



Assisted Reproductive Technologies (ART)

- All treatments or procedures that include the in vitro handling of human oocytes and human sperm or embryos for the purpose of establishing a pregnancy

(in vitro fertilization and transcervical embryo transfer, gamete intrafallopian transfer, zygote intrafallopian transfer, tubal embryo transfer, gamete and embryo cryopreservation, oocyte and embryo donation, gestational surrogacy)



First Successful IVF: Birth of Louise Brown in 1978



Louise Brown celebrated her
25th birthday in July 2003



Since 1978 over one million children born worldwide



- *Event launching the World Infertility Month at the United Nations in New York in June 2002*



Rapid developments in the field of ART

“Moral panic” about the changes that IVF brought about

Continuous ethical dilemmas

Legislation



TABLE 1

Legislation and guidelines.

Country	Legislation	Guidelines	Neither
Argentina		+	
Australia (West)	+		
Australia (South)	+		
Australia (Victoria)	+		
Australia (Remainder)		+	
Austria	+		
Belgium	+		
Brazil	+		
Canada			+
China			+
Czech Republic	+		
Denmark	+		
Egypt	+		
Finland			+
France	+		
Germany	+		
Greece			+
Hong Kong	+		
Hungary	+		
India			+
Ireland		+	
Israel	+		
Italy			+
Japan		+	
Jordan			+
Korea		+	
Mexico		+	
the Netherlands	+		
Norway	+		
Poland		+	
Portugal		+	
Saudi Arabia	+		
Singapore	+		
South Africa	+		
Spain	+		
Sweden	+		
Switzerland	+		
Taiwan	+		
Turkey	+		
United Kingdom	+		
United States of America		+	
Venezuela			+



“Moral panic”

- **No society has been neutral about reproduction**
- **social values**
- **morals**
- **fears**

- Separation of sex from reproduction
- Reproduction with the involvement of a third party
- Gender issues
- Pronatalist attitudes



Ethical concerns

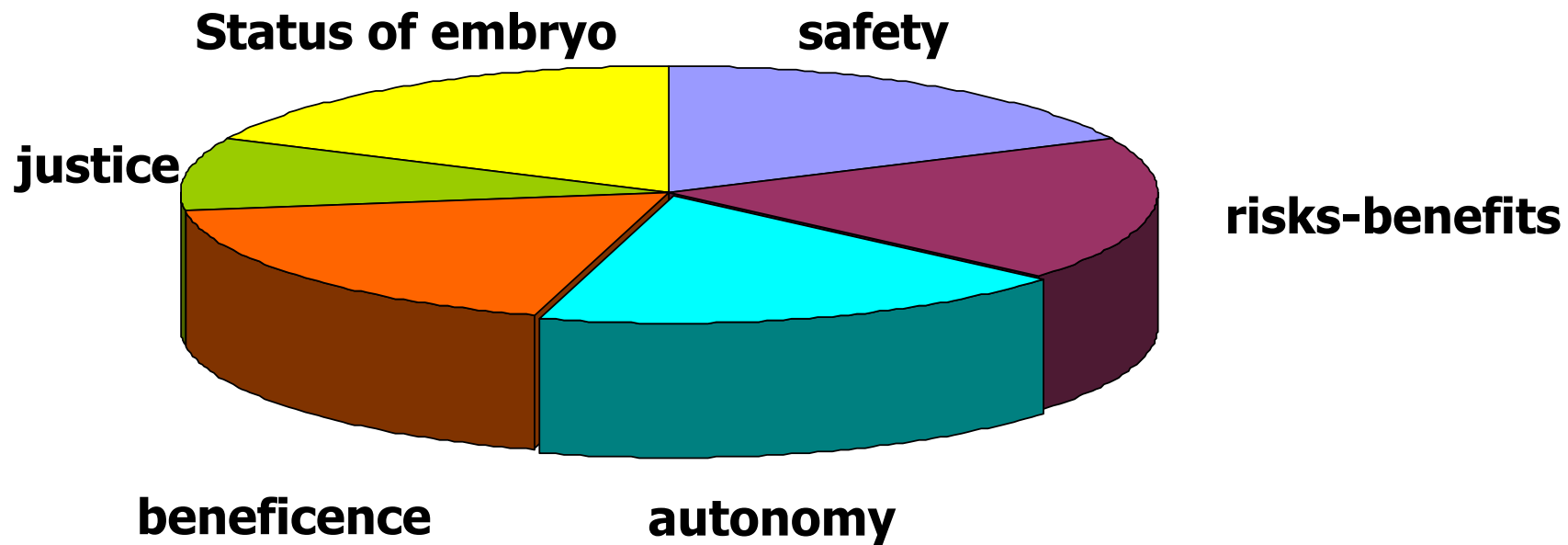
- **Ideology or religion**
 - **Status of the embryo**
 - **Sanctity of the family's genetic lineage**

