

2024 Gap Analysis and Educational Needs (Annual Meeting 2023)

Developed by the ASRM Continuing Medical Education Committee

TOPIC	GAP(S) IDENTIFIED	EDUCATIONAL NEED(S)
Andrology / Male Infertility	Abnormal semen analysis	Review latest evidence on abnormal semen analysis, particularly morphology
	Recent discoveries in advanced sperm testing	Explore novel tests that evaluate DNA fragmentation and genetic abnormalities in sperm
	Sperm preparation	Discuss updates in density gradient centrifugation, revisit swim-up techniques, and explore new sperm separation methods such as microfluidic sporting
	Implementing WHO 6 th Edition Semen Analysis Recommendations	Interpret the WHO 6 th Edition and how to transition from previous WHO editions
	Severe male factor infertility	Review evidence-based thoughts on when ejaculated sperm is preferred over TESE in severe male factor Overcome the logistical challenges of fresh TESE utilization
	Utilization of donor sperm in severe male factor infertility	Work with reproductive psychologists to discern the emotional impact on males needing donor sperm
	Genetic influences in male factor infertility	Understand the genetics and subsequent risks of using those native sperm in male factor infertility
	ART	Knowledge of lower-cost and more cost-effective IVF treatment options
Patient resources		Discover strategies and programs which supply resources that lower patient costs
IVF trigger options and outcomes		Compare cycle outcomes between Lupron trigger only and co-trigger with hCG and Lupron
ART Laboratory		Training programs for junior embryologists
	Assessing the literature	Improve skills in critical analysis of the published literature including some basic statistical methods
	Managing a diverse team in the lab	Discover strategies to develop high-functioning teams that have generational, gender, racial and cultural differences
	Culture media content	Review the latest information on what constitutes our culture media
	Oocyte and embryo vitrification troubleshooting	Provide a comprehensive review of vitrification including the rationale, instrumentation and techniques

2024 Gap Analysis and Educational Needs (Annual Meeting 2023)

Developed by the ASRM Continuing Medical Education Committee

TOPIC	GAP(S) IDENTIFIED	EDUCATIONAL NEED(S)
	Common practices in high-performing IVF laboratories	Discover laboratory best practices in high-performing IVF laboratories including QA/QC and policies
	Lack of proficiency in ICSI and embryo biopsy.	Provide hands-on training to improve skills with ICSI and embryo biopsy
	Embryo selection	Discuss current understanding of issues and evidence-based algorithms on embryo selection
	Lab design, technology adoption, and upgrades	Learn about how to update, evaluate and incorporate new laboratory technologies into standard practice
	Extended embryo culture: practical and experimental techniques	Review current Day 0-7 embryo culture methodology, experimental technologies in culturing embryos beyond Day 7, as well as technical and ethical concerns
	Artificial embryo	Discuss deriving embryos from extended cultured embryonic and extraembryonic structures, and stem cells
	Artificial gametes: female and male.	Analyze current progress and future applications of artificial gametes from embryonic and stem cell lineages
	In vitro maturation of gametes	Discover the feasibility of gamete in vitro maturation
	Laboratory environment control	Discuss experiences in air quality, toxicity detection, and the internal and external environment of the ART laboratory
	Laboratory risk and disaster management teaching and implementation	Review best practices in laboratory safety, monitoring systems, contingency plans, and patient material rescue
	Laboratory staff wellness, burn-out, morale, and mental wellness	Evaluate how job security, financial stability, mental health, employee-employer relationships, and professional development improve laboratory function
	Tools for laboratory quality improvement	Discuss tools for tracking and improving performance, including key performance indicators (KPIs), checklists, root cause analysis, etc.
	Improve embryo biopsy techniques	Demonstrate best techniques for embryo biopsy and troubleshoot difficulties
	Embryo glue	Update learners on the latest with embryo glue
	Improve gamete and embryo culture outcomes	Utilize microfluidics and other technologies to fine-tune gamete and embryo culture protocols, as well as in vitro maturation of gametes.
Biology of Reproduction	Tissue engineering and modeling in reproduction	Review the latest research in tissue engineering and modeling in reproduction

