



جَوَادَة  
الصَّفَرَة  
DEPARTMENT OF HEALTH

# Assisted Reproductive Technology Treatment Service (ART) Jawda Guidance

Version 9

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# ART JAWDA Performance Indicators

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## Executive Summary

The Department of Health- Abu Dhabi (DOH) is the regulatory body of the healthcare sector in the Emirate of Abu Dhabi and ensures excellence in healthcare for the community by monitoring the health status of its population.

The Emirate of Abu Dhabi is experiencing a substantial growth in the number of hospitals, centers and clinics. This is ranging from school clinics and mobile units to internationally renowned specialist and tertiary academic centers. Although, access and quality of care has improved dramatically over the last couple of decades, mirroring the economic upturn and population boom of the Abu Dhabi Emirate, however challenges remain in addressing further improvements.

The main challenges that are presented with increasingly dynamic population include an aging population with increased expectation for treatment, utilization of technology and diverse workforce leading to increased complexity of healthcare provision in Abu Dhabi. All of this results in an increased and inherent risk to quality and patient safety.

DOH has developed dynamic and comprehensive quality framework in order to bring about improvements across the health sector. This guidance pertains to the quality indicators that the Department of Health (DOH) is requiring for quarterly reporting by healthcare facilities operating ART fertility treatment in the Emirate of Abu Dhabi.

The guidance sets out the full definition and method of calculation for patient safety and clinical effectiveness indicators. For enquiries about this guidance, please contact [jawda@DoH.gov.ae](mailto:jawda@DoH.gov.ae)

This document is subject for review and therefore it is advisable to utilize online versions available on the DOH website at all times.

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### About this Guidance

The guidance sets out the definitions and reporting frequency of JAWDA Assisted Reproductive Technology Treatment (ART) performance indicators. Department of Health (DoH) with consultation of local and international fertility treatment quality of care expertise developed (ART) performance indicators that are aimed for assessing the degree to which a provider competently and safely delivers the appropriate clinical services to the patient within the optimal time period.

The ART performance indicators in this guidance include measures to monitor clinical effectiveness, and outcomes among patients receiving ART treatment i.e., (complications resulting from fertility treatment procedure, clinical pregnancy, multiple pregnancy, and live birth rates from fresh or frozen embryo transfer). Healthcare providers are the most qualified professionals to develop and evaluate quality of care measures for assisted reproductive technology treatment. Therefore, it is crucial that clinicians retain a leadership position in defining ART quality of care.

### Who is this guidance for?

All DoH licensed healthcare facilities providing ART fertility treatment in the Emirate of Abu Dhabi.

\*\*All patient population are included in the KPI counts i.e. Thiqa, Non-Thiqa, Self-pay etc.

### How do I follow this guidance?

Each provider will nominate one member of staff to coordinate, collect, monitor and report ART quality performance indicators data as per communicated dates. The nominated healthcare facility lead must in the first instance e-mail their contact details (if different from previous submission) to [JAWDA@doh.gov.ae](mailto:JAWDA@doh.gov.ae) and submit the required quarterly quality performance indicators through Jawda online portal.

### What are the Regulation related to this guidance?

- Legislation establishing the Health Sector
- DOH Standard for Assisted Reproductive Technology Services and Treatment
- As per [DoH Policy for Quality and Patient Safety](#) issued January 15th 2017, this guidance applies to all DOH Licensed Hospital Healthcare Facilities in the Emirate of Abu Dhabi in accordance with the requirements set out in this Standard.

## ART JAWDA Performance Indicators

### Glossary

<b>ART</b>	Assisted Reproductive Technology Treatment (ART) is any assisted conception treatment involving ovarian stimulation with gonadotropins injections and other stimulating drugs such as Letrozole and Clomiphene Citrate leading to timed intercourse, intra uterine insemination (IUI) or IVF/ICSI.
<b>ART Cycle</b>	<p>It is the start of an IUI/IVF cycle in which a woman begins taking drugs to stimulate egg production; ART cycles include any process in which:</p> <ol style="list-style-type: none"> <li>1) a woman has undergone ovarian stimulation or monitoring with the intent of having an ART procedure, including incomplete frozen cycles where stimulating medications have been administered with no embryo warming done</li> <li>2) IUI or an IVF/ICSI procedure is performed or</li> <li>3) Frozen embryos have been thawed with the intent of Embryo transfer</li> <li>4) Ovulation induction and timed intercourse</li> </ol>
<b>Invitro mature oocytes</b>	In vitro matured oocyte is an immature egg at the germinal vesicle GV or metaphase I stage and matured in the IVF lab
<b>Clinical Pregnancy</b>	Intra-uterine pregnancy with fetal heart activity / viable pregnancy identified using ultrasound around 4-6 weeks after embryo transfer
<b>Multiple pregnancy</b>	Pregnancy with $\geq 2$ pulsating intrauterine fetal hearts identified using ultrasound 4-6 weeks after embryo transfer
<b>Cryopreservation</b>	The practice of freezing eggs, sperm or embryos from a patient cycle for potential future use in ART cycles.
<b>Embryo transfer</b>	Placement of embryos into a woman's uterus.
<b>Fresh IVF cycle</b>	An IVF cycle in which fresh embryos are transferred to the woman. The fresh embryos are created with fresh or frozen eggs, and fresh or frozen sperm  In cases where the transfer procedure includes both fresh and frozen embryos, it should be considered a <b>fresh cycle</b> .
<b>Frozen embryo cycle</b>	An ART cycle in which frozen embryos are thawed and transferred to the woman.
<b>Preimplantation genetic testing (PGT)</b>	Techniques performed on embryos prior to transfer. <b>PGT-A</b> screens embryos for an abnormal number of chromosomes, which is of special value for women with selected clinical indication such as advanced maternal age, recurrent miscarriages, or recurrent implantation IVF failure. <b>PGT-M</b> is for detecting specific genetic conditions to reduce the risk of passing inherited diseases to offspring. <b>PGT-SR</b> is a test for structural rearrangements of chromosomes which are chromosomal variations that are carried by the biologic mother and/or father.
<b>Reporting period</b>	The span of time that defines the Jawda reporting period. The period will include all ART cycles that "started" in that period.

## ART JAWDA Performance Indicators

<b>Service codes</b>	Service codes for bundled reimbursement by Thiqa for IVF cycle
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Source: CDC (2017), Assisted reproductive technology, 2015 Fertility Clinic Success Rates Report  
 HFEA (2016), Fertility treatment 2019- trends and figures

## ART Performance Indicators

**Type: ART Quality Indicator**

**Number: ART001**

<b>KPI Description (title):</b>	<b>Rate of severe complications resulting from fertility treatment</b>
<b>Domain</b>	<b><i>Safety</i></b>
<b>Indicator Type</b>	<b><i>Outcome</i></b>
Definition:	Percentage of all started ART cycles with severe complications within two weeks from the start of fertility treatment, which requires hospitalization through emergencies, during the reporting period.
Calculation:	<p><b><u>Numerator:</u></b> Number of ART cycles with severe complications resulting from the fertility treatment, which requires unplanned hospitalization.</p> <p><b>Complications to be considered (not limited to):</b></p> <ul style="list-style-type: none"> <li>• OHSS: N98.1</li> <li>• Others: N98.2, N98.3, N98.8, N98.9</li> </ul> <p><b><i>For a diagnosis of OHSS, a hemoconcentration of HCT above 45% is required.</i></b></p> <ul style="list-style-type: none"> <li>• <b>Bleeding:</b> N83.6, N85.7, N93.8, N93.9, K66.1</li> <li>• <b>Infections:</b> N70.01, N70.02, N70.03, N70.91, N70.92, N70.93, N71.0, N71.9, N73.8, N73.9, N74, N98.0, N83.511, N83.512, N83.519, N83.521, N83.522, N83.529, N83.53</li> </ul> <p><b><u>Denominator:</u></b> Total number of all started cycles during the reporting time period, even if they were canceled at any stage (e.g. before retrieval).</p> <p><b>Service codes:</b> 70-01, 70-02, 70-03, 70-04, 70-05, 70-06, 70-07, 70-08, 70-09, 70-10, 70-11, 70-26</p> <p><b><u>Denominator Inclusion:</u></b></p> <ul style="list-style-type: none"> <li>• Natural cycle (no stimulation) that is under monitoring with OPU or IUI performed.</li> <li>• Please refer to the glossary for ART cycle definition.</li> </ul>
Reporting Frequency:	Quarterly
Unit of Measure:	Percentage
International comparison if available	ESHRE Clinic PI Working Group; Vlaisavljevic V, Apter S, Capalbo A, D'Angelo A, Gianaroli L, Griesinger G, Kolibianakis EM, Lainas G, Mardesic T, Motrenko T, Pelkonen S, Romualdi D, Vermeulen N, Tilleman K. The Maribor consensus: report of an expert meeting on the development of performance indicators for clinical practice in ART. Hum Reprod Open. 2021 Jul 3;2021(3):hoab022. doi: 10.1093/hropen/hoab022. PMID: 34250273; PMCID: PMC8254491.

