MAKING INFORMED CHOICES IN CONTRACEPTION: THE ROLE AND IMPORTANCE OF COUNSELLING
Contraception for the individual woman

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Contraceptive choice: lifestyles, healthcare provider relationship and counselling

- Lifestyles of women have changed dramatically in recent years
  - Education and career goals
  - Relationship status/family planning
  - Access to information

- Changing lifestyles have affected wants from the healthcare provider relationship
  - ‘Partnership’

- Contraceptive counselling is a healthcare partnership with bi-directional dialog
Women in US civilian labor force has increased greatly

The proportion of women in the labor force increased from 34% of women in 1950 to 60% in 2000

Women in the European civilian labor force has increased greatly

http://siteresources.worldbank.org/EXTLACREGTOPGENDER/Resources/PresentationFernandez.ppt
Trends in ages of women becoming pregnant in US have changed

Women <30 years of age are having fewer children; women ≥30 years of age are having more children

Increased access to information

- Women increasingly seek information to create solutions for their life
- Women engage in social networks where they share knowledge, experiences and support
  - For example, blogs and chat rooms
- Increased internet use
  - Affords easier access to information globally
  - Primary resource for healthcare information among women
  - Empowering women to input in healthcare dialog

What women want from healthcare provider relationships

- Results from a Canadian study show that what women want from healthcare services is:
  - High-quality care
  - Services that feel safe and they understand
  - Flexible, individual services
  - Alternative options
  - Recognition of personal roles and responsibilities
  - A voice in decision-making

“What women care about most is relationships; that they need to be appreciated, respected, engaged intellectually, understood and part of something larger than themselves”
Dialog around contraception must be bi-directional, to meet and understand women’s needs and expectations.

While counselling it is important to:

- Acknowledge understanding/knowledge of topic
- Correct misconceptions and misinformation
- Provide appropriate information and guidance

Life stage impacts a woman’s choice of contraception

- Relationship status
- Importance of career/education
- Long-term versus short-term desire to avoid pregnancy
- Breastfeeding
- Other illnesses/diseases
Changes in contraceptive needs over time: relationship status and career/education

- Completing education or establishing career
  - Highest use of contraception among different groups
  - Oral contraceptives are the most popular method

- Methods become less reliable over time in long-term relationships
  - Decrease in dual protection

Changes in contraceptive needs over time: long-term vs short-term desire for contraception

- Married women rely more on sterilization
  - Switch to ‘long-term’ contraception (eg, sterilization) most likely among married women aged \( \geq 35 \) years

- In contrast, single women prefer condom and oral contraceptives

Changes in contraceptive needs over time: breastfeeding

Progestin-only contraceptives recommended for women postpartum

- Risk of pregnancy maintained in breastfeeding women, even when amenorrheic (0–7.5% pregnancy rate)
- Risk of reduced quantity and quality of breast milk with estrogen-containing contraceptives

Contraceptive choices in older women may be affected by other health conditions

Some risks associated with COCs increase with age

<table>
<thead>
<tr>
<th>Variable, per 100,000 women-years of use</th>
<th>Age, years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20–24</td>
</tr>
<tr>
<td>Number of excess cases of myocardial infarction and ischemic stroke attributed to COC use</td>
<td></td>
</tr>
<tr>
<td>Among non-smokers</td>
<td>0.4</td>
</tr>
<tr>
<td>Among smokers</td>
<td>1</td>
</tr>
<tr>
<td>Among women with hypertension</td>
<td>4</td>
</tr>
<tr>
<td>Number of excess cases of venous thromboembolism attributed to COC use</td>
<td></td>
</tr>
<tr>
<td>Second-generation progestins</td>
<td>6</td>
</tr>
<tr>
<td>Third-generation progestins*</td>
<td>16</td>
</tr>
</tbody>
</table>

*Results challenged by EURAS data

Many contraceptive options are available to meet the changing needs of women

Need to match women’s needs and contraceptive choices

Modern woman
- Values independence and individuality
- Empowered through increased access to information
- Multiple lifestyle factors influencing contraceptive needs

All available options
- Daily, weekly, monthly, yearly
- Reversible, permanent
- Oral, transdermal, vaginal, injection, implant, surgery, barrier
- Hormonal (combined or progestin only), non-hormonal
Conclusions

- **Women of today**
  - Value independence and individually defined lifestyles
  - Empowered through increased information access
  - Have multiple factors influencing contraceptive needs

- Important for clinician to listen to woman’s individual needs and consider them as active partner in decision-making process
Today’s symposium

Will provide insight into the:

- Challenges of contraceptive use
- Importance of counselling
- Elements of successful counselling
- Impact of counselling in the clinical setting
Making informed CHOICES in contraception: The role and importance of counselling
Contraceptive use and the importance of contraceptive counselling

Dr Diana Mansour

Consultant in Community Gynaecology and Reproductive Health Care
NHS Newcastle and North Tyneside, Community Health
Newcastle upon Tyne, UK
Overview

- Incidence of unintended pregnancy
- Factors contributing to contraceptive failure
  - Perfect versus typical use
  - Discontinuation
  - Challenges of birth control
- Contraceptive options
- Factors associated with contraceptive use
- Impact and importance of counselling
  - Real-world perspective
- The Contraceptive Triangle
Incidence of unintended pregnancy
Incidence of unintended pregnancy

- 208 million pregnancies occurred worldwide in 2008
  - Unintended: 55 per 1000 women aged 15–44

- In developed countries (including Eastern Europe)
  - 23 million pregnancies occur every year
  - Unintended: 42 per 1000 women aged 15–44

- In developing countries
  - 185 million pregnancies occur every year
  - Unintended: 57 per 1000 women aged 15–44

Factors contributing to contraceptive failure
### Failure rates in perfect use versus typical use

