

30 Commercialized assisted reproduction

Filip Křepelka

30.1 Position of reproductive treatment in the economy

Reproductive treatment contributes to an increasing number of newborns in developed countries (Mouzon et al. 2009). Many women and men are infertile when they wish to raise children in socioeconomic conditions they find appropriate.

Only a small proportion of the population needs reproductive treatment in a particular year. Therefore, its impact on health care, which contributes up to 10% of the gross domestic product in the most developed countries (Pearson 2009), is minor. Reproductive treatment, however, is expensive. The costs of standard in vitro fertilization (IVF) exceed US\$10,000 in most countries for most age groups (www.ivfcost.net, Table 2: Average IVF cost worldwide). Therefore, billions are spent on it worldwide, and a reproductive industry has emerged in many countries.

30.2 Commercialization of assisted reproduction

Health care is generally based on a consensus of providers and patients. Certainly, the duty to treat in emergency situations, the obligation to care for all patients, mandatory vaccination and quarantines, and involuntary treatment of the insane, plus price and quality regulations, are examples of government interventions in the health care market.

Reproductive treatment, however, is more commercialized than other areas of health care. Apart from measures against discrimination, no compulsion to treat is imposed on providers. Exclusively, people showing a desire to be treated are treated. Public reimbursement is limited, and many people pay the whole price for treatment out of their own pockets.

Commercialization is apparent in deliveries of genetic material and services. Egg donation is a burdensome and risky procedure that cannot be expected without remuneration. Payments, however, are labeled as compensation for inconvenience, time lost, and related risk. Even sperm is usually not free. An excellent example of commercialization in reproductive medicine is surrogacy, in which the biological mother is paid for to become pregnant.

Technologies related to reproductive medicine are also commercialized with patented pharmaceuticals and with licenses.

Desperate women and men suffering from infertility can be misguided by inappropriate advertisements from the profit-oriented reproductive industry (Robertson 2007).

30.3 Divergent national policies toward reproductive treatment

Many aspects of manipulation with eggs, sperm, and embryos outside the human body are controversial, including donation of gametes (anonymity, remuneration), use of gametes in altered conditions (duration of storage, withdrawal of consent, death of

donor), use of surplus material, specific patients (single mothers, same-sex couples, or older women), preimplantation diagnosis, and implantation of several embryos and subsequent partial abortion, in addition to surrogate pregnancy.

Even IVF based on the egg of a wife and sperm from her husband and subsequent implantation of a resulting single embryo in the wife's uterus is considered objectionable. The Roman Catholic Church is the most prominent critic of this and other practices in assisted reproduction.

National policies vary significantly, based on different religious, cultural, and political attitudes toward reproductive treatment in general and toward its various methods and specific groups of patients.

Many nations do not find consensus on assisted reproduction or its aspects. As a consequence, there is often a lack of appropriate legislation or timely changes of applicable law. (For example, Italy switched in 2004 from a liberal stance to restrictions. Nevertheless, its restrictive "legge 40" faced referendum seeking its annulment in 2005 and was restricted by the constitutional court in 2009. Future victory of leftist parties can result in removal of restrictions.) Laws often do not address specific situations, and it is hard to legislate appropriately on quickly developing procedures of reproductive treatment even if there is consensus.

Diverse attitudes toward various types of reproductive treatment based on an estimation of their benefits for both affected men and women and for society are reflected in different levels of government spending for various procedures.

An absence of global consensus on assisted reproduction is apparent. There is no standardization with international treaties and little effort to adopt them in pertinent organizations such as the United Nations Educational, Scientific, and Cultural Organization and the World Health Organization. Nevertheless, these organizations organize in-depth studies of the issue, useful for comparison of political, social, economic, and legal conditions (Vayena, Rowe, and Griffin 2002).

Diverging laws and various economic conditions result in variations in the availability of reproductive treatment. Reproductive tourism can solve problems for infertile women and men. I don't concur with suggestions (Mattoras 2005) to describe this movement as reproductive exile, because that implies an evaluation of restrictions, and reproductive tourists seek other services abroad due to restrictions in their home country.

30.4 International economic integration and assisted reproduction

Liberalized trade in goods among the member states of the World Trade Organization is not applicable for assisted reproduction. Nevertheless, contemporary global economic integration based on voluminous trade contributes to establishment of an international marketplace where commercialized assisted reproduction is feasible.

International migration is curtailed, but a short-term stay is sufficient for reproductive treatment. Reproductive tourists are generally welcomed as consumers of services that pump money into national economies. Similarly, people are usually encouraged to travel abroad.

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Free exchange of knowledge seems to be similarly important as part of economic liberalization. Progress in developing procedures in reproductive medicine result from international cooperation.

