ICMART is a non-State actor in official relations with the World Health Organization.

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Manish Banker: India
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Disclosure

- The authors declare that they have no commercial or financial interest pertaining to the subject of this presentation or its content.
The International Glossary on Infertility and Fertility Care, 2017

A disease characterized by the failure to establish a clinical pregnancy after 12 months of regular, unprotected sexual intercourse or due to an impairment of a person’s capacity to reproduce either as an individual or with his/her partner. Fertility interventions may be initiated in less than one year based on medical, sexual and reproductive history, age, physical findings and diagnostic testing. Infertility is a disease, which generates disability as an impairment of function.
World Report Coverage History

Countries = 76 (-1)*

2015: 1,722,412 cycles (+4.5%)

* India delayed
# 10 Main Contributors in 2015

73.3% of 1,722,412 cycles

<table>
<thead>
<tr>
<th>Country</th>
<th>Cycles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>424,151</td>
</tr>
<tr>
<td>US</td>
<td>174,040</td>
</tr>
<tr>
<td>Spain</td>
<td>117,356</td>
</tr>
<tr>
<td>Russia</td>
<td>109,136</td>
</tr>
<tr>
<td>Germany</td>
<td>96,512</td>
</tr>
<tr>
<td>France</td>
<td>92,995</td>
</tr>
<tr>
<td>Italy</td>
<td>71,788</td>
</tr>
<tr>
<td>Australia</td>
<td>69,903</td>
</tr>
<tr>
<td>UK</td>
<td>64,232</td>
</tr>
<tr>
<td>Taiwan</td>
<td>42,176</td>
</tr>
</tbody>
</table>
Participation and Coverage

- 25 countries in 1991 ➔ 76 in 2015
  - Almost all of Europe, the Americas, Australia-NZ
  - Missing countries: Middle-East, Asia
  - 14 African countries (Benin, Burkina Faso, Cameroon, Egypt, Ghana, Ivory Coast, Mali, Mauritius, Morocco, Nigeria, Senegal, South Africa, Togo, Tunisia)
- 2,691 clinics (-43)
  - 85% of all clinics in reporting countries
- 31 countries >90% coverage (+6); 24 (full -7)
- But incomplete information

63-70% of World ART activity
Growth of ART Cycles by Region

- North America
- Latin America
- Europe
- Aust-NZ
- Asia
- Middle East
- Africa
- China? ~600K
Regional Contribution 2015

N=1,722,412 Cycles

- Europe: 49%
- North America: 12%
- Australia: 4%
- Latin America: 4%
- Middle East: 3%
- Asia: 4%
- Africa: 12%

27%
Global Results 2015

- 1,722,412 initiated cycles
- 336,856 deliveries
- Compared to 2014
  - + 74,635 cycles (+4.5%)
  - +25,663 deliveries (+8.2%)

Recent trend: Freeze-all
- 155,803 cycles (+20%)
- 94,158 in Japan (+13%)

Not included in calculations of PR or DR/cycle or aspiration

Included in cumulative PR

Probably underreported
2015: 1,722,412 cycles

<table>
<thead>
<tr>
<th>Cycles types</th>
<th>n</th>
<th>Delivery rates**</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,017,020 aspirations</td>
<td>+1.0%</td>
<td></td>
</tr>
<tr>
<td>• IVF:</td>
<td>297,099</td>
<td></td>
</tr>
<tr>
<td>• ICSI*</td>
<td>678,166</td>
<td>19.2% (-1.0%)</td>
</tr>
<tr>
<td>• GIFT:</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>FET</td>
<td>+6.8%</td>
<td>24.8% (+1.9%)</td>
</tr>
<tr>
<td>PGD/PGS (now PGT)</td>
<td>+57.7%</td>
<td>36.7% (+8.0%)</td>
</tr>
<tr>
<td>Egg donations (-10.2%)</td>
<td>-10.2%</td>
<td>29.8% (+4.4%)</td>
</tr>
<tr>
<td>Cancellations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• reported by 52 (+15)</td>
<td>+74.7%</td>
<td>67,354</td>
</tr>
</tbody>
</table>

