Project Coordinator

Miguel Oliveira da Silva, Portugal

Steering committee

Kitty Bloemenkamp, The Netherlands

Philip Hannaford, United Kingdom

Jørn Olsen, Denmark

MarleenTemmerman, Belgium

Other participants

Agustín Montes Martinez, Spain

Adriano Cattaneo, Italy

Katarina Bremme, Sweden

Leo Auerbach, Austria

Elina Hemminki, Finland

Mika Gissler, Finland

Evangelos Makrakis, Greece

Albrecht Jahn, Germany

Mary Short, Ireland

Marie-Heléne Bouvier-Colle, France

Reproductive Health

Reprostat

Indicators in the European Union

Final Technical Report

August 2003

Instituto de Medicina Preventiva
Faculdade de Medicina de Lisboa

EU Community Health Monitoring Programm

Reproductive Health Indicators in the European Union

Project co-financed by the European Comission

(September 2001 - August 2003)

Health Monitoring Programme

(Director: J. Pereira Miguel)

August 2003

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Contents

Introduction

REPROSTAT aims to provide health professionals, policy makers, researchers and health service user groups with reproductive health indicators that they can use to monitor and evaluate reproductive health and associated health care in the European Union. At present, many reproductive health indicators used by different EU Member States are inconsistent, preventing useful comparisons between countries. Information about some key indicators is missing is some Member States. By harmonising the definition for each indicator, REPROSTAT hopes to facilitate the comparison of reproductive health services in different Member States.

REPROSTAT is part of the Health Monitoring Program of the European Commission. The Health Monitoring Program's objectives are to contribute to the establishment of a community wide health monitoring system, by proposing a comprehensive set of health indicators within the European Community Health Indicator (ECHI) framework and European Union Public Health Information Network (EUPHIN). Reproductive health was one of the Program's priority areas for the year 2001 and is again a priority area for the year 2003.

According to the International Conference on Population and Development, reproductive health "implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when, and how often to do so. It also includes sexual health, the purpose of which is the enhancement of life and personal relationships, and not merely counselling and care related to reproductive and sexually transmitted diseases" (Cairo, 1994, paragraph 7.2).

Thus, reproductive health has relevance to events in early life; events that may have short-or long-term consequences for an individual, and implications for their offspring. As well as important physical and psychological dimensions, reproductive health has important social dimensions, such as issues related to unwanted pregnancy, induced abortions, abuse and violence.

Reproductive health is important for the well being of the people in the EU. It is also important because of concerns about the ageing population of Europe and declining fertility rates. Never before in history have birth rates fallen so far, so fast, so low and for so long (1).

Health indicators can be used to monitor needs for health care, and evaluate the effectiveness and impact of health care programs. Our set of indicators is likely to be used for the:

1) development of policies and programs aimed at improving the sexual and reproductive health of EU citizens;
2) regular monitoring and evaluation of progress, quality and effectiveness of the reproductive health programs within Europe;
3) making of comparisons among EU Member States;
4) making of comparisons between different groups within Member States.

In order to avoid making monitoring an unrealistic burden, each indicator should be relevant and useful.

Relevant in the sense that they represent important Public Health problems within Reproductive Health and useful in the sense that they provide cues for interventions or research. Whenever possible, indicators should be based on readily available information. When such routine information is not available, other data sources, such as specific health surveys, are required.

The group readily acknowledges the excellent work that the World Health Organisation (WHO) has already done in the development of reproductive health indica-

tors (2). We have had open dialogue and co-operation with WHO from the start of REPROSTAT. The WHO list of 17 indicators was examined and used, when appropriate, to develop our set of indicators. It was recognised, however, that EU Member States have specific needs, and that new issues are emerging in reproductive health, requiring the development of a new set of indicators for Europe.

The group recognised the importance of making sure that there was no duplication between different sets of indicators within the Health Monitoring Program. Reproductive health indicators could include those related to the screening and occurrence of reproductive cancers, as well as indicators of perinatal health.

Sometimes the same indicator can be used for different purposes. For example, information about births after assisted reproductive technology can be used as a reproductive health indicator (as a proxy measure for infertility and infertility services) or as a perinatal health indicator (as a measure of risk factors related to perinatal outcomes and antenatal care).

Discussion was held between the chairs of different indicator development groups in order to decide where an indicator best set within the overall Health Monitoring Program.

When a comprehensive picture of reproductive health is to be measured, indicators from PERISTAT (perinatal health) and EUROCHIP (cancer) should be considered.

As a result of the communication between project coordinators covering adjacent fields, we have excluded from our list indicators related to reproductive organ cancers and those related to the perinatal period (from conception to delivery). Annex 1 gives details of the PERISTAT indicators (see: http://europeristat.aphp.fr).

The group also recognised the importance of making sure that our range of indicators covered the sexual health of both sexes. We rapidly realised that this ambition would fail if we relied only on existing indicators and data sources. Some of the new indicators proposed, therefore, require major development before they can be implemented.

An initial set of proposed indicators was discussed among the 14 project participants (plus WHO and EU representatives) between September 2001 and June 2002. Between July and December 2002, an open invitation to review the proposed list was issued to over 200 experts in reproductive and sexual health based within the 15 E.U. Member States. A specific web site (http://reprostat.com) was created and this resulted in a number of suggestions and criticisms, which have been incorporated into the final set of indicators.

This report contains the final recommended minimum list of indicators that the 15 EU countries can use to monitor reproductive health. The list of indicators may need to be modified slightly when the number of Member States expands in May 2004. The list may also develop over time to include new indicators for issues such as erectile dysfunction and sexual health and violence during pregnancy.

For each indicator we have used a structure similar to that used by WHO (2). Thus for each indicator there is an operational definition, justification for selection, criteria for selection, data sources and (when appropriate) references.

Our list of indicators consists of 13 core indicators, one recommended indicator and 4 others that need future development (Table 1 and 2).

Core indicators are defined as those essential for monitoring reproductive health and related health care.

The recommended indicator is considered desirable for a more complete assessment of reproductive health across Member States.

Indicators for future development represent important aspects of reproductive health and associated health care, but require further work before they can be operationalised in Member States.

Regarding sexual health and sexual violence, these are areas that have been identified as important aspects of reproductive health. No definite proposal for indicators is given, but a request for future research and development.

We have shown which indicators are based upon data that already exists in many countries as part of routine health care services (secondary data) and those based on data generated from specific health surveys (primary data).

Some Member States currently have health information systems that include surveys that include questions covering several of our proposed indicators, but methods of data collection differ (see as examples, Italian and German situations - annex 2 and 3).

