



# Reproductive health research at WHO



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World Health Organization

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**“Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”**

**7 April 1948**





# Functions

“In order to achieve its objective, the functions of the Organization shall be:

(a) to act as the directing and co-ordinating authority on international health work;

...

(n) to promote and conduct research in the field of health;

”  
...

(WHO Constitution, Article 2)



# Growth of total world population





# The Programme's history

“REQUESTS the Director-General to develop further the programme proposed:

(a) in the fields of reference services, studies on medical aspects of sterility and fertility control methods and health aspects of population dynamics; ...”

*(WHA Resolution 18.49; 1965)*



# UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction (HRP)

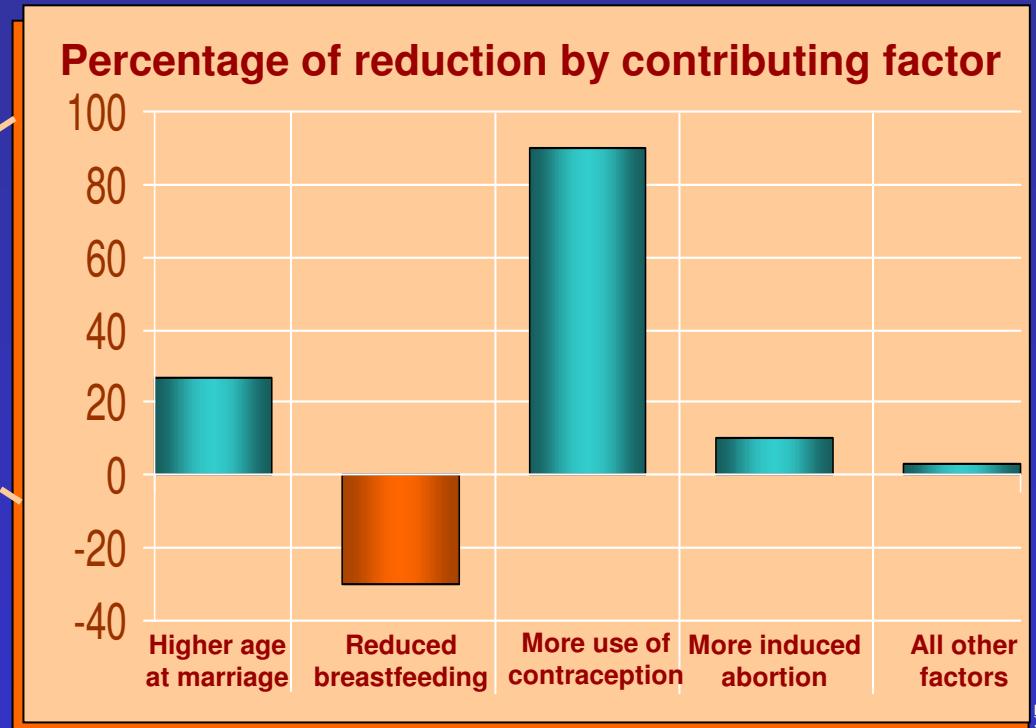
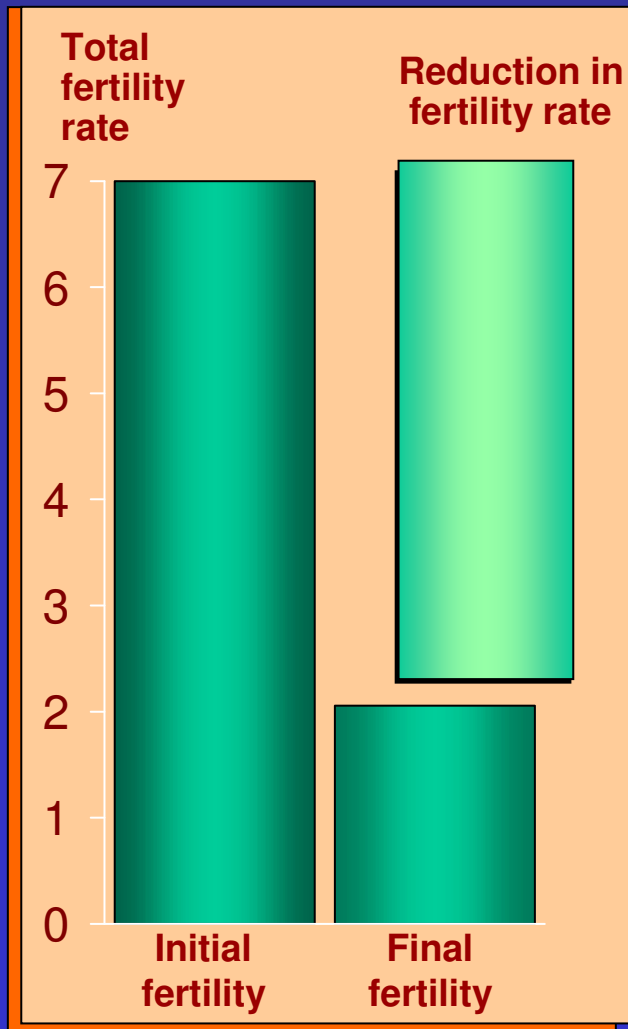


“To coordinate, promote, conduct and evaluate international research in human reproduction”





# Factors contributing to fertility decline



(Source: World Bank, Population change and economic development, 1984)



# How can contraceptive use be increased?

- **Development of new and improvement of existing methods**
- Improving access to existing methods

