

## Council on Human Reproductive Technology 2020 Annual Statistics

published in July 2022\*

\* Statistics on live birth events in relation to reproductive procedures performed in 2020 are covered in this final version.

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## Introduction

The Council on Human Reproductive Technology was established under section 4 of the Human Reproductive Technology Ordinance (Cap. 561) ("the Ordinance") in April 2001 to regulate the provision of reproductive technology (RT) procedures, the conducting of embryo research, the handling, storing or disposing of gametes or embryos used or intended to be used in connection with a RT procedure or embryo research, and surrogacy arrangement. According to section 5(1) of the Ordinance, the Council shall keep under review information about RT activities and publish statistics and summaries concerning relevant activities which have been carried on. To this end, the *Annual Statistics* has been published since 2009.

This 2020 Annual Statistics lists out different RT activities carried out by the licensed centres in operation in the year. It provides graphs, charts and tables that summarize information about the RT activities and its outcomes in 2020. The figures in this publication are based only on RT cycles performed in 2020 and cannot be used to calculate cumulative success rates.

As at 31.12.2020, there were a total of 45 valid licences issued by the Council, including 26 Artificial Insemination by Husband (AIH) licences, 17 Treatment licences and 2 Research licences. This publication provides information on the reported outcomes of all RT cycles started in the licensed AIH and treatment centres.

RT cycles include any process in which (1) a RT procedure is performed or (2) frozen embryos have been thawed with the intent of transferring them to a woman. For example, while a RT cycle could include an embryo transfer, another cycle could include egg retrieval and storage of embryos.

Of the 7,511 non-donor in vitro fertilization (IVF) and frozen-thawed embryo transfer (FET) cycles reported in 2020, a total of 4,954 (66%) were started with the intent to transfer at least one embryo. These 4,954 cycles resulted in 1,863 pregnancies, 1,527 live-birth events (delivery of one or more living babies), and 1,633 babies. The other 2,557 cycles (34%) were banking cycles, where eggs or embryos were cryopreserved (frozen) and stored for potential future use.

A patient's chances of having a pregnancy and live-birth delivery when using RT are influenced by many factors. Some of these factors are patient-related, such as the patient's age or the cause of infertility. The *Annual Statistics* includes the figures on infertility diagnosis of patients for the reference of readers.

The *Annual Statistics* also includes information on live birth event rate, which can give potential RT users an idea of the average chances of success. However, the average live birth event rate in the *Annual Statistics* should be viewed as a general reference only and couples should discuss with their doctor about their treatment plan and potential for success under their specific circumstances.

The figures in this publication provide data on pregnancy and live birth event outcomes and trends of the types of procedures performed and pregnancy outcomes. The figures also include RT cycles that used fresh or frozen oocytes (for non-donor IVF cycles only).

# Key Terms used in the Annual Statistics

Terms	Description
Artificial insemination by husband (AIH)	The placing of sperm inside a woman's vagina or uterus (i.e. womb) by means other than sexual intercourse. In artificial insemination by husband (AIH), the husband's sperm is used.
Clinical pregnancy	A pregnancy documented by one or more gestational sacs on ultrasound or the histological confirmation of gestational products in miscarriages or ectopic pregnancies.
Clinical pregnancy rate	Clinical pregnancy rate is expressed as number of clinical pregnancies per 100 treatment cycles started/commenced or per 100 cycles reaching the stage of attempted oocyte recovery/retrieval or embryo transfer (ET).
Donor insemination (DI)	Also known as artificial insemination by donor (AID). DI is an artificial insemination whereby sperm collected from a man who is not the woman's husband is used.
Ectopic pregnancy	A pregnancy in which implantation has taken place outside the uterine cavity.
Heterotopic pregnancy	Simultaneous existence of intrauterine and ectopic pregnancy.
In vitro fertilisation (IVF)	In vitro fertilization (a) means the fertilization of an egg by sperm outside the human body, whether or not the egg was originally removed from the body of that or any other woman; (b) includes any procedure involving the induction or aspiration of an egg, or the culture of an egg for the purposes of any such fertilization. It includes IVF without ICSI and IVF with ICSI.
Intracytoplasmic sperm injection (ICSI)	A method of gamete micromanipulation by which a single sperm is injected into the inner cellular structure of the egg.
Live birth event	For the purposes of the Code of Practice on Reproductive Technology and Embryo Research issued by the Council, live birth event shall mean an event of the birth of one or more than one live child from one single pregnancy. The birth of live twins, triplets and so on will therefore be considered as a single "live birth event".
Live birth event rate	Unless otherwise specified, live birth event (single and multiple live births included) rate is expressed per 100 treatment cycles started, i.e. live birth event rate = Number of live birth events/Number of treatment cycles x 100%

Terms	Description
Microsurgical epididymal sperm aspiration/extraction (MESA/MESE)	A surgical procedure performed with the assistance of an operating microscope to retrieve sperm from the epididymis of men with obstructive azoospermia. In the absence of optical magnification, any surgical procedure to retrieve sperm from the epididymis should also be registered as MESE.
Miscarriage (Spontaneous abortion)	A loss of an intrauterine pregnancy detected clinically or by ultrasound, and less than 24 weeks' gestation (as estimated by the day of embryo transfer or day of ovulation).
Multiple live birth event rate	Unless otherwise specified, multiple live birth event rate is expressed per 100 treatment cycles started, i.e. Multiple live birth event rate = Number of multiple live birth events/Number of treatment cycles x 100%
No. of no pregnancy	The number of treatment cycles started and reported by the licensed centre with an outcome of "no pregnancy", including those abandoned and those ending with elective cryopreservation of embryos.
Ongoing pregnancy	Ongoing pregnancy with foetal cardiac activity during the period of the year being reported on.
Ongoing pregnancy rate	Ongoing pregnancy rate is expressed as number of ongoing pregnancies per 100 treatment cycles started /commenced or per 100 cycles reaching the stage of attempted oocyte retrieval or embryo transfer.
Testicular sperm aspiration/extraction (TESA/TESE)	A surgical procedure involving one or more testicular biopsies or needle aspirations to obtain sperm for use in IVF and/or ICSI.
Treatment cycle	The process in which a reproductive technology (RT) procedure is carried out, where a woman has undergone ovarian stimulation or monitoring with the intent of having RT procedure, or frozen embryos have been thawed with the intent of transferring them to a woman. A treatment cycle starts (a) on the day when superovulatory drugs are commenced or (b) from the date of the last menstrual period. This annual statistics only covered treatment cycles that led to (1) Gamete transfer/embryo replacement/insemination, or stopped because of (2) Elective cryopreservation of all embryos or (3) Cycle abandonment.