## ART JAWDA Performance Indicators

	<p><i>-Developed by DoH- Abu Dhabi ,-SA El Shawarby et al A review of complications following Transvaginal oocyte retrieval for in-vitro fertilisation, Human Fertility June 2004, 7(2), 127-133 (Document attached) ,-E.A.F. Dancet, T.M. D'Hooghe, C. Spiessens, W. Sermeus, D. De Neubourg, N. Karel, J.A.M. ,Kremer, W.L.D.M. Nelen; Quality indicators for all dimensions of infertility care quality: consensus between professionals and patients, Human Reproduction, Volume 28, Issue 6, ,1 June 2013, Pages 1584–1597, <a href="https://doi.org/10.1093/humrep/det056">https://doi.org/10.1093/humrep/det056</a></i></p>
Desired direction:	Lower is better
<b>Notes for all facilities</b>	
Data Source/ Report Name:	<ul style="list-style-type: none"><li>- Administrative and medical records</li><li>- Claims</li></ul>

## ART JAWDA Performance Indicators

Type: ART Quality Indicator		Number: ART002
<b>KPI Description (title):</b>	<b>Live births rate from fresh IVF cycle</b>	
<b>Domain</b>	<i>Effectiveness</i>	
<b>Indicator Type</b>	<i>Outcome</i>	
Definition:	<p>Percentage of live births (the complete expulsion or extraction of a product of fertilization that shows evidence of life of any product of conception regardless how many weeks of pregnancy) after a fresh IVF cycle for women:</p> <p><u>Age Group:</u></p> <ul style="list-style-type: none"> <li>• Less than 35 years old</li> <li>• Between 35-37</li> <li>• Between 38-39</li> <li>• Between 40-42</li> <li>• Between 43-45</li> <li>• Above 45 years old</li> </ul> <p>Note: (Each age group must be reported separately)</p>	
Calculation:	<p><b>Numerator:</b> Total number of women with live births (the complete expulsion or extraction of a product of fertilization that shows evidence of life) after <b>fresh</b> IVF cycle for women (see age group above).</p> <p><b>Numerator Inclusion:</b> All live births including singleton and multiple irrespective of gestational age and birth weight. A cycle resulting in live birth may include single or multiple infants born live.</p> <p><b>ICD-10 CM:</b> 080, 082, Z37.0, Z37.2, Z37.3, Z37.50, Z37.51, Z37.52, Z37.53, Z37.54, Z37.59, Z37.60, Z37.61, Z37.62, Z37.63, Z37.64, Z37.69</p> <p><b>Or</b></p> <p><b>CPT codes:</b> 59400, 59409, 59410, 59510, 59514, 59515, 59610, 59612, 59614, 59618, 59620, 59622</p> <p><b>Numerator Exclusion:</b> Women where all reasonable attempts have been made to follow up on status of live birth.</p> <p><b>Denominator:</b> Total number of <b>fresh</b> embryo transfer procedures performed in the reporting period for women (see age group above).</p> <p><b>Denominator Inclusion:</b> Include all embryos that were transferred i.e. including those with and without preimplantation genetic testing (PGT).</p> <p><b>Service codes (not limited to):</b> 70-01 and 70-05</p>	
Reporting Frequency:	Annually ( <b>Live birth rate from all fresh Embryo transfer procedures in women</b> (see age group above) <b>that started from January to December of a target year should be reported with the Q4 submissions of subsequent year.)</b>	
Unit of Measure:	Percentage	
International comparison if available	Developed as per DoH- Abu Dhabi standard, HFEA and CDC	
Desired direction:	Higher is better	
<b>Notes for all facilities</b>		

## ART JAWDA Performance Indicators

Data Source/ Report Name:	<ul style="list-style-type: none"><li>- Administrative and medical records.</li><li>- Claims.</li><li>- Medical Record Numbers (or unique patient identifier) list of all lost to follow up cases must be submitted to DOH at time of data submission</li></ul>
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## ART JAWDA Performance Indicators

**Type: ART Quality Indicator**

**Indicator Number: ART003**

<p><b>KPI Description (title):</b> <b>Clinical Pregnancy rate from fresh IVF cycle</b></p>	
<b>Domain</b>	<b>Effectiveness</b>
<b>Indicator Type</b>	<b>Outcome</b>
Definition:	<p>Total number of women with positive fetal hearts as confirmed by ultrasound 2-4 weeks after positive pregnancy test or viable pregnancy confirmed in the ultrasound report following fresh IVF cycle for women of.</p> <p><b>Age Group:</b></p> <ul style="list-style-type: none"> <li>• Less than 35 years old</li> <li>• Between 35-37</li> <li>• Between 38-39</li> <li>• Between 40-42</li> <li>• Between 43-45</li> <li>• Above 45 years old</li> </ul> <p>Note: (Each age group must be reported separately)</p>
Calculation:	<p><b>Numerator:</b> Total number of women with positive fetal heart activity / viable pregnancy as confirmed by ultrasound around 2-4 weeks after positive pregnancy test following fresh IVF cycle for women age (see age group above).</p> <p><b>Numerator Inclusion:</b> All pregnancies including singleton and multiple.</p> <p><b>CPT codes:</b> 76801, 76802, 76811, 76812, 76813, 76814, 76815, 76816, 76817</p> <p><b>Denominator:</b> Total number of <b>fresh</b> embryo transfer procedures performed in the reporting period for women age (see age group above).</p> <p><b>Denominator Inclusion:</b> Include all embryos that were transferred, i.e. including those with and without preimplantation genetic testing (PGT).</p> <p><b>Service codes (not limited to):</b> 70-01 and 70-05</p>
Reporting Frequency:	Quarterly
Unit of Measure:	Percentage
International comparison if available	Developed as per DoH- Abu Dhabi standard, HFEA and CDC
Desired direction:	Higher is better
<b>Notes for all facilities</b>	
Data Source/ Report Name:	<ul style="list-style-type: none"> <li>- Administrative and medical records.</li> <li>- Claims</li> </ul>

## ART JAWDA Performance Indicators

Type: ART Quality Indicator		Indicator Number: ART004
<b>KPI Description (title):</b>	<b>Multiple Clinical pregnancy rate from fresh IVF cycles</b>	
<b>Domain</b>	<b>Safety</b>	
<b>Indicator Type</b>	<b>Outcome</b>	
<b>Definition:</b>	<p>Percentage of multiple pregnancies (2 or more) as a result of fresh IVF cycle during the reporting period.</p> <p><b>Note:</b> (twins must be reported separately from triplets and above)</p>	
<b>Calculation:</b>	<p><b>Numerator:</b> Total number of women with multiple pregnancies (2 or more fetal heart activities) confirmed by ultrasound at around 2-4 weeks after positive pregnancy test.</p> <p><b>Note:</b> (twins must be reported separately from triplets and above)</p> <p><b>ICD-10 CM:</b> O30 (Multiple gestation) with  <b>CPT codes:</b> 76801, 76802, 76811, 76812, 76813, 76814, 76815, 76816, 76817</p> <p><b>Denominator:</b> Total number of <b>fresh</b> embryo transfer procedures performed during the reporting period</p> <p><b>Denominator Inclusion:</b> Include all embryos that were transferred, i.e. including those with and without preimplantation genetic testing (PGT).</p> <p><b>Service codes (not limited to):</b> 70-01 and 70-05</p>	
<b>Reporting Frequency:</b>	Quarterly	
<b>Unit of Measure:</b>	Percentage	
<b>International comparison if available</b>	Developed as per DoH- Abu Dhabi standard, HFEA and CDC	
<b>Desired direction:</b>	Lower is better	
<b>Notes for all facilities</b>		
<b>Data Source/ Report Name:</b>	<ul style="list-style-type: none"> <li>- Administrative and medical records.</li> <li>- Claims</li> </ul>	

