World Preliminary Report on ART

Year 2011

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ICMART: An NGO with WHO (Sheryl Vanderpoel)
Disclosures

- Industry
  - Advanced Reproductive Care (ARC): Founder and CEO

- Professional Organizations
  - ASRM: Past President
  - FIGO: Chair, Reproductive Medicine Committee
  - ICMART: International Committee Monitoring ART
  - IFFS: Executive Committee
  - WERF: President
  - WHO: Co-chair, Infertility Assessment Task Force

- Funded Research Studies & Consulting
  - Bayer
  - Ferring
  - LabCorp
  - Ziva
Supporters

American Society for Reproductive Medicine (ASRM)
European Society for Human Embryology and Reproduction (ESHRE)
Fertility Society of Australia (FSA)
Indian Society for Assisted Reproduction
Japan Society for Reproductive Medicine (JSRM)
Japan Society of Fertilization and Implantation (JSFI)
Latin American Society for Assisted Reproduction (REDLARA)
Society for Assisted Reproductive Technology (SART)

Government of Canada
Ferring Pharmaceuticals
World Health Organization (WHO)

Dedicated to Kathryn Tunstall
## World report 2011 Countries/region

<table>
<thead>
<tr>
<th>Region</th>
<th>Participating (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>8</td>
</tr>
<tr>
<td>America, Latin</td>
<td>12</td>
</tr>
<tr>
<td>America, North</td>
<td>2</td>
</tr>
<tr>
<td>Asia</td>
<td>5</td>
</tr>
<tr>
<td>Australia-NZ</td>
<td>2</td>
</tr>
<tr>
<td>Europe</td>
<td>33</td>
</tr>
<tr>
<td>Middle East</td>
<td>1</td>
</tr>
<tr>
<td>Israel</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total 2011</strong></td>
<td><strong>64</strong></td>
</tr>
</tbody>
</table>
World Report Coverage History

2011: 1,281,492 cycles
+ 111,000
9.5% increase
### Main Contributors

(>50,000 cycles)

<table>
<thead>
<tr>
<th>Country</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>268,255</td>
</tr>
<tr>
<td>USA:</td>
<td>142,325</td>
</tr>
<tr>
<td>France</td>
<td>88,518</td>
</tr>
<tr>
<td>Spain</td>
<td>71,638</td>
</tr>
<tr>
<td>Germany</td>
<td>70,154</td>
</tr>
<tr>
<td>Italy</td>
<td>61,270</td>
</tr>
<tr>
<td>UK</td>
<td>60,147</td>
</tr>
<tr>
<td>Australia</td>
<td>59,212</td>
</tr>
<tr>
<td>Russia</td>
<td>57,454</td>
</tr>
</tbody>
</table>

**TOTAL**: 1,281,492

69%
World Coverage 2011

- 64 countries (25 in 1991 to 58 in 2010)
  - Almost all Europe, America, Australia-NZ
  - Missing countries: Africa, Middle-East, Asia
  - But 8 African countries (Benin, Cameroon, Ivory coast, Mali, Morocco, South Africa, Togo, Tunisia,): expectations for the future?

2,547 clinics (+79): 75% of all clinics
- 32 countries >90% coverage (29 full)

- Estimate of the overall coverage
  - 63% - 70% of World activity
Evolution of ART Cycles by Region
Regional Contribution of ART Cycles to the World Report (2011)

- Europe: 49%
- Asia: 26%
- North America: 13%
- Africa: 1%
- Middle East: 3%
- Latin America: 3%
- Australia & New Zealand: 5%

N = 1,281,492

* Corresponds to aspiration cycles in IVF, ICSI & GIFT and transfer cycles in FET & OD.
Global Results 2011

- 1,281,472 initiated cycles for 241,535 deliveries

- Compared to 2010:
  - + 111,000 cycles; 9.5% increase
  - + 16,609 deliveries; 7.4% increase