## Key Statistics and Charts

## **Key Statistics for 2020**

#### A (for non-donor IVF cycles only)

1 Type of RT p	rocedure	es (%)	2 Patient diagno	osis <sup>3</sup> (%,	)						
(Please refe	r to <b>Char</b>	t <b>A1</b> )	(Please refer to	Chart A	2)						
					Single	cause				Multiple	causes
IVF <sup>1</sup> (with IC	51²)	35.61	Endometriosis	3.1	Male fa	actor 23.1	. Tubal	problem	4.2	Female & ma facto	
IVF (without	ICSI)	12.17	Immunologic problem		Ovula prol	atory 3.2 blem	? Othe	r Causes	12.0	Female facto	ors 8.4 nly
Frozen-thaw	ed ET	52.22			Tubo-perito prol	neal 2.4 blem	l Une	explained	11.2		
							Age G	aroup <sup>4</sup>			
Pregnancy & L	ve Birth	Outcomes		25 or below	26-30	31-35	36-40	41-45	46-5	0 51 or above	All/ <i>Overall%</i>
3 Fresh em	b <b>ryos</b> fro	om patient o	couple's <b>own gar</b>	netes							
a Number o	f patient	ts		7	159	1004	1379	405	26	0	2980
b Number o	f treatm	ent cycles⁵		9	180	1115	1626	617	42	NA	3589
c Number o transferre		ent cycles	with embryo	3	40	316	552	144	8	NA	1063
d Average r	umber o	of embryo ti	ransferred	1.67	1.23	1.14	1.26	1.56	1.50	D NA	1.27
e Clinical p	Clinical pregnancy rate <sup>6</sup> (%)			11.1	9.4	12.0	12.2	4.2	4.8	NA	10.5
f Live birth	Live birth event rate <sup>7</sup> (%)			11.1	7.2	8.4	8.4	1.9	0.0	NA NA	7.2
g Singleton	live birth	h event rate	e <sup>8</sup> (%)	11.1	6.7	8.2	8.1	1.9	0.0	NA NA	6.9
h Multiple I	ve birth	event rate <sup>s</sup>	(%)	0.0	0.6	0.3	0.3	0.3 0.0		NA NA	0.3
Frozen er	n <b>bryos</b> fr	rom patient	couple's <b>own g</b> a	metes							
a Number o	f patient	ts		7	165	959	1377	411	24	0	2943
b Number o	f treatm	ent cycles⁵		8	212	1269	1862	543	28	NA	3922
c Number o transferre		ent cycles	with embryo	8	212	1261	1848	535	27	NA	3891
d Average r	umber o	of embryo ti	ransferred	1.13	1.28	1.18	1.22	1.38	1.78	B NA	1.24
e Clinical p	regnancy	/ rate <sup>6</sup> (%)		62.5	56.1	52.6	45.3	24.7	7.1	NA	<i>45.2</i>
f Live birth	event ra	nte <sup>7</sup> (%)		37.5	42.9	39.6	32.0	14.4	3.6	S NA	32.4
g Singleton	live birth	h event rate	e <sup>8</sup> (%)	25.0	36.8	37.1	29.5	13.3	3.6	S NA	29.9
h Multiple I	ve birth	event rate <sup>s</sup>	' (%)	12.5	6.1	2.4	2.5	1.1	0.0	NA NA	2.5
5 Trends of	RT Proc	edures									
a Number o	f patient	ts and treat	ment cycles					Ple	ase ref	er to <b>Chart A</b>	5(a)
b Proportio	n of ICSI	cycles (%)						Ple	ase ref	er to <b>Chart</b> A	1 <i>5(b)</i>
c Number o	f live bir	th events a	nd babies born					Ple	ase ref	er to <b>Chart A</b>	5(c)
d Live birth	event ra	nte (%)						Ple	ase ref	er to <b>Chart</b> A	15(d)
			es (with embryo embryos transf			ing in live	birth	Ple	ase ref	er to <b>Chart A</b>	1 <i>5(e)</i>
3											

- Storage of Gametes and Embryos

   Number of gametes and embryos stored by licensed centres
  - a Number of gametes and empryos stored by incensed centres

 $b\$  Number of gametes or embryos stored or used for research

Please refer to Chart B1(a) Please refer to Chart B1(b)

#### Remarks:

- NA Not applicable
- (1) In vitro fertilization (IVF) (a) means the fertilization of an egg by sperm outside the human body, whether or not the egg was originally removed from the body of that or any other woman; (b) includes any procedure involving the induction or aspiration of an egg, or the culture of an egg for the purposes of any such fertilization.

It includes Conventional IVF (IVF without ICSI) and IVF with ICSI.

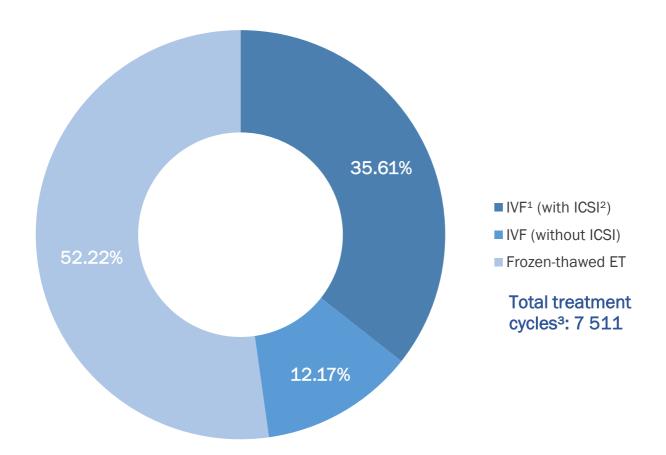
- (2) **Intracytoplasmic sperm injection (ICSI)** means a method of gamete micromanipulation by which a single sperm is injected into the inner cellular structure of the egg.
- (3) Total patient diagnosis percentages may be greater than 100% because more than one diagnosis can be reported for each treatment cycle.
- (4) The age of wife has been used in calculating the age of patient.
- (5) (i) Treatment cycles refers to the process in which a reproductive technology (RT) procedure is carried out, where a woman has undergone ovarian stimulation or monitoring with the intent of having RT procedure, or frozen embryos have been thawed with the intent of transferring them to a woman. A treatment cycle starts (a) on the day when superovulatory drugs are commenced or (b) from the date of the last menstrual period.

This annual statistics only covered treatment cycles that led to (1) Gamete transfer/embryo replacement/insemination, or stopped because of (2) Elective cryopreservation of all embryos or (3) Cycle abandonment.

- (ii) In this Key Statistics, the treatment cycles for (a) RT procedures involving donated gametes/embryos and
   (b) involving artificial insemination (i.e. AlH and DI) are <u>excluded</u> in the above table and separately shown in Table 2. To avoid double counting, treatment cycles in which one patient engages in more than one type of RT procedure in one cycle (e.g. IVF and FET) are also <u>excluded</u> in the above table.
- (6) (i) **Clinical pregnancy** means a pregnancy documented by one or more gestational sacs on ultrasound or the histological confirmation of gestational products in miscarriages or ectopic pregnancies.
  - (ii) **Clinical pregnancy rate** is expressed as number of clinical pregnancies per 100 treatment cycles started /commenced or per 100 cycles reaching the stage of attempted oocyte retrieval or embryo transfer. i.e. Clinical pregnancy rate = Number of clinical pregnancies/Number of treatment cycles x 100%
- (7) (i) **Live birth event** means an event of the birth of one or more than one live child from one single pregnancy. The birth of live twins, triplets and so on will therefore be considered as a single "live birth event".
  - (ii) Live birth event rate (single and multiple live births included) is expressed per 100 treatment cycles started,
     i.e. Live birth event rate [3(f) or 4(f)] = Number of live birth events/Number of treatment cycles [3(b) or 4(b)]
     x 100%
- (8) (i) **Singleton live birth event** means an event of the birth in Hong Kong of <u>one live child from one single</u> <u>pregnancy</u>.
  - (ii) Singleton live birth event rate is expressed per 100 treatment cycles started, i.e. Singleton live birth event rate[3(g) or 4(g)] = Number of live birth events with one live child born/Number of treatment cycles [3(b) or 4(b)] x 100%
- (9) (i) **Multiple live birth event** means an event of the birth in Hong Kong of <u>more than one live child from one single</u> <u>pregnancy</u>.
  - (ii) Multiple live birth event rate is expressed per 100 treatment cycles started, i.e. Multiple live birth event rate[3(h) or 4(h)] = Number of live birth events with more than one live child born/Number of treatment cycles [3(b) or 4(b)] x 100%