2024 Gap Analysis and Educational Needs (Annual Meeting 2023)

Developed by the ASRM Continuing Medical Education Committee

TOPIC	GAP(S) IDENTIFIED	EDUCATIONAL NEED(S)
	Emerging technology in embryo implantation and uterine receptivity	Review current knowledge and future directions in endometrial implantation science and the embryo-endometrium interaction
	Inner cell mass (ICM), trophoctoderm (TE), gene editing, and stem cell therapy to repair defective ICM and TE	Review the mechanisms of differentiated ICM and TE lineages and explore technologies to examine and potentially repair defects during embryo implantation and the earliest stage of pregnancy initiation.
	MicroRNA technology in ART	Assess microRNA-based technology to be used in non-invasive assessment of embryo quality and endometrial receptivity
	Improvement of implantation success	Discuss the latest data on molecular determinants of successful implantation in the human blastocyst and education on how to modify these determinants to improve implantation success
Cost Effectiveness	Optimization of laboratory effectiveness and performance	Understand the balance between cost-effectiveness and performance of laboratory outcomes, address areas to prioritize, and coordinate parties/personnel
Contraception	Male contraception	Review options in development for male contraception and timeline for mainstream use
	Female contraception	Review options in development for female contraception and timeline for mainstream use
	Contraceptives for the treatment of dysmenorrhea	Discuss the efficacy of different birth control methods, including LARCs, at decreasing dysmenorrhea and other menstrual abnormalities
Complementary/ Alternative Medicine	Complementary adjunctive therapeutic options for infertility and, specifically, patients undergoing IVF	Review available data on the roles of acupuncture and other Eastern medicine practices for donor oocyte recipient patients
		Education around holistic fertility options such as nutrition, the role of EDCs in fertility, supplements that enhance fertility, and Eastern Medicine practices.
Counseling	Knowledge of national resources for counseling	Review new resources for mental health counseling such as guided apps and national organizations providing telehealth mental health services
	Counseling patients with poor outcomes and/or prognosis	Learn strategies for delivering bad news to patients in the infertility space; specifically delivering emotionally competent care to patients with multiple failed cycles

2024 Gap Analysis and Educational Needs (Annual Meeting 2023)

Developed by the ASRM Continuing Medical Education Committee

TOPIC	GAP(S) IDENTIFIED	EDUCATIONAL NEED(S)
Early Human Development	Steroid hormone pathway in early human development	Review the different types, presentations and evaluations for enzymatic deficiencies in the steroid hormone pathway
Endometriosis	Endometriomas and DIE	Discuss current thoughts from experts on preservation of fertility in endometriosis patients
	Diagnosis of DIE	Study the use of MRI for the diagnosis of DIE and treatment planning
Ethics/ Legal	Embryo management and compliance with legal decisions	Discuss best practices for the safe handling and transport of embryos during IVF and FET to avoid/minimize any legal issues; include disposition, abandonment and transport of embryos across state borders
	Embryo disposition and donation	Explore ways for providers and laboratory leadership to educate staff, administration, and patients on embryo disposition (destruction) and donation of embryos to research
	Diversity, equity & inclusion	Review strategies to create a diverse and equitable environment for all practice staff
	Dobbs decision	Continue study on the impact of the Dobbs decision for patients, infertility practices and implementation of necessary changes in an evolving legal climate
Fertility Preservation	Gender-affirming care and fertility preservation options	Update learners on fertility preservation options in patients seeking gender-affirming care; specific focus on management of hormonal treatment
	Testicular tissue cryopreservation	Review new advances, techniques, and counseling for options in testicular tissue cryopreservation
	Ovarian tissue cryopreservation	Discuss justice, patient counseling, ethical implications, counseling, and cost-effectiveness Review utilization in pre-pubertal and adolescent patients with oncofertility concerns
	Sperm cryopreservation for male cancer patients	Discuss options and methods for sperm retrieval
	Oocyte preservation skills	Provide a forum for discussion on guidelines, best practices, and skill development of oocyte preservation

