

2015 Gap Analysis and Educational Needs

Based on 2014 Scientific Program & Postgraduate Program Pre-Tests and 2014 Case of the Month Surveys

TOPIC	GAP(S) IDENTIFIED	EDUCATIONAL NEED(S)
Adolescent/ Pediatric Gynecology	Understanding baseline fertility	Fertility testing
Andrology / Male Infertility	Evaluation and treatment of the infertile male	Evaluation and treatment of the infertile male
	Genetic evaluation of the infertile male	Interpretation of Y-chromosome microdeletion results
	Male fertility practitioners are generally not using or are familiar with the SART database	Educating how the SART database benefits couples with male factor infertility
	Recognizing obstructive azoospermia Appropriate management of the couple with OA	Workup and management of obstructive azoospermia
	Adequate knowledge of andrology laboratory techniques Recognizing non-obstructive azoospermia	ART/andrology lab techniques in the management of NOA
	Correct laboratory processing of testicular extracted sperm	Laboratory procedures for tissue-extracted sperm
	Sperm harvesting in non-obstructive azoospermia	Recognition of appropriate sites and uses of sperm retrieval in NOA
	Advanced testing for male infertility	Role of advanced testing and counseling for complicated cases
	Recognizing recurrent pregnancy loss Knowledge of role for sperm DNA fragmentation testing	Workup for recurrent pregnancy loss
	Indications and management of DNA fragmentation testing	Optimizing male fertility DNA fragmentation testing and management
	Male fertility providers do not generally deal with donor sperm testing	Teaching urologists about what tests are appropriate pre-conception screens and their relative cost-efficiencies
	Basic science knowledge gap	Need for basic science education
ART	Incorrect interpretation of PGD results	PGD testing limitations
	Perinatal risks of ART	Perinatal risks of ART Multiple gestation
	Perinatal risks of ART	Perinatal risks of ART Risks of multiple gestation
	Understanding of HIV transmission in ART	Evidence-based ART in HIV-positive patients.
	In vitro success rates given past medical history	Success of IVF in specific patient population and situation in which IVF may not assist.
	IVF alone versus IVF with additional techniques	When to use PGS

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	Lack of knowledge on stage of biopsy for PGS	Preimplantation genetic screening indications, outcome data
	Understanding of current technologies and approaches to follicular monitoring	Most up-to-date ultrasound monitoring technologies
	Understanding approaches to restore ovulation and risks to avoid	Ovulation induction approaches and goals to reduce risk of multiple gestation
	Understanding fertility preservation technologies	Fertility preservation technologies limitations and expectations
	Lack of knowledge on GnRH agonist trigger sequelae	Clinical outcomes following GnRHa trigger
	Insufficient counseling related to IVF success rates	Counseling women about IVF success rates
	IVF outcomes	Live birth rate outcomes with IVF
	Understanding of the most recent ART outcomes data, specifically regarding blastocyst vs. cleavage-stage transfer	Best practice patterns for embryo transfer
	Understanding of embryo selection and competency	Embryo competency techniques/ assessment for single embryo transfer
	Understanding of metabolites in culture media	Culture media and embryo by-products
	Understanding of oocyte physiology	Oocyte physiology and function
	Understanding of techniques used in assessment of oocytes	Microscopy use in oocyte biology
	Understanding of microscopy technique	Microscopy use
	Self-interests of practitioners vs. legal protection of embryos	Lab identification procedure/patient safety in the laboratory
	Lack of understanding for methods of transfer	The utility of various embryo transfer methods
	Role of time-lapse morphometric technology for analysis of embryos	Understanding of morphometric techniques in embryology lab technology
	Role of the embryology lab in handling of gametes and embryos	Understanding embryology lab technology and capabilities
	Identifying pitfalls of cryopreservation	Understanding cryopreservation technology
	Lack of knowledge of properties of cryoprotectants	Vitrification process and media
	Lack of knowledge on different vitrification devices	Vitrification devices
	Lack of understanding about post thaw survival of embryos	Embryo survival basics and techniques
	Understanding of vitrification and embryo physiology	Vitrification protocols
	Understanding of risk factors for viral transmission	Mechanisms of viral transmission
Biology of Reproduction	Basic science knowledge of fertilization process	Detailed review of fertilization events
	Lack of knowledge regarding the role of CSF2 in embryo development	Animal models and use of cytokines in cell culture

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	Lack of knowledge on effect of maternal diet on embryo development	Maternal exposures and early embryo development
	Lack of knowledge on maternal diet on mitochondria in oocytes	Mitochondria and early embryo development
Coding	Incorrect Medicare/Medicaid coding for consultation	Medicare/Medicaid coding
Complementary/Alternative Medicine	Alternative medicine methodology	Recognition of alternative approaches to healing
Contraception	Lack of understanding of the utility of LARC methods	LARCs and cost effectiveness
	Lack of understanding of effective methods of birth control	LARCs and effectiveness for young women
	Perhaps the gap is not the knowledge but the question might be changed to reversible versus irreversible methods	Methods of contraception
	Lack of understanding when bone density monitoring is needed or required	Bone density testing recommendations and what risk factors suggest you should or should not monitor
	Statistical interpretation of relative risk	Biostatistics
	Inadequate knowledge on risk of thromboembolic disease with LN-IUS, body size and OCPs, and hypertension and OCPs	Contraception risks
Counseling/ Ethics/Legal	Ethical/cultural sensitivity	Ethics/cultural sensitivity
	Practice of medicine and the legalities of having foreign patients	Ethics in treatment of foreign patients
	Lack of education in lab practices for patient ID	Lab practices for optimizing patient identification
	Awareness of legislation and advocacy for fertility therapies	Fertility advocacy approaches
	Legal aspects of reproductive medicine	Need to proactively have consents for tissue cryopreservation
	Gestational surrogacy laws	Legal aspects of third party reproduction
	Egg donor screening	What are tools that may assist clinicians as they screen potential egg donors?
	Knowledge of ethical foundations of informed consent	Ethical basis of consent
	Legal standards of informed consent	Legal standards of informed consent
Endometriosis	Lack of knowledge on endometriosis and perinatal outcomes	Endometriosis and perinatal outcomes
	Inability to identify/diagnose endometriomas	Surgical management of endometriomas
	Understanding of ASRM practice committee report	Review guidelines