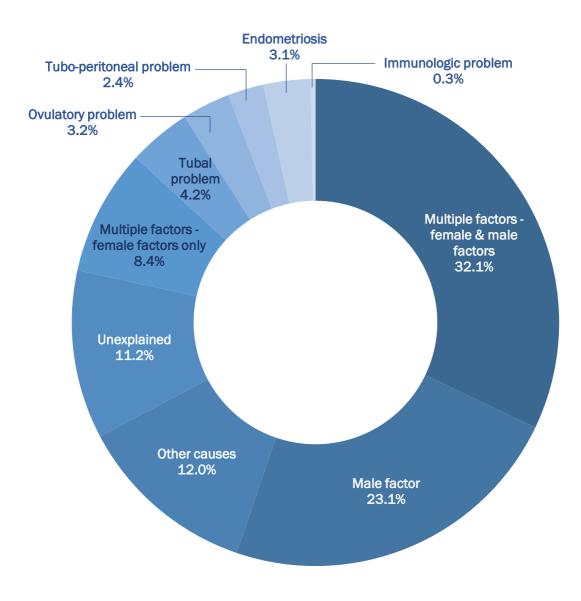
### **Charts for selected Key Statistics**

### Chart A1 - Type of RT Procedures taken by Patients (%) (for non-donor IVF cycles only)



- (1) In vitro fertilization (IVF) (a) means the fertilization of an egg by sperm outside the human body, whether or not the egg was originally removed from the body of that or any other woman; (b) includes any procedure involving the induction or aspiration of an egg, or the culture of an egg for the purposes of any such fertilization. It includes IVF without ICSI and IVF with ICSI.
- (2) **Intracytoplasmic sperm injection (ICSI)** means a method of gamete micromanipulation by which a single sperm is injected into the inner cellular structure of the egg.
- (3) (i) Treatment cycles refers to the process in which a reproductive technology (RT) procedure is carried out, where a woman has undergone ovarian stimulation or monitoring with the intent of having RT procedure, or frozen embryos have been thawed with the intent of transferring them to a woman. A treatment cycle starts (a) on the day when superovulatory drugs are commenced or (b) from the date of the last menstrual period.
  - (ii) In this chart, the treatment cycles for (a) RT procedures involving donated gametes/embryos and (b) involving artificial insemination (i.e. AIH and DI) are <u>excluded</u> in the above chart and separately shown in Table 2. To avoid double counting, treatment cycles in which one patient engages in more than one type of RT procedure in one cycle (e.g. IVF and FET) are also <u>excluded</u> in the above chart.

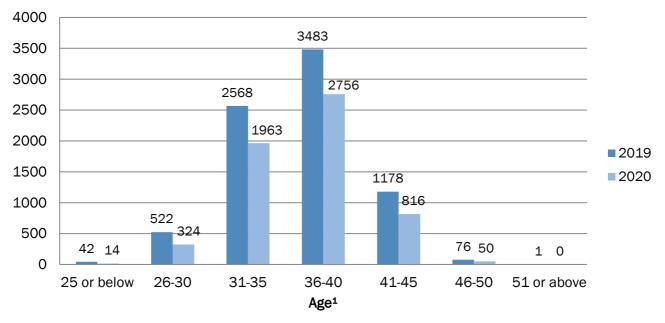
#### Chart A2 - Patients Diagnosis (%) (for non-donor IVF cycles only)



#### Remarks:

(1) "Other causes" of infertility diagnosis reported by licensed centres included advanced maternal age, reduced ovarian reserve, coital problem, polycystic ovary syndrome, etc.

### Chart A5(a) - Number of Patients and Treatment Cycles (for non-donor IVF cycles only)



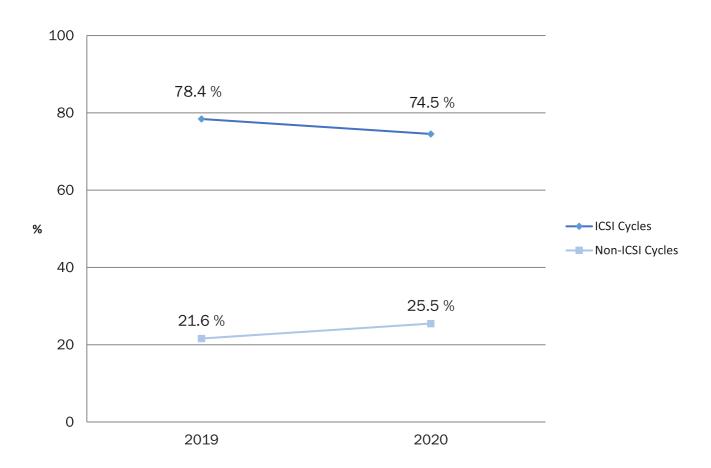
#### **Number of Patients**

#### 5000 4488 4500 4000 3488 3266 3500 3000 2384 2500 2019 2000 1654 2020 1500 1160 1000 609 392 500 115 70 52 17 1 0 0 36-40 41-45 25 or below 26-30 31-35 46-50 51 or above Age

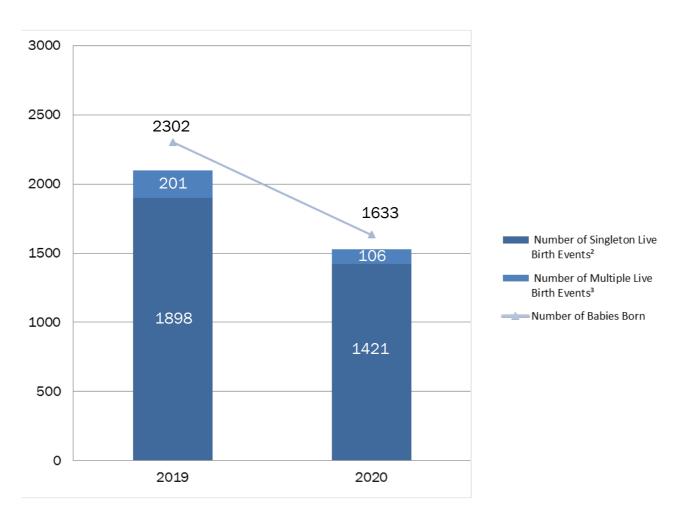
### Number of Treatment Cycles<sup>2</sup>

- (1) The age of wife has been used in calculating the age of patient.
- (2) (i) **Treatment cycles** refers to the process in which a reproductive technology (RT) procedure is carried out, where a woman has undergone ovarian stimulation or monitoring with the intent of having a RT procedure, or frozen embryos have been thawed with the intent of transferring them to a woman. A treatment cycle starts (a) on the day when superovulatory drugs are commenced or (b) from the date of the last menstrual period.
  - (ii) In this chart, the treatment cycles for (a) RT procedures involving donated gametes/embryos and (b) involving artificial insemination (i.e. AIH and DI) are <u>excluded</u> from the above chart and separately shown in Table 2. To avoid double counting, treatment cycles in which one patient engages in more than one type of RT procedure in one cycle (e.g. IVF and FET) are also <u>excluded</u> from the above chart.

#### Chart A5(b) - Proportion of ICSI<sup>1</sup> Cycles (%) (amongst all non-donor IVF cycles<sup>2</sup>)



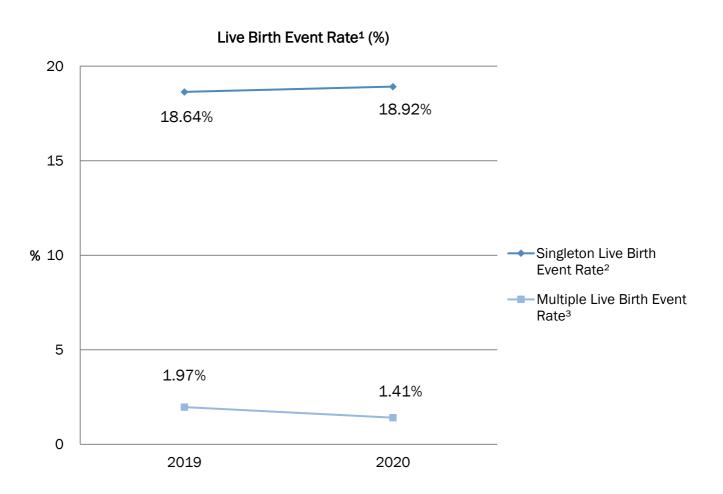
- (1) **Intracytoplasmic sperm injection (ICSI)** means a method of gamete micromanipulation by which a single sperm is injected into the inner cellular structure of the egg.
- (2) (i) Treatment cycles refers to the process in which a reproductive technology (RT) procedure is carried out, where a woman has undergone ovarian stimulation or monitoring with the intent of having RT procedure, or frozen embryos have been thawed with the intent of transferring them to a woman. A treatment cycle starts (a) on the day when superovulatory drugs are commenced or (b) from the date of the last menstrual period.
  - (ii) In this chart, the treatment cycles for (a) RT procedures involving donated gametes/embryos and (b) involving artificial insemination (i.e. AIH and DI) are <u>excluded</u> from the above chart and separately shown in Table 2. To avoid double counting, treatment cycles in which one patient engages in more than one type of RT procedure in one cycle (e.g. IVF and FET) are also <u>excluded</u> from the above chart.