* Not counted / countries combining IVF& ICSI: Israel
** DR after removing Freeze-all cycles
Trends in Distribution: Aspirations, FET, OD
Trends in Distribution: IVF cf. ICSI
IVF cf. ICSI by region 2015

<table>
<thead>
<tr>
<th>Region</th>
<th>IVF %</th>
<th>ICSI %</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Am</td>
<td>76.3</td>
<td></td>
</tr>
<tr>
<td>Latin Am</td>
<td>85.4</td>
<td></td>
</tr>
<tr>
<td>Europe</td>
<td>71.3</td>
<td></td>
</tr>
<tr>
<td>Aust-NZ</td>
<td>65.1</td>
<td></td>
</tr>
<tr>
<td>Asia</td>
<td>61.8</td>
<td></td>
</tr>
<tr>
<td>Africa</td>
<td>83.0</td>
<td></td>
</tr>
</tbody>
</table>
Fresh and Cumulative DR/Asp by Region 2015: IVF & ICSI

Fresh cycles: freeze all cycles excluded
Transfers of ≤2 Embryos by Region: 1998 to 2015
Delivery and Twin Delivery Rate (Fresh/Asp) by region 1998 cf. 2015
Triplet Pregnancies (% of Deliveries) by region 1998 cf. 2015
## Summary

<table>
<thead>
<tr>
<th></th>
<th>No. Cycles</th>
<th>Babies Born</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reported</td>
<td>1,722,412</td>
<td>462,856</td>
</tr>
<tr>
<td>Estimated globally</td>
<td>2.5-2.7 Million</td>
<td>661,000-735,000</td>
</tr>
<tr>
<td>Increase</td>
<td>4.6%</td>
<td>29.4% (Better reporting)</td>
</tr>
<tr>
<td>Average number of embryos transferred</td>
<td>1.69 (-0.04)</td>
<td>+/- 8.7 Million since 1978</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>DR/Asp</th>
<th>ICSI rate</th>
<th>Age &gt;40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh</td>
<td>19.2%</td>
<td>69.5%</td>
<td>18.9%</td>
</tr>
<tr>
<td>Decrease from 2014</td>
<td>-1.0%</td>
<td>-1.1%</td>
<td>-8.2%</td>
</tr>
<tr>
<td>Cumulative</td>
<td>28.1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decrease from 2014</td>
<td>-0.5%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Conclusion

- Increase
  - Number of cycles
  - Number of babies
  - PGT
- Stable ICSI and women > 40y
- Decrease
  - Average number of embryos transferred
  - Multiple pregnancies
- Wide differences in utilization, practice and results
- Registry issues: Day of transfer, Freeze-all, PGT
Worldwide Trends In Gender Equality

2002

ART utilisation

Gender Equality

More

Less

Less

More
EUROPE : ESHRE (39) : Albania, Austria, Belarus, Belgium, Bosnia, Bulgaria, Croatia, Cyprus, Czech Rep, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Kazakhstan, Latvia, Lithuania, Macedonia, Malta, Moldova, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovenia, Spain, Sweden, Switzerland, UK, Ukraine

AUSTRALIA—NEW ZEALAND (2)

LATIN AMERICA (15) : Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guatemala, Mexico, Nicaragua, Panama, Paraguay, Peru, Dominican Republic, Uruguay, Venezuela

NORTH AMERICA (2) : Canada, USA

NATIONAL REGISTERS (7): India, Indonesia, Israel, Japan, Korea, South Africa, Taiwan

INDIVIDUAL CLINICS (13) : Benin, Cameroon, Egypt, Ghana, Ivory Coast, Mali, Mauritius, Morocco, Nigeria, Senegal, Togo, Tunisia

Thank You To Our Contributors
THANK YOU

ICMART World Report 2015
Vienna, Austria
June 25, 2019

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