## ART JAWDA Performance Indicators

Type: ART Quality Indicator

Indicator Number: ART005

<b>KPI Description (title):</b>	<b>Multiple live birth rate from fresh IVF cycles</b>
<b>Domain</b>	<b><i>Safety</i></b>
<b>Indicator Type</b>	<b><i>Outcome</i></b>
Definition:	<p>Percentage of women with multiple live births (2 or more) as a result of fresh IVF cycle during the reporting period</p> <p><b>Note:</b> (twins must be reported separately from triplets and above)</p>
	<p><b><u>Numerator:</u></b> Total number of women with multiple live births (2 or more) as a result of fresh IVF cycle</p> <p><b><u>Numerator Inclusion:</u></b> All live births (2 or more) irrespective of gestational age and birth weight</p> <p><b>Note:</b> (twins must be reported separately from triplets and above)</p> <p><b><i>ICD-10 CM:</i></b> Z37.2, Z37.50, Z37.51, Z37.52, Z37.53, Z37.54, Z37.59, Z37.60, Z37.61, Z37.62, Z37.63, Z37.64, Z37.69</p> <p><b><u>Numerator Exclusion:</u></b> Women where all reasonable attempts have been made to follow up on status of live birth.</p> <p><b><u>Denominator:</u></b> Total number of <b>fresh</b> embryo transfer procedures performed during the reporting period</p> <p><b><u>Denominator Inclusion:</u></b> Include all embryos that were transferred, i.e. including those with and without preimplantation genetic testing (PGT).</p> <p><b><i>Service codes (not limited):</i></b> 70-01 and 70-05</p>
Reporting Frequency:	Annually ( <b><i>Live birth rate from all fresh Embryo transfer procedures that started from January to December of a target year should be reported with the Q4 submissions of subsequent year</i></b> )
Unit of Measure:	Percentage
International comparison if available	Developed as per DoH- Abu Dhabi standard, HFEA and CDC
Desired direction:	Lower is better
<b>Notes for all facilities</b>	
Data Source/ Report Name:	<ul style="list-style-type: none"> <li>- Administrative and medical records.</li> <li>- Claims</li> <li>- Medical Record Numbers (or unique patient identifier) list of all lost to follow up cases must be submitted to DOH at time of data submission</li> </ul>

## ART JAWDA Performance Indicators

Type: ART Quality Indicator

Indicator Number: ART006

KPI Description (title):	<b>Live births rate from frozen IVF cycle</b>
Domain	<b>Effectiveness</b>
Indicator Type	<b>Outcome</b>
Definition:	<p>Percentage of live births (the complete expulsion or extraction of a product of fertilization that shows evidence of life regardless gestational age) after a frozen IVF cycle for women regardless of gestational age.</p> <p><u>Age Group:</u></p> <ul style="list-style-type: none"> <li>• Less than 35 years old</li> <li>• Between 35-37</li> <li>• Between 38-39</li> <li>• Between 40-42</li> <li>• Between 43-45</li> <li>• Above 45 years old</li> </ul> <p>Note: (Each age group must be reported separately)</p>
Calculation:	<p><b>Numerator:</b> Total number of women with live births (the complete expulsion or extraction of a product of fertilization that shows evidence of life) after <b>frozen</b> IVF cycle for women age (see age group above).</p> <p><b>Numerator Inclusion:</b> All live births including singleton and multiple irrespective of gestational age and birth weight. A cycle resulting in live birth may include single or multiple infants born live.</p> <p><b>ICD-10 CM:</b> 080, 082, Z37.0, Z37.2, Z37.3, Z37.50, Z37.51, Z37.52, Z37.53, Z37.54, Z37.59, Z37.60, Z37.61, Z37.62, Z37.63, Z37.64, Z37.69</p> <p><b>Or</b></p> <p><b>CPT codes:</b> 59400, 59409, 59410, 59510, 59514, 59515, 59610, 59612, 59614, 59618, 59620, 59622</p> <p><b>Numerator Exclusion:</b> Women where all reasonable attempts have been made to follow up on status of live birth.</p> <p><b>Denominator:</b> Total number of <b>frozen</b> embryo transfer procedures performed in the reporting period for women age (see age group above).</p> <p><b>Denominator Inclusion:</b> Include all embryos that were transferred, i.e. including those with and without preimplantation genetic testing (PGT).</p> <p><b>Service codes(not limited to):</b> 70-03, 70-05</p>
Reporting Frequency:	Annually: ( <b>Live birth rate from all frozen Embryo transfer procedures for women</b> (see age group above). <b>that started from January to December of a target year should be reported with the Q4 submissions of subsequent year</b> )
Unit of Measure:	Percentage
International comparison if available	Developed as per DoH- Abu Dhabi standard, HFEA and CDC
Desired direction:	Higher is better
<b>Notes for all facilities</b>	

## ART JAWDA Performance Indicators

Data Source/ Report Name:	<ul style="list-style-type: none"><li>- Administrative and medical records.</li><li>- Claims</li><li>- Medical Record Numbers (or unique patient identifier) list of all lost to follow up cases must be submitted to DOH at time of data submission</li></ul>
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## ART JAWDA Performance Indicators

Type: ART Quality Indicator

Indicator Number: ART007

KPI Description (title):	<b>Clinical Pregnancy rate from frozen IVF cycle</b>
Domain	<b>Effectiveness</b>
Indicator Type	<b>Outcome</b>
Definition:	<p>Percentage of women with positive fetal hearts resulting from frozen IVF cycle during the reporting period for women for.</p> <p><u>Age Group:</u></p> <ul style="list-style-type: none"> <li>• Less than 35 years old</li> <li>• Between 35-37</li> <li>• Between 38-39</li> <li>• Between 40-42</li> <li>• Between 43-45</li> <li>• Above 45 years old</li> </ul> <p>Note: (Each age group must be reported separately)</p>
Calculation:	<p><b>Numerator:</b> Total number of women with positive fetal heart activity / viable pregnancy as confirmed by ultrasound around 2-4 weeks after positive pregnancy test following frozen IVF cycle for women age (see age group above).</p> <p><b>Numerator Inclusion:</b> All pregnancies including singleton and multiple.</p> <p><b>CPT codes:</b> 76801, 76802, 76811, 76812, 76813, 76814, 76815, 76816, 76817</p> <p><b>Denominator:</b> Total number of <b>frozen</b> embryo transfer procedures performed in the reporting period for women of (see age group above).</p> <p><b>Denominator Inclusion:</b> Include all embryos that were transferred, i.e. including those with and without preimplantation genetic testing (PGT).</p> <p><b>Service codes (not limited to):</b> 70-03, 70-05</p>
Reporting Frequency:	Quarterly
Unit of Measure:	Percentage
International comparison if available	Developed as per DoH- Abu Dhabi standard, HFEA and CDC
Desired direction:	Higher is better
<b>Notes for all facilities</b>	
Data Source/ Report Name:	<ul style="list-style-type: none"> <li>- Administrative and medical records.</li> <li>- Claims</li> </ul>