2024 Gap Analysis and Educational Needs (Annual Meeting 2023)

Developed by the ASRM Continuing Medical Education Committee

TOPIC	GAP(S) IDENTIFIED	EDUCATIONAL NEED(S)
Genetics/PGT	PGT and its usage	Supply learners with comprehensive information about PGT, and expanded use for polygenic disease
	Non-invasive PGT (niPGT), including cell-free DNA (cfDNA) analysis	Review evidence on non-invasive genetic testing of embryos. Current progress, platforms, cfDNA approaches (blastocle sampling, spent medium, etc.), utilization, and timeframe for routine use. Pros and cons of niPGT vs. traditional PGT
	Embryo mosaicism	Review safety and outcomes of transferring mosaic embryos; give healthcare providers (MDs/lab/RNs) strategies to accurately counsel patients
	Gene editing	Provide education on the current state of gene editing and associated issues
	Embryo aneuploidy and mosaicism and the relationship with genetic mechanisms in gametes	Discuss common genetic conditions that have reproductive consequences for patients
	Impact of epigenetics on ART outcomes	Review research on the effect on the embryo and long-term offspring health
	Polar body testing	Learn about polar body testing, risks and benefits, and review current knowledge
Imaging	Ultrasound training	Educate learners on ultrasound skills (including 3D) and provide hands-on experiences
Infertility	Effect of uterine pathology on fertility	Discuss uterine pathology such as adenomyosis, uterine fibroids, and endometriosis and their effects on fertility
	Decision-making for IVF protocols	Discern strategies for medication protocol decision-making based on fertility history and other patient-specific factors
Leiomyomas	Surgical management of leiomyomas	Compare hysterectomy and uterine preservation, particularly as women approach menopause

2024 Gap Analysis and Educational Needs (Annual Meeting 2023)

Developed by the ASRM Continuing Medical Education Committee

TOPIC	GAP(S) IDENTIFIED	EDUCATIONAL NEED(S)
	Non-surgical management	Review options for non-surgical management of uterine fibroids in patients who desire pregnancy; discuss ablation, MRI-US, and embolization with effects on future fertility
	Genetics of leiomyomas	Discuss the genetics of leiomyomas and potential effects on treatment response
Lesbian, Gay, Bisexual, and Transgender	Education on different routes of hormone administration for gender-affirming care	Review the risks and benefits of various routes of hormone administration: effectiveness, adherence, cost, etc.
		Discuss how gender-affirming care affects fertility
Menopause/ Ovarian Insufficiency	Aging and menopause	Review current research presented at the NAMS conference
Mental Health	Psychosocial effects of delayed puberty	Learn about the psychosocial effects of delayed puberty
	Psychosocial effects of seeking fertility treatment on LGBTQ patients	Gain skills to address the psychosocial concerns of LGBTQ patients seeking fertility treatment
	Psychosocial effects of infertility on patients and staff	Discuss the emotional effects of infertility both on patients and staff caring for these patients
Practice/ Risk Management/ Team-based Care	Practice growth	Discuss strategies for growing a practice in the face of limited resources
Pregnancy/ Pregnancy Loss	Role of weight in pregnancy loss	Learn about weight-based effects on miscarriage rates Learn how to incorporate weight management treatment into practice Discuss the effects of GLP-1 agonists on early pregnancy
	Preconception recommendations for fertility patients	Review current guidelines for preconception counseling and early pregnancy
Reproductive Surgery	Office procedures for evaluation of patients with infertility	Review hysteroscopy in the office setting: Outcomes, economic implications, patient satisfaction, equipment considerations, and, hands-on sessions