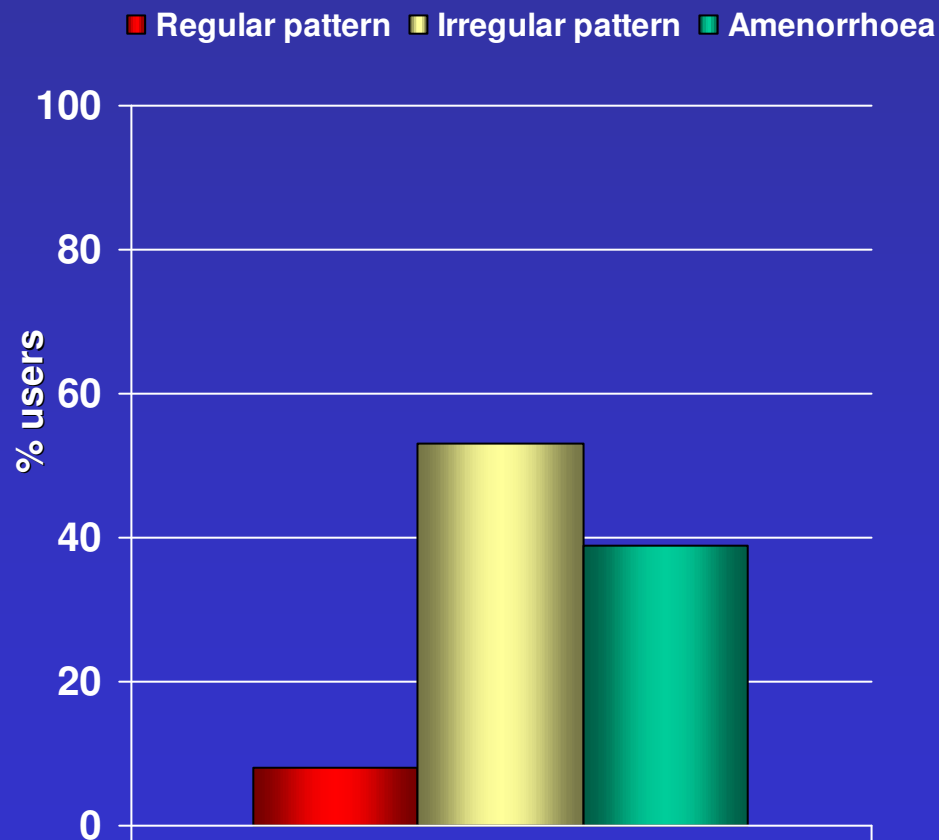






# Bleeding patterns experienced by Depo-provera users at 1 year of use

## Depo-provera





## Once-a-month injectables developed by the Programme

**Mesigyna<sup>®</sup>** : 50 mg norethisterone enantate  
+ 5 mg estradiol valerate

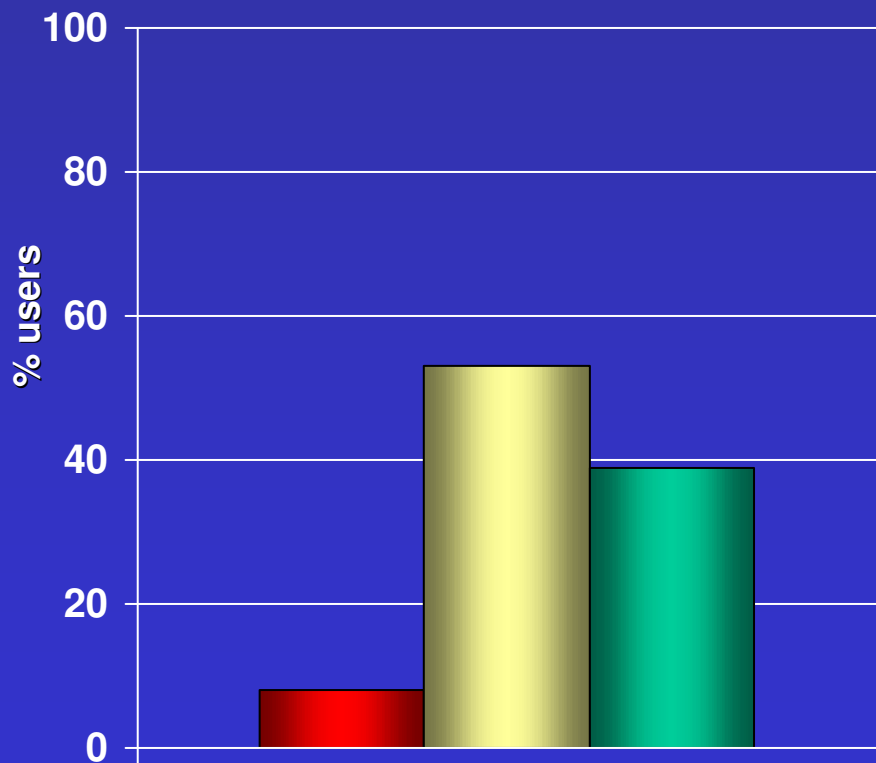
**Cyclofem<sup>®</sup>** : 25 mg medroxyprogesterone  
acetate  
+ 5 mg estradiol cypionate