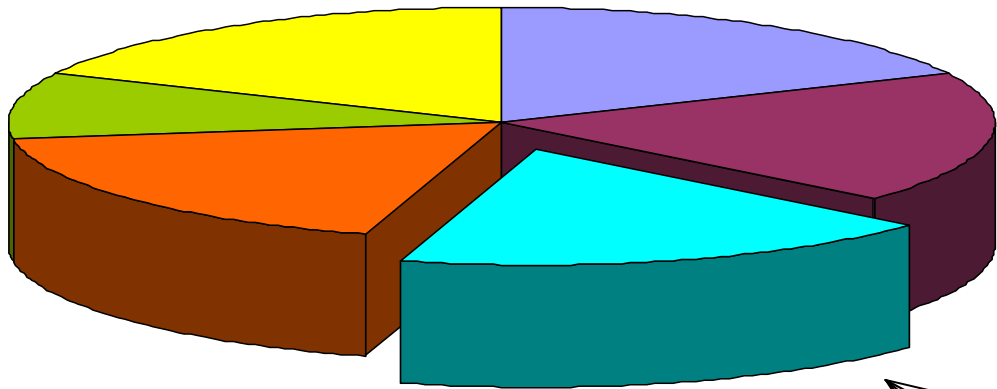
- **Utilitarian principles**
 - **Best for society**
 - **Best interest of the child**





Ethical concerns





autonomy

- **Infertile individual**
- **Infertile couple**
- **Child**
- **Physician**
- **Society**



Ethical concerns/ autonomy

- Autonomy
 - Patient's autonomy (respect for autonomy)
 - Reproductive freedom
 - Decision based on accurate information
 - Issue of success rates

• Woman requests implantation of seven embryos



Ethical issues/ autonomy

- **Eligibility**
 - **all infertile couples**
 - **only married couples**
 - **single women without partners**
 - **gay couples**
 - **lesbian couples**
 - **menopausal women**
 - **HIV-positive women or couples**

•58-year-old couple seeks ART



- **A gay couple, Janice and Lisa, had been in a stable relationship for over five years and decided to have a family. One would become pregnant using donor sperm, and they would both raise the child in a loving environment. The women had top private health cover, so could easily afford the procedure, both were professional women and could also easily afford the costs associated with raising a child, however, neither disclosed their sexual preference when they entered the programme. (There was formal opportunity to do so in the various application forms)**
- **Upon discovering the nature of their relationship the Director of the clinic, refused to allow them to continue in the programme on the basis that the legislation allows for couples where conception cannot occur naturally. He stated that a preliminary medical examination revealed both women could in fact conceive naturally, their problem in not achieving conception was due to a sexual preference, not a biological problem, thus they did not actually need the in-vitro procedure to have a baby, moreover given that the couple were gay, they did not qualify for access to the programme.**



TABLE 2

Marital status in ART.