<table>
<thead>
<tr>
<th>Method</th>
<th>Typical use</th>
<th>Perfect use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Withdrawal</td>
<td>27</td>
<td>4</td>
</tr>
<tr>
<td>Condom</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>COC</td>
<td>8</td>
<td>0.3</td>
</tr>
<tr>
<td>Patch</td>
<td>8</td>
<td>0.3</td>
</tr>
<tr>
<td>Ring</td>
<td>8</td>
<td>0.3</td>
</tr>
<tr>
<td>3-Month Injectable</td>
<td>3</td>
<td>0.3</td>
</tr>
<tr>
<td>Copper IUD</td>
<td>0.8</td>
<td>0.6</td>
</tr>
<tr>
<td>Levonorgestrel IUS</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>3-Year Implant</td>
<td>0.05</td>
<td>0.05</td>
</tr>
</tbody>
</table>

COC = combined oral contraceptives, including combined pill and progestin-only pill; IUD = intrauterine device; IUS = intrauterine system

### Rates of discontinuation of contraceptive methods due to dissatisfaction

<table>
<thead>
<tr>
<th>Method</th>
<th>Ever users of reversible contraception</th>
<th>Rate of discontinuation of method due to dissatisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diaphragm</td>
<td>8.9%</td>
<td>51.6%</td>
</tr>
<tr>
<td>Injectable</td>
<td>17.1%</td>
<td>42.3%</td>
</tr>
<tr>
<td>Implant</td>
<td>2.1%</td>
<td>42.0%</td>
</tr>
<tr>
<td>IUD</td>
<td>6.0%</td>
<td>36.4%</td>
</tr>
<tr>
<td>Pill</td>
<td>84.5%</td>
<td>29.2%</td>
</tr>
<tr>
<td>Patch</td>
<td>0.9%</td>
<td>19.8%</td>
</tr>
<tr>
<td>Condom</td>
<td>90.1%</td>
<td>11.9%</td>
</tr>
<tr>
<td>All reversible methods</td>
<td>100%</td>
<td>46.3%</td>
</tr>
</tbody>
</table>

Challenges of providing contraception – attributes desired by women

- **Affordable**: 92% very desirable/essential, 5% somewhat desirable, 3% not at all/slightly desirable
- **Few side effects**: 86% very desirable/essential, 8% somewhat desirable, 7% not at all/slightly desirable
- **Discreet**: 80% very desirable/essential, 14% somewhat desirable, 6% not at all/slightly desirable
- **Regulates cycle**: 78% very desirable/essential, 14% somewhat desirable, 8% not at all/slightly desirable
- **Not taken daily**: 75% very desirable/essential, 15% somewhat desirable, 10% not at all/slightly desirable
- **Effective with low-dose hormones**: 72% very desirable/essential, 16% somewhat desirable, 12% not at all/slightly desirable
- **Clears acne**: 67% very desirable/essential, 20% somewhat desirable, 13% not at all/slightly desirable
- **Steady constant delivery**: 66% very desirable/essential, 20% somewhat desirable, 14% not at all/slightly desirable
- **Taken monthly**: 59% very desirable/essential, 25% somewhat desirable, 16% not at all/slightly desirable
- **Taken weekly**: 37% very desirable/essential, 36% somewhat desirable, 27% not at all/slightly desirable
- **Taken daily**: 16% very desirable/essential, 24% somewhat desirable, 60% not at all/slightly desirable

N = 1117 (US women)

Contraceptive options
Contraceptive choices in 2010

- Significant advances have occurred over the past 50 years
  - 1960s: plastic IUDs,
  - 1970s: Cu-IUD, POPs, progestogen injectables
  - 1980s: first implant system
  - 1990s: LNG-IUS
  - 2000s and beyond: hormonal patch, vaginal ring and modern oral POPs

IUD=intruterine device; COC: combined oral contraceptives; Cu-IUD=copper intruterine device; POP=progestogen-only pill; LNG-IUS=levonorgestrel intruterine system

Factors associated with contraceptive use
Effective use of a contraceptive method

There needs to be:

- A desire not to become pregnant
- A suitable contraceptive method available
- The ability to obtain/afford this method
- The ability to use it effectively

With good counselling, a woman will use a method that best suits her contraceptive needs
Users who receive their method of choice are more likely to continue

Many factors are associated with initiation of, or adherence to, a contraceptive

<table>
<thead>
<tr>
<th>Factors associated with contraceptive use</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Individual factors</strong></td>
</tr>
<tr>
<td>Personal goals</td>
</tr>
<tr>
<td>Fear/misconceptions</td>
</tr>
<tr>
<td>Ambivalence about avoiding pregnancy</td>
</tr>
<tr>
<td>Satisfaction with contraception</td>
</tr>
<tr>
<td>Prior contraceptive experience</td>
</tr>
</tbody>
</table>

Impact and importance of contraceptive counselling
Pre-abortion counselling can substantially increase contraceptive use

2003: Targeted counselling in pre-abortion session
2000–2001: Poor counselling

N=104

Percent using a contraceptive

<table>
<thead>
<tr>
<th>Method</th>
<th>2003-0002</th>
<th>3002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral contraceptive</td>
<td>18%</td>
<td>20%</td>
</tr>
<tr>
<td>Progestogen injection</td>
<td>12%</td>
<td>15%</td>
</tr>
<tr>
<td>Progestogen implant</td>
<td>0%</td>
<td>11%</td>
</tr>
<tr>
<td>IUS</td>
<td>0%</td>
<td>32%</td>
</tr>
<tr>
<td>No contraception</td>
<td>60%</td>
<td>4%</td>
</tr>
</tbody>
</table>
Specialist counselling increases contraceptive uptake, but effects are short-lived

- Study conducted at abortion clinic in Edinburgh

- Women receiving specialist advice and enhanced provision (‘intervention’) significantly more likely to leave hospital with contraception (271 vs 115; \( P<0.001 \))
  - Also more likely to have long-acting method (141 vs 78; \( P<0.001 \))

- After 4 months, no significant difference in contraceptive prevalence or continuation between groups
  - But more women using implants in intervention group (32 vs 6; \( P<0.001 \))

- After 2 years, 14.6% of women in intervention group vs 10% of controls had undergone another abortion in same hospital (\( P=0.267 \))

Motivational interviewing (MI) techniques used successfully for contraceptive adherence

- Motivational interviewing combines a counselling style stressing warmth and empathy, with technique of using key questions and reflective listening.