### Chart A5(c) - Number of Live Birth Events<sup>1</sup> and Babies Born (for non-donor IVF cycles only)

- (1) **Live birth event** means an event of the birth of one or more than one live child from one single pregnancy. The birth of live twins, triplets and so on will therefore be considered as a single "live birth event".
- (2) **Singleton live birth event** means an event of the birth of <u>one live child from one single pregnancy</u>.
- (3) **Multiple live birth event** means an event of the birth of <u>more than one live child from one single pregnancy</u>.

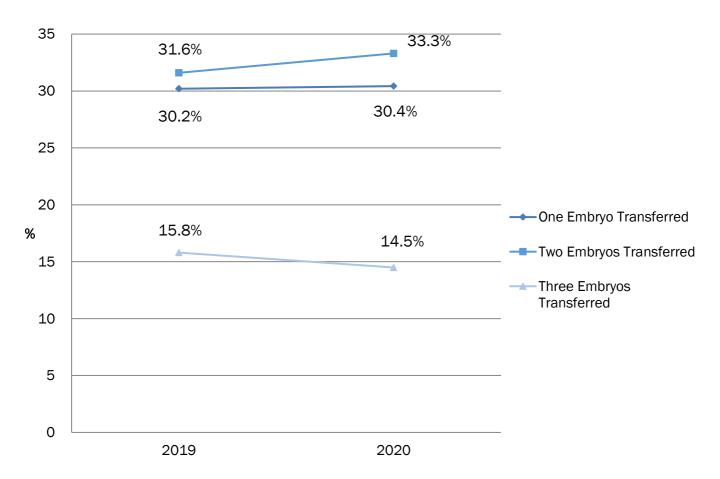
#### Chart A5(d) - Live Birth Event<sup>1</sup> Rate (%) (for non-donor IVF cycles only)



- (1) (i) **Live birth event** means an event of the birth of <u>one or more than one live child from one single pregnancy</u>. The birth of live twins, triplets and so on will therefore be considered as a single "live birth event".
  - (ii) Live birth event rate (single and multiple live births included) is expressed per 100 treatment cycles started, i.e. Live birth event rate = Number of live birth events/Number of treatment cycles x 100%
- (2) (i) Singleton live birth event means an event of the birth of <u>one live child from one single pregnancy</u>.
  - (ii) **Singleton live birth event rate** is expressed per 100 treatment cycles started, i.e. Singleton live birth event rate = Number of live birth events with one live child born/Number of treatment cycles x 100%
- (3) (i) Multiple live birth event means an event of the birth of more than one live child from one single pregnancy.
  - (ii) **Multiple live birth event rate** is expressed per 100 treatment cycles started, i.e. Multiple live birth event rate = Number of live birth events with more than one live child born/Number of treatment cycles x 100%

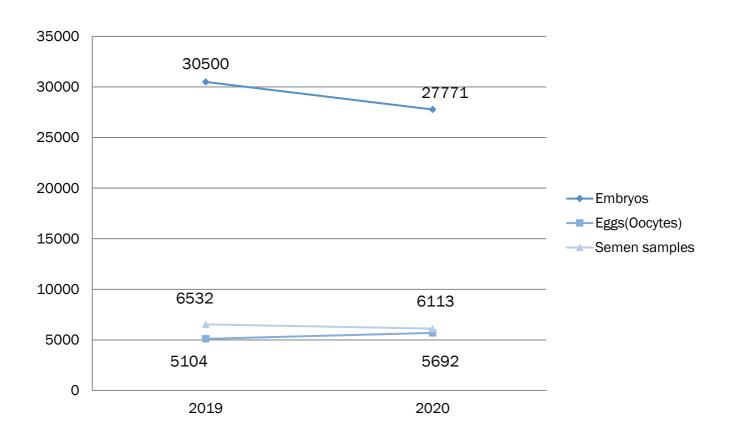
## Chart A5(e) - Percentage of Treatment Cycles (with Embryo Transferred) Resulting in Live Birth Events<sup>1</sup> by One, Two and Three Embryos Transferred (%)

(for non-donor IVF cycles only)

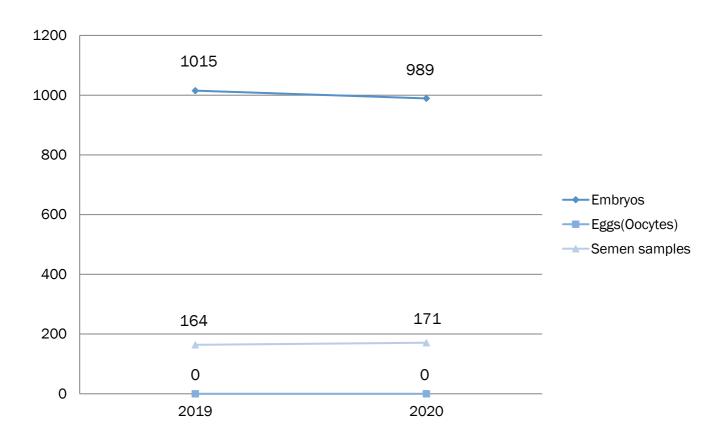


- (1) (i) Live birth event means an event of the birth of one or more than one live child from one single pregnancy. The birth of live twins, triplets and so on will therefore be considered as a single "live birth event".
  - (ii) Live birth event rate (single and multiple live births included) is expressed per 100 treatment cycles started, i.e. live birth event rate = Number of live birth events/Number of treatment cycles x 100%

### Chart B1(a) - Number of Gametes and Embryos Stored by Licensed Centres



## Chart B1(b) - Number of Donated Gametes or Embryos Stored or Used for Research



	Number of Donated Embryos Used for Research							
	2019	2020						
Embryos	96	75						

# Detailed Statistics Tables

## Table 1 - Gamete and Embryo Donations Made in 2020

(Based on the information on Annual Statistics Forms received in the calendar year)

	Gan	nete	Emt	oryo	Total	
Age Group	Female Donors	Male Donors	Female Donors	Male Donors	TOLAT	
25 or below	2	6	0	0	8	
26-30	0	6	0	0	6	
31-35	3	4	0	0	7	
36-40	0	5	0	0	5	
41-45	0	2	0	0	2	
46-50	0	0	0	0	0	
51 or above	0	0	0	0	0	
Total	5	23	0	0	28	

#### a) Gamete and Embryo Donors by Age Group and Sex

#### b) Donors and Donated Materials

Donated Materials	Number of Donors	Number of Donations Made
Semen	23	43
Eggs (oocytes)	5	6
Embryos <sup>1</sup>	0	0

Remark:

(1) Both the female and male donors of the couple will be counted for an embryo donation.