Country	Legislation	Guidelines	Couple restrictions
Argentina		+	Stable relationship
Australia (West)	+		No requirement
Australia (South)	+		No requirement
Australia (Victoria)	+		Stable relationship
Australia (Remainder)		+	No requirement
Austria	+		Stable relationship
Belgium	+		No requirement
Brazil	+		Stable relationship
Canada ^a			Stable relationship
China			Marriage
Czech Republic	+		Stable relationship
Denmark	+		Stable relationship
Egypt	+		Marriage
Finland			Stable relationship, single woman
France	+		Marriage, stable relationship (≥2 y)
Germany	+		Stable relationship
Greece			Marriage
Hong Kong	+		Marriage
Hungary	+		Marriage, stable relationship
India			Marriage
Ireland		+	Stable relationship
Israel ^a	+		Marriage, stable relationship
Italy			Stable relationship
Japan		+	Marriage
Jordan			Marriage
Korea		+	Marriage
Mexico		+	Stable relationship
The Netherlands	+		No requirement
Norway	+		Stable relationship
Poland		+	Stable relationship
Portugal		+	Stable relationship
Saudi Arabia	+		Marriage
Singapore	+		Marriage
South Africa	+		No requirement
Spain	+		No requirement
Sweden	+		Stable relationship
Switzerland	+		Stable relationship
Taiwan	+		Marriage
Turkey	+		Marriage
United Kingdom	+		No requirement
United States of America	+		Stable relationship
Venezuela			Not an issue

^a Single women are allowed to have ART with donor.



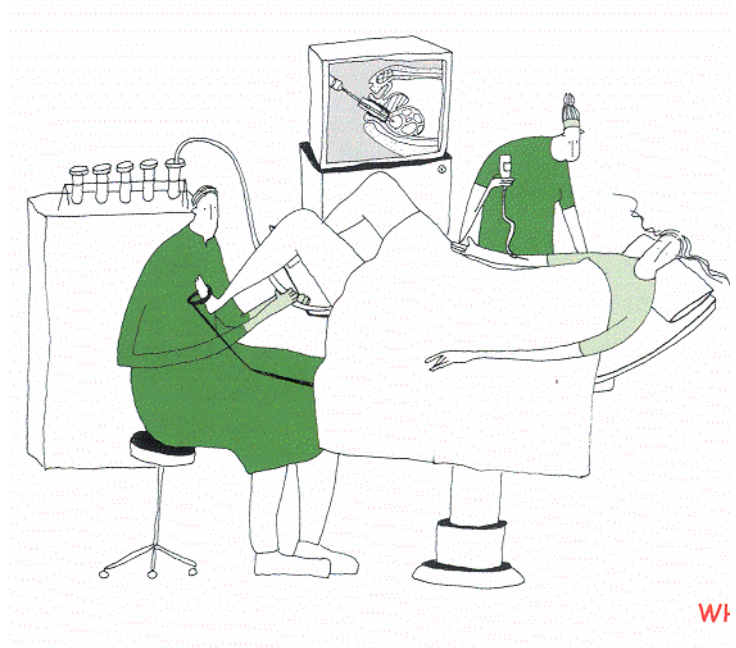
Ethical concerns/ donation

- Gamete donor

– Sperm



- Oocytes





Ethical issues/donation

- **EGG DONOR NEEDED**
- **Couple seeks egg donor with 1420 SAT or 33 ACT, 18-28 yrs old, 5'4"-5'10", attractive, athletic and healthy. Grandparents European and at least one Jewish. Compensation is \$25,000. Email photos and scores to Nancykp9@aol.com**

– Commercialization

- » **Ethical arguments against** (exploitation, potentiality, dignity, risk for distinctions in genetic pedigree)
- » **Ethical arguments for** (justice, pay for a service, reward, reproductive tourism)



Ethical issues/ donation

alternative sources of donor eggs

- **Eggs and ovaries from aborted female fetuses**
 - Repugnance
 - Respect of dignity
 - Best interest of the child
- **Donation of eggs and ovaries after a woman's death**
 - Existence of consent
 - Best interest of the child
- **Egg sharing**