## ART JAWDA Performance Indicators

Type: ART Quality Indicator

Number: ART008

<b>KPI Description (title):</b>	<b>Multiple clinical pregnancy rate from frozen IVF cycles</b>
<b>Domain</b>	<b><i>Safety</i></b>
<b>Indicator Type</b>	<b><i>Outcome</i></b>
Definition:	<p>Percentage of women with multiple pregnancies (2 or more) resulting from frozen IVF cycle during the reporting period.</p> <p><b>Note:</b> (twins must be reported separately from triplets and above)</p>
Calculation:	<p><b><u>Numerator:</u></b> Total number of women with multiple pregnancies (2 or more fetal heart activities) confirmed by ultrasound at around 2-4 weeks after positive pregnancy test.</p> <p><b>Note:</b> (twins must be reported separately from triplets and above)</p> <p><b>ICD-10 CM:</b> O30 (Multiple gestation) with  <b>CPT codes:</b> 76801, 76802, 76811, 76812, 76813, 76814, 76815, 76816, 76817</p> <p><b><u>Denominator:</u></b> Total number of <b>frozen</b> embryo transfer procedures performed in the reporting period</p> <p><b><u>Denominator Inclusion:</u></b> Include all embryos that were transferred, i.e. including those with and without preimplantation genetic testing (PGT).</p> <p><b><i>Service codes (not limited to):</i></b> 70-03, 70-05</p>
Reporting Frequency:	Quarterly
Unit of Measure:	Percentage
International comparison if available	Developed as per DoH- Abu Dhabi standard, HFEA and CDC
Desired direction:	Lower is better
<b>Notes for all facilities</b>	
Data Source/ Report Name:	<ul style="list-style-type: none"> <li>- Administrative and medical records.</li> <li>- Claims</li> </ul>

## ART JAWDA Performance Indicators

Type: ART Quality

Indicator Number: ART009

<b>KPI Description (title):</b>	Multiple live birth rate from frozen IVF cycles
<b>Domain</b>	<i>Safety</i>
<b>Indicator Type</b>	<i>Outcome</i>
Definition:	<p>Percentage of women with multiple live multiple births (2 or more) resulting from frozen IVF cycles during the reporting period.</p> <p><b>Note:</b> (twins must be reported separately from triplets and above)</p>
Calculation:	<p><b>Numerator:</b> Total number of women with multiple live births (2 or more) following frozen IVF cycles.</p> <p><b>Numerator Inclusion:</b> All live births (2 or more) irrespective of gestational age and birth weight</p> <p><b>Note:</b> (twins must be reported separately from triplets and above)</p> <p><b>ICD-10 CM:</b> Z37.2, Z37.50, Z37.51, Z37.52, Z37.53, Z37.54, Z37.59, Z37.60, Z37.61, Z37.62, Z37.63, Z37.64, Z37.69</p> <p><b>Numerator Exclusion:</b> Women where all reasonable attempts have been made to follow up on status of live birth.</p> <p><b>Denominator:</b> Total number of <b>frozen</b> embryo transfer procedures performed in the reporting period</p> <p><b>Inclusion:</b> Include all embryos that were transferred, i.e. including those with and without preimplantation genetic testing (PGT).</p> <p><b>Service codes (not limited to):</b> 70-03, 70-05</p>
Reporting Frequency:	Annually: ( <i>Live birth rate from all frozen Embryo transfer procedures that started from January to December of a target year should be reported with the Q4 submissions of subsequent year</i> )
Unit of Measure:	Percentage
International comparison if available	Developed as per DoH- Abu Dhabi standard, HFEA and CDC
Desired direction:	Lower is better
<b>Notes for all facilities</b>	
Data Source/ Report Name:	<ul style="list-style-type: none"> <li>- Administrative and medical records.</li> <li>- Claims</li> <li>- Medical Record Numbers (or unique patient identifier) list of all lost to follow up cases must be submitted to DOH at time of data submission</li> </ul>

## ART JAWDA Performance Indicators

Type: ART Quality Indicator		Indicator Number: ART010
<b>KPI Description (title):</b>	<b>Live birth rate from fresh embryo transfers</b>	
<b>Domain</b>	<i>Effectiveness</i>	
<b>Indicator Type</b>	<i>Outcome</i>	
Definition:	<p>Percentage of live births (the complete expulsion or extraction of a product of fertilization that shows evidence of life of any product of conception regardless how many weeks of pregnancy) after fresh embryo transfers relative to the total number of fresh embryos transferred among women of <u>age groups</u>:</p> <p>Less than 35 years old</p> <ul style="list-style-type: none"> <li>• Between 35-37</li> <li>• Between 38-39</li> <li>• Between 40-42</li> <li>• Between 43-45</li> <li>• Above 45 years old</li> </ul> <p>Note: (Each age group must be reported separately)</p>	
Calculation:	<p><b>Numerator:</b> Total sum of live births (the complete expulsion or extraction of a product of fertilization that shows evidence of life) after <b>fresh</b> embryo transfers for women (see age group above).</p> <p><b>Numerator Inclusion:</b> All live births including singleton and multiple irrespective of gestational age and birth weight.</p> <p><b>ICD-10 CM:</b> 080, 082, Z37.0, Z37.2, Z37.3, Z37.50, Z37.51, Z37.52, Z37.53, Z37.54, Z37.59, Z37.60, Z37.61, Z37.62, Z37.63, Z37.64, Z37.69</p> <p><b>Or</b></p> <p><b>CPT codes:</b> 59400, 59409, 59410, 59510, 59514, 59515, 59610, 59612, 59614, 59618, 59620, 59622</p> <p><b>Numerator Exclusion:</b> Women who were lost to follow up in spite of all reasonable attempts made to follow up on status of live birth.</p> <p><b>Denominator:</b> Total sum of <b>fresh</b> embryos transferred for IVF cycles performed in the reporting period for women (see age group above).</p> <p><b>Denominator Inclusion:</b> Include all embryos that were transferred i.e. including those with and without preimplantation genetic testing (PGT).</p>	
Reporting Frequency:	Annually ( <b>Live birth rate from all fresh embryos transferred in women</b> (see age group above) for ART cycles <b>that started from January to December of a target year should be reported with the Q4 submissions of subsequent year.</b> )	
Unit of Measure:	Percentage	
International comparison if available	Developed as per DoH- Abu Dhabi standard, HFEA and CDC	
Desired direction:	Higher is better	
<b>Notes for all facilities</b>		
Data Source/ Report Name:	<ul style="list-style-type: none"> <li>- Administrative and medical records.</li> <li>- Claims.</li> <li>- Medical Record Numbers (or unique patient identifier) list of all lost to follow up cases must be submitted to DOH at time of data submission</li> </ul>	

## ART JAWDA Performance Indicators

Type: ART Quality Indicator

Indicator Number: ART011

KPI Description (title):	<b>Clinical pregnancy rate from fresh embryo transfers</b>
Domain	<b><i>Effectiveness</i></b>
Indicator Type	<b><i>Outcome</i></b>
Definition:	Percentage of positive fetal hearts as confirmed by ultrasound 2-4 weeks after positive pregnancy test or viable pregnancy following <b>fresh embryo transfers relative to the total number of fresh embryos transferred among women of age group:</b> Less than 35 years old Between 35-37 Between 38-39 Between 40-42 Between 43-45 Above 45 years old Note: (Each age group must be reported separately)
Calculation:	<p><b><u>Numerator:</u></b> Total sum of positive fetal hearts as confirmed by ultrasound 2-4 weeks after positive pregnancy test or viable pregnancy confirmed in the ultrasound report after <b>fresh</b> embryo transfers for women (see age group above).</p> <p><b><u>Numerator Inclusion:</u></b> All pregnancies including singleton and multiple.</p> <p><b><u>CPT codes:</u></b> 76801, 76802, 76811, 76812, 76813, 76814, 76815, 76816, 76817</p> <p><b><u>Denominator:</u></b> Total sum of <b>fresh</b> embryos transferred for IVF cycles performed in the reporting period for women (see age group above).</p> <p><b><u>Denominator Inclusion:</u></b> Include all embryos that were transferred i.e. including those with and without preimplantation genetic testing (PGT).</p>
Reporting Frequency:	Quarterly
Unit of Measure:	Percentage
International comparison if available	Developed as per DoH- Abu Dhabi standard, HFEA and CDC
Desired direction:	Higher is better
<b>Notes for all facilities</b>	
Data Source/ Report Name:	<ul style="list-style-type: none"> <li>- Administrative and medical records.</li> <li>- Claims</li> </ul>