The purchasing power of women and men seeking infertility treatment is, however, a principal consideration. Many people cannot afford it. Three-fourths of the world's population lives in countries with a gross domestic product per capita and per year that is significantly lower than the costs of IVF. Advanced procedures of infertility treatment such as IVF are thus available primarily for people living in developed countries.

30.5 Absence of effective restrictions on reproductive tourism

Countries with restrictive reproductive policies are incapable of preventing their citizens from seeking reproductive treatment abroad. Travelers' intentions can be easily hidden; even careful body searches and examinations of luggage would not likely reveal their true purpose for traveling. Return after successful treatment is also easy. Generally, a baby resulting from IVF cannot be distinguished from a child produced by traditional methods.

Sanctions for participating in reproductive tourism would hardly be acceptable even with hypothetically effective controls. Restrictions are based on the conviction that human dignity is compromised with assisted reproduction. However, a baby, no matter how it conceived, is no monster. No country could compel a woman who becomes pregnant thanks to reproductive treatment that is restricted in her home country to submit to abortion, especially if it emphasizes protection of unborn children. Similarly, fines and imprisonment for women and men seeking restricted treatment abroad are hard to enforce and are thus usually not expected. However, Turkey recently introduced legislation permitting prosecution of parents using donated sperm or eggs for concealing biological ancestry (*Telegraph* 2010).

Certainly, countries with restrictive policies can try to discourage reproductive tourism with campaigns highlighting safety problems, low efficacy, and adverse effects. Ultimately, people who agree with the restrictive policies of their home country would not seek treatment abroad.

30.6 Natural barriers to reproductive tourism

Nevertheless, national restrictions are partially effective. First, transportation costs increase, especially if the treatment requires repeated attendance at a foreign reproductive center. Second, reproductive tourists often face a language barrier, and reproductive medicine requires a good understanding about the nature of the treatment. Third, trust in safety and quality of goods and services from abroad is a highly sensitive issue in reproductive treatment.

Both reproductive centers and their clients are capable of surpassing these barriers. However, facilities face increased costs and are thus compelled to charge higher prices. As a result, demand decreases to some extent, although there are always infertile people with a strong desire for a child.

30.7 Intellectual property and assisted reproduction

The progress of reproductive treatment is based on a worldwide exchange of experience and knowledge. Nevertheless, such exchange is not free from an economic point of view.

Certainly, basic knowledge can be found in textbooks, and experts find information in the professional literature. Similarly, patients can easily find numerous Web pages where aspects of infertility treatment are intensively debated.

Modern pharmaceuticals administered to many infertile patients are patented. Their prices thus include royalties or profits for patent holders having a temporary monopoly on production. It is hard to estimate to what extent patenting of pharmaceuticals increases their prices. These costs vary significantly from one country to another due to other reasons.

Patenting is harmonized globally with the multilateral conventions administered by the World Intellectual Property Organization. The World Trade Organization, meanwhile, has improved protections of inventions while making that a precondition for further liberalization of international trade. New pharmaceuticals are usually patented worldwide.

On the contrary, most countries – the only significant exception is the United States – reject patenting of medical procedures, and attempts to collect royalties face resistance there also (DeBlasio 2004). Worldwide, physicians express their objections, as revealed in a statement of the World Medical Association (1999). In reality, patenting of medical procedures has little importance, at least as far as its consequences for reproductive treatment are concerned.

Nevertheless, commerce in knowledge and technology is thus not excluded. Leading centers of reproductive medicine such as Australia's Sydney IVF make their organization, technology, and equipment available to other centers. An important aspect is reputation: Centers are expected to advertise such cooperation, which, understandably, is compensated. Information about costs and other conditions of such franchising is, however, not disclosed.

Similarly, the quality of reproductive treatment is increased with widespread recourse to quality-management systems (ISO 9001).

30.8 Doing business in the reproductive industry

The development of methods of reproductive treatment is connected with gynecology and obstetrics clinics at university hospitals and other major health care facilities. Special departments at these hospitals continue to progress in advanced infertility treatment.

Nevertheless, reproductive care has been privatized significantly in many countries. Private clinics, managed by senior physicians who have acquired experience in university hospitals, specialize in assisted reproduction or offer the treatment together with other gynecological health care. Joint employment in these hospitals and private business is common, and many of these physicians are also university professors. In addition, these physicians and their colleagues often hold shares in the companies operating the centers.

The economic success of assisted reproduction and expectations that the number of women and men facing infertility issues will increase attracts institutional investors.

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Takeovers and mergers in the industry are expected, suggested, and realized, and multinational providers emerge.

30.9 Assisted reproduction in united Europe

Both assisted reproduction and antireproductive interventions show limits of consensus of European countries. Many European countries have liberal policies. Nevertheless, Germany and Italy impose significant restrictions on IVF, and various restrictions are also proposed in Poland (Brown 2010).