- Adapted for counselling regarding contraceptive choice, MI includes following process:
  - Explore discrepancies between pregnancy intention and contraceptive use, and between STI risk and condom use.
  - Share information on contraception and method use.
  - Promote behaviors that reduce risk of unintended pregnancy and infection.

STI: Sexually Transmitted Infections
Motivational-based, structured counselling on continued basis increases adherence

Proportion of women using an effective contraceptive at 3, 6, and 9 months after counselling

Structured counselling over time has positive effect on adherence to contraception

Proportion of women discontinuing progestogen injectable

Many successful counselling approaches result in only short-term effects

• While some interventions have positive effect for contraceptive use, findings are not consistent across all studies

• Therefore, continued counselling is important for optimal adherence to a given contraceptive

Challenges in family planning

- Maximize contraceptive efficacy
- Minimize health risks
- Optimize tolerability
- Realize health benefits
- Avoid unnecessary cost

Information courtesy of Dr. Johannes Bitzer
Counselling using the Contraceptive Triangle
An integrated approach to counselling

Subjective: wishes, values, and objectives
Objective: risks and resources
Social and cultural background
Relationship
Life phase
Physical and chemical characteristics
Statistical data

Information courtesy of Dr. Johannes Bitzer
Conclusions

- High incidence of unintended pregnancy worldwide including in high-resource countries
- Health care provider needs to be aware of factors contributing to contraceptive failure
- Most health care providers agree that counselling for contraceptive choice is necessary and appropriate
- Structured and/or motivational counselling can be particularly successful for both appropriate contraceptive choice and adherence
- However, the effect of counselling appears short-lived
- Therefore, counselling should occur on a regular/periodic basis to re-assess appropriate choice and acceptability
Making informed CHOICES in contraception: The role and importance of counselling
POST-COUNSELLING CONTRACEPTIVE USE

Fátima Palma
Contraception Research Group
PORTUGAL
Overview

• **The Challenge**
  - Unintended pregnancies and contraception
  - The REMO Study

• **Does Counselling matter?**
  - The TEAM Study

• **The IMAGYNE study**

• **Conclusions**
The Challenge
Intended vs. Unintended Pregnancy

- Intended pregnancy: 52%
- Unintended pregnancy with contraception: 25%
- Unintended pregnancy without contraception: 23%

Henshaw, S: Unintended pregnancy in the USA, Family Planning Perspectives, 1998;30 (1): 24-29
Causes of Unintended Pregnancies

- Inconsistent or incorrect use: 52%
- Consistent use, method failed: 43%
- Nonuse: 5%

Our hypothesis:

- Clear and comprehensive information is essential for a woman to choose a contraceptive method

- Counselling may improve proper use and adherence to the selected method
Impact of self-described noncompliant behavior among typical users of a combined hormonal contraceptive (CHC) method

Cross-sectional, multicenter study in Spain, 26,250 women (18–49 years) current users of the contraceptive pill, the patch, or the ring, participated in the study

Self-administered questionnaire, during the control visits
Contraceptive use among participants

- **PILL**: 65%
- **PATCH**: 12%
- **RING**: 23%

REMO Study
Impact of Noncompliance in CHC users

Significant differences in compliance
(missing/delays in taking the pill/application, insertion or removal of the patch or ring)

Emergency Contraception

<table>
<thead>
<tr>
<th>Contraception Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>PILL</td>
<td>32%</td>
</tr>
<tr>
<td>PATCH</td>
<td>6.3%</td>
</tr>
<tr>
<td>RING</td>
<td>21.6%</td>
</tr>
<tr>
<td></td>
<td>14%</td>
</tr>
</tbody>
</table>

*p<0.001

Noncompliant behavior with current CHC resulted in:

- 40% of the women, in all groups, called or visited a physician
- Negative impact on work activities and/or couple relationships (10%–20%)
- Worry (>50%) and fear due to inconsistent use of the contraceptive method (20%)

Noncompliance noticeably affects well-being and prompts requests for physician’s advice and use of emergency contraception

Despite awareness of problems due to inconsistent use, women prefer their current contraceptive method

- 64.7% of pill users continued to prefer the pill
- 61.7% of patch users preferred the patch
- 96.6% of women using the vaginal ring preferred the ring
Does counselling matter?
TEAM Study

• Cross-sectional, multicenter study in Spain

• 9700 women, (18–49 years) starting or reinitiating combined hormonal contraception

• Self-administered questionnaire to assess the reasons for selection or refusal of CHC methods (daily pill, weekly patch or monthly ring)

• A counselling guide was used by investigators to back up verbal information and discussion about effectiveness of the combined hormonal contraceptive methods, modes of action, modes of use, risks and benefits, and suitability for individual needs

TEAM Study
Contraceptive Choices after counselling

46%
39%
15%

Proven efficacy
Ease of use

Low possibility of inadvertent omission
Convenience
Frequency of administration

TEAM Study
Predictors and Determinants of Choice

- Patch and ring acceptance increased with age

- The pill was mostly accepted by younger women

Primary determinants of contraceptive choice
- Convenience
- Frequency of use
- Lower probability of inadvertent omission