These methods need to be harmonised.

Limits and biases of indicators depend on the quality of data collected in each Member State.

We propose that a specific part of the EU-wide general health survey scheduled for 2006 be devoted to sexual health.

We wish to develop further the questions that might be added to that, and subsequent, general health surveys. In addition, we believe there is a strong need for a youth survey that includes questions about reproductive health, undertaken at regular intervals.

All surveys should include a representative sample of individuals from the country or region studied. If the surveys are region specific, we suggest that the regions be comparable in size and urbanisation.

We do not expect the reproductive health indicators be collected every time that the surveys are done, if there is a short interval between surveys. Some reproductive health indicators could be collected at, say, 5 year intervals.

1-Diczfalusy E. The aging male and developed countries in the 21st century. The Aging Male 2002;5:139-146

2-WHO/RHT/ 97.27 Reproductive Health indicators for global monitoring: report of an inter-agency technical meeting.

REPROSTAT list of indicators • Table 1 (areas)

Areas	Core	Recommend	Areas for future development
STI / Sexual Behaviour	1- HIV (pregnant women) 2- Chlamyda prevalence 3- Condom use (last high-risk sex contact)		
Youth	4- Median age at first intercourse 5- Contraceptive use at first intercourse 6- Teenage birth rates		
Contraception Fertility & Reproduction	7- Contraceptive Prevalence 8- Maternal age at 1st childbirth 9- Total fertility rate 10- % trying to get pregnant 11- % deliveries after ART		
Abortion	12- Induced abortions		
Emerging areas	13- Hysterectomy rate	14- Urinary incontinence	15- Menopause hormone therapy 16- Ecrectile dysfunction 17- Sexual health and wellbeing 18- Violence during pregnancy

Note: Perinatal and reproductive cancer areas are covered by other projects.

REPROSTAT list of indicators • Table 2 (categories)

Category	Core	Recommended	Future development
Individual health	1- HIV (pregant women) 2- Chlamydia prevalence 6- Teenage birth rates	14- Urinary incontinence	16- Erectile dysfunction 17- Sexual health and wellbeing
Risk factors	3- Condom use (last high-risk sex contact)		
Population characteristics and/or Risk factors	4- Median age at first intercourse 5- Contraceptive use at first intercourse 7- Contraceptive prevalence 8- Maternal age at 1st childbirth 9- Total fertility rate 10- % trying to get pregnant 11- % deliveries after ART 12- Induced abortions		18- Violence during pregnancy
Health care services	13- Hysterectomy rate		15- Menopause hormone therapy

Note: Perinatal and reproductive cancer areas are covered by other projects.

SOURCES OF DATA

Data will come from three different sources:

a) administrative data
b) youth surveys
c) general health surveys

We expect the following indicators to stem from:

a) Indicators 1,6, 8,9,11,12,13
b) Indicators 2,3,4,5 (15-19 years old)
c) Indicators 7,10,12,13,14,15,16,17,18

Indicators 16, 17, 18 will require a special design that could be incorporated into the Health Survey. The indicators have to be developed when the conditions for such a design is agreed upon. An option could be to offer a self administered and anonymous questionnaire at the end of the survey to be filled out in privacy and to be returned by mail in sealed envelops to the survey centre.

Indicator 1:

1a • Acceptance of HIV testing among pregnant women
1b • HIV seroprevalence among HIV tested pregnant women (all ages)

Operational definition

Percentage of pregnant women attending antenatal care who accept to be screened for HIV (1a), and the percentage of these who were found HIV seropositive (1b).

Justification for selection

HIV seroprevalence in pregnant women is a useful indicator to measure prevalence rates in the heterosexual population and trends over time in different Member States. Limitations are the likely operational complexity of measuring the indicator in some countries, and the inherent biases involved in sampling only pregnant women.

Criteria for selection

- **Useful** – it is impossible to have a perfect HIV indicator. HIV seroprevalence in pregnant women is perhaps the best obtainable proxy of HIV trends in the general population. The indicator is, however, subject to bias because of exclusion of men and non-pregnant women. A further limitation is the general low risk of HIV in pregnant women in most of actual Member States, and the risk of selection bias among those who refuse to be tested.
- **Robust** - relatively large sample sizes (minimum of 3000 individuals) are needed to ensure adequate precision of the estimates.
- **Ethical** - data collection should be through individual serological screening. Offering medical adequate care is essential when the test is positive.
- **Representative** - depends on the representativeness of the sample used for the total population.
- **Understandable** - if applied properly according to definitions and methodology.

Data sources

From laboratories performing routine tests in pregnant women, or national HIV/AIDS data collection systems based on the same primary source.

The data are available in antenatal care in some countries. In most Member States blood is obtained from pregnant women for at least one or several occasions.

References

Adapted from WHO/RHT/HRP/97.26 (Monitoring Reproductive Health)

Indicator 2:
Chlamydia prevalence

Operational definition

Prevalence of chlamydia positive persons (male and females) within a youth survey selected for testing between 15 to 19 years old, tested by a NAAT (nucleic acid amplification technique) in urine (v.g. LCR - lygase chain reaction - or PCR - polimerase chain reaction).

Justification for selection

Chlamydia infection is the most common sexually transmitted bacterial disease in USA and in most Member States. Chlamydia infection can be associated with long-term complications, such as pelvic inflammatory disease (PID), ectopic pregnancy and infertility.

A high-quality randomised trial demonstrated that screening and treating at-risk women could reduce PID incidence by more than 50%.

Criteria for selection

- **Useful** - represents an important Public Health problem where treatment is available.
- **Robust** - a minimum of 1,000 individuals is needed in order to ensure adequate statistical precision if the expected prevalence is between 4 and 10%.
- **Ethical** - if easy access to effective treatment and follow up is available.
- **Representative** - if the testing is accepted by most of the invited.
- **Understandable** - easy to understand.

Data sources

Through urinary LCR or PCR assays.

Varies by country. We propose to use the recommended youth survey to collect the information.

References

Atkins D. First new screening recommendations from the third US Preventive Services Task Force BMJ USA 2001;1:187-190

Brito de Sá A et al. Genital infection by Chlamydia trachomatis in Lisbon: prevalence and risk markers. Family Practice 2002; 19 (4): 362-364

Scholes D. et al. Prevention of PID by screening for cervical chlamydia infection. N Engl J Med 1996;334:1362-1366

Indicator 3:
Reported condom use at last higher risk sex

Operational definition

The percent of respondents who reported high-risk sex, defined as having had penetrative sex with a non-marital, non-cohabiting partner in the last 12 months, of all respondents reporting sexual activity in the last 12 months (15-19 years old).