2024 Gap Analysis and Educational Needs (Annual Meeting 2023)

Developed by the ASRM Continuing Medical Education Committee

TOPIC	GAP(S) IDENTIFIED	EDUCATIONAL NEED(S)
	Cervical Stenosis	Compare surgical approaches and management of cervical stenosis prior to embryo transfer
	Cesarean section scar isthmocele	Learn about surgical approaches to Cesarean section scar separation (isthmocele) and indications
	Effect of adenomyosis on fertility	Provide an overview of adenomyosis and its relationship to the biology of reproduction with a focus on current techniques for treatment (medical and surgical)
	Diagnosis and surgical management of Mullerian anomalies	Review the MAC2021 Mullerian Anomalies Classification system and the app. Study preoperative preparation, imaging, and choice of surgical treatment for uterine/vaginal anomalies
	Tubal surgery to optimize fertility	Discuss how to address hydrosalpinges and the role of fimbrioplasty Review tubal function, evaluation, and impact for fertility patients (especially those that cannot move forward with IVF) Compare situations in which salpingectomy is helpful vs. retaining fallopian tubes in infertility patients
	Methods to optimize the difficult egg retrieval (abdominal) and embryo transfer	View examples of abdominal egg retrieval and guidelines for its use Strategize techniques for difficult embryo transfers, including patients with obesity
	Uterine transplantation, transposition and transgender uterus transplantation	Discuss candidates, indications, and techniques for continually evolving uterine transplantation and other procedures
	Uterine septum	Learn about the current literature on uterine septum management, resection vs. expectant management
Stem Cells	Therapeutic applications of stem cells in reproduction	Review the current application of stem cell research as it applies to reproductive medicine and future application
	Progress and outlook in utilizing artificial gametes and embryos	Consider scientific studies on the current progress, limitations, ethical concerns, and potential timeline for utilization of artificial gametes and embryos
	Long-term preservation of stem cells for clinical use	Evaluate the efficacy of stem cell cryopreservation and storage relative to solution and container types used.

2024 Gap Analysis and Educational Needs (Annual Meeting 2023)

Developed by the ASRM Continuing Medical Education Committee

TOPIC	GAP(S) IDENTIFIED	EDUCATIONAL NEED(S)
	Application of synthetic biology in reproductive medicine.	Consider data on using synthetic biology to regenerate and repair embryos, tissues, and organs.
	Use of Stem cell-derived gametes	Discuss the use of stem cell-derived gametes and both technical aspects and ethical implications
Technology	Artificial intelligence (AI) in reproductive health: basic concepts, current technology development, and utilization	Review basic concepts in AI and its application in embryo selection, non-invasive PGT, and patient treatment Learn how to integrate technology and management tools to streamline and improve patient care
	Knowledge in cybersecurity and data safety	Understand the voluntary use of clinical and laboratory data Review best practices in cybersecurity Compare hardware and software configurations for on-site and cloud-based solutions
	Social media and the practice of medicine	Consider the best uses for social media in the domain of medicine
Journal Editors	Preparation of journal manuscripts and the review process	Develop skills in manuscript writing, submission and review for clinical and laboratory providers
Miscellaneous	Sexual Health	Learn how to perform a comprehensive sexual health evaluation and provide medical options when appropriate
	Gestational surrogacy and age-related risks	Discuss age as a factor in gestational surrogacy
	Evaluation in children with gynecologic complaints and physical or mental incapacities	Learn new skills in pediatric and adolescent gynecology (vaginal bleeding, trauma) in children with physical or mental incapacities
	Pelvic floor dysfunction	Perform physical examination of the pelvic floor in patients with pelvic pain and review the anatomy
	Health disparities in third-party reproduction	Find and utilize resources to assist in the teaching of minority patients regarding possible biases, fears, and outcomes of IUI and IVF cycles using known and unknown donor sperm and oocytes