## ART JAWDA Performance Indicators

Type: ART Quality Indicator		Indicator Number: ART012
KPI Description (title):	Live birth rate from frozen embryo transfers	
Domain	<i>Effectiveness</i>	
Indicator Type	<i>Outcome</i>	
Definition:	<p>Percentage of live births (the complete expulsion or extraction of a product of fertilization that shows evidence of life of any product of conception regardless how many weeks of pregnancy) after <b>frozen</b> embryo transfers relative to the total number of <b>frozen</b> embryos transferred among women of <u>age groups</u>:</p> <ul style="list-style-type: none"> <li>• Less than 35 years old</li> <li>• Between 35-37</li> <li>• Between 38-39</li> <li>• Between 40-42</li> <li>• Between 43-45</li> <li>• Above 45 years old</li> </ul> <p>Note: (Each age group must be reported separately)</p>	
Calculation:	<p><b>Numerator:</b> Total sum of live births (the complete expulsion or extraction of a product of fertilization that shows evidence of life) after <b>frozen</b> embryo transfers for women (see age group above).</p> <p><b>Numerator Inclusion:</b> All live births including singleton and multiple irrespective of gestational age and birth weight.</p> <p><b>ICD-10 CM:</b> 080, 082, Z37.0, Z37.2, Z37.3, Z37.50, Z37.51, Z37.52, Z37.53, Z37.54, Z37.59, Z37.60, Z37.61, Z37.62, Z37.63, Z37.64, Z37.69</p> <p><b>Or</b></p> <p><b>CPT codes:</b> 59400, 59409, 59410, 59510, 59514, 59515, 59610, 59612, 59614, 59618, 59620, 59622</p> <p><b>Numerator Exclusion:</b> Women who were lost to follow up in spite of all reasonable attempts made to follow up on status of live birth.</p> <p><b>Denominator:</b> Total sum of <b>frozen</b> embryos transferred for IVF cycles performed in the reporting period for women (see age group above).</p> <p><b>Denominator Inclusion:</b> Include all embryos that were transferred i.e. including those with and without preimplantation genetic testing (PGT).</p>	
Reporting Frequency:	<p>Annually (<b>Live birth rate from all frozen embryos transferred in women</b> (see age group above) for ART cycles <b>that started from January to December of a target year should be reported with the Q4 submissions of subsequent year.</b>)</p>	
Unit of Measure:	Percentage	
International comparison if available	Developed as per DoH- Abu Dhabi standard, HFEA and CDC	
Desired direction:	Higher is better	
<b>Notes for all facilities</b>		
Data Source/ Report Name:	<ul style="list-style-type: none"> <li>- Administrative and medical records.</li> <li>- Claims.</li> <li>- Medical Record Numbers (or unique patient identifier) list of all lost to follow up cases must be submitted to DOH at time of data submission</li> </ul>	

## ART JAWDA Performance Indicators

Type: ART Quality Indicator

Indicator Number: ART013

<b>KPI Description (title):</b>	<b>Clinical pregnancy rate from frozen embryo transfers</b>
<b>Domain</b>	<b>Effectiveness</b>
<b>Indicator Type</b>	<b>Outcome</b>
Definition:	<p>Percentage of positive fetal hearts as confirmed by ultrasound 2-4 weeks after positive pregnancy test or viable pregnancy confirmed in the ultrasound report following <b>frozen embryo transfers relative to the total number of frozen embryos transferred among women of age group:</b></p> <ul style="list-style-type: none"> <li>• Less than 35 years old</li> <li>• Between 35-37</li> <li>• Between 38-39</li> <li>• Between 40-42</li> <li>• Between 43-45</li> <li>• Above 45 years old</li> </ul> <p>Note: (Each age group must be reported separately)</p>
Calculation:	<p><b>Numerator:</b> Total sum of positive fetal hearts as confirmed by ultrasound 2-4 weeks after positive pregnancy test or viable pregnancy confirmed in the ultrasound report after <b>frozen</b> embryo transfers for women (see age group above).</p> <p><b>Numerator Inclusion:</b> All pregnancies including singleton and multiple.</p> <p><b>CPT codes:</b> 76801, 76802, 76811, 76812, 76813, 76814, 76815, 76816, 76817</p> <p><b>Denominator:</b> Total sum of <b>frozen</b> embryos transferred for IVF cycles performed in the reporting period for women (see age group above).</p> <p><b>Denominator Inclusion:</b> Include all embryos that were transferred, i.e. including those with and without preimplantation genetic testing (PGT).</p>
Reporting Frequency:	Quarterly
Unit of Measure:	Percentage
International comparison if available	Developed as per DoH- Abu Dhabi standard, HFEA and CDC
Desired direction:	Higher is better
<b>Notes for all facilities</b>	
Data Source/ Report Name:	<ul style="list-style-type: none"> <li>- Administrative and medical records.</li> <li>- Claims</li> </ul>

## ART JAWDA Performance Indicators

Type: ART Quality Indicator		Indicator Number: ART014
<b>KPI Description (title):</b>	<b>Multiple live birth rate among IVF patients</b>	
<b>Domain</b>	<i>Safety</i>	
<b>Indicator Type</b>	<i>Outcome</i>	
Definition:	<p>The percentage of all live births occurrences resulting from IVF treatments (inclusive of Fresh cycles/Frozen cycles) performed in that year which resulted in more than one live birth.</p> <p><b>Note:</b> (twins must be reported separately from triplets and above)</p>	
	<p><b>Numerator:</b> Total number of women with multiple live births (2 or more) resulting from IVF treatments performed.</p> <p><b>Numerator Inclusion:</b> All live multiple births including (2 or more) irrespective of gestational age and birth weight.</p> <p><b>Note:</b> (twins must be reported separately from triplets and above)</p> <p><b>ICD-10 CM:</b> Z37.2, Z37.50, Z37.51, Z37.52, Z37.53, Z37.54, Z37.59, Z37.60, Z37.61, Z37.62, Z37.63, Z37.64, Z37.69</p> <p><b>Denominator:</b> Total number of women with all live births resulting from IVF treatments performed (inclusive of Fresh cycles/Frozen cycles)</p> <p><b>Guidance:</b>  <i>Embryo transfer date (fresh or frozen) is to be used for the date of IVF treatment (cycle performed date)</i></p> <p><b>ICD-10 CM:</b> 080, 082, Z37.0, Z37.2, Z37.3, Z37.50, Z37.51, Z37.52, Z37.53, Z37.54, Z37.59, Z37.60, Z37.61, Z37.62, Z37.63, Z37.64, Z37.69</p> <p><b>Or</b></p> <p><b>CPT codes:</b> 59400, 59409, 59410, 59510, 59514, 59515, 59610, 59612, 59614, 59618, 59620, 59622</p> <p>With</p> <p><b>Service codes (But not limited to):</b> 70-01, 70-02, 70-03, 70-05.</p> <p><b>Denominator Exclusion:</b> Women where all reasonable attempts have been made to follow up on status of live birth.</p>	
Reporting Frequency:	<p>Annually: <i>(Live birth rate from all IVF treatments that started from January to December of a target year should be reported with the Q4 submissions of subsequent year)</i></p>	
Unit of Measure:	Percentage	
International comparison if available	<p>Developed as per DoH standard and HFEA</p> <p><a href="https://www.hfea.gov.uk/about-us/publications/research-and-data/fertility-treatment-2019-trends-and-figures/fertility-treatment-2019-quality-and-methodology-report/">https://www.hfea.gov.uk/about-us/publications/research-and-data/fertility-treatment-2019-trends-and-figures/fertility-treatment-2019-quality-and-methodology-report/</a></p>	
Desired direction:	<p>Lower is better</p> <p>Annual target rate:</p> <ul style="list-style-type: none"> <li>• Twin live birth rate <math>\leq</math> 15%</li> <li>• Triplets and above live birth rate = 0%</li> </ul>	
<b>Notes for all facilities</b>		
Data Source/ Report Name:	<ul style="list-style-type: none"> <li>- Administrative and medical records.</li> <li>- Claims</li> </ul>	