Lete I. Contraception. 2007;76:77–83
Results of an assessment of the impact of an information program given to patients by gynecologists in Portugal

Ana Rosa Costa Hospital de São João
Fátima Palma Maternidade Dr. Alfredo da Costa
Lisa Vicente Maternidade Alfredo da Costa
Luís Sá IPO Coimbra
Teresa Bombas Maternidade Dr. Daniel de Matos / Hospitais da Universidade de Coimbra
The Portuguese Reality

Contraception use rate in the female population 85.1%

<table>
<thead>
<tr>
<th>METHOD</th>
<th>YEAR</th>
<th>1997 (%)</th>
<th>2005–2006 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PILL</td>
<td></td>
<td>62.3</td>
<td>65.9</td>
</tr>
<tr>
<td>CONDOM</td>
<td></td>
<td>14.6</td>
<td>13.4</td>
</tr>
<tr>
<td>IUD</td>
<td></td>
<td>9.7</td>
<td>8.8</td>
</tr>
</tbody>
</table>

Primary objective

- To evaluate the woman’s choice, after presentation and explanation of the available combined hormonal contraceptive methods (daily pill, weekly patch, monthly ring)

Secondary objectives

- To compare the choice of methods before and after counselling
- To evaluate the criteria of women to choose a contraceptive method
- To evaluate demographic predictors of contraceptive choice
Sample
- 3000 women of childbearing potential, aged ≥16 years
  - Women who had never used a CHC method
  - Women who had not used a CHC method in the last 6 months
- 200 sites, geographically distributed to allow representation of the Portugal Mainland population

Procedures
- Pre counselling question
- Contraceptive information - counselling guide
- Post counselling choice
# COUNSELING GUIDE for Combined Hormonal Contraceptive Methods

This table shows three types of combined hormonal contraceptive methods. All of these methods contain a fixed combination of estrogen and progesterone. There are no significant differences in terms of efficacy, safety and tolerability. The main differences lie in the frequency of use and the route of administration, which may represent important differences in terms of convenience.

<table>
<thead>
<tr>
<th>Method</th>
<th>Mode of Action</th>
<th>Efficacy</th>
<th>Frequency of Administration</th>
<th>Characteristics</th>
<th>Safety Information (most common adverse reactions)</th>
<th>Important things to know</th>
<th>Route of Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly ring</td>
<td>Prevents Ovulation</td>
<td>&gt; 99%</td>
<td>1 Ring inserted for 3 consecutive weeks + 1 week of rest</td>
<td>Frequency of use: - Monthly administration, daily dose not needed - Discrete Route of administration: - Not affected by vomiting or diarrhea - No 1st pass liver effect - Hormone levels are constant and low - No interaction with amoxicillin or doxycycline</td>
<td>- Very regular and predictable menstrual bleeding patterns - No need to remember everyday - Greater incidence of vaginal or device related symptoms - Minimal awareness of the ring during sexual relations and everyday life</td>
<td></td>
<td>Vaginal</td>
</tr>
<tr>
<td>Weekly patch</td>
<td></td>
<td>&gt; 99%</td>
<td>1 Patch per week for 3 consecutive weeks + 1 week of rest</td>
<td>Frequency of use: - Weekly administration, daily dose not needed Route of administration: - Not affected by vomiting or diarrhea - No 1st pass liver effect - Hormone levels are constant and higher</td>
<td>- Headache - Nausea - Weight increase (fluid retention) - Depressed mood, mood altered - Breast pain</td>
<td>- Regular menstrual bleeding patterns - No need to remember everyday - Greater incidence of breast tenderness - Not recommended for women weighing more than 90 Kg - Possibility of skin irritation</td>
<td>Transdermal</td>
</tr>
<tr>
<td>Daily Pill</td>
<td></td>
<td>&gt; 99%</td>
<td>1 Tablet daily for 21/24 days + 4/7 days of rest</td>
<td>Frequency of use: - Daily administration - Classic route of administration - Daily fluctuations in hormone levels</td>
<td>- Most studied method, with more experience than other methods - Regular menstrual bleeding patterns - Depends on daily administration - Efficacy affected by vomiting and diarrhea - Possibility of drug interactions</td>
<td></td>
<td>Oral</td>
</tr>
</tbody>
</table>

This Counseling Guide is based on data from Lente I, et al. Factor affecting women’s selection of a combined hormonal contraceptive method: a TEAMAes Spanish cross-sectional study. Contraception 2007 Aug; 76(2): 77-83. Epub 2007 Jun 27, and has been issued by the IMAGYNE Project Scientific Committee, the Contraception Research Group -NIST

FSIPG Scientific Review by Professor Doutor J. L. Silva Cervelho
IMAGYNE Study Population

- Age – 29.9 y (mean)
- Educational Level - 29.6% High School, 49.8% University Degree
- Employment Status - 66.7% Employed, 18.7% Working Students
Last contraception method used (all applicable)

- Calendar: 3.2%
- Coitus interruptus: 6.3%
- Diaphragm: 0.1%
- Spermicide: 0.3%
- IUD: 4.9%
- Condom: 40.0%
- Daily pill: 47.8%
- Weekly patch: 1.2%
- Monthly ring: 1.2%
- None: 6.9%
- Other: 4.4%

n = 2950

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Contraceptive Choice
Before and After Counselling

Before

- PILL: 26.7%
- PATCH: 11.4%
- RING: 9.6%
- OTHER: 15.7%

After

- PILL: 52.7%
- PATCH: 4.9%
- RING: 11.4%
- OTHER: 9.6%

Chi-square test: p<0.001

Costa A, et al. 2010 11th Congress of the European Society of Contraception and Reproductive Health
• **32.3%** of women changed their initial choice after being informed

• **35.0%** of the women changed from the daily pill to another CHC method
  • 19.6% changed to monthly ring
  • 10.7% changed to weekly patch
**IMAGYNE**