Ethical issues/ donation

- **Donor anonymity**

- (i) the right of autonomy and privacy of the parents;**
- (ii) the right of privacy of the donor;**
- (iii) the right of the child to know his/her origins.**



Ethical issues/ PGD

- **Pre-implantation genetic diagnosis (PGD)**
screening of cells from preimplantation embryos for the detection of genetic and or chromosomal disorders before embryo transfer

- **Status of the embryo**

- Discrimination
- “Designer” babies
- Sex selection
- Destruction of unwanted embryos



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**ABC News
BULLETIN**

Last Update: Monday, March 8, 2004.
8:19pm (AEDT)

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The AMA wants more debate on the ethics of IVF research. (file photo) (ABC)

AMA calls for IVF ethics debate

The Australian Medical Association (AMA) says greater debate is needed on the ethics of In Vitro Fertilisation (IVF) techniques after doctors designed a lifesaving baby for the parents of a child with an incurable

disease.

A Tasmanian woman is pregnant with a baby who will be a tissue match and a lifesaver for his four-year-old brother.

AMA president Dr Bill Glasson says if the intent is to create another child that is disease free and can help the sibling then it could be argued that it is ethically correct.

But he says if the intent is to create an embryo that is compatible with the sick child and in doing so discards a series of other embryos, then the process has to be questioned.

"It's a difficult one," he said.

"I think it's one that society has to talk about, what's happening here is science is getting ahead of the ethics of the issue, and as a community I think we have to talk about it."

Related Video

Doctors used IVF techniques to create a healthy baby boy who will be able to donate tissue to his big brother who has a rare genetic disease.

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Ethical issues/ PGD

Sarah is 30 years old. Previous genetic testing shows that she is a carrier for cystic fibrosis (CF). Her partner is a carrier as well. Despite the fact that she is not infertile, she seeks IVF treatment at an assisted reproduction clinic at an NHS Trust Hospital in order that any resulting embryos can be screened using pre-implantation genetic diagnosis (PGD) and only embryos without the CF gene will be implanted.



Ethical issues /risks-benefits

- **The welfare of the child**
 - **Medical risks**
 - **Family environment**
 - **Social environment**
- **Who is making the decisions for the welfare of the child?**
 - **Parents**
 - **Medical personnel**
 - **Society and the law**
- **Is it in one's best interest to be born?**