# Bleeding patterns experienced by injectable users at 1 year of use

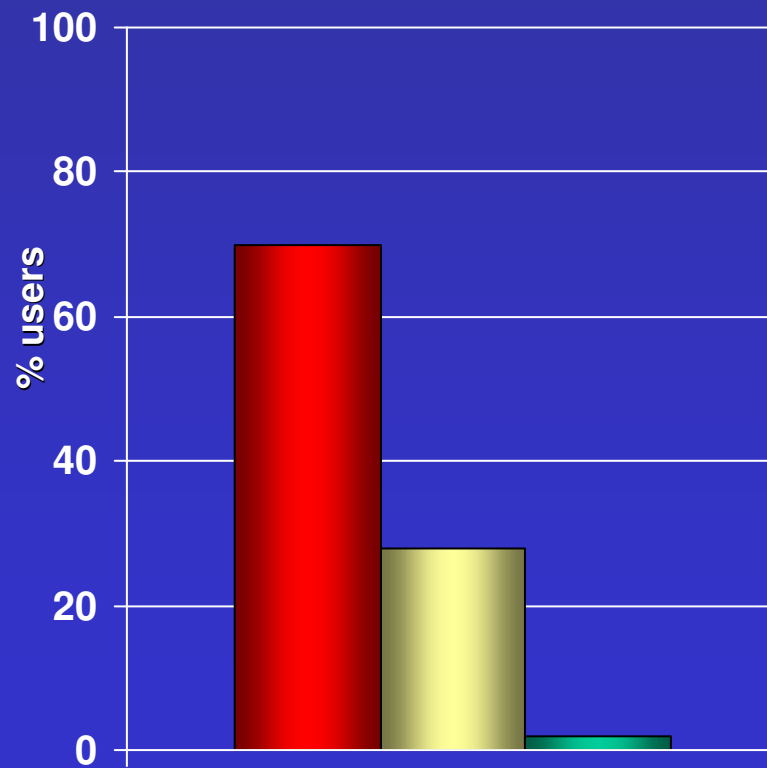
## Depo-provera

■ Regular pattern ■ Irregular pattern ■ Amenorrhoea



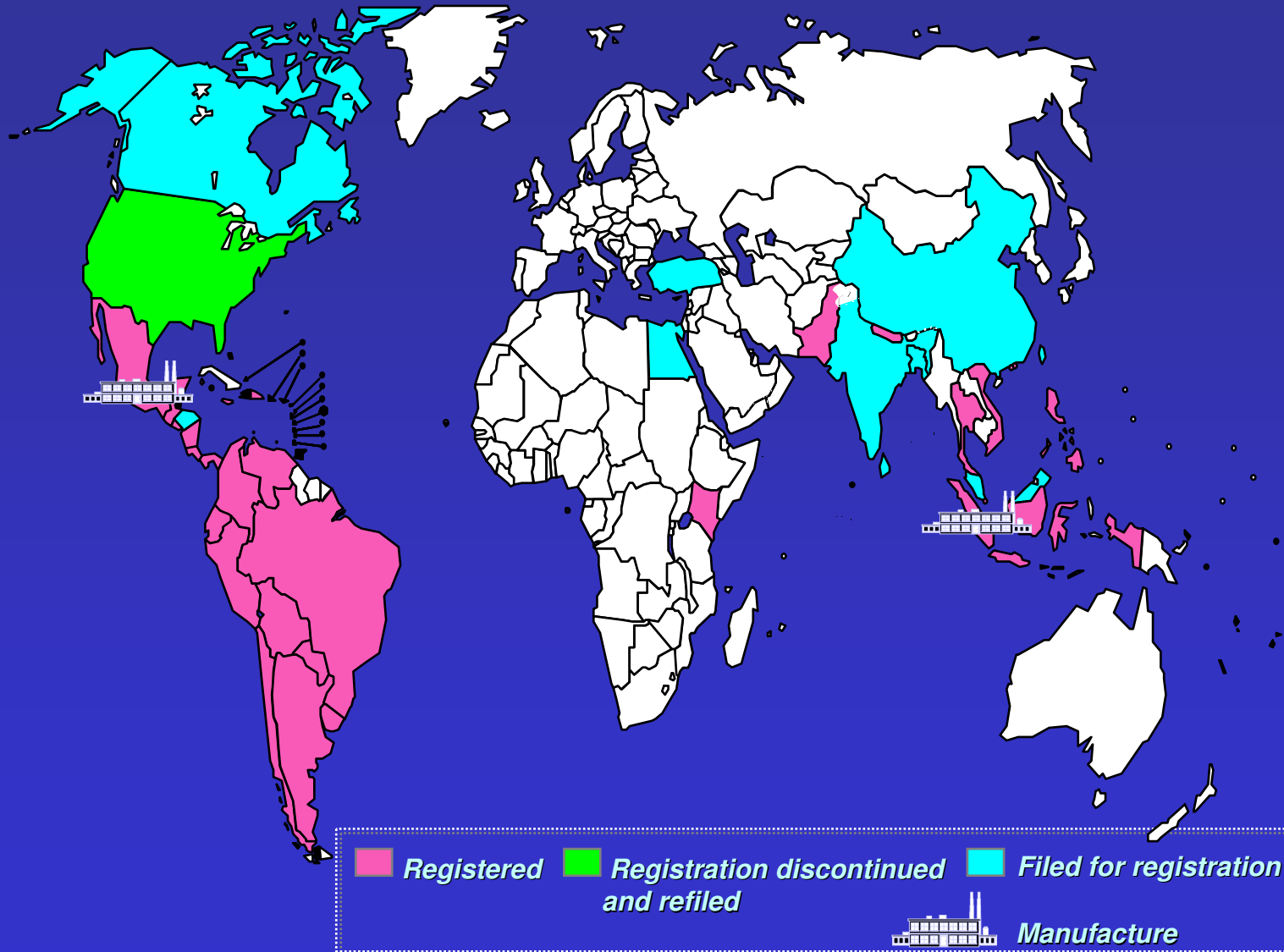
## Cyclofem

■ Regular pattern ■ Irregular pattern ■ Amenorrhoea





# Cyclofem/Cyclofemina





“ Emergency contraceptives are methods which women can use after intercourse to prevent pregnancy.”

*(from Consensus Statement on Emergency Contraception, Bellagio, April 1995)*



## Emergency contraception is indicated to prevent pregnancy after intercourse

- When no contraceptive was used
- When there is a contraceptive failure or misuse, including:
  - condom breakage, slippage or misuse
  - 2 or more consecutive missed oral contraceptive pills
  - late for contraceptive injection
  - failed coitus interruptus, etc.
- In cases of sexual assault



# Methods of emergency contraception in early 1990s

- Ethinylestradiol/levonorgestrel (Yuzpe regimen) (1974)
  - nausea 50%, vomiting 20%
  - efficacy approx. 75%
- Copper-T intrauterine device (1970s)
  - often unsuitable, requires trained providers
  - painful at insertion, risk of PID
  - efficacy of greater than 95%



## Lower pregnancy rate after levonorgestrel

Group	Number of women	Observed pregnancies	Pregnancy rate (95% CI)
Yuzpe	979	31	3.2% (2.2, 4.5)
LNG	976	11	1.1% (0.6, 2.0)

The difference in pregnancy rate was statistically significant.

*(Source: WHO, Lancet, 1998)*





## Less side-effects after levonorgestrel

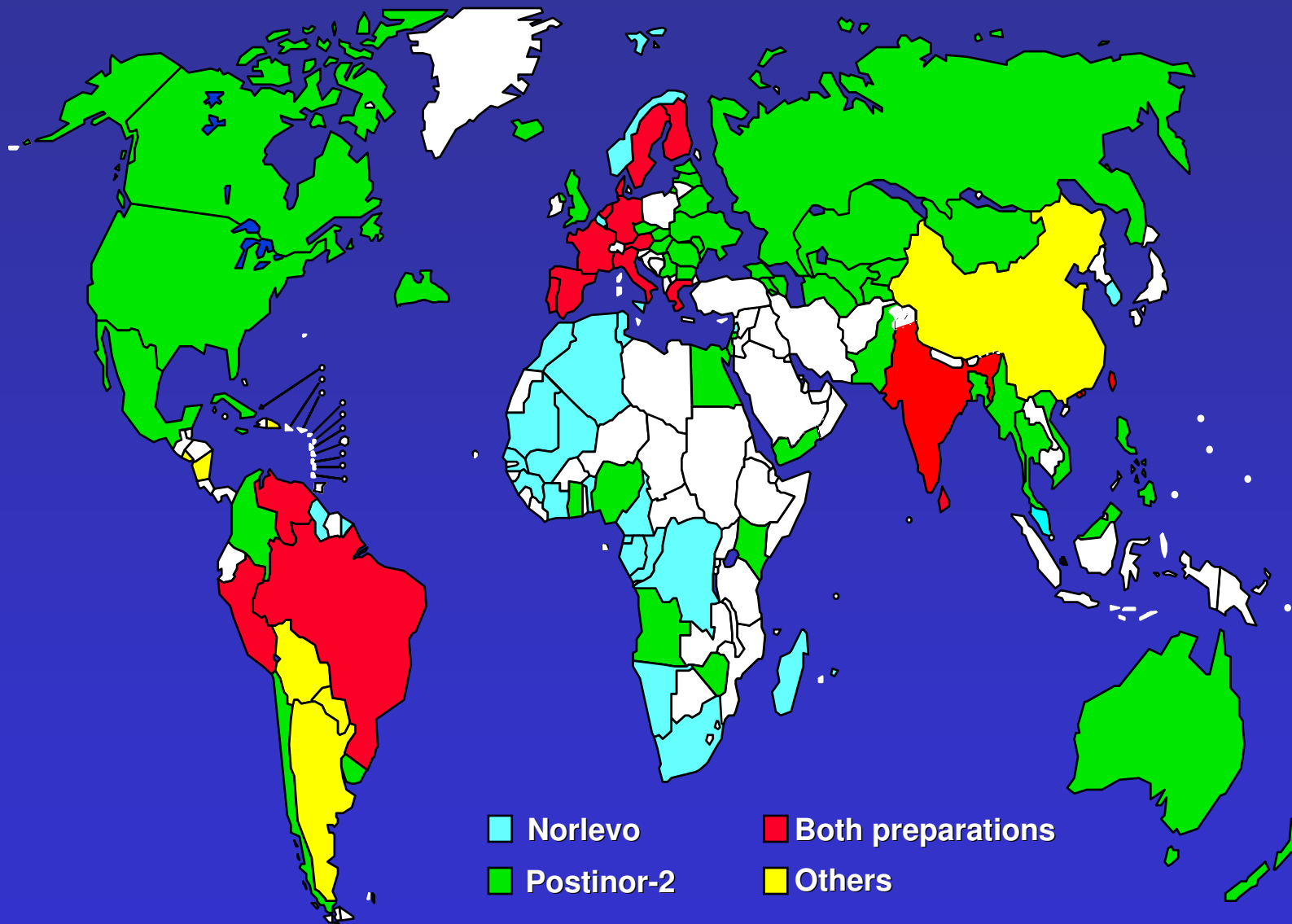
Side-effect	Yuzpe	LNG	p-value
	No. (%) of cases	No. (%) of cases	
Nausea	494 (50.5)	226 (23.1)	<0.01
Vomiting	184 (18.8)	55 (5.6)	<0.01
Headache	198 (20.2)	164 (16.8)	0.06
Dizziness	163 (16.7)	109 (11.2)	<0.01
Fatigue	279 (28.5)	165 (16.9)	<0.01