**Socio-Demographic Predictors**

### Age

<table>
<thead>
<tr>
<th></th>
<th>Daily pill</th>
<th>Weekly patch</th>
<th>Monthly ring</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>1.555</td>
<td>462</td>
<td>789</td>
</tr>
<tr>
<td>Mean</td>
<td><strong>28.7</strong></td>
<td><strong>30.8</strong></td>
<td><strong>31.0</strong></td>
</tr>
<tr>
<td>Median</td>
<td>28.0</td>
<td>31.0</td>
<td>31.0</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>7.2</td>
<td>7.3</td>
<td>7.0</td>
</tr>
<tr>
<td>Minimum</td>
<td>16</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Maximum</td>
<td>52</td>
<td>49</td>
<td>51</td>
</tr>
</tbody>
</table>

p <0.001

Costa A, et al. 2010 11th Congress of the European Society of Contraception and Reproductive Health
IMAGYNE
Socio-Demographic Predictors

Educational level

Daily pill
- Never attended school: 4.2%
- Completed basic school: 17.4%
- Completed high school: 31.6%
- Attended high school: 46.7%

Weekly patch
- Never attended school: 5.3%
- Completed basic school: 19.3%
- Completed high school: 28.4%
- Attended high school: 47.0%

Monthly ring
- Never attended school: 2.7%
- Completed basic school: 13.3%
- Completed high school: 26.9%
- Attended high school: 57.1%

n = 1533
n = 457
n = 784

p<0.001

Costa A, et al. 2010 11th Congress of the European Society of Contraception and Reproductive Health
Reasons to choose the daily pill

- Daily use: 22.3%
- Less probability of omission: 11.6%
- Convenience: 36.7%
- Easy to use: 63.3%
- "My friend takes it": 4.3%
- "I am used to it": 37.5%
- More discreet: 13.7%
- Low hormone levels: 9.3%
- Decades of experience: 34.5%
- Other: 4.5%

Reasons to reject the daily pill

- Daily use: 65.1%
- Influenced by negative opinion: 1.1%
- Possibility of omission: 67.9%
- More convenient methods available: 33.8%
- Very old method: 3.9%
- May lose efficacy (vomiting, diarrhea and antibiotics): 53.8%
- Partner's refusal: 1.1%
- Other: 9.7%

n= 551

Costa A, et al. 2010 11th Congress of the European Society of Contraception and Reproductive Health
**Reasons to choose the weekly patch**

- Weekly use: 33.3%
- Less probability of omission: 64.9%
- Convenience: 50.4%
- Easy to use: 61.7%
- "My friend uses it": 4.8%
- Permanent control (visible): 21.9%
- Lower hormonal levels: 15.4%
- No loss of efficacy (vomiting or diarrhea): 38.5%
- Other: 3.9%

**Reasons to reject the weekly patch**

- Weekly use: 20.6%
- Influenced by negative opinion: 6.4%
- More convenient methods available: 37.7%
- May be indiscreet: 44.9%
- Doubts about its efficacy: 28.1%
- Possibility of detachment: 48.3%
- Possibility of skin irritation: 50.2%
- Partner’s refusal: 1.4%
- Other: 4.3%

Women who have chosen:
- Monthly ring
- Daily pill

n=462

Costa A, et al. 2010 11th Congress of the European Society of Contraception and Reproductive Health
IMAGYNE Determinants of Choice
Monthly Ring

Reasons to choose the monthly ring

- Less probability of omission: 71.8%
- Convenience: 40.7%
- Easy to use: 30.8%
- "My friends uses it": 4.6%
- More discreet: 21.4%
- Lower and constant hormonal levels: 35.6%
- No loss of efficacy (vomiting, diarrhea and antibiotics): 53.3%
- Other: 2.0%

Reasons to reject the monthly ring

- Influenced by negative opinion: 4.6%
- More convenient methods available: 36.7%
- Fear to use a foreign body: 45.5%
- Doubts about efficacy: 38.5%
- Need for vaginal manipulation: 52.8%
- Possibility of displacement: 38.7%
- Partner's refusal: 2.8%
- Other: 5.1%

Women who have chosen:

- Monthly use:
  - Weekly patch: 0.9%
  - Daily pill: 5.5%
- Influenced by negative opinion:
  - Weekly patch: 1.7%
  - Daily pill: 2.3%
- More convenient methods available:
  - Weekly patch: 44.6%
  - Daily pill: 36.7%
- Fear to use a foreign body:
  - Weekly patch: 45.5%
  - Daily pill: 38.5%
- Doubts about efficacy:
  - Weekly patch: 9.5%
  - Daily pill: 21.4%
- Need for vaginal manipulation:
  - Weekly patch: 52.8%
  - Daily pill: 46.4%
- Possibility of displacement:
  - Weekly patch: 38.6%
  - Daily pill: 36.6%
- Partner's refusal:
  - Weekly patch: 3.5%
  - Daily pill: 2.8%
- Other:
  - Weekly patch: 4.3%
  - Daily pill: 5.1%

n=786

Costa A, et al. 2010 11th Congress of the European Society of Contraception and Reproductive Health
After appropriate counselling, 32% of the women changed their contraceptive choice. The DAILY PILL was the first choice in 79%, going down to 53% after counselling. Reasons for change: (1) possibility of forgetting, (2) daily dose.

The WEEKLY PATCH was the first choice in 10%, going up to 16% after counselling. Reasons for change: (1) less likely to forget, (2) easy to use.

The MONTHLY RING was the first choice in 11%, going up to 27% after counselling. Reasons for change: (1) less likely to forget, (2) monthly use.

Costa A, et al. 2010 11th Congress of the European Society of Contraception and Reproductive Health
Conclusions
The Challenge

- Unintended pregnancies account for almost 50% of all pregnancies and often result of failure to use contraception or inconsistent or incorrect use.