- Recent development: Freeze all
  - Embryo freezing without transfer
  - 51,694 cycles (+18%)
    - 46,971 Japan (27.8% of Retrievals)

- Removed from calculations:
  - PR-DR per cycle/aspiration
  - Included in cumulative rates
Global Results 2011
1,281,472 Initiated Cycles

- 832,796 aspirations (+8.5%)
- 248,281 IVF*
- 501,965 ICSI*
- 53 GIFT
- 286,368 Thaws (+3.6%) 20.1% (+0.9%)
- 12,744 PGD/PGS (Asp, + 0.8%) 23.8% (+10 %)
- 62,811 Egg donations (+ 28.3%) 32.9% (-3.4%)
- 71,698 cancellations (+10.0%) reported by 51

*Not counted: India, Australia, New Zealand & Israel combining IVF & ICSI
** DR after removing Freeze all CYCLE
Trends in Procedure Distribution: Aspirations, FET, Egg Donation

[Graph showing trends from 1991 to 2010 with categories ED, Thawings, and Fresh asp]
Trends in Procedure Distribution: Aspirations
Procedure Distribution
By Region 2011

*excludes Israel, and calculated on transfers for ANZ
Delivery Rates Per Retrieval By Region: IVF & ICSI 2011

%:

- NA: 32.3%
- Lat Am: 23.1%
- EU: 19.9%
- ANZ: 19.8%
- Asia: 9.7%

[Graph showing delivery rates per region]
Transfers of 1-2 Embryos per Region (%) 1998 - 2011

- North America
- Latin America
- Europe
- Asia
- Australia
- Africa

- 1 & 2, 1998
- 1 & 2, 2009
- 1 & 2, 2011
Delivery Rate (fresh) and Twin Pregnancies per Region 1998 - 2011

North America | Latin America | Europe | Australia-NZ | Asia | Africa

Triplet Pregnancies per Region
1998 - 2011
Conclusion

- 1,281,492 cycles reported (+9.5%)
  - Estimated 1.8-2.0 million worldwide
- 284,159 babies born (+4.0%)
  - Estimated 430,000 worldwide
- ~6.0+ million babies born since ART began in 1978
- 67.2% ICSI (+2.4%); 23.2% women >40 (+0.4%)
- Mean number of transferred embryos: 1.66 (-0.23)
- 20.0 % Delivery rate per aspiration (-1.1%),
  26.3% cumulative delivery rate/asp (-0.5%)
- Huge differences in availability, practice and results
Publications

- 2000 report published (FS 2006),
- 2002 report published (HR 2009)
- 2003 report published (FS 2011)
- 2004 report published (HR 2013)
- 2005 report published (FS2013)
- 2006 report published (HR 2014)
- 2007 report published (F&S 2014)
- 2008 in preparation (HR 2015)
- 2009 in preparation (F&S 2015)
- 2010 in preparation (HR 2016)

Glossary  ICMART / WHO:
- F&S and Hum Reprod 2006,
- Revision, F&S and HR 2009
THANK YOU
To Our Contributors

Registers : Regional Organisations

- EUROPE : ESHRE : Austria, Belarus, Belgium, Bulgaria, Cyprus, Czech Rep, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Kazakhstan, Lithuania, Moldova, Montenegro, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovenia, Spain, Sweden, Switzerland, The Netherlands, UK, Ukraine

- AUSTRALIA -NEW ZEALAND : Australia, New Zealand

- LATIN AMERICA : Argentina, Brazil, Chile, Colombia, Ecuador, Guatemala, Mexico, Nicaragua, Panama, Peru, Uruguay, Venezuela

- NORTH AMERICA : Canada, USA

- Middle-East : Lebanon,

Registers : National Level :

- Israel, India, Indonesia, Japan, Korea, Taiwan, South Africa

- Individual clinics: Benin, Cameroon, Ivory Coast, Mali, Morocco, Togo, Tunisia
THANK YOU!