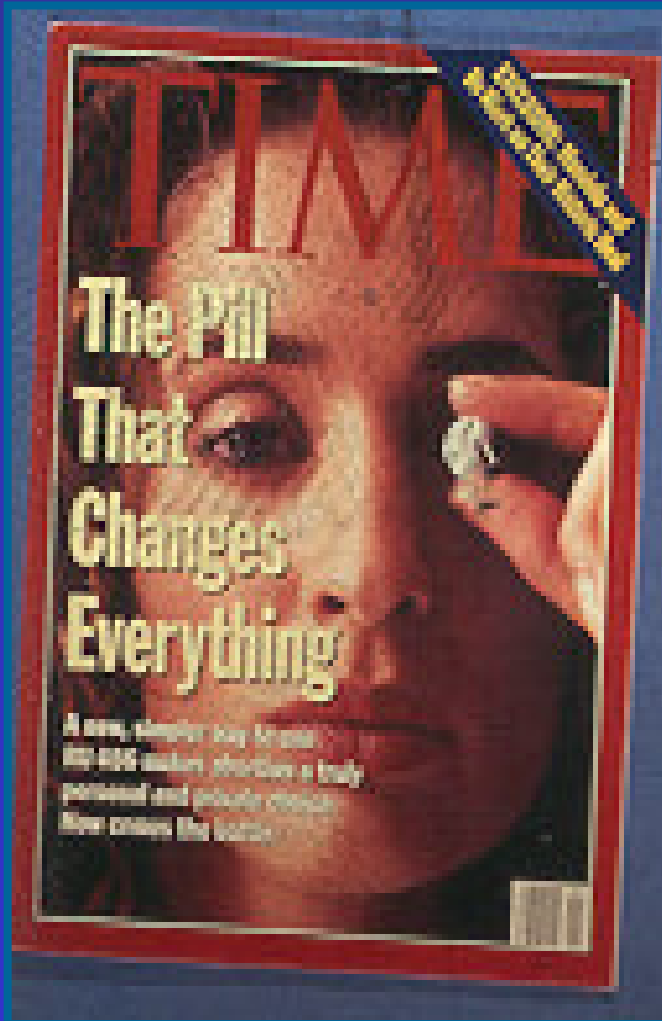
(Source: WHO, Lancet, 1998)





# Availability of levonorgestrel preparations for emergency contraception (as of November 2002)





## Mifepristone research

- pregnancy termination (first and second trimester)
- cervical ripening
- menses induction
- ovulation blocking
- luteal contraception
- emergency contraception



# Unmet needs in contraceptive hardware

- Methods for dual protection (including improved barrier methods)
- Reversible methods for men
- Postcoital methods for repeated use during the cycle
- Improved (hormonal) methods for women
- Long-acting, non-hormonal methods for women



# How can contraceptive use be increased?

- Development of new and improvement of existing methods
- **Improving access to existing methods**





## Important new knowledge about safety/efficacy of hormonal fertility-regulating methods

- Oral contraceptives and cancer (benefits and risks)
- Oral contraceptives and cardiovascular disease
- Oral contraceptives and breast cancer
- DMPA and breast cancer
- Safety and efficacy of mifepristone
- Third-generation oral contraceptives and venous thromboembolism
- Long-term safety and efficacy of Norplant<sup>®</sup>



## Cumulative net probabilities (se) of discontinuation and continuation rates per 100 women at 10 years of use\*

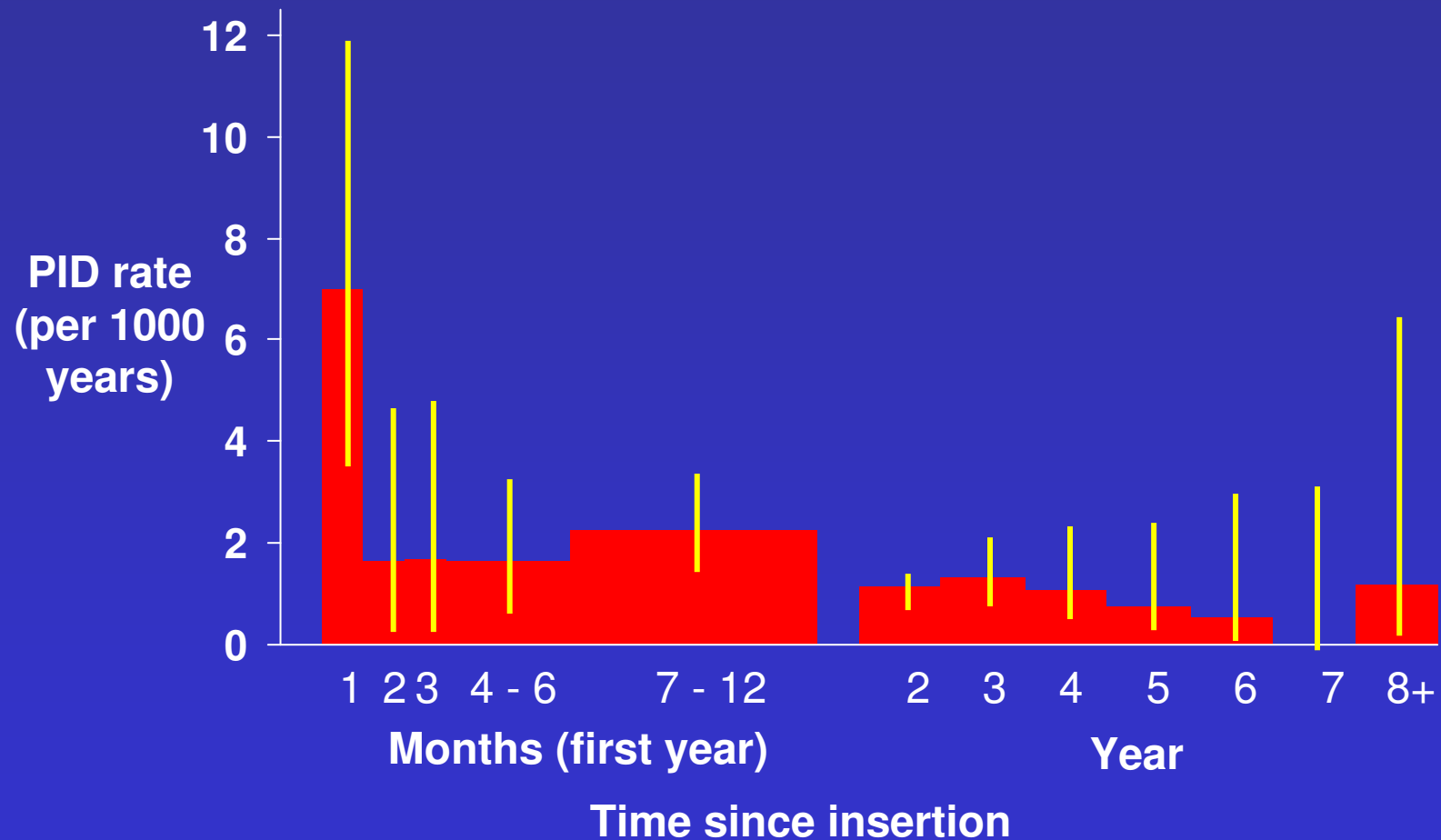
	TCu 380A	Multiload 375	p-value
Total pregnancy	3.4 (0.5)	5.3 (0.7)	0.029
- Intrauterine	2.7 (0.5)	5.2 (0.7)	0.002
- Ectopic	0.8 (0.3)	0.1 (0.1)	0.011
Expulsions	11.2 (1.0)	14.8 (1.2)	0.023
Total medical removals	29.2 (1.4)	28.9 (1.5)	0.80
- Pelvic inflammatory disease	0.4 (0.2)	0.5 (0.2)	0.82
Continuation rate	40.1 (1.3)	37.4 (1.3)	0.14
Woman-years	10,164	10,014	