- The REMO study demonstrated:
  - Significant differences in compliance among contraceptives
  - Women tend to prefer their current method

- Based upon the TEAM study, the primary determinants of contraceptive choice are:
  - Convenience
  - Frequency of method use
  - Lower probability of inadvertent omission

- The IMAGYNE study shows that:
  - One-third of women changed their initial choice of contraception after counselling.
The Impact of Counselling

- Information on CHC methods through counselling significantly affects choice of contraceptive.

- Counselling may help women to make more appropriate choices, with potential impact on adherence and compliance rates.
Making informed CHOICES in contraception: The role and importance of counselling
Contraceptive Health Education Research Program Among Women Requesting Combined Hormonal Contraception (CHOICE) Preliminary data

Arie Yeshaya, MD
Rabin Medical Center
Petah Tikva, Israel
Current contraception problems in Europe and the United States (US)

- In developed countries, each year >40% of pregnancies are unintended\(^1\)
- An estimated 7% of women in Europe\(^2\) and 8% of women in the US\(^3\) who need contraception do not use any method
- Women using oral contraceptives often switch, discontinue, or are dissatisfied\(^4,5\)

---

Non-adherence is very common among users of combined hormonal contraception (CHC), resulting in emergency contraception use\(^6\)

<table>
<thead>
<tr>
<th>Nonadherence</th>
<th>Use of emergency contraception</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pill</td>
<td>71%</td>
</tr>
<tr>
<td>Transdermal patch</td>
<td>32%</td>
</tr>
<tr>
<td>Vaginal ring</td>
<td>22.6%</td>
</tr>
</tbody>
</table>

---

## Model of choices between combined hormonal contraceptive methods for women who consult for contraception

<table>
<thead>
<tr>
<th>Repeat CHC or POP prescription</th>
<th>Request for long-acting method:</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Continue current CHC or POP</em></td>
<td>- Sterilization</td>
</tr>
<tr>
<td>Request for CHC or to change CHC</td>
<td>- IUD/IUS</td>
</tr>
<tr>
<td>3 CHC options</td>
<td>- Implant</td>
</tr>
<tr>
<td>2 CHC options</td>
<td>0 CHC options</td>
</tr>
</tbody>
</table>

CHC=combined hormonal contraception; POP=progestin-only pill; IUD=intruterine device; IUS=intruterine system
Patient counselling can optimize contraceptive choice and improve adherence

- Accurate and clear information about methods of combined hormonal contraception optimizes contraceptive choice and improves adherence\(^1\)

- Contraceptive counselling by physicians or professional healthcare provider creates a better fit between a woman’s needs and lifestyle and the contraceptive method she chooses\(^2\)

- No single contraceptive method will satisfy all potential users

- A variety of contraceptive methods with different delivery systems, mechanisms of action, timing of use and side effects is important

- It is critical to understand individual users in order to optimize contraceptive choice\(^3\)

CHOICE Project

Design
CHOICE Project objectives

• Support counselling about combined hormonal CHCs

• Evaluate women’s contraceptive decisions
  • Contraceptive method chosen after information provided on all three available CHC methods (pill, patch, ring)
  • Chosen method versus original intention
  • Criteria used to choose a method
  • Evaluate social and demographic predictors of contraceptive choice

• Compare findings among participating countries
  • Effects of the counselling program
  • Perceptions of CHCs
Project description

- Endorsed by the European Society of Contraception
- Recruiting women 18 to 40* years of age in 11 countries who consult their healthcare provider (HCP) about contraception and who would consider a CHC method
- The target sample size: 1850 to 3250 women per country
- Participants indicate which method of CHC they prefer and are then counselled about three CHC methods: combined hormonal pill, contraceptive patch, and contraceptive vaginal ring
  - These methods belong to the same category of CHCs, sharing high efficacy,\textsuperscript{1,2} adverse events, contraindications and precautions inherent to ethinyl estradiol and progestogens
  - These methods vary with respect to route and frequency of administration

*Some countries allowed women younger than 18 years

### CHOICE country participation

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>NUMBER OF WOMEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>3250</td>
</tr>
<tr>
<td>Belgium</td>
<td>3250</td>
</tr>
<tr>
<td>Czech/Slovak Rep</td>
<td>1850</td>
</tr>
<tr>
<td>Israel</td>
<td>1850</td>
</tr>
<tr>
<td>Netherlands</td>
<td>3250</td>
</tr>
<tr>
<td>Poland</td>
<td>1850</td>
</tr>
<tr>
<td>Russian Federation*</td>
<td>1850</td>
</tr>
<tr>
<td>Sweden</td>
<td>1850</td>
</tr>
<tr>
<td>Switzerland</td>
<td>1850</td>
</tr>
<tr>
<td>Ukraine</td>
<td>1850</td>
</tr>
</tbody>
</table>

* Moscow/Petersburg
Survey objectives

- Evaluating women’s contraceptive decisions is achieved using a survey

- The objectives of the survey are to assess and compare the use rates of CHCs before and after the counselling
Inclusion flow chart

**Woman who consults for contraception**

**Log is kept**

**Would she consider a combined hormonal contraceptive method?**

- **Yes**
  - **No**
  - Counseling as usual

**Is she 18-40 years old and does she agree to participate?**

- **Yes**
  - **No**
  - Counseling as usual

**Is she stopping a combined hormonal method? (Does not include switching between pills)**

- **No**
  - **Yes**
  - Counseling as usual

**She qualifies for program**

**Do you think that a combined hormonal contraceptive method is suitable for her?**

- **Yes**
  - **No**
  - Please check if leaflet can be used.
  - Counsel as appropriate.
  - Please ask woman to complete questionnaire.
  - Does she participate in program: yes