Numerator: The number of respondents who reported having had penetrative sex with a non-marital, non-cohabiting partner in the last 12 months using a condom.

Denominator: Total number of respondents who report having had penetrative high-risk sex in the last 12 months.

Justification for selection

This indicator has been used in several surveys and it has been selected by UNAIDS as core indicator. It is included in the millennium indicators.

Criteria for selection

- **Useful** - good measure of risk behaviour. Appropriate for needs assessment and evaluation of interventions related to the reduction of high-risk behaviour. Can be stratified for age and sex.
- **Robust** - the indicator replies on self-reported practice and suffers from reporting bias problems like all survey derived indicators on sexual behaviour. However, there is no alternative to self-reported data.
- **Ethical** - like all indicators derived from population surveys, confidentiality must be guaranteed. The related questions may be perceived as inappropriate in specific communities.
- **Representative** - depends on the representativeness of the sample.
- **Understandable** - easy to understand.

Data sources

From youth health surveys.

Youth surveys are available in some Member States, but specific questions should be written.

References

http://millenniumindicators.un.org/unsd/mi/mi_series_results.asp?rowID=709

http://www.cpc.unc.edu/measure/publications/bulletins/bulletin2/article3.pdf

Indicator 4:
Median age at first intercourse

Operational definition

Sex specific proportions of youth with experience of penetrative sex by age (15 to 19 years).

Justification for selection

The indicator is straightforward and captures trends in sexual activity among young people and related vulnerability of unwanted side effects such as STDs.

Criteria for selection

- **Useful** - good measure of timing and trends of the start of sexual activity. Appropriate for needs assessment and identification of target groups for sex education.
- **Robust** - the indicator relies on self-reported practise and suffers from reporting bias (and lack of recall) problems like all surveys on sexual behaviour. However there is no alternative to self reported data.
- **Ethical** - like all indicators derived from population surveys, confidentiality must be guaranteed. The related questions may be perceived as inappropriate in specific communities.
- **Representative** - good if based upon properly sampled survey.
- **Understandable** - easy to understand.

Data sources

From youth health surveys.
Specific questions need to be developed for the Youth Survey.

References

http://www.measuredhs.com/hivdata/ind_detl.cfm?ind_id=56&prog_area_id=9
http://www.cehip.org/apheo/indicators/pages/indicators/ind06a01.html)

Indicator 5:
Proportion of contraceptive use at first intercourse

Operational definition

The number of respondents reporting contraceptive use * at the first penetrative sex, among those who had penetrative sex in the age group of 15 to 19 years.

Justification for selection

To estimate the proportion of those not using contraception at first penetrative sex and risking unwanted pregnancies in this age group.

Criteria for selection

- **Useful** - for planning sex education. Can be stratified by method.
- **Robust** - depends on sample size and the proportion having had sexual debut in the sample.
- **Ethical** - confidentiality must be guaranteed.
- **Representative** - depends on the representativeness of the sample.
- **Understandable** - easy if the participation rates are high in the surveys.

Data sources

Youth health surveys.
Specific questions need to be developed for the questionnaire.

References

http://www.measuredhs.com/hivdata/ind_detl.cfm?ind_id=56&prog_area_id=9
http://www.cehip.org/apheo/indicators/pages/indicators/ind06a01.html)

*Contraceptive methods include female and male sterilisation, injectable, oral, subdermal hormones, intrauterine devices and systems, diaphragms, spermicides and condoms, natural family planning, lactational amenorrhea and coitus interruptus.

Indicator 6:
Age-specific birth rates in teenagers

Operational definition

The number of births in women aged less than 20 years (at delivery) per 1000 women of the same age by one-year interval.

Justification for selection

Teenage pregnancy can be associated with adverse health and social outcomes.
A low teenage pregnancy rate is desirable.
Interventions to reduce teenage pregnancy rates are in progress.
Data are already available in most countries and can be easily analysed.

Criteria for selection

- **Useful** - to set priorities for health of teenagers, to develop and modify policies and strategies (most useful if stated in one-year age intervals). Usefulness would be improved if the rates are stratified for different subgroups of the population.
- **Robust** - birth data from routine statistics are fairly complete and accurate in the EU, all countries should use the same definition, i.e. age at delivery, not age at conception.
- **Ethical** - no figures should be produced which may identify individuals.
- **Representative** - as miscarriages and induced abortions are not included, and vary between countries, delivery rates may not be a reliable and consistent indicator of pregnancy rates.
- **Understandable** - easy to understand for policy makers and experts in public health.

Data sources:

* Routine birth registers.
* Population census.

References

Council of Europe collects and publishes birth rates among women aged 15-19 years in Europe
http://www.coe.int/t/e/social_cohesion/population/demographic_year_book/

Indicator 7:
Contraceptive Prevalence

Operational definition

Percentage of women of reproductive age (15-49) who are using (or whose partner is using) a contraceptive method* at a particular point in time

Justification for selection

Complementary to the Total Fertility Rate (indicator 9).
Effective utilisation is mediated by many factors-cognitive (knowledge), economic, accessibility, reimbursement policies, quality of services.

Criteria for selection

- **Useful** - as an intermediate measure of contraception use, more useful if information by method is available about choice, appropriateness and compliance; with use of the methods the indicator should be given for the population at large and subgroup.
- **Robust** - can be made more specific by confining to women at risk of pregnancy.
- **Ethical** - if privacy is respected.
- **Representative** - depends on the representativeness of the sample.
- **Understandable** - needs a clear definition of contraceptive methods.

Data sources

Population-based health surveys using standard questions.

References

Adapted from WHO 97.26, Annex 5

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*Contraceptive methods include female and male sterilisation, injectable, oral, subdermal hormones, intrauterine devices and systems, diaphragms, spermicides and condoms, natural family planning, lactational amenorrhea and coitus interruptus.

Indicator 8:
Maternal age at first childbirth

Operational definition

Age of women at the birth of their first child, expressed as mean and median age.

Justification for selection

Increasing age at first childbirth, as seen in most European countries, is associated with adverse reproductive health outcomes.

Since fecundity is a function of age, the starting age of childbearing will indicate not only change in expected fertility rates but also expected need for fertility treatment.