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Fertility Preservation	Fertility preservation for cancer patients	Recognition of appropriate candidates for egg/embryo cryopreservation
	Standard of care for fertility preservation in female pediatric patients requiring gonadotoxic treatment for cancer	Standard of care for fertility preservation Ovarian tissue cryopreservation
	Fertility preservation for cancer patients	Identification of uses of ovarian tissue transplantation
	Fertility preservation for cancer patients	Recognition of uses of cryopreserved ovarian tissue for transplant
	Fertility preservation for cancer patients	Counseling regarding the effects of chemotherapy on ovarian function
	Fertility preservation for cancer patients	Processing of cryopreserved oocytes after harvesting
	Fertility preservation for cancer patients	Identification of outcomes with orthotopic cryopreserved ovarian tissue
Fibroids	Understanding of surgical options and implications around uterine factor	Surgical options and implications around uterine factor
	Appropriate diagnostic modalities for fibroids	Diagnosis of fibroids
	Lack of understanding of the steroid biosynthesis pathway	Adrenogenital disorders and sex reversal disorders
	Understanding WES	The benefits and limitations of WES
Genetics/PGD	Not applying clinical guidelines	Review guidelines
	Understanding oocyte/embryo physiology	Oocyte/embryo physiology
	Prenatal testing in multiple gestations	Recommended use of NIPT
	Knowledge of cell-free fetal DNA prenatal testing	Cell-free fetal DNA prenatal testing
	Embryo biopsy and PGD	Unclear- need complete text of answers?
	Knowledge of ultrasound technology and equipment	Instruction in use of ultrasound
	When SHG can be performed reliably	Recognition of proper timing and limitations of SHG
Imaging	Knowledge of treatment options for idiopathic infertility	Treatment for idiopathic infertility and associated risks
	Lack of knowledge of effects of zero gravity on fertility	Appropriate preventive care for space flights
Infertility	Too few responses	
	Knowledge of screening/testing for ovarian reserve	Screening/testing/ assessment of ovarian reserve
	Evaluation of secondary amenorrhea	Evaluation of secondary amenorrhea
	Knowledge of treatment options for anovulation with hyperandrogenic etiology	Treatment options for clomiphene-citrate resistant hyperandrogenic anovulation
	Perimenopausal medicine and management of symptoms	Counseling of perimenopausal women on lifestyle modifications

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	Knowledge of effects of maternal obesity on the embryo	Obesity in reproduction
Nutrition/ Obesity	Recognizing PCOS	Diagnosis and management of polycystic ovary syndrome
	Understanding PCOS	Treatment of PCOS
	Obesity and reproductive function	Recognition of the adverse consequences of obesity of female reproductive health
	Standard of care in terms of managing PCOS Role of metformin in the management of PCOS	Management of PCOS
PCOS/ Androgen Excess	Polycystic ovary syndrome management	Management of PCOS specific physical symptoms
	Polycystic ovary syndrome management	Management of PCOS-specific psychological symptoms
	Patient did not adhere to protocol	Managing resistant patients
	Knowledge of cultural differences in response to bariatric surgery	Diversity in bariatric surgery
	Ovarian hyperstimulation in PCOS	Ways to stimulate women safely who have PCOS and excessive egg maturation
	The old method of medroxyprogesterone challenge is still frequently utilized	A medroxyprogesterone challenge is not always needed. Discussing other options for symptom management for adolescents and adults with menstrual concerns.
	Understanding methods for minimizing error in the healthcare environment What is the “sterile cockpit”	Error reduction in healthcare
Practice/ Risk Management	Definition of risk	Risk-benefit analyses and decision making in healthcare
	Understanding quality management	Quality management training
	Knowledge of billing/reimbursement for diagnostic testing for infertility	Billing/reimbursement for diagnostic infertility testing
Pregnancy/ Pregnancy Loss	Knowledge of implications of treatment options for missed abortion	Implications (risks/benefits) of treatment options for missed abortion
	Understanding biochemical pregnancy loss	Discussing and counseling patients about risk when pregnancy loss occurs and how stage of pregnancy impacts this.
	Genetic reasons for pregnancy loss	Understanding which genetic conditions pose ongoing risk and which ones may be random

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		occurrence.
	Knowledge of ultrasound assessment of early pregnancy	Training in ultrasound assessment in early pregnancy
	Evaluation of the uterus in the patient with recurrent pregnancy loss	US versus HSG in evaluation of the uterus in patients with recurrent pregnancy loss
	Staying up-to-date on cutting edge technology	Education about novel surgical techniques
Stem Cells	Steps in initiating and conducting an RCT	Understanding study design
Other	Understanding of study design	Optimizing outcomes based on clinical study design
	Statistical Analysis of Study Design Power Analysis	Understanding study design
	Current knowledge of ovarian cancer	Updates in ovarian cancer care
	Side effects of contraceptive medicine	Recognition of venous thromboembolism incidence with oral contraceptive treatments
	Unfamiliar with Cochrane Database and study recruitment	Designing study protocols and how to enroll ideal subjects
	Knowledge of study design in clinical medicine	Study design for clinical medicine research