**Please do use leaflet**
Please ask woman to complete questionnaire
Does she participate in program: yes
Physician responsibility

- Determines eligibility
- Determines which method the woman thinks she may want prior to receiving additional information. Then, in the same session,
- Counsels about the pill, the transdermal patch and the vaginal ring

After the discussion and a method is chosen, the woman is asked to complete the rest of the questionnaire (in same consultation). This includes which method she has actually chosen, reasons for choosing this method and perceptions about a range of contraceptive methods.
Counselling materials

- Information leaflet provided to each participant
- Presents the range of available hormonal contraceptives (pill, patch, ring)
- Includes reference to alternative progestogen-only methods
- Covers relevant information on each method, including:
  - Efficacy
  - Mode of action
  - Tolerability
  - Risks
  - Frequency of administration
  - How to use the method
  - Other information
CHOICE Project

Preliminary, partial results
## Baseline characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Israel (n=1802)</th>
<th>Austria (n=2478)</th>
<th>Poland (n=1836)</th>
<th>Russia (n=1749)</th>
<th>Sweden (n=1944)</th>
<th>Ukraine (n=1867)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, years, mean (SD)</td>
<td>26.7 (6.0)</td>
<td>24.9 (6.5)</td>
<td>26.8 (5.9)</td>
<td>27.3 (5.7)</td>
<td>22.6 (6.1)</td>
<td>27.4 (5.8)</td>
</tr>
<tr>
<td>Unplanned pregnancies*, n (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>348 (19.4)</td>
<td>252 (10.3)</td>
<td>307 (16.9)</td>
<td>687 (39.8)</td>
<td>401 (20.8)</td>
<td>860 (47.6)</td>
</tr>
<tr>
<td>1</td>
<td>234 (77.7)</td>
<td>206 (86.9)</td>
<td>251 (87.2)</td>
<td>375 (57.1)</td>
<td>275 (71.6)</td>
<td>515 (60.2)</td>
</tr>
<tr>
<td>2</td>
<td>50 (16.6)</td>
<td>27 (11.4)</td>
<td>30 (10.4)</td>
<td>175 (26.6)</td>
<td>79 (20.6)</td>
<td>199 (23.2)</td>
</tr>
<tr>
<td>&gt;2</td>
<td>17 (4.9)</td>
<td>4 (1.7)</td>
<td>7 (2.4)</td>
<td>107 (16.3)</td>
<td>30 (7.8)</td>
<td>142 (16.5)</td>
</tr>
<tr>
<td>Induced abortion, n (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>277 (15.8)</td>
<td>191 (8.1)</td>
<td>1 (100)*</td>
<td>686 (40.1)</td>
<td>325 (17.1)</td>
<td>783 (44.9)</td>
</tr>
<tr>
<td>1</td>
<td>191 (83.0)</td>
<td>154 (84.6)</td>
<td>ND</td>
<td>383 (58.3)</td>
<td>227 (72.3)</td>
<td>444 (57.5)</td>
</tr>
<tr>
<td>2</td>
<td>31 (13.5)</td>
<td>24 (13.2)</td>
<td>ND</td>
<td>173 (26.3)</td>
<td>72 (22.9)</td>
<td>190 (24.6)</td>
</tr>
<tr>
<td>&gt;2</td>
<td>8 (3.4)</td>
<td>4 (2.2)</td>
<td>ND</td>
<td>101 (15.4)</td>
<td>15 (4.8)</td>
<td>138 (17.8)</td>
</tr>
<tr>
<td>Steady relationship with a partner, n (%)</td>
<td>1522 (85.2)</td>
<td>1843 (75.0)</td>
<td>1566 (85.5)</td>
<td>1569 (90.5)</td>
<td>1543 (79.7)</td>
<td>1627 (87.4)</td>
</tr>
<tr>
<td>Gynaecologist, n (%)</td>
<td>145 (100)</td>
<td>199 (99.5)</td>
<td>179 (99.4)</td>
<td>145 (96.7)</td>
<td>9 (4.7)†</td>
<td>120 (99.2)</td>
</tr>
</tbody>
</table>

*All but one value was missing; †Most frequent specialty was Midwife (95.3%); ND=no data
<table>
<thead>
<tr>
<th>Perception</th>
<th>Percent of Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevents pregnancy effectively</td>
<td>42.8</td>
</tr>
<tr>
<td>Many side effects</td>
<td>7.9, 10.4</td>
</tr>
<tr>
<td>Can be dangerous for your health</td>
<td>7.0, 7.9</td>
</tr>
<tr>
<td>Easy to use</td>
<td>29.4, 29.4</td>
</tr>
<tr>
<td>Easy to forget</td>
<td>11.4, 13.6</td>
</tr>
<tr>
<td>Regular menstrual bleeding</td>
<td>32.0, 32.0</td>
</tr>
<tr>
<td>Protects against cancer</td>
<td>11.6, 12.4</td>
</tr>
<tr>
<td>Many women use it</td>
<td>8.7, 6.6</td>
</tr>
</tbody>
</table>

**Percentages:**
- **Vaginal ring:**
- **Patch:**
- **Pill:**

*Women’s perception of methods – Israel*
Intended versus chosen method – Israel

- Women chose the pill less often after counselling compared to before counselling.

- The patch was chosen significantly more often after counselling compared to before.

- The monthly ring was chosen three times as often after counselling compared to before.

Women's intended method before counselling and chosen method after counselling:

*In women with no preconceived idea of their intended method before counselling, the preferred method of their healthcare professional was used.