**TABLE 7**

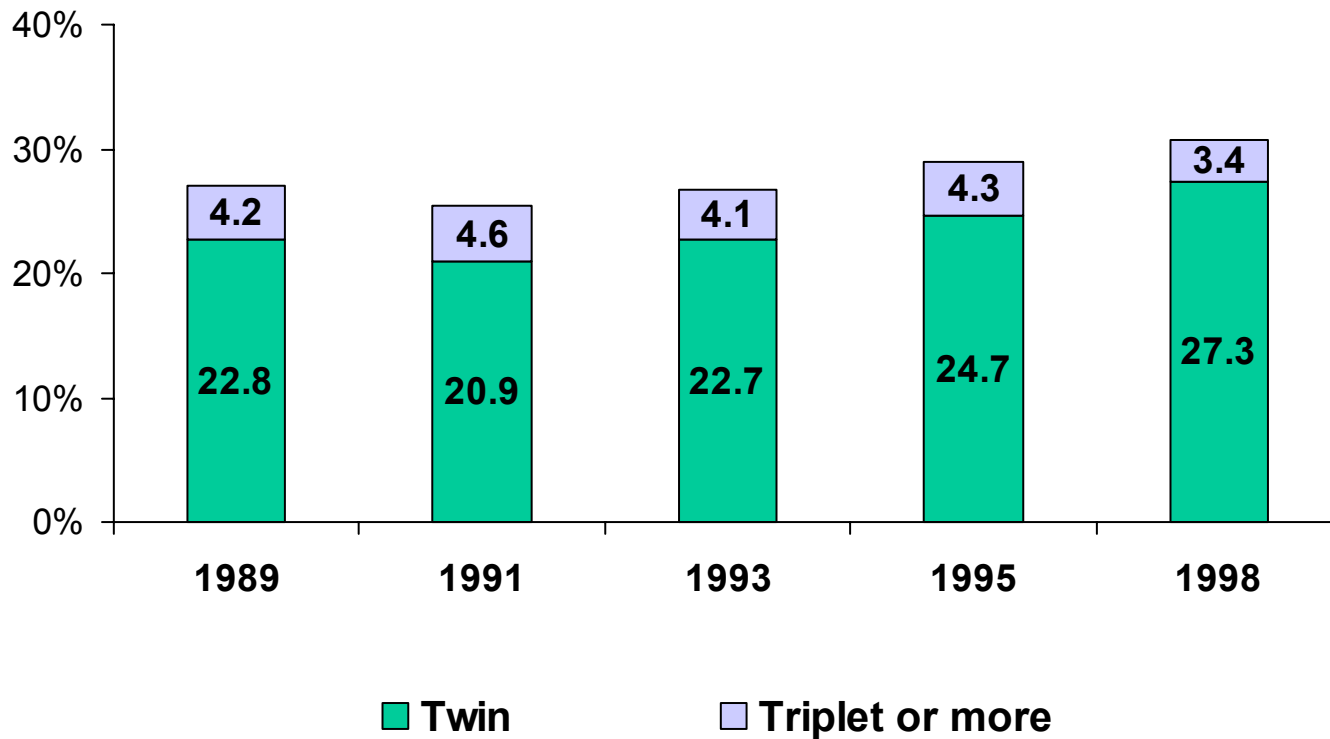
Welfare of the child.

Country	Regulation/guidelines on child welfare
Argentina	<i>No</i>
Australia NSW/T/NT/C	Man + woman
Australia (West)	No harm/reprod tech Act 91, pretreatment counseling
Australia (South)	Fit, proper person
Austria	Anonymous right origins 14
Belgium	No
Brazil	1358/92
Canada	<i>No</i>
China	<i>No</i>
Czech Republic	Women 18 to 45 y, married, stable
Denmark	Stable relationship (3 y)
Egypt	<i>Yes, marriage</i>
Finland	<i>No</i>
France	<i>No</i>
Germany	Not posthumous, socially stable
Greece	<i>No</i>
Hong Kong	Married/stable
Hungary	Married/stable
India	Law
Ireland	
Israel	<i>No</i>
Italy	
Japan	<i>No</i>
Jordan	Marriage
Korea	<i>No</i>
Mexico	<i>No</i>
the Netherlands	Yes
Norway	No
Poland	<i>Stable</i>
Portugal	<i>Draft bill for stable couples</i>
Saudi Arabia	
Singapore	Married
South Africa	Stable
Spain	Good mental and phy health
Sweden	Stable; physician responsibility
Switzerland	DI marriage, no other
Taiwan	Married
Turkey	<i>No</i>
United Kingdom	Yes
United States of America	<i>No</i>
Venezuela	<i>No</i>



Ethical issues/risks-benefits

- High incidence of multiple pregnancies





Ethical issue/ multiple pregnancies

Two reasons driving the increase

- Need for better success rates
- Patient's "choice"/ pressure (lack of accurate information)