## ART JAWDA Performance Indicators

	<ul style="list-style-type: none"> <li>- Medical Record Numbers (or unique patient identifier) list of all lost to follow up cases must be submitted to DOH at time of data submission</li> </ul>
<b>Type:</b> ART Quality Indicator	<b>Indicator Number:</b> ART015
<b>KPI Description (title):</b>	<b>Multiple clinical pregnancy rate among IVF patients</b>
<b>Domain</b>	<i>Safety</i>
<b>Indicator Type</b>	<i>Outcome</i>
Definition:	<p>The percentage of all clinical pregnancies resulting from IVF treatments (inclusive of Fresh cycles/Frozen cycles) performed in that year which consisted of a multiple pregnancy.</p> <p><b>Note:</b> (twins must be reported separately from triplets and above)</p>
Calculation:	<p><b>Numerator:</b> Total number of women with multiple clinical pregnancies (2 or more positive fetal hearts or viable pregnancy confirmed in the ultrasound report) resulting from IVF treatments performed.</p> <p><b>Note:</b> (twins must be reported separately from triplets and above)</p> <p><b>ICD-10 CM:</b> O30 (Multiple gestation) with  <b>CPT codes:</b> 76801, 76802, 76811, 76812, 76813, 76814, 76815, 76816, 76817</p> <p><b>Denominator:</b> Total number of women with clinical pregnancies resulting from IVF treatments performed (inclusive of Fresh cycles/Frozen cycles) (A cycle where one or more fetal hearts are seen).</p> <p><b>Guidance:</b>  <i>Embryo transfer date (fresh or frozen) is to be used for the date of IVF treatment (cycle performed date)</i></p> <p><b>CPT codes:</b> 76801, 76802, 76811, 76812, 76813, 76814, 76815, 76816, 76817  With  <b>Service codes (But not limited to):</b> 70-01, 70-02, 70-03, 70-05</p>
Reporting Frequency:	Quarterly
Unit of Measure:	Percentage
International comparison if available	Developed as per DoH standard and HFEA <a href="https://www.hfea.gov.uk/about-us/publications/research-and-data/fertility-treatment-2019-trends-and-figures/fertility-treatment-2019-quality-and-methodology-report/">https://www.hfea.gov.uk/about-us/publications/research-and-data/fertility-treatment-2019-trends-and-figures/fertility-treatment-2019-quality-and-methodology-report/</a>
Desired direction:	Lower is better
<b>Notes for all facilities</b>	
Data Source/ Report Name:	<ul style="list-style-type: none"> <li>- Administrative and medical records.</li> <li>- Claims</li> <li>- Medical Record Numbers (or unique patient identifier) list of all lost to follow up cases must be submitted to DOH at time of data submission</li> </ul>

## ART JAWDA Performance Indicators

Type: ART Quality Indicator

Indicator Number: ART016

<b>KPI Description (title):</b>	<b>Oocyte degeneration After ICSI</b>
<b>Domain</b>	<b><i>Safety</i></b>
<b>Indicator Type</b>	<b><i>Process</i></b>
<b>Definition:</b>	Number of oocytes damaged or degenerated out of total number of oocytes injected
<b>Calculation:</b>	<p><b><u>Numerator</u></b> Number of damaged or degenerated oocytes after ICSI</p> <p><b><u>Denominator</u></b> Total Number of all MII injected oocytes within the reporting period</p> <p><b><u>Denominator Inclusion:</u></b> 16.a Fresh and Frozen ejaculated spermatozoa 16.b Fresh and Frozen surgically retrieved spermatozoa</p> <p><b><u>Denominator exclusion:</u></b></p> <ul style="list-style-type: none"> <li>• In-vitro matured oocytes</li> </ul> <p>ICSI damage rate= (No. of damaged or degenerated oocytes / MII oocyte injected)</p>
<b>Reporting Frequency:</b>	Quarterly
<b>Unit of Measure:</b>	Percentage
<b>International comparison if available</b>	The Vienna consensus report of an expert meeting on the development of ART laboratory performance indicators- Human Reproduction
<b>Desired direction:</b>	Lower is better
<b>Notes for all facilities</b>	
<b>Data sources and guidance:</b>	-Patient medical record -Hospital administrative data

## ART JAWDA Performance Indicators

Type: ART Quality Indicator

Indicator Number: ART017

<b>KPI Description (title):</b>	<b>ICSI Fertilization Rate</b>
<b>Domain</b>	<i>Effectiveness</i>
<b>Indicator Type</b>	<i>Outcome</i>
<b>Definition:</b>	Number of fertilized 2pn oocytes after ICSI of mature oocytes
<b>Calculation:</b>	<p><b><u>Numerator</u></b> Number of oocytes with 2PN with or without 2PB.</p> <p><b><u>Denominator</u></b> Total Number of all MII injected oocytes within the reporting period</p> <p><b><u>Denominator Inclusion:</u></b> 17.a Fresh and Frozen ejaculated spermatozoa 17.b Fresh and Frozen surgically retrieved spermatozoa</p> <p><b><u>Denominator exclusion:</u></b></p> <ul style="list-style-type: none"> <li>• In-vitro matured oocytes</li> </ul>
<b>Reporting Frequency:</b>	Quarterly
<b>Unit of Measure:</b>	Percentage
<b>International comparison if available</b>	The Vienna consensus report of an expert meeting on the development of ART laboratory performance indicators- Human Reproduction
<b>Desired direction:</b>	Higher is better
<b>Notes for all facilities</b>	
<b>Data sources and guidance:</b>	-Patient medical record -Hospital administrative data

## ART JAWDA Performance Indicators

Type: ART Quality Indicator

Indicator Number: ART018

<b>KPI Description (title):</b>	<b>Rate of Cycle Cancellations before OPU</b>
<b>Domain</b>	<b>Efficiency</b>
<b>Indicator Type</b>	<b>Process</b>
<b>Definition:</b>	Percentage of ART cycles cancelled before OPU due to any reason.
<b>Calculation:</b>	<p><b><u>Numerator:</u></b> Number of ART cycles cancelled before OPU due to any reason including the following:</p> <p>18.a Medical reasons 18.b Social reasons</p> <p><b>Note:</b> If a patient starts her stimulation in the reporting period and cycle cancelled in next quarter due to no response, she will be counted in the same reporting period in which stimulation started.</p> <p><b>Example:</b> If a patient starts her stimulation on March 30 and cycle cancelled on April 5 due to no response she will be counted in Q1</p> <p><b><u>Denominator:</u></b> Total number of stimulations started for OPU during the reporting period.</p> <p><b>Service codes:</b> 70-06</p>
<b>Reporting Frequency:</b>	Quarterly
<b>Unit of Measure:</b>	Percentage
<b>International comparison if available</b>	<a href="https://www.sart.org/patients/a-patients-guide-to-assisted-reproductive-technology/general-information/cycle-cancellation/">https://www.sart.org/patients/a-patients-guide-to-assisted-reproductive-technology/general-information/cycle-cancellation/</a>
<b>Desired direction:</b>	Lower rates are better.
<b>Data sources and guidance:</b>	-Patient medical record -Hospital administrative data