Criteria for selection

- **Useful** - for planning of reproductive health services and social policies. Since the distribution of maternal age at first childbirth is skewed, two measures (mean and median) are needed and should be specified when reported.
- **Robust** - data from routine statistics are fairly complete and accurate in the EU.
- **Ethical** - no problems are foreseen if privacy is respected.
- **Representative**- not applicable.
- **Understandable** - easy to understand.
  The use of maternal age distribution by five-year age groups (less than 20, 20-24, 25-29, 30-34, 35-39, 40-44, 45 or more) is even more informative.

Data sources

The data will be available in all countries with valid and updated populations statistics.
Vital statistics.
Routine birth registers.
Council of Europe - The demographic situation in Europe.

References

Annual publication by Council of Europe. Recent demographic developments in Europe. Strasbourg, Council of Europe Publishing.
http://www.coe.int/t/e/social_cohesion/population/demographic_year-book/

Indicator 9:
Total Fertility Rate

Operational definition

Total number of children a woman would have by the end of her reproductive period if she experienced the currently prevailing age-specific fertility rates throughout her childbearing life.

Justification for selection

Needed for planning reproductive health services and social policy development.
Complementary indicator of contraceptive prevalence.

Criteria for selection

- **Useful** - requires the calculation of age specific fertility rates (ASFR)-the number of live births occurring to women within a specific age range per thousand women in that age range. ASFR can be calculated for specific sub groups of the population.
- **Robust** - the measure reflects social and cultural changes in society in addition to the biological capacity of the population to reproduce.
- **Ethical** - no special problems.
- **Representative** - valid only as hypothetical measure of expected total number of births per women since it assumes constant ASFRs over time.
- **Understandable** - it uses the term fertility as understood by demographers. It is a measure of livebirths not of conceptions; ambiguity remains over inclusion of livebirths only.

Data sources

Routine statistics.
Population census.

References

WHO 97.26, Annex 5
Council of Europe
WHO - Health for All database
OECD Health Data
The data will be available in all Member States with valid and updated statistics.

Indicator 10:
Proportion of women trying to get pregnant for one year or more

Operational definition

Percentage of women of reproductive age (15-49) who have tried to get pregnant for one year or more among those trying to conceive at the time of the survey.

Justification for selection

There are concerns that subfertilty is increasing in some European countries, perhaps as long-term sequelae of sexually transmitted infections (STIs), decreased sperm quality, older age at starting to get pregnant and other factors affecting conception rates.

Subfertility has important emotional, social, health and economical consequences.

Many European countries use a one-year waiting time before initiating treatment.

Criteria for selection

- **Useful** - is a measure of reproductive health related to a couple's biological capacity to reproduce. Usefulness will be improved if age and parity specific figures can be provided.
- **Robust** - provides a point prevalence measure of the "failure to conceive" in 15-49 year old women, but requires a large sample size. The measure will be influenced by the prevalence of effective contraception, help seeking behavior and provision of reproductive health care services in the population. If there are differences in these influences between countries or over time interpretation of data may be difficult.
- **Ethical** - provided privacy is protected and consent is obtained.
- **Representative** - depends on representativeness of sample used.
- **Understandable** - provided that the limitations of the measure indicated above are recognised.

Data sources

Health surveys using standardised and validated questions (which have to be developed).

References

European Society for Human Reproduction and Embriology (ESHRE) collection of European wide statistics (published in Human Reproduction).

Indicator 11:
Proportion of deliveries associated with assisted reproductive technology (ART)

Operational definition

The number of women delivering live or stillborn babies after ART divided by the total number of women delivering live or stillborn babies.

At present ART includes IVF (in vitro fertilization, including ICSI, MESA and TESE), GIFT (gamete intrafallopian transfer), ZIFT (zygote intrafallopian transfer) and frozen embryo transfer after these treatments. The indicator does not include treatments in which only sperms are handled (i.e., artificial insemination or intrauterine insemination) or procedures in which a woman takes drugs only to stimulate egg production without the intention of having eggs retrieved.

Justification for selection

An increasing number of women are receiving ART. This may reflect an increasing acceptability, accessibility and availability of ART, as well as possible increase in infertility.

More multiple births are reported after ART treatment which will lead to more preterm births, and as a consequence more perinatal and maternal morbidity and mortality.

Criteria for selection

- **Useful** - reflects changes in fecundity and treatment options and availability; usefulness will be improved if also disaggregated by: a) type of ART b) indication for ART c) age group of woman.
- **Robust** - the indicator requires adequate and complete registration of deliveries associated with ART. ART includes all fertility treatments in which both egg and sperm are handled.
- **Ethical** - provided privacy is protected and consent is obtained.
- **Representative** - the indicator will be representative as long as all ART treatments and all life and still births are recorded in the registers.
- **Understandable** -when clear definitions are used, the indicator will be understandable. The indicator does not give information about the total frequency of pregnancies associated with ART or their outcome. This is not an indicator of the success rate of ART.

Data sources

From birth registers, or linkage of birth and ART registers.

This indicator will require changes in birth registration policies in some Member States.

References

European Society for Human Reproduction and Embriology (ESHRE) collection of European wide statistics (published in Human Reproduction).

Indicator 12:
Frequency of induced abortions

Operational definition

12a) Induced abortion rate (induced abortions per 1000 women aged 15-49 years).
12b) Induced abortion ratio to live births(induced abortions per 1000 livebirths).

Justification for selection

Induced abortions are social and public heath problem, and they also reflect maternal mortality and morbidity rate.
Provide information about the use of effective contraceptive methods.
Complementary to Contraception Prevalence (indicator 7).

Criteria for selection

- **Useful** - usefulness would be improved if the rates are stratified by age. When interpreting the available data it is essential to know the legal status of induced abortion in each Member State.
- **Robust** - routine data are not always available in some Member States. Moreover, it is likely to be underestimated in countries where registration is not legally required. Selfreported information is also usually inaccurate.
- **Ethical** - provided privacy is protected.
- **Representative** - likely to be underreported in some Member States.
- **Understandable** - easy to understand.

Data sources

Routine statistics in Member States where data collection is of good quality.
Population-based surveys will complete them.

References

http://www.qualitymeasures.ahrq.gov/summary/summary.aspx?view_id=1&doc_id=234
For 12 b) World Health Organisation, Regional office for Europe. Health for All - database. http://hfadb.who.dk/hfa/

Indicator 13:
Proportion of women with hysterectomy

Operational definition

Proportion of women with hysterectomy at the age of 50 years.

Justification for selection

High hysterectomy rates are a matter of concern in some European countries. Indications vary widely, are not always evidence based and may suggest overmedicalisation of reproductive health.