Source (for licensed centres) AS Form 8

## Table 2 - Pregnancy and Birth Outcomes for Main Types of RTProcedures in 2020

(Based on the information on Data Collection Forms received in the calendar year)

			RT proc	edures <u>invo</u> gametes/	lving patient 'embryos	<u>s' own</u>	involvin	ocedures g donated s/embryos
Iter	n		IV with ICSI <sup>2</sup>	F <sup>1</sup> without ICSI	Frozen- thawed ET	AIH <sup>3</sup>	DI <sup>3</sup>	RT procedures other than DI
1		Number of patients	2146	834	2943	1953	7	33
2	1	Number of treatment cycles <sup>4</sup>	2675	914	3922	2985	13	44
3		Number of treatment cycles with embryo transferred	659	404	3891	NA	NA	35
4		Number of cycles of insemination	NA	NA	NA	2959	13	NA
Tre	atr	ment Outcome <sup>5</sup>						
5a		Number of clinical pregnancy <sup>6(i)</sup>	232	146	1772	401	1	17
	i	Number of ongoing pregnancy <sup>7(i)</sup>	194	128	1541	336	1	15
	ii	Number of miscarriage <sup>8</sup>	34	15	219	59	0	2
	iii	Number of hydatidiform mole	0	0	0	1	0	0
	iv	Number of ectopic pregnancy <sup>9</sup>	3	3	9	5	0	0
	v	Number of heterotopic pregnancy <sup>10</sup>	0	0	0	0	0	0
	vi	pregnancy	1	0	3	0	0	0
5b		Number of no pregnancy <sup>11</sup>	2443	767	2148	2571	12	27
5c		Number of lost to follow up <sup>12</sup>	0	1	2	13	0	0
5d		Clinical pregnancy rate <sup>6(ii)</sup> (per treatment cycle) (%)	8.7	16.0	45.2	13.4	7.7	38.6
	ii	Clinical pregnancy rate (per treatment cycle with embryo transferred) (%)	35.2	36.1	45.5	NA	NA	48.6
	iii	Clinical pregnancy rate (per cycle of insemination) (%)	NA	NA	NA	13.6	7.7	NA
5e		Ongoing pregnancy rate <sup>7(ii)</sup> (per treatment cycle) (%)	7.3	14.0	39.3	11.3	7.7	34.1
	ii	Ongoing pregnancy rate (per treatment cycle with embryo transferred) (%)	29.4	31.7	39.6	NA	NA	42.9
	iii	Ongoing pregnancy rate (per cycle of insemination) (%)	NA	NA	NA	11.4	7.7	NA
	-	ancy Outcome					-	
6a		Number of lost to follow up	1	2	41	25	0	0
6b		Number of live birth events <sup>13(i)</sup>	164	93	1270	262	1	14
		Number of singleton live birth events <sup>14(i)</sup>	155	93	1173	236	1	14
		Number of multiple live birth events <sup>15(i)</sup>	9	0	97	26	0	0
6c		Live birth event rate <sup>13(ii)</sup> (%)	6.1	10.2	32.4	8.8	7.7	31.8
		Singleton live birth event rate <sup>14(ii)</sup> (%)	5.8	10.2	29.9	7.9	7.7	31.8
		Multiple live birth event rate <sup>15(ii)</sup> (%)	0.3	0.0	2.5	0.9	0.0	0.0
6d		Total number of babies born	173	93	1367	288	1	14

Remarks:

- NA Not applicable
- (1) In vitro fertilization (IVF) (a) means the fertilization of an egg by sperm outside the human body, whether or not the egg was originally removed from the body of that or any other woman; (b) includes any procedure involving the induction or aspiration of an egg, or the culture of an egg for the purposes of any such fertilization. It includes IVF without ICSI and IVF with ICSI.
- (2) **Intracytoplasmic sperm injection (ICSI)** means a method of gamete micromanipulation by which a single sperm is injected into the inner cellular structure of the egg.
- (3) Artificial insemination refers to the placing of sperm inside a woman's vagina or uterus (i.e. womb) by means other than sexual intercourse. In artificial insemination by husband (AIH), the husband's sperm is used. In artificial insemination by donor (AID or DI), sperm collected from a man who is not the woman's husband is used.
- (4) (i) Treatment cycles refers to the process in which a reproductive technology (RT) procedure is carried out, where a woman has undergone ovarian stimulation or monitoring with the intent of having RT procedure, or frozen embryos have been thawed with the intent of transferring them to a woman. A treatment cycle starts (a) on the day when superovulatory drugs are commenced or (b) from the date of the last menstrual period.

This annual statistics only covered treatment cycles that led to (1) Gamete transfer/embryo replacement/insemination, or stopped because of (2) Elective cryopreservation of all embryos or (3) Cycle abandonment.

- (ii) In this table, the treatment cycles for RT procedures involving donated gametes/embryos and those involving artificial insemination (i.e. AlH and DI) are shown. To avoid double counting, treatment cycles in which one patient engages in more than one type of RT procedure in one cycle (e.g. IVF and FET) are excluded from the above table.
- (5) Figures on **treatment outcome** reported in the interim statistics will be replaced when outcome of pregnancy is available in the final statistics. Licensed centres are required to report the details concerning **pregnancy outcome** within 12 months after treatment.
- (6) (i) **Clinical pregnancy** means pregnancy documented by one or more gestational sacs on ultrasound or the histological confirmation of gestational products in miscarriages or ectopic pregnancies.
  - (ii) **Clinical pregnancy rate** is expressed as number of clinical pregnancies per 100 treatment cycles started /commenced or per 100 cycles reaching the stage of attempted oocyte retrieval or embryo transfer.
  - Clinical pregnancy rate per treatment cycles [Item 5d(i)] = Number of clinical pregnancies [Item 5a]/Number of treatment cycles[Item 2] x 100%
  - **Clinical pregnancy rate per treatment cycles with embryo transferred** [Item 5d(ii)] = Number of clinical pregnancies [Item 5a]/Number of treatment cycles with embryo transferred [Item 3] x 100%
  - Clinical pregnancy rate per cycles of insemination [Item 5d(iii)] = Number of clinical pregnancies [Item 5a]/ Number of cycles of insemination [Item 4] x 100%
- (7) (i) Ongoing pregnancy means ongoing pregnancy with foetal cardiac activity during the period of the year being reported on.
  - (ii) **Ongoing pregnancy rate** is expressed as number of ongoing pregnancies per 100 treatment cycles started /commenced or per 100 cycles reaching the stage of attempted oocyte retrieval or embryo transfer.
  - **Ongoing pregnancy rate per treatment cycles** [Item 5e(i)] = Number of ongoing pregnancies [Item 5a(i)]/ Number of treatment cycles [Item 2] x 100%
  - **Ongoing pregnancy rate per treatment cycles with embryo transferred** [Item 5e(ii)] = Number of ongoing pregnancies [Item 5a(i)]/Number of treatment cycles with embryo transferred [Item 3] x 100%
  - **Ongoing pregnancy rate per cycles of insemination** [Item 5e(iii)] = Number of ongoing pregnancies [Item 5a(i)]/Number of cycles of insemination [Item 4] x 100%
- (8) Miscarriage (Spontaneous abortion) refers to loss of an intrauterine pregnancy detected clinically or by ultrasound, and less than 24 weeks' gestation (as estimated by the day of embryo transfer or day of ovulation).
- (9) Ectopic pregnancy refers to a pregnancy in which implantation has taken place outside the uterine cavity.
- (10) Heterotopic pregnancy refers to simultaneous existence of intrauterine and ectopic pregnancy.