\* Interim data, cut-off July 2002



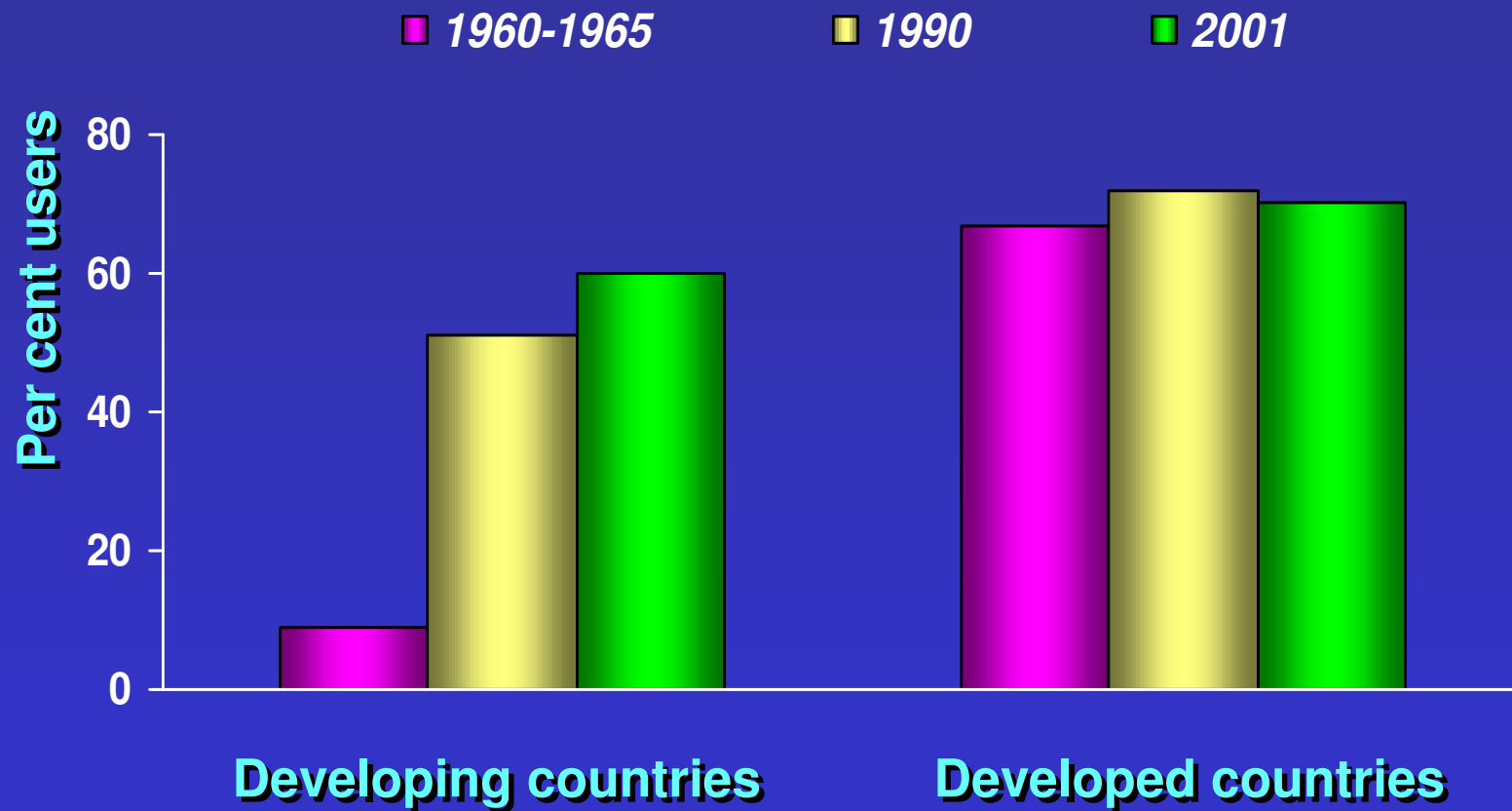


## PID INCIDENCE RATE (95% confidence interval)





# Trends in use of contraception

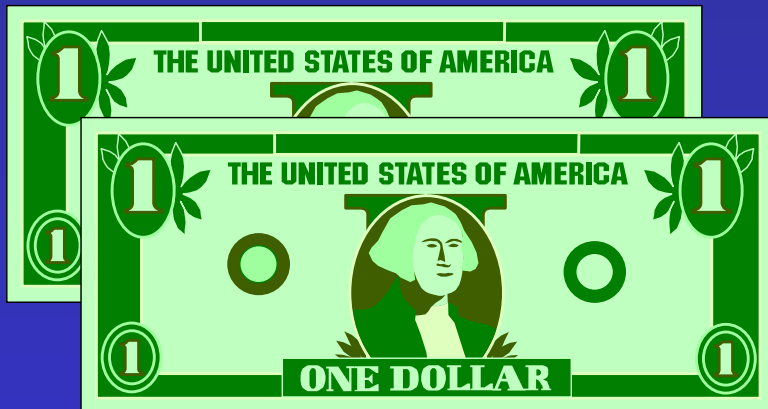


(Source: United Nations, 1991 and 1999)