Criteria for selection

- **Useful** - usefulness will be improved if data on indications are available. Information will be more useful if given by age group, even above the age of 50 years.
- **Robust** - depends on the completeness of registration of surgical interventions (if indicator is derived from hospital data) or accuracy of recall (survey).
- **Ethical** - provided privacy is protected.
- **Representative** - may be affected by completeness of registers.
- **Understandable** - easy to understand.

Data sources

Population based survey.
Data on hospital treatments and/or interventions can be used to gather comparable data.

References

http://www.qualitymeasures.ahrq.gov/summary/summary.aspx?view_id=18doc_id=234

Indicator 14:
Proportion of women with urinary incontinence

Operational definition

Proportion of women in a community survey reporting themselves to have urinary incontinence in at least one episode per month in the three previous months (40-49 years), by five-year age groups.

Justification for selection

Symptoms of urinary incontinence are common and frequently not disclosed to health care services. Incontinence can have a severe impact on quality of life, although there is poor correlation between severity of symptoms and quality of life. Short-term symptoms are more likely to reflect temporary problems such as urinary infections, whereas as long-term problems are likely to reflect anatomical problems. An increasing variety of interventions are available for treating the symptom. Information about prevalence of the symptom is not readily available from routine sources and would need to be collected in a specific health survey.

Criteria for selection

- **Useful** - indicator of possible need for health services. Usefulness is improved if age-and parity-specific prevalence rates are available. Usefulness is improved if information about duration of symptoms and quality of life is also available.
- **Robust** - the questions used need to have proven validity, reliability and responsiveness when used in the different Member States.
- **Ethical** - provided privacy is protected ansd based on consent.
- **Representative** - depends on the representativeness of the women answering the relevant questions.
- **Understandable** - valid, reliable and responsive self-completed questionnaires about urinary symptoms have been devised.

Data sources

From community survey.

Self-completed questionnaire is the recommended method of data collection. The number of questions needs to be small.

Data are not yet available from all Member States.

References

Donovan JL, Badia X, Corcos J, Gotoh M, Kelleher C, Naughton M, Shaw C, Lukas B. Symptom and quality of life assessment. In: Incontinence: 2nd International Consultation on Incontinence, Anonymous Plymouth:Health Publication Ltd, 2002, p. 267-316

Indicator 15:
Proportion of women using peri and post-menopausal hormone medication

Operational definition

Proportion of women aged 45-59 years using peri and post-menopausal hormone medication (previously called hormone replacement therapy) at the point in time of the survey, also by five-year age groups.

Hormone therapy includes oestrogens (with or without progestogens) and selective oestrogen receptor modulators.

Justification for selection

The use of hormone replacement therapy shows huge variations between regions and countries reflecting 1) the perceived health benefits by women and by caregivers, 2) economic factors in relation to health and health-seeking behaviour, and 3) guidelines from policymakers and professional societies. Measuring differences between Member States and trends in time may provide evidence of overmedicalisation.

Technical criteria

- **Useful** - improved if age-specific prevalence and duration of use is available.
- **Robust** - valid only if specific standardised questionnaires are used.
- **Ethical** - provided privacy is protected.
- **Representative** - depends on the representativeness of the women answering the relevant questions in the survey. National measures may hide wide differentials.
- **Understandable** - interpretation may be affected by changes in duration of hormone use over time.

Data sources

Results of the PERISTAT project

Category	Core	Recommended	Recommended further development needed
Neonatal health	C1-Fetal mortality rate by gestational age, birthweight plurality C2-Neonatal mortality rate by gestational age, birthweight plurality C3-Infant mortality rate by gestational age, birthweight plurality C4-Birthweight distribution by vital status, gestational age plurality C5-Gestational age distribution by vital status, plurality	R1-Prevalence of selected congenital anomalies Down's syndrome Neural tube defects R2-Distribution of APGAR score at 5 minutes	F1-Causes of perinatal death F2-Prevalence of cerebral palsy F3-Prevalence of hypoxic--ischemic encephalopathy
Maternal health	C6-Maternal mortality ratio by age, mode of delivery	R3-Maternal mortality by cause of death	F4-Prevalence of severe maternal morbidity F5-Prevalence of trauma to the perineum F6-Prevalence of faecal incontinence F7-Postpartum depression
Population characteristics or risk factors	C7- Multiple birth rate by number of fetuses C8-Distribution of maternal age C9-Distribution of parity	R4-Percentage of women who smoke during pregnancy R5-Distribution of mothers' education	F8-Distribution of mothers' country of origin
Health care services	C10-Distribution of births by mode of delivery by parity, plurality, fetal presentation, previous CS	R6-Percentage of all births following fertility treatment R7-Distribution of timing of 1st antenatal visit R8-Distribution of births by mode of onset of labor R9-Distribution of place of birth R10-Percentage of infants breast-feeding at birth R11-Percentage of very preterm births delivered in units without a NICU	F9-Indicator of support to women F10-Indicator of maternal satisfaction F11-births attended by midwives F12 -births without medical intervention

See http://europeristat.aphp.fr

Reproductive Health Indicators in ITALY

D'Anna Little/Adriano Cattaneo
Unit for Health Services Research and International Health, IRCCS Burlo Garofolo, Trieste

The search for reproductive health indicators in Italy was conducted using numerous online resources, personal communications and library referencing. The presentation of results is presented in tabular form for each indicator along with data sources and references. Personal communications are noted if used as a source of data. The end of the report includes 2 summary tables. The first table summarizes if (for selected indicators) computerized health statistics information systems are available in each of Italy's 20 regions along with contact information. The last table briefly summarizes the availability of information on each of the indicators with latest values.

Below are some brief notes on each of the indicators grouped according to subject area and/or data source.

Indicators 1,2,3

The data on sexually transmitted infections and sexual behaviour are collected through a national sentinel surveillance system. The data is collected in 11 sites nationally and transmitted to the National Operating Centre for AIDS. Data available online is currently routinely reported and updated only for AIDS cases and not for HIV infection or Chlamydia. The latter information is available by request. In addition, several regions have independently begun collection on AIDS cases and HIV infection. These regions are listed at the end of the report.

Indicators 4,5

The primary sources of data on adolescent sexual behaviours come from 3 national surveys all conducted in the late 1990's. None of the studies include data collected in the exact age group (15-19) as specified by the indicators. The National Health Institute conducted one of these studies and it involved students age 14-16. The second study by the Research Institute IARD involved a sample of college age students 18-32 and the last from Dr. De Sandre out of the University of Padova included ages between 20 and 49 years (cohort study). The data on the latter 2 surveys is available in published volumes. Lastly, there was a small, unpublished study found by searching the University of Padova database that includes university students age 18-26. This study reports primarily the median age at first sexual intercourse and not prevalence.