- (11) Number of no pregnancy refers to the number of treatment cycles started and reported by the licensed centre with an outcome of "no pregnancy", including those abandoned and those ending with elective cryopreservation of embryos.
- (12) Figures on number of lost to follow up cases will be reported in the interim statistics and it will be updated when pregnancy outcome is available in the final statistics.
- (13) (i) Live birth event means an event of the birth of one or more than one live child from one single pregnancy. The birth of live twins, triplets and so on will therefore be considered as a single "live birth event".
  - (ii) Live birth event rate (single and multiple live births included) is expressed per 100 treatment cycles started,
     i.e. Live birth event rate [Item 6c] = Number of live birth events [Item 6b]/Number of treatment cycles [Item 2] x 100%
- (14) (i) Singleton live birth event means an event of the birth of one live child from one single pregnancy.
  - (ii) Singleton live birth event rate is expressed per 100 treatment cycles started,

i.e. Singleton live birth event rate [Item 6c(i)] = Number of live birth events with one live child born [6b(i)]/Number of treatment cycles [Item 2] x 100%

- (15) (i) Multiple live birth event means an event of the birth of more than one live child from one single pregnancy.
  - (ii) Multiple live birth event rate is expressed per 100 treatment cycles started,

i.e. Multiple live birth event rate [Item 6c(ii)] = Number of live birth events with more than one live child born [6b(ii)]/Number of treatment cycles [Item 2] x 100%

Source (for licensed centres) DC Form 1, 2, 3, 4 & 7

## Table 3 - Pregnancy and Birth Outcomes by Age Group and Main Type of **RT Procedures in 2020**

(for non-donor treatment cycles only) (Based on the information on Data Collection Forms received in the calendar year)

			(with ICSI <sup>2</sup> )	• /				
Age Group <sup>4</sup>	Number of Patients Number of Treatment Cycles <sup>5</sup>		Number of Treatment Cycles with Embryo Transferred		going nancy <sup>6</sup> <i>(%)<sup>6(ii)</sup></i>	Live Birth Event <sup>7</sup> n <sup>7(i)</sup> (%) <sup>7(ii)</sup>		
25 or below	7	9	3	1 (11.1)		1	(11.1)	
26-30	132	148	27	12	(8.1)	11	(7.4)	
31-35	690	786	188	68	(8.7)	55	(7.0)	
36-40	945	1151	320	96	(8.3)	86	(7.5)	
41-45	347	541	113	16	(3.0)	11	(2.0)	
46-50	25	40	8	1	(2.5)	0	(0.0)	
51 or above	0	NA	NA	1	NA	1	NA	
Total	2146	2675	659	194	(7.3)	164	(6.1)	
		IVF (v	without ICSI)	I				
Age Group	Number of Patients	Number of Treatment Cycles	Number of Treatment Cycles with Embryo	Ongoing Pregnancy		Live Bi	th Event	
			Transferred	n	(%)	n	(%)	
25 or below	0	NA	NA	٦	NA	1	NA	
26-30	27	32	13	3	3 (9.4)		(6.3)	
31-35	314	329	128	50	(15.2)	39	(11.9)	
36-40	434	475	232	73	(15.4)	51	(10.7)	
41-45	58	76	31	2	(2.6)	1	(1.3)	
46-50	1	2	0	0	(0.0)	0	(0.0)	
51 or above	0	NA	NA	1	NA	1	NA	
Total	834	914	404	128	(14.0)	93	(10.2)	
		All IVF	(Fresh cycles	5)				
Age Group	Number of Patients	Number of Treatment Cycles	Number of Treatment Cycles with Embryo	Ongoing Pregnancy		Live Birth Event		
			Transferred	n	(%)	n	(%)	
25 or below	7	9	3	1	(11.1)	1	(11.1)	
26-30	159	180	40	15	(8.3)	13	(7.2)	
31-35	1004	1115	316	118	(10.6)	94	(8.4)	
36-40	1379	1626	552	169	(10.4)	137	(8.4)	
41-45	405	617	144	18	(2.9)	12	(1.9)	
46-50	26	42	8	1	(2.4)	0	(0.0)	
51 or above	0	NA	NA	1	NA	1	NA	
Total	2980	3589	1063	322	(9.0)	257	(7.2)	

		Froze	n-thawed ET						
Age Group	Number of Patients	Number of Treatment Cycles	Number of Treatment Cycles with Embryo Transferred		going nancy <i>(%)</i>	Live Birth Event			
25 or below	7	8	8	4	(50.0)	n 3	(37.5)		
26-30	165	212	212	108	(50.9)	91	(42.9)		
31-35	959	1269	1261	589	(46.4)	502	(39.6)		
36-40	1377	1862	1848	734	(39.4)	595	(32.0)		
41-45	411	543	535	105	(19.3)	78	(14.4)		
46-50	24	28	27	1	(3.6)	1	(3.6)		
51 or above	0	NA	NA	NA		1	NA		
Total	al 2943 3922 3		3891	1541	(39.3)	1270	(32.4)		
			AIH <sup>3</sup>			<u> </u>			
Age Group	Number of Patients	Number of Treatment Cycles	Number of cycles of insemination		going nancy	Live Birth Event			
				n	(%)	n	(%)		
25 or below	9	19	19	2	(10.5)	2	(10.5)		
26-30	184	274	272	28	(10.2)	23	(8.4)		
31-35	916	1433	1422	172	(12.0)	138	(9.6)		
36-40	692	1037	1025	121	(11.7)	91	(8.8)		
41-45	140	208	207	13	(6.3)	8	(3.8)		
46-50	12	14	14	0	(0.0)	0	(0.0)		
51 or above	0	NA	NA	1	NA	1	NA		
Total	1953	2985	2959	336	(11.3)	262	(8.8)		

- NA Not applicable
- (1) In vitro fertilization (IVF) (a) means the fertilization of an egg by sperm outside the human body, whether or not the egg was originally removed from the body of that or any other woman; (b) includes any procedure involving the induction or aspiration of an egg, or the culture of an egg for the purposes of any such fertilization. It includes IVF without ICSI and IVF with ICSI.
- (2) **Intracytoplasmic sperm injection (ICSI)** means a method of gamete micromanipulation by which a single sperm is injected into the inner cellular structure of the egg.
- (3) Artificial insemination refers to the placing of sperm inside a woman's vagina or uterus (i.e. womb) by means other than sexual intercourse. In artificial insemination by husband (AIH), the husband's sperm is used. In artificial insemination by donor (AID or DI), sperm collected from a man who is not the woman's husband is used.
- (4) The age of wife has been used in calculating the age of patient.
- (5) (i) **Treatment cycles** refers to the process in which a reproductive technology (RT) procedure is carried out, where a woman has undergone ovarian stimulation or monitoring with the intent of having RT procedure, or

frozen embryos have been thawed with the intent of transferring them to a woman. A treatment cycle starts (a) on the day when superovulatory drugs are commenced or (b) from the date of the last menstrual period.

This annual statistics only covered treatment cycles that led to (1) gamete transfer/embryo replacement/insemination, or stopped because of (2) elective cryopreservation of all embryos or (3) cycle abandonment.

- (ii) In this table, the treatment cycles for RT procedures involving donated gametes/embryos are excluded from the above table and separately shown in Table 2. To avoid double counting, treatment cycles in which one patient engages in more than one type of RT procedure in one cycle (e.g. IVF and FET) are also excluded from the above table.
- (6) **Ongoing pregnancy** means ongoing pregnancy with foetal cardiac activity during the period of the year being reported on.
  - (i) n = Number of ongoing pregnancies
  - (ii) Ongoing pregnancy rate is expressed as number of ongoing pregnancies per 100 treatment cycles started /commenced or per 100 cycles reaching the stage of attempted oocyte retrieval or embryo transfer. i.e. Ongoing pregnancy rate = number of ongoing pregnancies [n]/Number of treatment cycles x 100%
- (7) **Live birth event** means an event of the birth of one or more than one live child from one single pregnancy. The birth of live twins, triplets and so on will therefore be considered as a single "live birth event".
  - (i) n = Number of live birth events
  - (ii) Live birth event rate (single and multiple live births included) is expressed per 100 treatment cycles started, i.e. live birth event rate = Number of live birth events [n]/Number of treatment cycles x 100%

Source (for licensed centres) DC Form 1, 4 & 7

# Table 4 - Effect of One/Two/Three Embryo(s) Transferred (Fresh/FrozenCycle with or without ICSI1) on Pregnancy and Birth Outcomes2 in 2020(For non-donor IVF cycles only)

(Based on the information on Data Collection Forms received in the calendar year)

