



CANADIAN FERTILITY AND ANDROLOGY SOCIETY
SOCIÉTÉ CANADIENNE DE FERTILITÉ ET D'ANDROLOGIE



CANADIAN FERTILITY AND ANDROLOGY SOCIETY ART LAB SPECIAL INTEREST GROUP

COMPETENCY PROFILES
FOR ASSISTED REPRODUCTIVE TECHNOLOGY LABORATORY PROFESSIONALS IN CANADA

Prepared by the Committee on Professional Standards of the CFAS ART Lab Special Interest Group

**Approved by the membership of the
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Background

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

ART laboratory professionals work in the fields of Embryology and Andrology. 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 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. These competency profiles for Canadian ART laboratory professionals, in a non-supervisory position or a supervisory/directorial position, have 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.

Professional Code of Conduct for ART Laboratory Professionals

ART laboratory professionals are dedicated to servicing the reproductive health needs of the public and promoting the welfare of the patient and resulting offspring.

ART laboratory professionals shall respect and protect the integrity of the reproductive material.

ART laboratory professionals work with other health care professionals, to provide effective patient care.

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.

ART laboratory professionals shall protect the confidentiality of all patient information.

ART laboratory professionals shall practise within the scope of their professional competence and take responsibility for their actions.

ART laboratory professionals shall endeavour to maintain and improve their skills and knowledge and keep current with scientific advances.



ART laboratory professionals shall share their knowledge with colleagues and promote learning.

ART laboratory professionals shall be aware of the laws and regulations governing ART laboratory technology and shall apply them in practice.

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 Profile for an ART Lab Professional (non-supervisory position)

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



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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



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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 Maintains comprehensive quality assurance documentation
- 4.05 Identifies and reports deficiencies in the workplace that may affect safety and outcomes
- 4.06 Maintains logs for laboratory equipment/instruments
- 4.07 Performs and/or documents quality control on reagents and media
- 4.08 Initiates reordering of reagents and supplies as required
- 4.09 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



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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

Competency Profile for a Supervisory or Directorial Position

It is expected that a competent ART Laboratory Supervisor or Director shall have all of the following competencies in addition to the ones for the general ART Laboratory Professionals.

1. Communicating Effectively

Communicating effectively means dealing with clients, colleagues and other health professionals in a direct, open, trusting and respectful manner.



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- 1.01 Actively listens, gives feedback and chooses an appropriate communication strategy
- 1.02 Presents appropriate information clearly and concisely to a variety of audiences
- 1.03 Understands non-verbal cues (such as body language) and reacts sensitively
- 1.04 Acts as a trusted advisor or advocate; deals with very sensitive or emotionally charged situations while keeping things in perspective
- 1.05 Accurately measures other people's perspective, behaviour and motivation, and uses that insight to respond to unexpressed or poorly expressed messages

2. *Ethics and Integrity*

Ethics and integrity is the will to apply ethical standards and demonstrate integrity in all dealings with clients, colleagues and other health professionals.

- 2.01 Demonstrates self-awareness
- 2.02 Demonstrates leadership and consistency in regards to principles, values and behaviour
- 2.03 Demonstrates awareness and understanding of societal and global debates regarding ART ethical issues and their implications in practice

3. *Inspiring a Shared Vision and Enabling the Laboratory Personnel to Act*

Inspiring a shared vision is the ability to comprehend and see the whole picture, and to communicate it to others.

- 3.01 Aligns goals and actions of the laboratory with the organization's stated vision, mission, values, resources, and priorities
- 3.02 Engages laboratory staff in support of the shared vision and client-focused outcomes and goals
- 3.03 Creates and sustains an environment in the laboratory that translates values and principles of empowerment into daily practice

4. *Critical Thinking*

Critical thinking is the ability to break a situation down into smaller pieces and identify its key or underlying issues.