Indicators 6, 8, 9, 12

Data on these indicators are readily available from the National Statistics Institute (ISTAT).

Indicator 7, 10, 11

Data on these indicators primarily found in a series of studies done by the European Study Group on Infertility and Subfecundity.

Indicators 13, 14

The Italian Menopause Project Study group has published several articles on use of hormone replacement therapy (HRT) including information on "ever use" of HRT. In addition, a National Health Institute research project has set as a priority epidemiological surveillance of utilization of certain categories of medications including hormone replacement therapy in postmenopausal women. As a result, a national database was established in 2002 that collects information on drug utilization but the data is aggregate and does not include age information. Several regions have initiated computerized prescription databases that can recall information on prescriptions filled for HRT. This information is based on individual data and therefore includes age information. Of course, the information gained from this data cannot accurately predict actual or current use of the medication.

Friuli Venezia Giulia reports information on hysterectomy taken from hospital discharge information on its website. Many other regions collect and report data on diagnosis related groups (DRG). However, the information reported does not include specific information on hysterectomy. This data is most likely available upon request.

Indicator 15, 16

Data on these indicators readily available in published reports. In particular, the Italian incontinence study group has published numerous reports including prevalence of incontinence in sample surveys.

Indicators 17, 18

Data on these indicators in Italy not found in MEDLINE or National Statistics databases.

Indicator 1a :

Acceptance of HIV testing among pregnant women		Comments
Routine national collection	No	
Data Source	Regional sentinel surveillance	Study conducted by the Lazio Regional Health Authority[8]
Numerator/Denominator	# of pregnant women admitted to hospital at end of pregnancy consenting to testing/total number of women admitted at end of pregnancy	Regardless of outcome
Completeness	50% of all women in Lazio at end of pregnancy	
Latest values/year available	97.1% of 218, 357 subjects admitted at end of pregnancy	1989-94

Indicator 1b :

HIV seroprevalence among HIV tested pregnant women (all ages)		Comments
Routine national collection	No	
Data Source	Regional sentinel surveillance National AIDS register	Coordinated by the National AIDS Centre (COA)1.Regional surveil lance systems exist in the following regions: Lazio, Veneto, Friuli Venezia Giulia, Piemonte, provinces of Modena, Trento.
Completeness	Varies by region	
Similar statistic	Lazio study conducted on HIV prevalence at the end of pregnancy.[8]	Previously used as an estimate of HIV prevalence in women of reproductive age, regardless of pregnancy outcome.
Coverage	50% of all women in Lazio at end of pregnancy 1989-94.	
Numerator/Denominator	# pregnant women HIV Positive # of women accepting screening	
Values	0.27%	1989-94

Note: Perinatal and reproductive cancer areas are covered by other ongoing projects.

1: Micheletto F, Piovesan C, Gallo G. • Sensibilità e rappresentatività del sistema di sorveglianza dell'HIV in Veneto. Bolletino Epidemiologico Nazionale. Notiziario ISS. 2001 Dic 14 (12).

2: Menegon T, Baldo V, Cristofoletti M, Grella P, Carletti M, Trivello R. • Seroprevalence of HIV infection among pregnant women in the Veneto region (north-east Italy). • Public Health. 2000 Nov;114(6):477-9.

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4: D'Ubaldo C, Vucetich A, Brancatella R, Della Torre M, Codispoti I, Pardi G, Ippolito G, Puro V. • [Frequency and practice of prescribing prenatal HIV tests during pregnancy] • Minerva Ginecol. 1999 Sep;51(9):323-30. Italian.

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8: Abeni DD, Porta D, Perucci CA. Deliveries, abortion and HIV-1 infection in Rome, 1989-1994. The Lazio AIDS Collaborative Group. Eur J Epidemiol. 1997 Jun;13(4):373-8.

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10: Ippolito G, Stegagno M, Girardi E, Costa F, Rava L, Aebischer ML, Guzzanti - E. Temporal and geographical trends of anti-HIV-1 anti bodies screening among newborns in Italy, 1990-1993. Italian Collaborative Study Group for HIV Prevalence in Newborns.J Acquir Immune Defic Syndr Hum Retrovirol. 1996 May 1;12(1):63-8.

Indicator 2 :

Chlamydia prevalence (ages 15-19)		Comments
Routine national collection	No	
Data Source AIDS	Italian STD surveillance system[6]	Coordinated by the National Centre (COA) since 1991. Data currently collected in 11 centres nationally.*
Numerator/Denominator	# pos Chlamydia/adolescents diagnosed with STD	ELISA
Completeness	Sentinel	
Latest values/year available	Males 5% Females 6.4%	Study based on data taken from national STD surveillancesystem.[4] Age <20. Data collected from 9/90-12/97

**Personal communication - Massimo Giuliani: giuliani@iss.it - National AIDS Centre (COA)- 06 4938 7209/7211/7213*
Piemont, Liguria, Lombardy(3), Friuli Venezia, Giulia, Emilia Romagna, Tuscany, Latium, Puglia, Sardinia

1: Latino MA, Lanza A, Bello L, Leotta E, Peretto M, Spagnolo E, Girardi E, Tersiev P, Febo G, Grio R. [Cervico-vaginal infections. Study of a population in the Turin area] • Minerva Ginecol. 2002 Aug; 54(4): 309-16. Italian.

2: Wilson JS, Honey E, Templeton A, Paavonen J, Mardh PA, Stray-Pedersen B. • A systematic review of the prevalence of Chlamydia trachomatis among European women. • Hum Reprod Update. 2002 Jul-Aug;8(4):385-94. Review.

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4: Giuliani M, Suligoi B, et al. [Sexually transmitted disease and HIV infection in Italian adolescents] • Minerva Ginecol. 2000 Dec; 52(Suppl 1): 14-18. Italian.

5: Bavastrelli M, Midulla M, Rossi D, Salzano M, Calzolari E, Midulla C, et al. • Sexually active adolescents and young adults: a high risk group for Chlamydia trachomatis infection. • J Trav Med 1998 Jun; 5(2):57-60.

6: Giuliani M, Suligoi B, et al. • Sentinel surveillance of sexually transmitted diseases in Italy. • Euro Surveillance Communicable Diseases Bulletin. 1998 Jan/June; 3(6):55-70.