	One Embryo Transferred												
Age Group <sup>3</sup>	Number of Patients	Number of Treatment Cycles <sup>4</sup> with Embryo Transferred		going nancy <sup>5</sup>	Ongoing Multiple Pregnancy		Live Birth Events <sup>6</sup>		<sup>3</sup> Birth Events <sup>7</sup>		Multiple Birth Events <sup>8</sup>		Number of Babies born
			n <sup>5(i)</sup>	(%) <sup>5(ii)</sup>	n	(%)	n <sup>6(i)</sup>	<i>(%)</i> 6(ii)	n <sup>7(i)</sup>	<i>(%)</i> 7 <sup>(ii)</sup>	n <sup>8(i)</sup>	<i>(%)</i> <sup>B(ii)</sup>	
25 or below	7	8	3	(37.5)	0	(0.0)	2	(25.0)	2	(25.0)	0	(0.0)	2
26-30	160	184	93	(50.5)	2	(1.1)	77	(41.8)	76	(41.3)	1	(0.5)	78
31-35	1085	1313	581	(44.2)	11	(0.8)	486	(37.0)	479	(36.5)	7	(0.5)	493
36-40	1529	1877	689	(36.7)	12	(0.6)	546	(29.1)	539	(28.7)	7	(0.4)	553
41-45	340	427	68	(15.9)	2	(0.5)	52	(12.2)	51	(11.9)	1	(0.2)	53
46-50	13	13	1	(7.7)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0
51 or above	0	NA	٩	١A	NA		NA		NA		NA		NA
Total	3134	3822	1435	(37.5)	27	(0.7)	1163	(30.4)	1147	(30.0)	16	(0.4)	1179

	Two Embryos Transferred												
Age Group <sup>3</sup>	Number of Patients	Number of Treatment Cycles <sup>4</sup> with Embryo Transferred		going nancy <sup>5</sup>	Ongoing Multiple Pregnancy		Live Birth Events <sup>6</sup>		ents <sup>6</sup> Birth Events <sup>7</sup>		Multiple Birth Events <sup>8</sup>		Number of Babies born
			n <sup>5(i)</sup>	(%) <sup>5(ii)</sup>	n	(%)	n <sup>6(i)</sup>	<i>(%)</i> 6(ii)	n <sup>7(i)</sup>	<i>(%)</i> 7 <sup>(ii)</sup>	n <sup>8(i)</sup>	<i>(%)</i> <sup>B(ii)</sup>	
25 or below	3	3	2	(66.7)	1	(33.3)	2	(66.7)	1	(33.3)	1	(33.3)	3
26-30	59	68	30	(44.1)	13	(19.1)	27	(39.7)	14	(20.6)	13	(19.1)	40
31-35	228	256	126	(49.2)	32	(12.5)	110	(43.0)	83	(32.4)	27	(10.5)	137
36-40	439	495	209	(42.2)	48	(9.7)	181	(36.6)	137	(27.7)	44	(8.9)	225
41-45	198	222	49	(22.1)	5	(2.3)	33	(14.9)	29	(13.1)	4	(1.8)	37
46-50	16	19	1	(5.3)	0	(0.0)	1	(5.3)	1	(5.3)	0	(0.0)	1
51 or above	0	NA	٦	NA	NA		NA		NA		NA		NA
Total	943	1063	417	(39.2)	99	(9.3)	354	(33.3)	265	(24.9)	89	(8.4)	443

Three Embryos Transferred													
Age Group <sup>3</sup>	Number of Patients	Number of Treatment Cycles <sup>4</sup> with Embryo Transferred		going nancy <sup>5</sup>	Ongoing Multiple Pregnancy			Live Birth Singleton Live Events <sup>6</sup> Birth Events <sup>7</sup>		Multiple Birth Events <sup>8</sup>		Number of Babies born	
			n <sup>5(</sup>	i) <i>(%)</i> 5(ii)	r	ו <i>(%)</i>	n <sup>6(i</sup>	i) <i>(%)</i> 6(ii)	n <sup>7(</sup>	i) <i>(%)</i> 7(ii)	n <sup>8(i</sup>	) <i>(%)</i> <sup>B(ii)</sup>	
25 or below	0	NA		NA	NA		1	NA	NA		NA		NA
26-30	0	NA		NA	I	NA	1	NA	NA		NA		NA
31-35	8	8	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0
36-40	24	28	5	(17.9)	0	(0.0)	5	(17.9)	5	(17.9)	0	(0.0)	5
41-45	29	30	6	(20.0)	2	(6.7)	5	(16.7)	4	(13.3)	1	(3.3)	6
46-50	3	3	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0
51 or above	0	NA		NA	NA		NA		NA		NA		NA
Total	64	69	11	(15.9)	2	(2.9)	10	(14.5)	9	(13.0)	1	(1.4)	11

Remarks:

- NA Not applicable
- (1) **Intracytoplasmic sperm injection (ICSI)** means a method of gamete micromanipulation by which a single sperm is injected into the inner cellular structure of the egg.
- (2) Figures on **treatment outcome** reported in the interim statistics will be replaced when pregnancy outcome is available in the final statistics. Licensed centres are required to report the details concerning **pregnancy outcome** within 12 months after treatment.
- (3) The age of wife has been used in calculating the age of patient.
- (4) (i) Treatment cycles refers to the process in which a reproductive technology (RT) procedure is carried out, where a woman has undergone ovarian stimulation or monitoring with the intent of having RT procedure, or frozen embryos have been thawed with the intent of transferring them to a woman. A treatment cycle starts (a) on the day when superovulatory drugs are commenced or (b) from the date of the last menstrual period.

This annual statistics only covered treatment cycles that led to (1) gamete transfer/embryo replacement/insemination, or stopped because of (2) elective cryopreservation of all embryos or (3) cycle abandonment.

- (ii) In this table, treatment cycles for (a) RT procedures involving donated gametes/embryos and (b) involving artificial insemination (i.e. AlH and DI) are excluded from the above table and separately shown in Table 2. To avoid double counting, treatment cycles in which one patient engages in more than one type of RT procedure in one cycle (e.g. IVF and FET) are also excluded from the above table.
- (5) **Ongoing pregnancy** means ongoing pregnancy with foetal cardiac activity during the period of the year being reported on.
  - (i) n = Number of ongoing pregnancies with single foetus and multiple foetuses.
  - (ii) Ongoing pregnancy rate is expressed as number of ongoing pregnancies per 100 treatment cycles started /commenced or per 100 cycles reaching the stage of attempted oocyte retrieval or embryo transfer. i.e. Ongoing pregnancy rate = number of ongoing pregnancies [n]/Number of treatment cycles with embryo transferred x 100%
- (6) **Live birth event** means an event of the birth of one or more than one live child from one single pregnancy. The birth of live twins, triplets and so on will therefore be considered as a single "live birth event".
  - (i) n = Number of live birth events
  - (ii) Live birth event rate (single and multiple live births included) is expressed per 100 treatment cycles started, i.e. live birth event rate = Number of live birth events [n]/Number of treatment cycles with embryo transferred x 100%

- (7) **Singleton live birth event** means an event of the birth of one live child from one single pregnancy.
  - (i) n = Number of live birth events of one live child from one single pregnancy.
  - (ii) Singleton live birth event rate is expressed per 100 treatment cycles started, i.e. Singleton live birth event rate = Number of live birth events with one live child born [n]/Number of treatment cycles with embryo transferred x 100%
- (8) **Multiple live birth event** means an event of the birth of more than one live child from one single pregnancy.
  - (i) n = Number of live birth events of more than one live child from one single pregnancy.
  - (ii) Multiple live birth event rate is expressed per 100 treatment cycles started, i.e. Multiple live birth event rate = Number of live birth events with more than one live child born [n] /Number of treatment cycles with embryo transferred x 100%