International attempts to reduce multiple pregnancies

LIFE

Picture of the Day



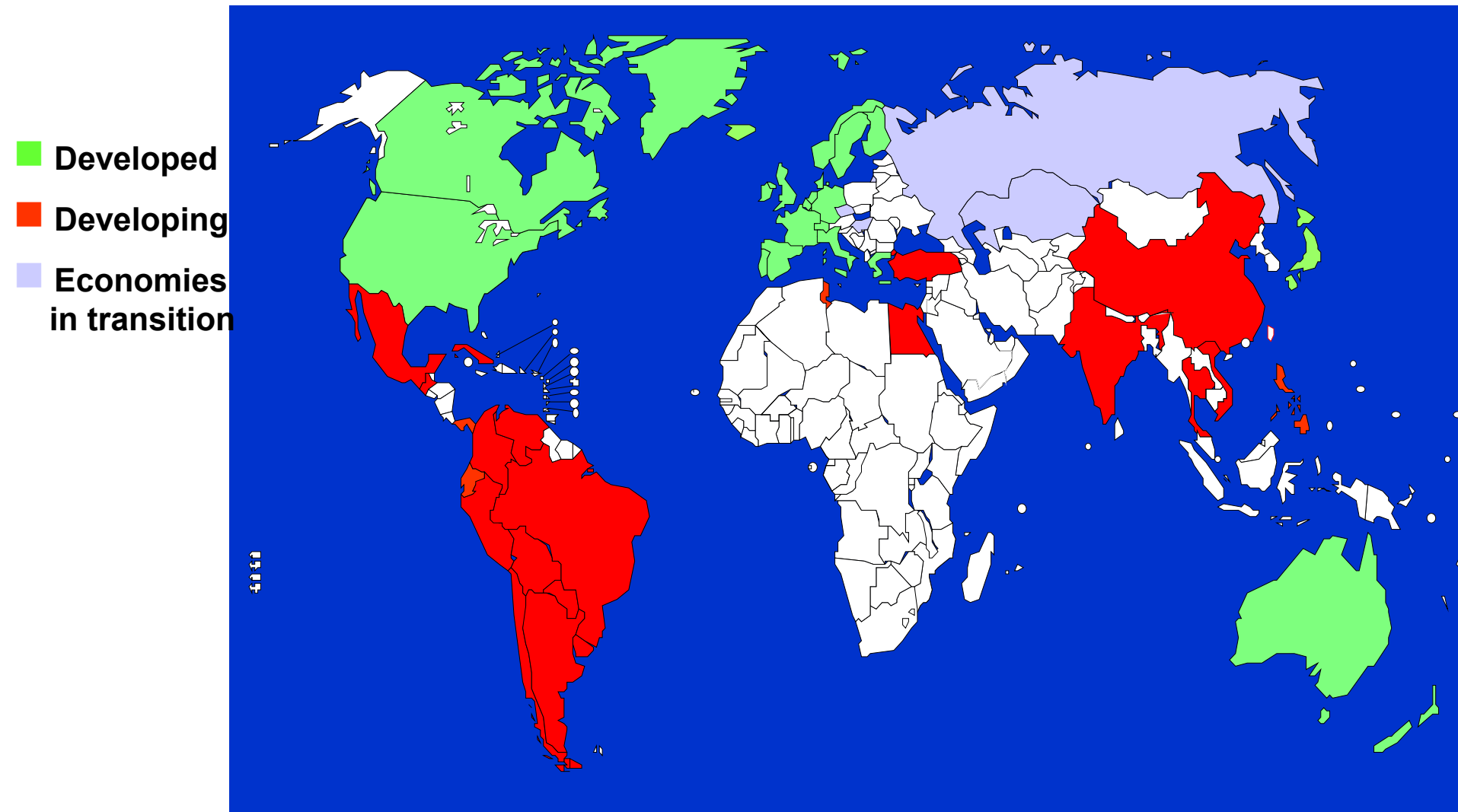


Ethical issues/ ART in developing countries

- **Magnitude of infertility**
- **Access to quality ART clinics/justice- safety**
- **Issue of resource allocation/justice**