The Council of Europe respects this lack of consensus. The Oviedo Convention on Human Rights and Biomedicine, which clarifies the fundamental rights for health care, avoids addressing controversial issues, and it condemns sex selection and the creation of embryos for research. In addition, the Council of Europe monitors the various policies of its member states.

Similarly, the European Court for Human Rights refused to interpret the Convention for the Protection of Human Rights and Fundamental Freedoms against national legislation in many controversial issues. Regarding assisted reproduction, the court accepted, in *Evans v. United Kingdom* (2007), a ban on the use of embryos created with the sperm of a former partner who has withdrawn his consent. The recent judgment of *S.H. and others v. Austria* (2010), however, condemns the prohibition of the use of donated eggs and sperm as discrimination. This decision indicates possible future interventions against national restrictions in the name of individual liberty and equality.

Liberalization of cross-border economic activities in 27 member states of the European Union makes reproductive tourism easier there than elsewhere. The free movement of services, including health care, is guaranteed. Border controls have ceased, and payments are largely uncontrolled. Socioeconomic cohesion and the harmonization of standards contribute to an improvement in the quality of health care. Directive 2004/23/EC of the European Union addresses the quality of tissues, including gametes (European Union 2004).

Approaches toward abortions are similar. The European Union's Court of Justice has underlined the economic nature of abortions while avoiding a decision on compliance of restrictions with fundamental rights. The European Court for Human Rights rejected for decades most complaints against both restrictive and liberal policies of European countries. This restraint has not evaporated in a recent judgment regarding *A, B, C v. Ireland*. Similarly, there is also antireproductive tourism in Europe: Women seeking abortion travel from countries with restrictions (i.e., Ireland and Poland) to nations where it is allowed (United Kingdom).

Few judgments of the Court of Justice deal accidentally with reproductive treatment (an embryo existing in vitro as a situation analogous to pregnancy protected by labor laws, patentability of biotechnological inventions). There is no judgment examining the different policies of member states toward reproductive treatment and their impact on internal markets. Nevertheless, it would be easy to apply economic freedoms of the European Union on any hypothetical restrictions of reproductive tourism.

Reproductive care can be also affected when the Court of Justice requires reimbursement of treatment sought abroad under the same conditions as at home. The member states finance IVF to a limited extent. Differing prices and the ability of infertile women and men to move abroad make it feasible.

Zealous application of economic freedoms of the European Union by national courts can be seen in *R. v. Human Fertilisation and Embryology Authority, ex parte Blood*, which found a ban on sperm exportation from the United Kingdom incompatible with the principle of free movement of goods.

30.9.1 Case study: German patients in Czech centers

Czech reproductive centers – both departments of university hospitals and private clinics – serve many Czech patients. Over the last two decades, increasing numbers of older women and men there have decided to have children, and thus, demand for reproductive treatment is increasing. Public financing of infertility treatments is considerable (up to four IVF cycles for women under 40 years of age).

Nevertheless, there is also a significant foreign clientele, and many patients come from Germany. This exportation of reproductive care can be detected in Web sites for Czech reproductive-treatment facilities. German-language versions of such sites are available, the presence of German-speaking staff is identified, and certificates awarded by German institutions are publicized. Similar Italian and Russian versions of these Web sites indicate other important foreign clienteles. English, of course, omnipresent as the language of global communication, is also represented.

Divergent policies among various nations is one explanation for cross-border migration for reproductive treatment. Certain procedures (anonymous donation of gametes, creation of embryos in excess) are prohibited in Germany, whereas Czechs, many of whom are not religious, generally support reproductive medicine. Disputed methods (i.e., anonymous donation, preimplantation genetic diagnosis, partial abortion) are allowed under certain conditions, while others (i.e., surrogate pregnancy) remain unaddressed due to little interest among Czech lawmakers. Assisted reproduction was unregulated in the Czech Republic for decades, but provisions addressing assisted reproduction were inserted in the national health care code in 2006.

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Preface

Medical ethics has
In fact, it continues

The role of medical
public matters is in
sciences.

It is very important
public at large to
is equally important
tual awareness and
dilemmas in modern

Infertility has become
existence. There are
the pain of not having
women" but also of
male problem as it
the blame solely on

At present millions
who suffer from in-
eral and assisted re-
social and psycholo-
sures on the relation-
with infertility care

The low status of
through motherhood
customs, and not

A stigma of being
many infertile couples

It may translate
second wives, diffi-

Scientific advances
of medicine that
wouldn't have known
offspring and in se-

The right to pro-
nounced in 1948,
men and women
have the right to
different international
reproduce has gained
assisted reproduction