†P<0.0001; statistical significance of the difference between method chosen and method intended was conducted for the patch and the ring only.
Intended versus chosen method – Austria

Women’s intended method before counselling and chosen method after counselling*

<table>
<thead>
<tr>
<th>Method</th>
<th>Intended (%)</th>
<th>Chosen (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily pill</td>
<td>58.4</td>
<td>57.3</td>
</tr>
<tr>
<td>Weekly patch</td>
<td>6.8</td>
<td>7.8</td>
</tr>
<tr>
<td>Monthly ring</td>
<td>10.4</td>
<td>23.8</td>
</tr>
<tr>
<td>Other method</td>
<td>12.4</td>
<td>7.9</td>
</tr>
<tr>
<td>Not yet decided</td>
<td>12.0</td>
<td>3.2</td>
</tr>
</tbody>
</table>

*In women with no preconceived idea of their intended method before counselling, the preferred method of their healthcare professional was used; †P=0.001; ‡P<0.0001

Statistical significance of the difference between method chosen and method intended was conducted for the patch and the ring only.
Intended versus chosen method – Poland

Women’s intended method before counselling and chosen method after counselling*

<table>
<thead>
<tr>
<th>Method</th>
<th>Intended</th>
<th>Chosen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily pill</td>
<td>55.9</td>
<td>52.3</td>
</tr>
<tr>
<td>Weekly patch</td>
<td>9.6</td>
<td>14.7</td>
</tr>
<tr>
<td>Monthly ring</td>
<td>8.5</td>
<td>25.1</td>
</tr>
<tr>
<td>Other method</td>
<td>5.9</td>
<td>3.9</td>
</tr>
<tr>
<td>Not yet decided</td>
<td>20.2</td>
<td>4.0</td>
</tr>
</tbody>
</table>

*In women with no preconceived idea of their intended method before counselling, the preferred method of their healthcare professional was used; †P<0.0001

Statistical significance of the difference between method chosen and method intended was conducted for the patch and the ring only.
Intended versus chosen method – Russia

Women’s intended method before counselling and chosen method after counselling*

*In women with no preconceived idea of their intended method before counselling, the preferred method of their healthcare professional was used; †P<0.0001

Statistical significance of the difference between method chosen and method intended was conducted for the patch and the ring only.
Intended versus chosen method – Sweden

Women’s intended method before counselling and chosen method after counselling*

*In women with no preconceived idea of their intended method before counselling, the preferred method of their healthcare professional was used; †P<0.0001

Statistical significance of the difference between method chosen and method intended was conducted for the patch and the ring only
Intended versus chosen method – Ukraine

Women’s intended method before counselling and chosen method after counselling*

*In women with no preconceived idea of their intended method before counselling, the preferred method of their healthcare professional was used; †*P* < 0.0001

Statistical significance of the difference between method chosen and method intended was conducted for the patch and the ring only.
<table>
<thead>
<tr>
<th>Method</th>
<th>Reasons for choosing method*</th>
<th>Reasons for not choosing other methods*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pill</strong></td>
<td>• Convenience &lt;br&gt; • Easy to use &lt;br&gt; • Regular menstrual bleeding &lt;br&gt; • I am used to it &lt;br&gt; • Relief from menstrual pain</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Not discrete, visible &lt;br&gt; • Can fall off &lt;br&gt; • Don’t know anybody who uses it</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ring</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pill</td>
</tr>
<tr>
<td><strong>Patch</strong></td>
<td>• Weekly use &lt;br&gt; • Will not forget it &lt;br&gt; • Convenience &lt;br&gt; • Easy to use &lt;br&gt; • Recommended by doctor &lt;br&gt; • Regular menstrual bleeding &lt;br&gt; • Low chance of side effects</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pill</td>
</tr>
<tr>
<td><strong>Ring</strong></td>
<td>• Monthly use &lt;br&gt; • Will not forget it &lt;br&gt; • Convenience &lt;br&gt; • Easy to use &lt;br&gt; • Recommended by my doctor &lt;br&gt; • Steady low hormone levels &lt;br&gt; • Regular menstrual bleeding &lt;br&gt; • Low chance of side effects</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Patch</td>
</tr>
</tbody>
</table>

*Reasons cited by >40% of women*
Conclusions

- High rates of unplanned pregnancies and abortions indicate the need for counselling in order to maximize compliance to contraception.
- In most countries:
  - Pill use declined after counselling.
  - For women not yet decided before counselling, there was an increase in patch and ring choice after counselling.
- Counselling appeared to influence women's contraceptive decisions, with substantially more women selecting the vaginal ring after than before counselling.
- Not forgetting, ease of use, and regular menstrual bleeding were reasons for choosing the ring or patch.
- Daily use and the possibility to forget were reasons cited for not choosing the pill.
Making informed CHOICES in contraception: The role and importance of counselling
Summary
The importance of contraceptive counselling

- High incidence of unintended pregnancy worldwide including in high-resource countries
- Structured and/or motivational counselling can be particularly successful for both appropriate contraceptive choice and adherence
- Counselling should occur on a regular/periodic basis to re-assess appropriate choice and acceptability
REMO

- Noncompliant contraceptive behavior can effect emotional well-being, work, relationships and increase use of emergency contraception
- Despite recognition of problems associated with inconsistent use, women tended to prefer their currently used contraceptive method

TEAM

- Primary determinants of contraceptive choice
  - Convenience
  - Frequency of use
  - Lower probability of inadvertent omission
The IMAGYNE study showed that one-third of women changed initial choice of contraception after counselling.

Detailed information on available CHC methods provided through counselling may significantly affect women’s choice of contraceptive.

Appropriate counselling may help women to make more appropriate choices, with potential impact on adherence and compliance rates.
CHOICE preliminary results are consistent:

- Pill use declined after counselling in most countries.
- Counselling appears to influence women's contraceptive decisions, with substantially more women selecting the vaginal ring after than before counselling.
- Daily use and the possibility to forget were reasons cited for not choosing the pill.
- Not forgetting, ease of use, and regular menstrual bleeding were reasons for choosing the ring or patch.

Making informed CHOICES in contraception: The role and importance of counselling