# Emphasis on research capability strengthening



**US\$ 2**

**Research and development**



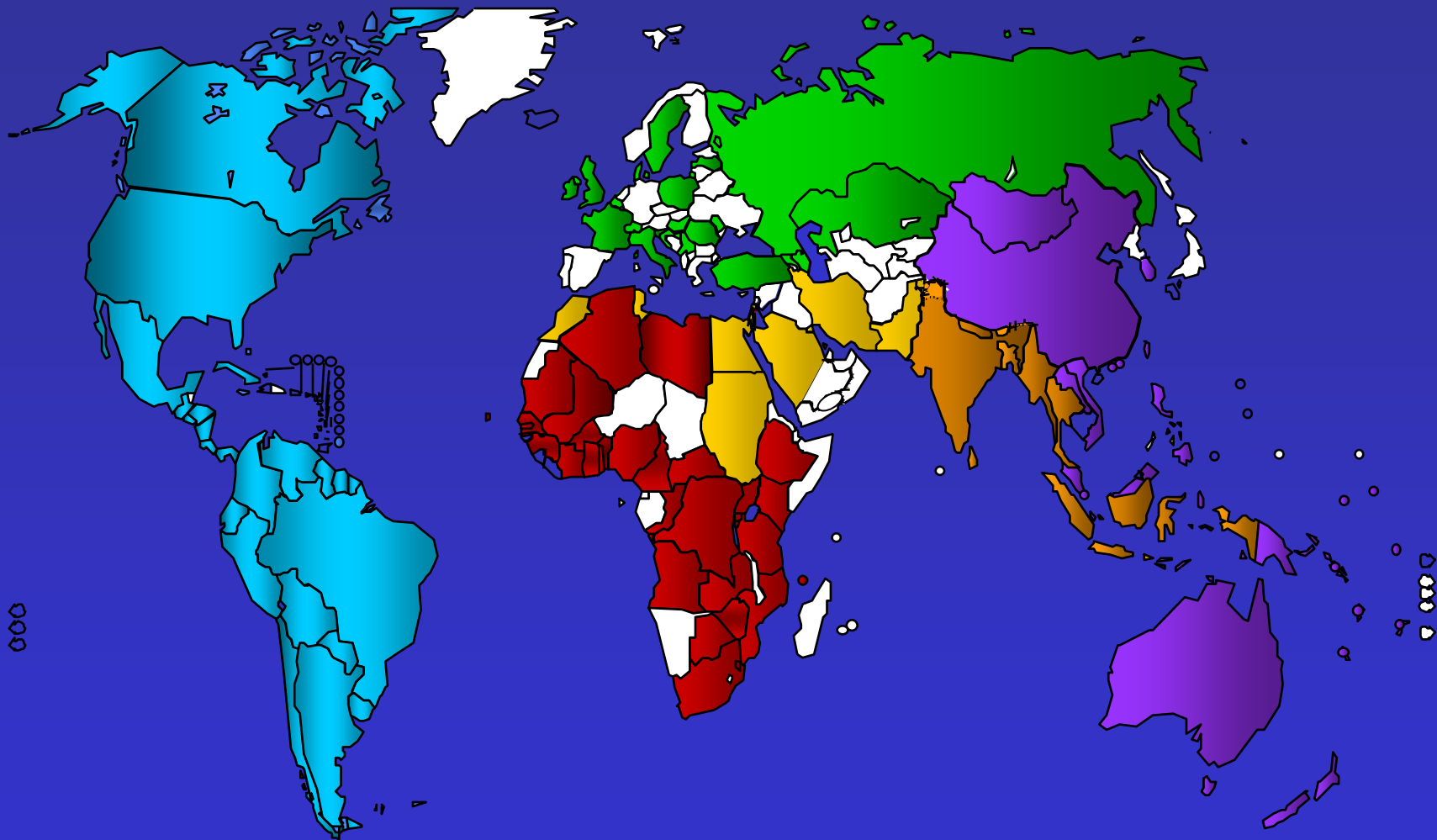
**US\$ 1**

**Research capability strengthening**





# Countries collaborating with the Department in the year 2002 (n = 110 countries)



■ AFRO ■ AMRO ■ EMRO ■ EURO ■ SEARO ■ WPRO

DEPARTMENT OF REPRODUCTIVE HEALTH AND RESEARCH



DÉPARTEMENT SANTÉ ET RECHERCHE GÉNÉSIQUES



## Maternal health intervention research during 1995-2003 with leading/active participation of the Programme

	Countries	Women	Status
Antenatal care	4	24 678	Published (2001)
Postpartum haemorrhage	9	18 530	Published (2001)
Treatment of pre-eclampsia (MAGPIE trial)	31	10 141	Published (2002)
	Caesarean section	5	149 276 In press
<i>The WHO Reproductive Health Library</i>	2	76 053	Final evaluation phase
Prevention of pre-eclampsia (calcium supplementation)	6	8 338	Completed
Screening and treatment of urinary tract infection	4	18 000	Ongoing
Prevention of pre-eclampsia (anti-oxidants)	3	4 044	Ongoing
Prevention of pre-eclampsia (treatment of hypertension)	5	1 600	In preparation
Treatment of postpartum haemorrhage	4	1 000	In preparation
<b>Total</b>	<b>25*</b>	<b>311 660</b>	

\* Some countries have been involved in more than one study



# Methods for dual protection (STI and pregnancy)

- Microbicides (cellulose sulfate)
  - double-blind, Phase I study (control: K-Y jelly)
  - Kampala, Mumbai, Sagamu
- Male and female condoms



# GRIP

## Getting research into practice

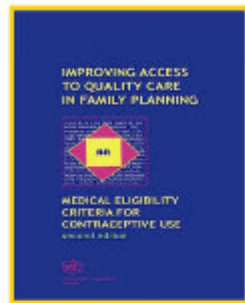
through the development of evidence-based technical and policy guidance





# Universally accepted guidance for family planning

## *Medical Eligibility Criteria for Contraceptive Use*



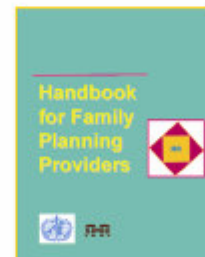
## *Decision-Making Tool for Family Planning Clients and Providers*

**Guidance for guides**



**Guidance for providers and clients**

## *Selected Practice Recommendations for Contraceptive Use*



## *Handbook for Family Planning Providers*



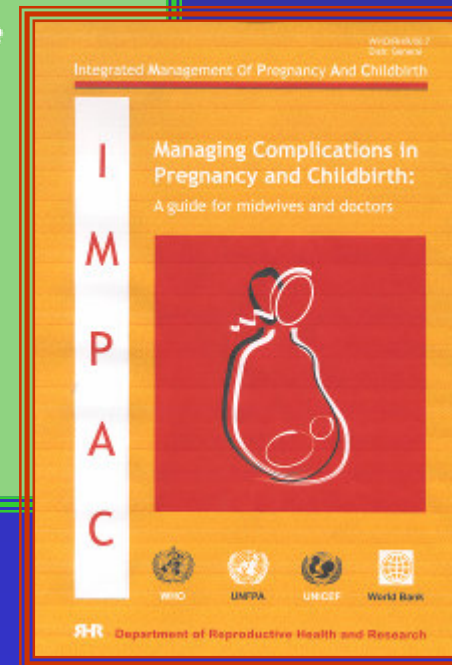
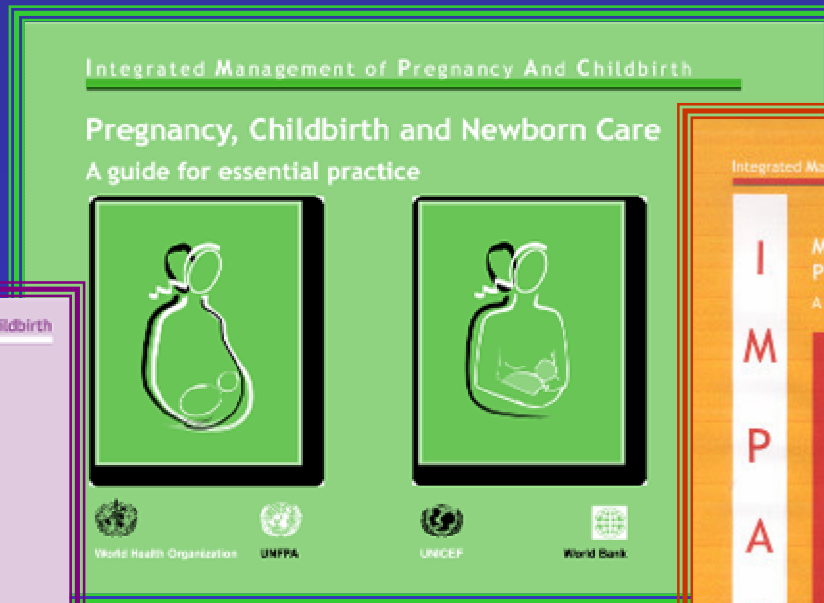
**Process for keeping the guidance up-to-date**