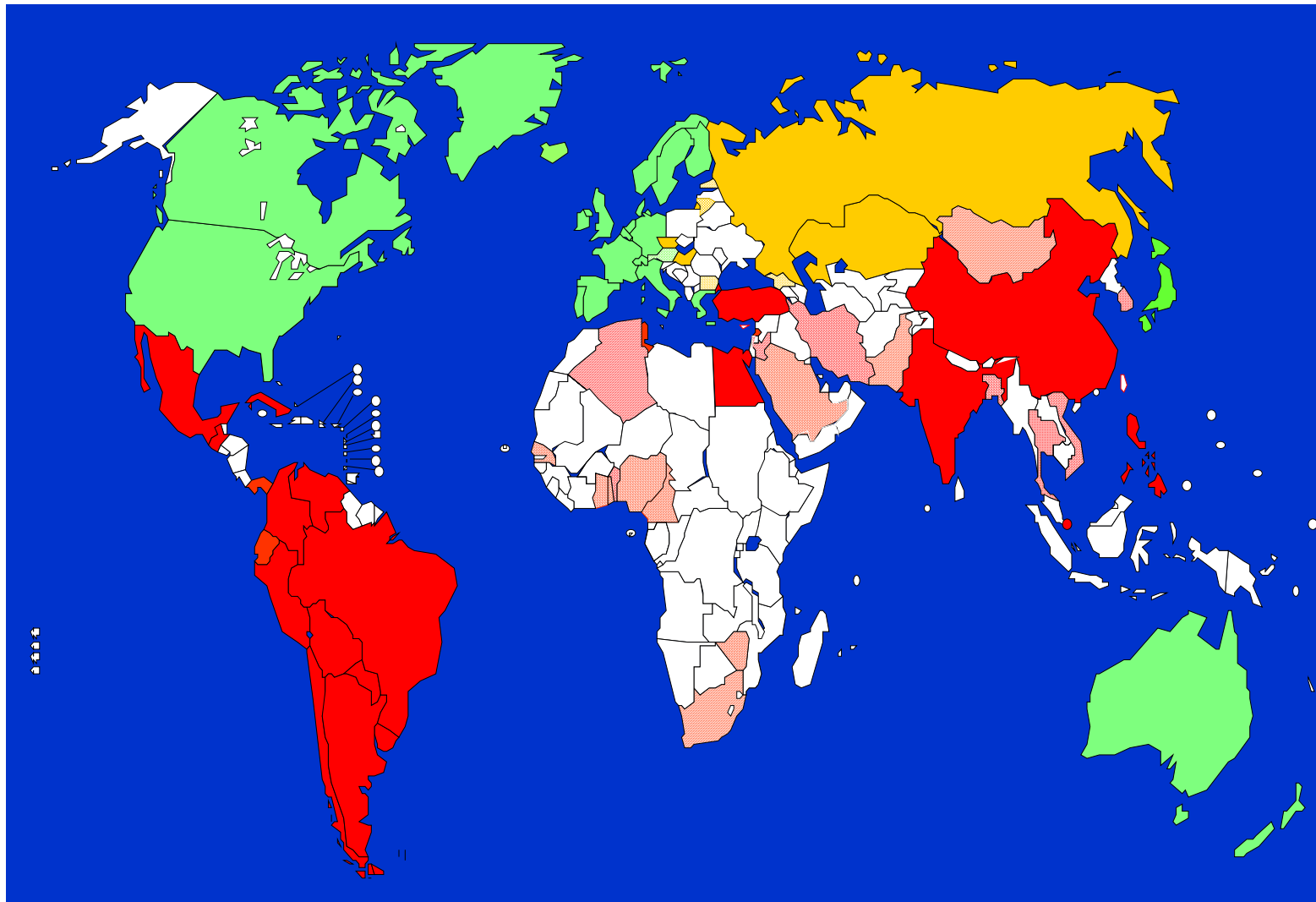
Countries reporting to ICMART in 1998





Countries reporting to ICMART in 1998 and countries where ART is available but no data reports