Indicator 3 :

Reported condom use at last higher risk sex (ages 15-19)		Comments
Routine national collection	No	
Data Source	National STD surveillance system[2]	
Completeness	Sentinel	
Similar statistic	% of persons with STDs (all ages) who report occasionally using condoms in the last 6 months prior to diagnosis	National STD surveillance study[3]
Latest values/year available	25.3%	1/91-12/96
Similar statistic	%persons (ages 14-16) always, sometimes or never using condoms/all sexually active	1998 Survey of 6532 students (ages 14-16) in middle and high school in 11 Italian regions[1]
Latest values/year available	57% always 32% sometimes 11% never	1998
Similar statistic	% persons(age <20) with STD who report using condoms at least sometimes	National STD surveillance study[2]
Latest values/year available	Males 41.4% Females 20.5% Data from 1990-97	

**Personal communication - Massimo Giuliani: National AIDS Centre 06 4938 7209/7211/7213*

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2: Giuliani M, Suligoi B, et al. • [Sexually transmitted disease and HIV infection in Italian adolescents] • Minerva Ginecol. 2000 Dec; 52(Suppl 1): 14-18. Italian.

3: Giuliani M, Suligoi B, et al. • Sentinel surveillance of sexually transmitted diseases in Italy. Euro Surveillance Communicable Diseases Bulletin. 1998 Jan/June; 3(6):55-70.

4: AIDS TASK FORCE - ISTITUTO SUPERIORE DI SANITÀ. AIDS Related knowledge and behaviors among teenagers Italy, 1990. MMWR 1991, 40 (13): 214-221.

Indicator 4 :

Proportion of youth with experience of penetrative sex (ages 15-19)		Comments
Routinely Collected	No	
Data Source	National sample survey	Survey of 6532 students (ages 14-16) in middle and high school in 11 Italian regions[5]
Numerator/Denominator	# students reporting penetrative sex/total number of students in sample	
Latest values/year available	18.3%	1998

**Personal communication - Massimo Giuliani: National AIDS Centre 06 4938 7209/7211/7213*

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3: Giuliani M, Suligoi B, et al. Sentinel surveillance of sexually transmitted diseases in Italy. • Euro Surveillance Communicable Diseases Bulletin. 1998 Jan/June; 3(6):55-70.
4: AIDS TASK FORCE - ISTITUTO SUPERIORE DI SANITÀ. AIDS Related knowledge and behaviors among teenagers - Italy, 1990. MMWR 1991, 40 (13): 214-221.

Indicator 5 :

Proportion of contraceptive use at first intercourse (age 15-19)		Comments
Routine national collection	No	
Data Source	National sample survey	Survey of 6532 students (ages 14-16) in middle and high school in 11 Italian regions.[5]
Numerator/Denominator	#sexually active who used some form of contraception/ #sexually active	
Latest values/year available	89%	1998
Similar statistic	75%	1997 Female cohort born in 1975 reporting contraceptive use at first intercourse.12, 13

**Personal communications: Angela Spinelli- 06 83060380 - spinelli@asplazio.it cell 338 4156436 Serena Donati - serena.donati@iss.it- 06 49902116*

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9: Grandolfo ME, Donati S. (1999). I consultori familiari e le strategie di prevenzione. Annali dell'Istituto Superiore di Sanità, 35 (2): 297-299.
10: Buzzi C., 1998, Giovani, affettività, sessualità. L'amore tra i giovani in un'indagine IARD. Il Mulino, Bologna.
11: Castiglioni M. and Dalla Zuanna G., 1997, L'inizio delle relazioni sessuali. in Bargagli M. and Saraceno C. (eds.), Lo stato delle famiglie in Italia, Il Mulino, Bologna.
12: Presidenza del Consiglio dei Ministri, Dipartimento per gli Affari Sociali. Un volto o una maschera? I percorsi di costruzione dell'identità. Rapporto1997 sulla condizione dell'infanzia e dell'adolescenza in Italia. Firenze: Istituto degli Innocenti di Firenze. 1997.
13: De Sandre P., Ongaro F., Rettaroli R., and Salvini S., 1997, Matrimonio e figli: tra rinvio e rinuncia. Il Mulino, Bologna.

Indicator 6 :

Age-specific birth rates in teenagers		Comments
Routine national collection	Yes	
Data Source	National Statistics Center	Birth register data
Numerator/Denominator	Number of births to women <18/1000 women in same age group	Calculated based on 1997 female population in age group <18
Latest values/year available	0.54	Latest data -1996
Similar statistic	<18 - 2,742 <20 - 11,153	Absolute numbers
Similar statistic	5.3	Live births to minors/1000 live births - 1996[2]
Similar statistic	0.3%	% live births to women <18[2]
Completeness	National	

1: Nascite:Caratteristiche Demografiche e Sociali 1996: Annuario #5-2000 Italian Statistical Yearbook - 2002.
2: EUROSTAT. Database New Cronos. 2000 Edition.

Indicator 7 :

Contraceptive Prevalence Rate (CPR)		Comments
Routine national collection	No	
Data Source women	National survey 1991-1993	Based on sample of 2,729 in Northern and Southern Italy[2]
Numerator/Denominator	Number of women reporting contraceptive use/women at risk of pregnancy (age 25-44)	
Latest values/year available	82.1% in North 91.2% in South	1991-1993

1: Ciolli P, Parlavecchio E, Onorati E, Russo P. [Contraception in teenagers. Medico legal implication] Minerva Ginecol. 2002 Apr;54(2):189-92. Italian.
2: Spinelli A, Talamanca IF, Lauria L. - Patterns of contraceptive use in 5 European countries. European Study Group on Infertility and Subfecundity. - Am J Public Health. 2000 Sep;90(9):1403-8.
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9: Monteforte CA, Nava C, Carnevale GP, Bagliani F, D'Errico G. - Contraceptive choice in Vigevano, Italy, 1983-1993. Adv Contracept. 1995 Sep;11(3):263-71.
10: Spinelli A, Grandolfo M, Donati S, Medda E. - Family planning in Italy. - Adv Contracept. 1993 Jun;9(2):153-60.

