality and risk management**

The ART laboratory professional practises and promotes the principles of quality management.

4.01 Understands the principles of quality management and quality improvement.

4.02 Follows established protocols as defined in policy and procedure manuals.

4.03 Maintains established standards for quality control in specimen collection, transportation, storage, preparation, analysis and reporting.

4.04

4.05 Maintains comprehensive quality assurance documentation.

4.06 Identifies and reports deficiencies in the workplace that may affect safety and outcomes.

4.07 Maintains logs for laboratory equipment/instruments.

4.08 Performs and/or documents quality control on reagents and media.

4.09 Initiates reordering of reagents and supplies as required.

4.10 Assesses the quality of new reagents and supplies.

4.10 Understands the importance of identifying and reporting errors or oversights in processes that may affect safety and outcomes.

4.11 Applies continuous quality improvement techniques and risk management processes to ensure quality clinical laboratory services.

## **5. Critical thinking**

The ART laboratory professional applies critical thinking skills to constructively solve problems and troubleshoot.

5.01 Understands the science that underpins assisted reproductive technology.

5.02 Understand the principles of the techniques and methods employed in the discipline.

5.03 Demonstrates an open inquiring mind and self-directed learning processes in resolving analytical, workplace and career challenges.

5.04 Demonstrates the ability to critique and assess limitations of published methodology and outcomes.

5.05 Demonstrates the ability to adapt to rapidly changing situations e.g.: responds appropriately to critical situations; retains composure in stressful situations; applies existing skills to new situations.

5.06 Demonstrates knowledge of the ART standards and professional ART organizations and responsibilities.

5.07 Demonstrates knowledge of the determinants of reproductive health and their implications for ART outcomes.

5.08 Understands the basics of external factors that have the potential to affect laboratory performance.

5.09 Recognizes that change initiated in one area will impact on other areas of the ART team.

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