Source (for licensed centres) DC Form 1 & 4

# Table 5 - Pregnancy and Birth Outcomes by Age Group usingFresh/Frozen Oocytes (Fresh Cycles) in 2020(For non-donor IVF cycles only)

(Based on the information on Data Collection Forms received in the calendar year)

Fresh Cycles Using Fresh Oocytes									
Age Group <sup>1</sup>	Number of Patients	Number of Treatment Cycles <sup>2</sup>	Number of Treatment Cycles with Embryo		going nancy <sup>3</sup>	Live Bir	th Event <sup>4</sup>		
		, , , , , , , , , , , , , , , , , , ,	Transferred	n <sup>3(i)</sup> <i>(%)<sup>3(ii)</sup></i>		n <sup>4(i)</sup>	<i>(%)</i> 4(ii)		
25 or below	7	8	3	1	(12.5)	1	(12.5)		
26-30	157	175	39	15	(8.6)	13	(7.4)		
31-35	956	1063	315	118	(11.1)	94	(8.8)		
36-40	1281	1497	548	168	(11.2)	136	(9.1)		
41-45	371	566	142	18	(3.2)	12	(2.1)		
46-50	19	24	8	1	(4.2)	0	(0.0)		
51 or above	0	NA	NA	NA		NA			
Total	2791	3333	1055	321	(9.6)	256	(7.7)		

Fresh Cycles Using Frozen Oocytes									
Age Group	Number of Patients	Number of Treatment Cycles	Number of Treatment Cycles with Embryo		going (nancy	Live Bi	rth Event		
			Transferred	n	(%)	n	(%)		
25 or below	0	NA	NA	NA		NA			
26-30	1	1	1	0	(0.0)	0	(0.0)		
31-35	3	3	1	0	(0.0)	0	(0.0)		
36-40	8	8	2	1	(12.5)	1	(12.5)		
41-45	8	8	3	1	(12.5)	1	(12.5)		
46-50	1	1	0	0	(0.0)	0	(0.0)		
51 or above	0	NA	NA	NA		NA			
Total	21	21	7	2	(9.5)	2	(9.5)		

Remarks:

NA Not applicable

- (1) The age of wife has been used in calculating the age of patient.
- (2) (i) Treatment cycles refers to the process in which a reproductive technology (RT) procedure is carried out, where a woman has undergone ovarian stimulation or monitoring with the intent of having RT procedure, or frozen embryos have been thawed with the intent of transferring them to a woman. A treatment cycle starts (a) on the day when superovulatory drugs are commenced or (b) from the date of the last menstrual period.
  - (ii) In this table, treatment cycles for (a) RT procedures involving donated gametes/embryos and (b) involving artificial insemination (i.e. AIH and DI) are excluded from the above table and separately shown in Table 2. To avoid double counting, treatment cycles in which one patient engages in more than one type of RT procedure in one cycle (e.g. IVF and FET) are also excluded from the above table.

- (3) **Ongoing pregnancy** means ongoing pregnancy with foetal cardiac activity during the period of the year being reported on.
  - (i) n = Number of ongoing pregnancies
  - (ii) **Ongoing pregnancy rate** is expressed as number of ongoing pregnancies per 100 treatment cycles started /commenced or per 100 cycles reaching the stage of attempted oocyte retrieval or embryo transfer.

i.e. Ongoing pregnancy rate = number of ongoing pregnancies [n]/Number of treatment cycles x 100%

- (4) **Live birth event** means an event of the birth of one or more than one live child from one single pregnancy. The birth of live twins, triplets and so on will therefore be considered as a single "live birth event".
  - (i) n = Number of live birth events
  - (ii) Live birth event rate (single and multiple live births included) is expressed per 100 treatment cycles started, i.e. live birth event rate = Number of live birth events [n]/Number of treatment cycles x 100%

Source (for licensed centres) DC Form 1 & 4

### Table 6 - Infertility Diagnosis of Patients in 2020

(Based on the information on Data Collection Forms received in the calendar year)

## A) Infertility Diagnosis by Age of Wives Receiving RT Procedures (other than DI and AIH)

	Age Group (Number of Patients)							
Diagnosis	25 or below	26-30	31-35	36-40	41-45	46-50	51 or above	All
Male factor	5	67	413	511	84	1	0	1081
Tubal problem	1	13	86	83	12	0	0	195
Endometriosis	0	10	51	72	13	0	0	146
Immunologic problem	0	1	4	5	5	0	0	15
Tubo-peritoneal problem	0	3	46	60	2	0	0	111
Ovulatory problem	0	10	50	77	12	0	0	149
Unexplained	0	13	174	269	64	3	0	523
Other causes <sup>3</sup>	2	37	139	219	148	16	0	561
Multiple causes - female & male factors	4	67	450	697	260	21	1	1500
Multiple causes - female factors only	0	20	109	191	69	2	0	391
Total	12	241	1522	2184	669	43	1	4672

Remark:

(1) All treatment cycles for RT procedures involving donated gametes/embryos are excluded.

#### **B) Infertility Diagnosis by Age of Wives Receiving AIH**

	Age Group (Number of Patients)							
Diagnosis	25 or below	26-30	31-35	36-40	41-45	46-50	51 or above	All
Male factor	1	74	306	206	30	2	0	619
Endometriosis	0	2	25	20	2	0	0	49
Ovulatory problem	1	23	93	61	7	0	0	185
Unexplained	0	26	184	139	22	2	0	373
Other causes <sup>3</sup>	1	13	90	85	33	3	0	225
Multiple causes - female & male factors	6	37	166	131	39	5	0	384
Multiple causes - female factors only	0	9	52	50	7	0	0	118
Total	9	184	916	692	140	12	0	1953

#### C) Reasons for Treatment by Age of Husbands - DI

	Age Group (Number of Patients)							
Reasons	25 or below	26-30	31-35	36-40	41-45	46-50	51 or above	All
Obstructive azoospermia	0	0	0	0	0	0	0	0
Non-obstructive azoospermia	0	0	2	2	1	0	0	5
Severe deficits in semen quality in couples who do not wish to undergo ICSI	0	0	0	0	0	0	1	1
Genetic	0	0	0	0	0	0	1	1
Infectious disease in the male partner (such as HIV)	0	0	0	0	0	0	0	0
Severe rhesus isoimmunisation	0	0	0	0	0	0	0	0
Others	0	0	0	0	0	0	0	0
Multiple causes	0	0	0	0	0	0	0	0
Total	0	0	2	2	1	0	2	7

- (1) Age of wife is used in calculating the age of patient in Infertility Diagnosis by Age of Patients Receiving RT Procedures (other than DI and AIH) and receiving AIH procedures while the age of husband is used in calculating the age of patient in Reasons for Treatment by Age of Patients DI.
- (2) One patient may undergo more than one type of RT procedure during the calendar year (e.g. both IVF and AIH).
- (3) "Other causes" of infertility diagnosis reported by licensed centres included advanced maternal age, reduced ovarian reserve, coital problem, polycystic ovary syndrome, etc.

Source (for licensed centres)
DC Form 1, 7 and 3 respectively

## Table 7 - Current Research Projects ending December 2020

Name of Licensed Centre	Name of Project	Project Duration (in months)
Assisted Reproductive Technology Unit (IVFHK), Prince of Wales Hospital / The Chinese University of Hong Kong	A case-series study to establish preimplantation genetic screening (PGS) and its clinical application	36
Assisted Reproductive Technology Unit (IVFHK), Prince of Wales Hospital / The Chinese University of Hong Kong	Molecular analysis of culture medium samples from embryos of in-vitro fertilisation (IVF) patients	36
Department of Obstetrics & Gynaecology, The University of Hong Kong	Deviation of Human Expanded Pluripotent Stem Cells (EPSCs) from Human Preimplantation Embryos	36

Remark:

(1) The full list of all research projects approved by the Council on Human Reproductive Technology ("the Council") could be accessed at the Council's website

https://www.chrt.org.hk/english/embryo/embryo\_app.html