# Widely acclaimed evidence-based guidance for maternal and newborn health care



(Arabic)  
English  
French  
Spanish  
Russian  
Laotian  
Vietnamese  
Indonesian  
Chinese  
Faisi





# Safe Abortion: Technical and Policy Guidance for Health Systems

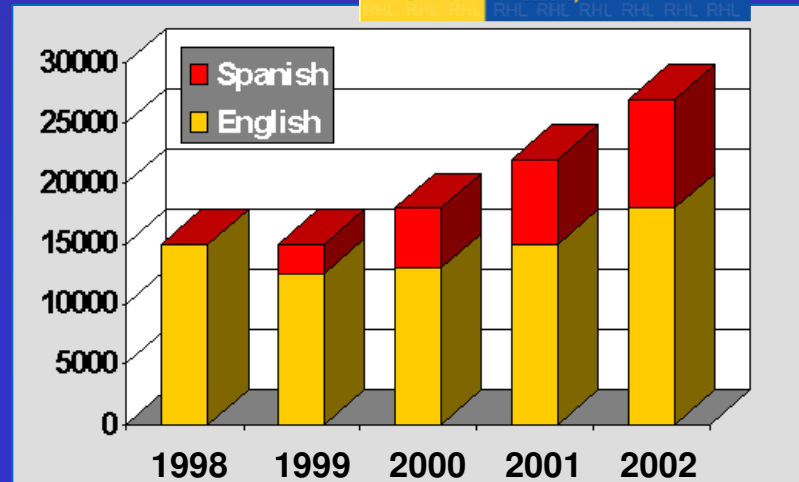


World Health Organization  
Geneva





# The WHO Reproductive Health Library



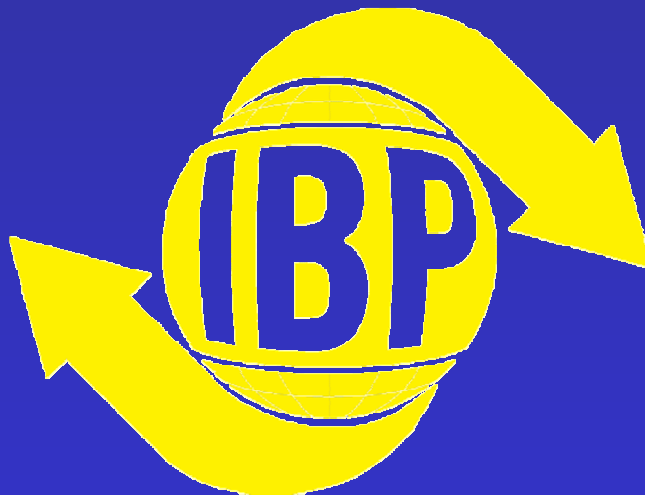


# The Implementing Best Practices (IBP) Initiative

*Implementing Best Practices Consortium*

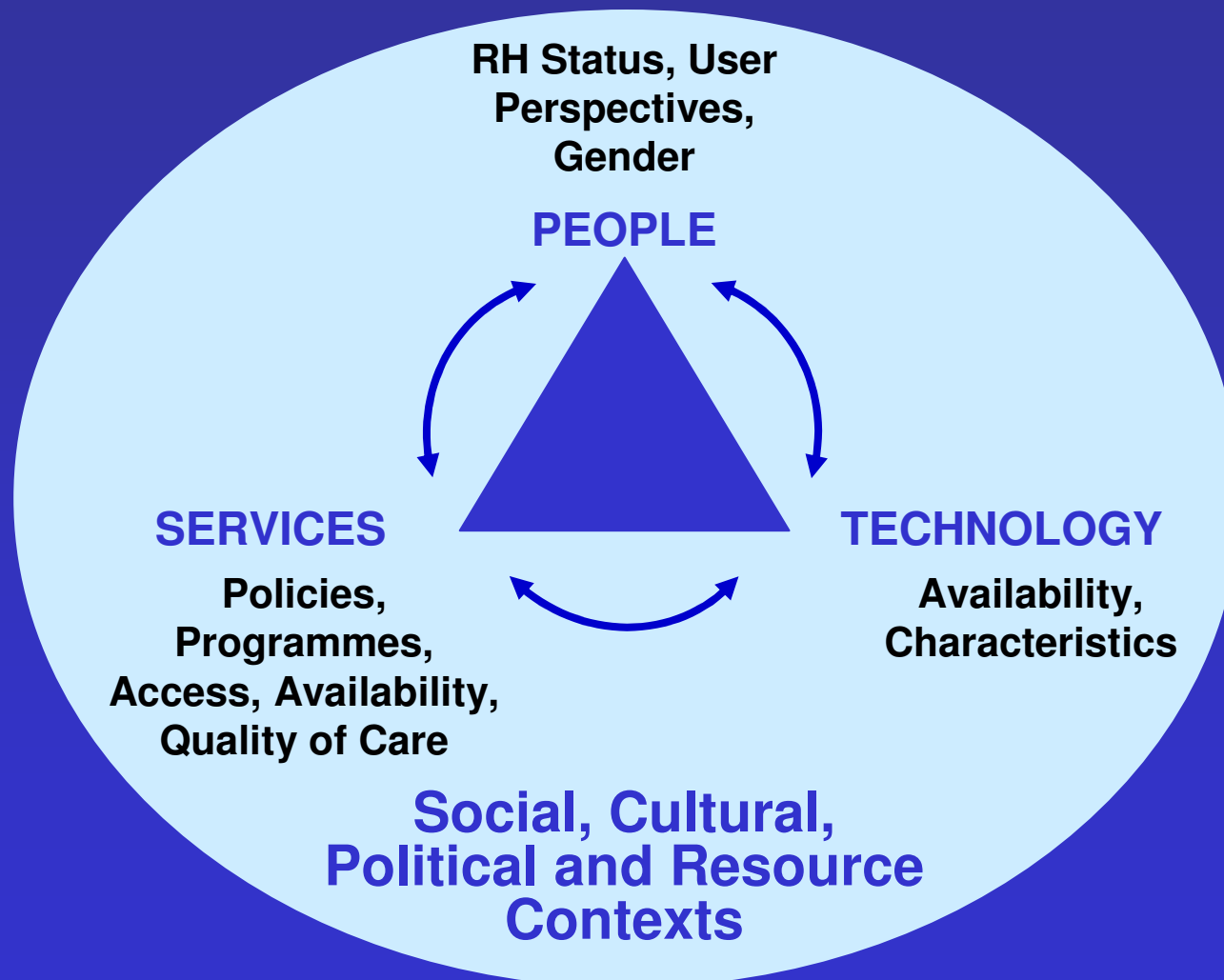
## Goal

To work with global, regional and country networks to exchange information and support a systematic process to introduce, adapt and apply best practices to improve access to and quality of reproductive health