## ART JAWDA Performance Indicators

Type: ART Quality Indicator

Indicator Number: ART019

<b>KPI Description (title):</b>	<b>Successful Surgical Sperm Retrieval processes for Patients with obstructive azoospermia</b>
<b>Domain</b>	<b>Effectiveness</b>
<b>Indicator Type</b>	<b>Outcome</b>
<b>Definition:</b>	Percentage of Successful Sperm Retrieval Processes intended to obtain sperm suitable for oocyte injection after surgery for patients with obstructive azoospermia
<b>Calculation:</b>	<p><b>Numerator:</b> Number of procedures done where sperm was found.</p> <p><b>Sperm identification CPT Codes (not limited to):</b> 89257, 89260, 89261, 89300, 89321, 89310, 89320, 89322, 89325, 89329, 89330, 89264.</p> <p><b>Denominator:</b> Total number of male procedures i.e. TESA, PESA, TESE, microTESE or oncoTESE during the reporting period</p> <p><b>Guidance:</b> More than one procedure performed on the same patient at the same time will be counted separately eg: 2 procedure counts as 2</p> <p><b>Codes (not limited to):</b> <b>HCPCS:</b> S4028, S4030, S4031 <b>CPT:</b> 54500, 54505</p> <p><b>Denominator Inclusion:</b> Patients with obstructive azoospermia (ICD-10 CM: N46.023)</p> <p><b>Denominator Exclusion:</b></p> <ul style="list-style-type: none"> <li>• Patients with non-obstructive azoospermia</li> <li>• <b>ICD-10 CM:</b> N46.01, N46.021, N46.022, N46.024, N46.025, N46.029</li> <li>• Patients who don't require process.</li> <li>• Patients refuse to undergo the process.</li> </ul>
<b>Reporting Frequency:</b>	Quarterly
<b>Unit of Measure:</b>	Percentage
<b>International comparison if available</b>	<a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8279053/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8279053/</a>
<b>Desired direction:</b>	Higher rates are required.
<b>Data sources and guidance:</b>	<ul style="list-style-type: none"> <li>-Patient medical record</li> <li>-Hospital administrative data</li> </ul>

## ART JAWDA Performance Indicators

### ART Quality Indicator

Indicator Number: ART020

<b>KPI Description (title):</b>	<b>Successful Surgical Sperm Retrieval processes for patients with non-obstructive azoospermia</b>
<b>Domain</b>	<b>Effectiveness</b>
<b>Indicator Type</b>	<b>Outcome</b>
<b>Definition:</b>	Percentage of Successful Sperm Retrieval Processes intended to obtain sperm suitable for oocyte injection after surgery for patients with non-obstructive azoospermia
<b>Calculation:</b>	<p><b><u>Numerator:</u></b> Number of procedures where sperm was found</p> <p><b>Sperm identification CPT Codes (not limited to):</b> 89257, 89260, 89261, 89300, 89321, 89310, 89320, 89322, 89325, 89329, 89330</p> <p><b><u>Denominator:</u></b> Total number of male procedures i.e. TESA, PESA, TESE, microTESE or oncoTESE during the reporting period</p> <p><b>Guidance:</b> More than one procedure performed on the same patient at the same time will be counted separately eg: 2 procedure counts as 2</p> <p><b><u>Codes (not limited to):</u></b> <b>HCPCS:</b> S4028, S4030, S4031 <b>CPT:</b> 54500, 54505</p> <p><b><u>Denominator Inclusion:</u></b> Patients with non-obstructive azoospermia</p> <p><b><u>ICD-10 CM:</u></b> N46.01, N46.021, N46.022, N46.024, N46.025, N46.029</p> <p><b><u>Denominator Exclusion:</u></b></p> <ul style="list-style-type: none"> <li>• Patients with obstructive azoospermia (ICD-10 CM: N46.023)</li> <li>• Patients who don't require process.</li> <li>• Patients refuse to undergo the process.</li> </ul>
<b>Reporting Frequency:</b>	Quarterly
<b>Unit of Measure:</b>	Percentage
<b>International comparison if available</b>	<a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8279053/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8279053/</a>
<b>Desired direction:</b>	Higher rates are required.
<b>Data sources and guidance:</b>	<ul style="list-style-type: none"> <li>-Patient medical record</li> <li>-Hospital administrative data</li> </ul>

## ART JAWDA Performance Indicators

Type: ART Quality Indicator

Indicator Number: ART021

<b>KPI Description (title):</b>	<b>Cleavage rate</b>
<b>Domain</b>	<b>Effectiveness</b>
<b>Indicator Type</b>	<b>Process</b>
<b>Definition:</b>	Number of cleaved embryos out of fertilized oocytes (2pn) on day 1
<b>Calculation:</b>	<p><b>Numerator:</b> The cleavage rate is defined as the proportion of zygotes (fertilized oocytes) that cleave to become embryos on Day 2 or Day 3.</p> <p><b>Denominator:</b> Total number of fertilized oocytes (2pn) on day 1</p> <p><b>Denominator Inclusion:</b></p> <ul style="list-style-type: none"> <li>• Fresh and Frozen spermatozoa (Naturally and surgically retrieved sperms)</li> <li>• MII oocytes</li> </ul> <p>Denominator exclusion:</p> <ul style="list-style-type: none"> <li>• In-vitro matured oocytes</li> </ul>
<b>Reporting Frequency:</b>	Quarterly
<b>Unit of Measure:</b>	Percentage
<b>International comparison if available</b>	The Vienna consensus: report of an expert meeting on the development of ART laboratory performance indicators
<b>Desired direction:</b>	Higher rates are better
<b>Data sources and guidance:</b>	<ul style="list-style-type: none"> <li>-Patient medical record</li> <li>-Hospital administrative data</li> </ul>

## ART JAWDA Performance Indicators

Type: ART Quality Indicator

Indicator Number: ART022

<b>KPI Description (title):</b>	<b>Blastocyst Utilization</b>
<b>Domain</b>	<b>Effectiveness</b>
<b>Indicator Type</b>	<b>Process</b>
<b>Definition:</b>	The number of blastocysts suitable for transfer or cryopreservation as a function of the number of normally fertilized (2PN) oocytes observed on Day 1
<b>Calculation:</b>	<p><b>Numerator:</b> Number of blastocysts available for transfer and/or freezing.</p> <p><b>Numerator Inclusion:</b> Biopsied blastocysts on days 5, 6 and 7 of development for genetic testing and frozen regardless of the genetic results.</p> <p><b>Denominator:</b> Total number of fertilized oocytes (2pn) on day 1</p> <p><b>Denominator Inclusion:</b></p> <ul style="list-style-type: none"> <li>• Fresh and Frozen spermatozoa (Naturally and surgically retrieved sperms)</li> <li>• MII oocytes</li> </ul> <p><b>Denominator Exclusion:</b></p> <ul style="list-style-type: none"> <li>• Embryos which were transferred or frozen before blastocyst stage</li> <li>• In-vitro matured oocytes</li> </ul>
<b>Reporting Frequency:</b>	Quarterly
<b>Unit of Measure:</b>	Percentage
<b>International comparison if available</b>	The Vienna consensus: report of an expert meeting on the development of ART laboratory performance indicators
<b>Desired direction:</b>	Higher rates are better
<b>Data sources and guidance:</b>	<ul style="list-style-type: none"> <li>-Patient medical record</li> <li>-Hospital administrative data</li> </ul>

## ART JAWDA Performance Indicators

Type: ART Quality Indicator

Indicator Number: ART023

<b>KPI Description (title):</b>	<b>Oocyte survival rate post warming</b>
<b>Domain</b>	<b>Effectiveness</b>
<b>Indicator Type</b>	<b>Process</b>
<b>Definition:</b>	The percentage of eggs that survive the thawing process.
<b>Calculation:</b>	<p><b>Numerator:</b> Number of oocytes surviving after warming.</p> <p><b>Denominator:</b> Total number of warmed MII oocytes within the reporting period.</p> <p><b>Denominator Exclusion:</b></p> <ul style="list-style-type: none"> <li>• Eggs that were damaged prior to freezing.</li> </ul>
<b>Reporting Frequency:</b>	Quarterly
<b>Unit of Measure:</b>	Percentage
<b>International comparison if available</b>	<p><a href="#">Clinical and laboratory key performance indicators in IVF: A consensus between the Italian Society of Fertility and Sterility and Reproductive Medicine (SIFES-MR) and the Italian Society of Embryology, Reproduction and Research (SIERR) - PMC</a></p> <p>The Vienna consensus: report of an expert meeting on the development of ART laboratory performance indicators</p>
<b>Desired direction:</b>	Higher rates are better
<b>Data sources and guidance:</b>	<p>-Patient medical record</p> <p>-Hospital administrative data</p>