- 4.01 Asks questions to get at root causes of issues and situations



- 4.02 Critically evaluates, synthesizes, and integrates information from internal and external sources when solving problems
- 4.03 Critical appraisal of evidence when introducing or changing technologies
- 4.04 Considers new approaches and the consequences of decisions before taking action
- 4.05 Takes decisive action on emerging opportunities in a rapidly changing, ambiguous environment

5. *Facilitating Organizational Change/Improvements*

Facilitating organizational change/improvements involves an understanding of a dynamic organization and the change process.

- 5.01 Learns and adapts to changing situations in the organization
- 5.02 Able to work in an ambiguous environment
- 5.03 Seeks opportunities in new situations
- 5.04 Implements a plan that includes transition strategies

6. *Developing Others*

Developing others is the desire to foster the long-term growth of others.

- 6.01 Gives detailed instructions or on-the-job demonstrations; explains how to do tasks, makes specific and useful suggestions or ensures someone else is available to help out
- 6.02 Stresses the benefits the person will gain by following procedures properly
- 6.03 Expresses confidence in others' potential to grow; helps others integrate and develop
- 6.04 Knows how to reinforce others' current and expected abilities
- 6.05 Believes in others' potential to learn, even in "difficult" cases
- 6.06 Gives constructive feedback that focuses on problems and behaviours rather than personalities and cultural diversity
- 6.07 Reassures others after a setback and gives tailor-made suggestions for improvement



- 6.08 Arranges assignments or training that helps people work out problems themselves
- 6.09 Identifies training or development needs, and establishes programs to meet those needs

7. Resource Management

Resource management involves understanding and managing financial, human, information and physical resources.

- 7.01 Implements effective hiring and selection processes
- 7.02 Clarifies roles and performance expectations
- 7.03 Supports people through fair and equitable administrative policies
- 7.04 Manages laboratory data collection and ensures their integrity, privacy and safety
- 7.05 Ensures effective utilization of material and physical resources
- 7.06 Demonstrates fiscal responsibility

8. Building Teamwork and Collaborative Partnership:

Building teamwork and collaborative partnerships is the willingness to work closely with colleagues and community partners toward a common goal.

- 8.01 Determines the needs of the clients and matches these needs with customized services
- 8.02 Builds teams and alliances across internal and external boundaries
- 8.03 Shares and volunteers scientific and technical knowledge and expertise
- 8.04 Regularly informs others of events affecting the organization
- 8.05 Creates team spirit by speaking positively of others
- 8.06 Gives public credit to deserving people

- 8.07 Seeks ideas and opinions not only to make decisions and draft plans, but also to promote co- operation
- 8.08 Encourages teams to openly discuss concerns and conflicts



8.09 Able to solve conflicts to everyone's benefit

9. *Achieving Results*

Achieving results is the will to develop and implement strategies and convince or influence others to bring about the desired outcomes.

9.01 Develops and implements quality management systems such as standard operating procedures and forms to achieve best outcomes

9.02 Monitors and evaluates the general quality of the lab work and recommends improvements as needed

9.03 Assesses situations, sets goals and priorities, and transforms strategy into action

9.04 Plans and prepares for contingencies to achieve best outcomes

9.05 Adds value to the organization

9.06 Uses basic (e.g. appeals to reason) or targeted (e.g. appeal to the interest and level of varying audience) persuasion techniques in a discussion or presentation to convince or influence others to achieve goals and objectives

9.07 Knows how to propose concrete solutions that mesh with the organization's needs and interests

9.08 Works with clinical partners to achieve best outcomes

10. *Self-Confidence, Self-Control and Personal Motivation*

Self-confidence is demonstrating one's ability to accomplish a task; self-control is the ability to cap one's emotions to avoid negative reactions; and personal motivation is a desire for working well and striving for improvement.

10.01 Presents oneself with assurance and makes sound decisions

10.02 Exercises calm, sound, constructive judgment during challenging situations

10.03 Adapts to a changing environment and recognizes one's own limitations

10.04 Actively pursues learning and self development opportunities

10.05 Changes one's own work methods to improve performance



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Revision Process

This document will be reviewed every three years or earlier if needed.