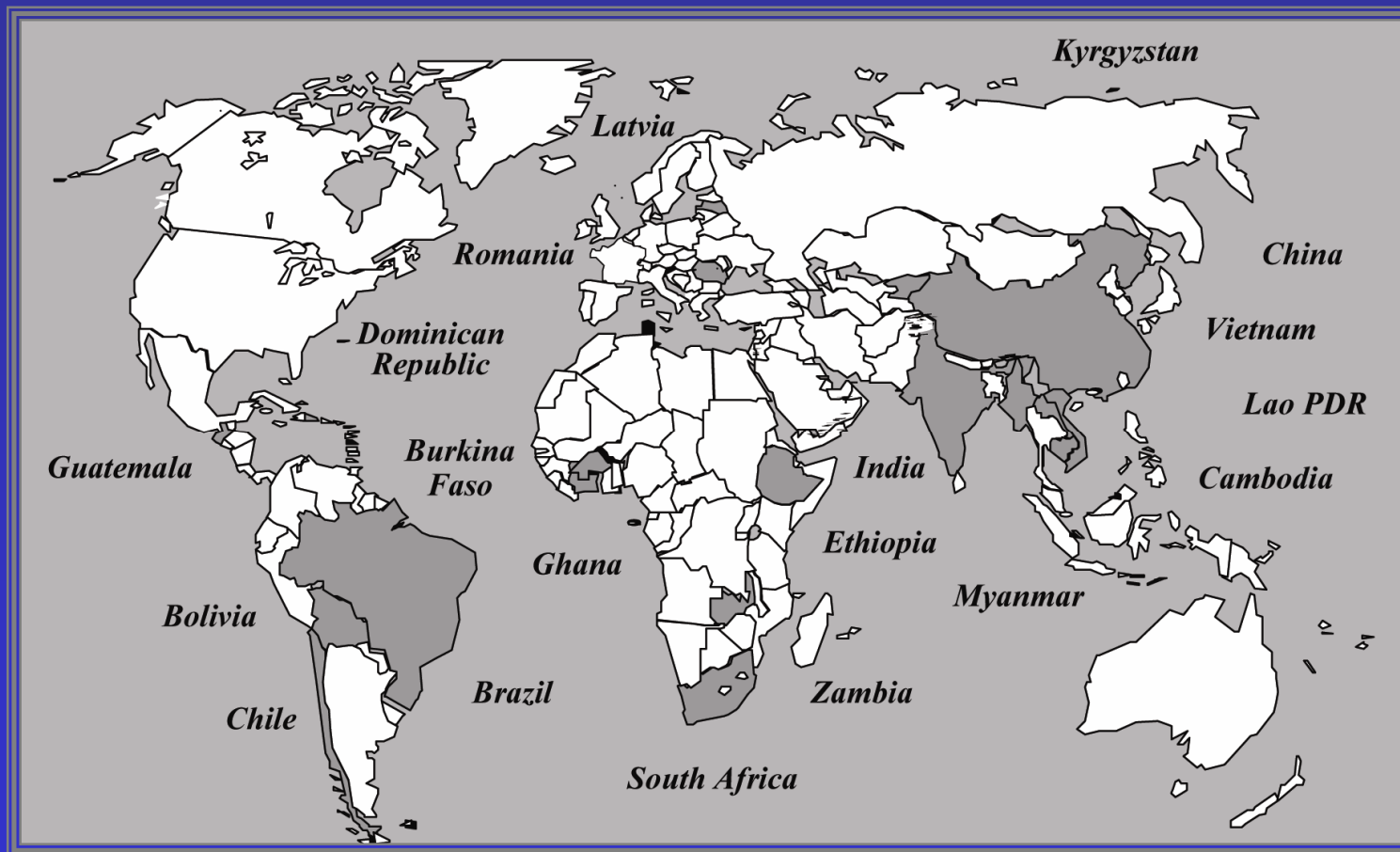


# The Strategic Approach: Conceptual framework





# Using the Strategic Approach for Strengthening Quality of Care in Reproductive Health Services





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Last Updated: Tuesday, 20 January, 2004, 15:26 GMT

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## Durex withdraws condom lubricant

The makers of Durex have ceased production of condoms containing a controversial lubricant amid doubts about its ability to prevent infection.



Condoms play a vital role in preventing disease

The lubricant, nonoxynol-9 (N-9), was originally thought to provide a high level of protection against infections such as HIV.

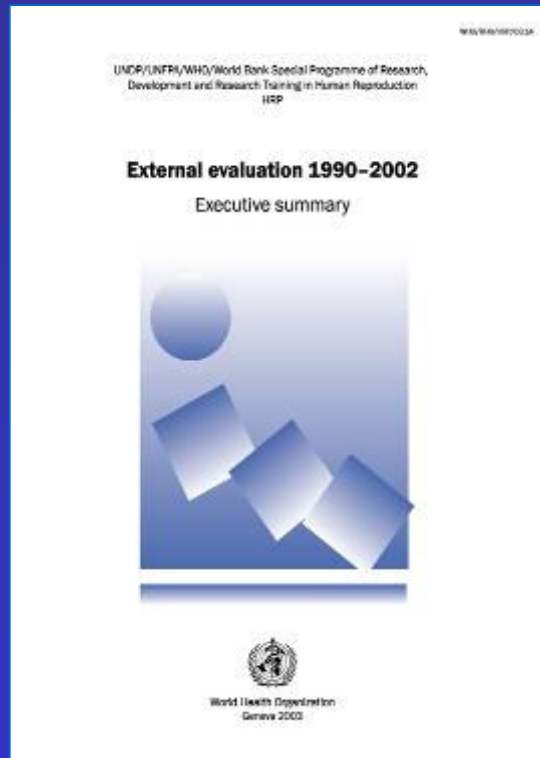
However, recent studies have shown that it may actually increase the risk.

Concerns had been raised by the World Health Organization, UNAIDS and the US Centres for Disease Control.

The UK National Aids Trust, which has campaigned for the removal of N-9 from condoms, applauded the decision.

Keith Winestein, campaigns manager, said: "This is a very welcome decision."

**BBC SPORT**  
**BBC WEATHER**  
**cBBC news**  
**BBC ON THIS DAY**



“HRP is a unique Programme and the international leader in reproductive health research. It needs to be supported further to enable it to continue its role effectively in response to evolving reproductive health problems and practices.”

*(External Evaluation of HRP,  
Final Report, June 2003)*





The Bush administration may withhold funds from a World Health Organization program because it is doing research on the abortion pill mifepristone, also known as RU-486, a spokesman said yesterday...

...“We are looking at that program in terms of whether that is consistent with Kemp-Kasten,” State Department spokesman Richard Boucher said...

*(The Washington Post, 8 November 2002)*



“...often I get this question whether I will be interested in supporting HRP and also whether I will be interested in supporting the sexual and reproductive health programme. The short answer is a “yes”, because I know that this is a very, very important programme.”



(Extract from intervention by Dr J.W. Lee,  
Director-General Elect, at HRP's  
Policy and Coordination Committee,  
1 July 2003)