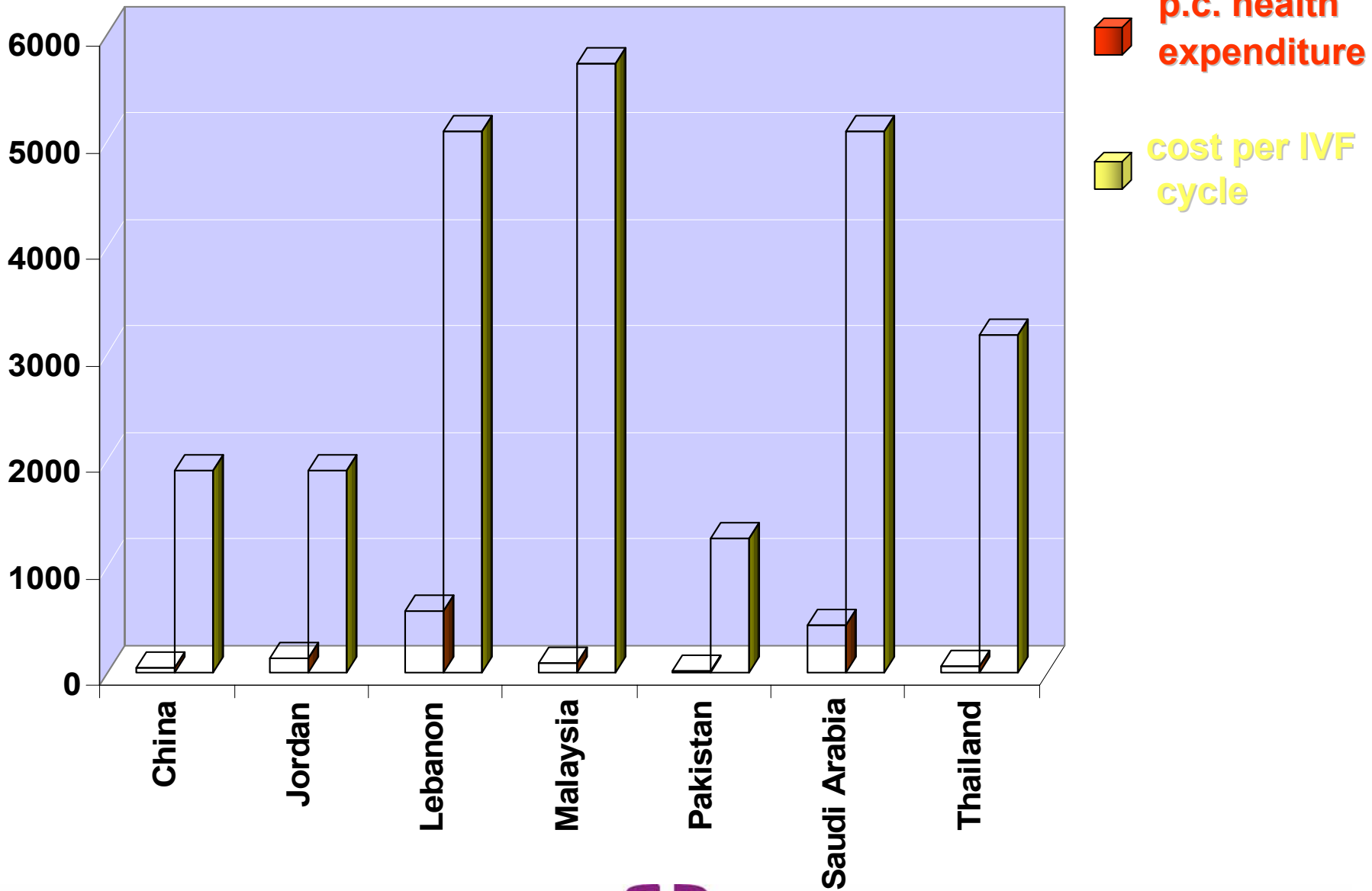
- Developed
- Developing
- Economies in transition
- ART available but not reporting





Main arguments

- **“overpopulation”**
- **limited resources and burden of disease**
- **poorly trained practitioners offering demanding services**
- **cultural and religious values**





The Slippery Slope