## ART JAWDA Performance Indicators

Type: ART Quality Indicator

Indicator Number: ART024

<b>KPI Description (title):</b>	<b>Seeing a doctor (Door to Doctor Time)</b>
<b>Domain</b>	<b>Timeliness</b>
<b>Indicator Type</b>	<b>Process</b>
<b>Definition:</b>	Percent of patients meeting the target time of 30 minutes from registration to seeing any Department of Health (DOH) licensed physicians providing ART services.
<b>Calculation:</b>	<p><b>Numerator:</b> Number of patients that were seen by DOH licensed physicians providing ART services within target time of 30 minutes from registration.</p> <p><b>Denominator:</b> Total number of all outpatients registered by any DOH licensed physicians who are providing ART services.</p> <p><b>Denominator Exclusion:</b></p> <ul style="list-style-type: none"> <li>• Patient Left Without Being Seen (LWBS)</li> </ul>
<b>Reporting Frequency:</b>	Quarterly
<b>Unit of Measure:</b>	% for performance ( <b>minutes</b> for mean, median and min. & max)
<b>Reported Information</b>	Numerator, Denominator, Indicator Performance (also, mean waiting time, median waiting time, min. & max. waiting time)
<b>Target:</b>	90% within 30 minutes
<b>Data sources and guidance:</b>	<ul style="list-style-type: none"> <li>-Patient medical record</li> <li>-Hospital administrative data</li> </ul>

## ART JAWDA Performance Indicators

Type: ART Quality Indicator

Indicator Number: ART025

<b>KPI Description (title):</b>	<b>Days to the Third Next Available Appointment for ART Clinic</b>
<b>Domain</b>	<b>Timeliness</b>
<b>Indicator Type</b>	<b>Process</b>
<b>Definition:</b>	<p>This is a measure of patient access to ART Service and is defined as the number of days (including weekends) to the third next available appointment for a routine office visit with ART practitioner.</p> <p>Average length of time in days (including weekends) between the day a patient (<b>dummy patient</b>) makes a request for an appointment with ART clinic and the third next available appointment for a new patient physical, routine exam, or return visit exam.</p> <p>N.B: The "third next available" appointment is used rather than the "next available" appointment since it is a more sensitive reflection of true appointment availability. For example, an appointment may be open at the time of a request because of a cancellation or other unexpected event. Using the "third next available" appointment eliminates these chance occurrences from the measure of availability.</p>
<b>Calculation:</b>	<p><b>Specialty Care:</b> This is a measure of patient access to an outpatient medical specialist visit (ART Services) and is defined as the number of days (including weekends) to the third next available appointment for a nonurgent office visit with an ART practitioner.</p> <p><b>Definition:</b> Number of calendar days until third next available appointment for a specialty care non-urgent visit.</p> <p><i>*Choose the same day of the week and the same time of day to measure each Quarter.</i></p>
<b>Reporting Frequency:</b>	Quarterly (Average of 3 months)
<b>Unit of Measure:</b>	Days
<b>Data sources and guidance:</b>	<p><a href="https://www.ihi.org/library/model-for-improvement/establishing-measures">https://www.ihi.org/library/model-for-improvement/establishing-measures</a>  <a href="https://cdn.ymaws.com/ohiochc.siteym.com/resource/resmgr/Third_Next_Appointment_word.pdf">https://cdn.ymaws.com/ohiochc.siteym.com/resource/resmgr/Third_Next_Appointment_word.pdf</a></p> <p>Synopsis based on Saudi MOH limited-access document HQI Briefing Document 2024, adopted for local application</p>

## ART JAWDA Performance Indicators

### Summary of Changes for 2025 (V8.1)

KPI #	Changes	
ALL KPIs	Revised Domains and added Indicator Types based on IOM domains, removed sub-domain	
Guidance for	Added-**All patient population are included in the KPI counts i.e. Thiqa, Non-Thiqa, Self-pay etc.	
Glossary	<b>Clinical Pregnancy</b>	Intra-uterine pregnancy with fetal heart activity / viable pregnancy identified using ultrasound around 4-6 weeks after embryo transfer
	<b>Multiple pregnancy</b>	Pregnancy with $\geq 2$ pulsating intrauterine fetal hearts identified using ultrasound 4-6 weeks after embryo transfer
	<b>PGT-A and PGT-M (preimplantation genetic diagnosis or screening)</b>	Replaced by Preimplantation genetic testing (PGT).
ART001	Added denominator inclusion: <b><i>Natural cycle (no stimulation) that is under monitoring with OPU or IUI performed.</i></b>	
ART002-ART009	Replaced "ART" with "IVF" in the title, definition and numerator, wherever applicable. Removed ICSI cycle wherever it was present.	
ART010 - ART013	Replaced "ART" with "IVF" in the denominator	
ART014, ART015	Replaced "ART" with "IVF" in the title, definition, numerator and denominator. Removed the IUI and TI cycles from the denominator  Guidance: Embryo transfer date (fresh or frozen) is to be used for the date of IVF treatment (cycle performed date)	
ART017	Updated Numerator: Number of oocytes with 2PN with or without 2PB. Shifted the numerator inclusion to make it denominator inclusion and sub classified the KPI into 17a and 17b for ejaculated and surgically retrieved sperms. Added Denominator exclusion: <ul style="list-style-type: none"><li>• in-vitro matured oocytes</li></ul>	
ART016, ART021, ART022	Added as denominator Inclusion: Fresh and Frozen spermatozoa (Naturally and surgically retrieved sperms)	
ART018	Added in the definition: <ul style="list-style-type: none"><li>• Abnormal hormone levels e.g. raised thyroid hormone levels</li><li>• Other related medical reasons</li></ul> Added in numerator "related" medical reasons.	
ART019-ART020	The definition is updated by removing the word "normal". Added denominator Guidance: More than one procedure performed on the same patient at the same time will be counted separately eg: 2 procedure counts as 2	
ART021	Numerator updated- The cleavage rate is defined as the proportion of zygotes (fertilized oocytes) that cleave to become embryos on Day 2 or Day 3.	

## **Summary of Changes for 2025 (V8.2)**

KPI #	Changes
Glossary	Added definition - In vitro matured oocyte is an immature egg at the germinal vesicle GV or metaphase I stage and matured in the IVF lab
ART016	<p>Updated Denominator: Denominator Total Number of all MII injected oocytes within the reporting period</p> <p>Denominator Inclusion: 16.a Fresh and Frozen ejaculated spermatozoa 16.b Fresh and Frozen surgically retrieved spermatozoa</p> <p>Denominator exclusion: • In-vitro matured oocytes</p>
ART018	<p>Changed the definition: Percentage of ART cycles cancelled before OPU due to any reason Changed the numerator: Number of ART cycles cancelled before OPU due to any reason including the following: s</p> <p>18.a Medical reasons 18.b Social reasons</p>
ART021, ART022	<p>Added the following to the denominator information:</p> <p>Denominator Inclusion: • MII oocytes</p> <p>Denominator Exclusion: • In-vitro matured oocytes</p>

## **Summary of Changes for 2026 (V9)**

KPI #	Changes
Glossary	added phrase in Fresh Cycle definitions: "In cases where the transfer procedure includes both fresh and frozen embryos, it should be considered a fresh cycle."
ART001	<b>Denominator:</b> Added Social egg freezing service code: 70-26
ART023 To ART025	<p><b>Added New KPIs</b></p> <p>Oocyte survival rate post warming Seeing a doctor (Door to Doctor Time) Days to the Third Next Available Appointment for ART Clinic</p>