Indicator 8 :

Mean age at first childbirth		Comments
Routine national collection	Yes	
Data Source	National Statistics Center[1]	
Numerator/Denominator	n/a	Average age at childbearing weighted with specific fertility measures
Latest values/year available	28.2	1996
Completeness	National	

1. Nascite:Caratteristiche Demografiche e Sociali 1996: Annuario #5-2000 Italian Statistical Yearbook — 2002

Indicator 9 :

Total Fertility Rate		Comments
Routine national collection	Yes	since 1955
Data Source	National Statistics Center (ISTAT)[1]	
Latest values/year available	1.2 1.3	1999 2002[2]
Completeness	National	

1. Italian Statistical Abstract - 2000. Printed 10/2002
2. Population Reference Bureau - World Data Sheet 2002

Indicator 10 :

Percentage of women who report trying to get pregnant for one year or more		Comments
Routine national collection	No	
Data Source	EU study on Infertility and subfecundity[5]	Based on data from 622 women in 4 Italian hospitals
Numerator/Denominator	#women not pregnant after trying to conceive for >12 months/total number of women in the study	
Latest values/year available	11.25%	1993
Similar Statistic	19% North 10% South	% women with time to pregnancy (TTP) > 12 months based on 1999 study on regional differences in TTP.[2] Survey conducted in 1992

Indicator 11:

Percentage of pregnancies after assisted reproductive technology (ART)		Comments
Routine national collection	No	

1: Nappi L, Loverro G, Carriero C, Depalo R, Greco P, Vicino M, Selvaggi L. -Assisted reproductive technology in Italy: juridical and ethical considerations. J Assist Reprod Genet. 2000 Aug;17(7):400-3. No abstract available.
2: Juul S, Karmaus W, Olsen J. - Regional differences in waiting time to pregnancy: pregnancy-based surveys fromDenmark, France, Germany, Italy and Sweden. The European Infertility and Subfecundity Study Group. Hum Reprod. 1999 May;14(5):1250-4.
3: Parazzini F, Chatenoud L, Di Cintio E, La Vecchia C, Benzi G, Fedele L. - Alcohol consumption is not related to fertility in Italian women. BMJ. 1999 Feb 6;318(7180):397. No abstract available.
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Indicator 12a:

Proportion of induced abortions per 1000 women age 15-49 (gross abortion rate)		Comments
Routine national collection	Yes	Collected since 1980
Data Source	Hospital reports of abortions	Form completed by physician National Statistics Center[1]
Numerator/Denominator	Abortions per 1000 women of childbearing age 15-49	
Completeness	National	
Latest values/year available	9.7	1999

Indicator 12b:

Proportion of induced abortions per 1000 live births (abortion ratio)		Comments
Routine national collection Data Source	Yes Hospital reports of abortions	since 1980 Form completed by physician National Statistics Center[1]
Numerator/Denominator	Abortions per 1000 live births	
Completeness	National	
Latest values/year available	260.5	1999

1. National Statistics Center: Health Statistics Yearbook 1999-published 1999

Indicator 13:

Hysterectomy rate		Comments
Routine national collection	No	
Data Source	Hospital discharge registers	Routine collection in FVG[1]
Numerator/Denominator	Standardized rate/10000 regional population	
Completeness	Regional	
Latest values/year available	31.99	1998
Similar Statistic	1 in 8 women per year have hysterectomy in Italy[4]	Personal communication Maria Rosa dalla Costa 049 8274030
Similar Statistic	18.3% of women attending menopause clinics throughout Italy	Menopause Project Study Group[3]

1: Friuli Venezia Giulia: Regional information system‡Health indicators at www.sanita.fvg.it
2; Materia E, Rossi L, Spadea T, Cacciani L, Baglio G, Cesaroni G, Arca M, Perucci CA. - Hysterectomy and socioeconomic position in Rome, Italy. (36.7/10000 population) - J Epidemiol Community Health. 2002 Jun;56(6):461-5.
3: Progetto Menopausa Italia Study Group. - Determinants of hysterectomy and oophorectomy in women attending menopause clinics in Italy. - Maturitas. 2000 Jul 31;36(1):19-25.
4: Dalla Costa M. - Hysterectomy: the social problem of an abuse against women. Franco Angeli Editor. Third edition (2002).
5: Parazzini F, La Vecchia C, Negri E, Tozzi L. - Determinants of hysterectomy and oophorectomy in northern Italy. Rev Epidemiol Sante Publique. 1993;41(6):480-6.

Indicator 14:

Proportion of women reporting hormone replacement therapy		Comments
Routine national collection	No	
Data Source in:	Regional pharmacy databases National Utilization Database	Information available by request FVG, Umbria, Lombardia, Emiglia-Romagna. Data available for 2002 from national utilization database by request.*
Completeness	Varies by region	1990-92 Roma (random pop)
Similar statistic	3.8% 2.4%	1994 Umbria (all women) Study on 2 Italian populations age of women 45-74.[5] Most studies report “ever use”.

*Personal communication: Dr. Roberto Raschetti — roras@iss.it — National Health Institute (ISS) - 06 4990 3183.

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Indicator 15:

Reported prevalence of women with urinary incontinence		Comments
Routine national collection	No	
Data Source	Surveys	
Numerator/Denominator	Number of women reporting incontinence in the past year/total number of women age > 40 in survey	Italian Study Group on Incontinence[2]
Latest values/year available	10.2%	2000

1: Parazzini F, Lavezzari M, Arbitani W. - Prevalence of overactive bladder and urinary incontinence. - J Fam Pract. 2002 Dec;51(12):1072-5.
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3: Maggi S, Minicuci N, Langlois J, Pavan M, Enzi G, Crepaldi G. - Prevalence rate of urinary incontinence in community-dwelling elderly individuals: the Veneto study. - J Gerontol A Biol Sci Med Sci. 2001 Jan;56(1):M14-8.
4: Aggazzotti G, Pesce F, Grassi D, Fantuzzi G, Righi E, De Vita D, Santacroce S, Artibani W. - Prevalence of urinary incontinence among institutionalized patients: a cross-sectional epidemiologic study in a midsized city in northern Italy. - Urology. 2000 Aug 1;56(2):245-9.
5: Tediosi F, Parazzini F, Bortolotti A, Garattini L. - The cost of urinary incontinence in Italian women. A cross-sectional study. Gruppo di Studio Incontinenza. Pharmacoeconomics. 2000 Jan;17(1):71-6.
6: Bortolotti A, Bernardini B, Colli E, Di Benedetto P, Giocoli Nacci G, Landoni M, Lavezzari M, Pagliarulo A, Salvatore S, von Heland M, Parazzini F,Artibani W. - Prevalence and risk factors for urinary incontinence in Italy. - Eur Urol. 2000 Jan;37(1):30-5.

Indicator 16:

Erectile dysfunction (ED)		Comments
Routine national collection	No	
Data Source	Community surveys	Cross national survey involving 600 men in each country[1] ages 40-70.1
Numerator/Denominator	#men reporting ED/total number of men in survey age 40-70	
Latest values/year available	17%	2002

1: Nicolosi A, Moreira ED Jr, Shirai M, Bin Mohd Tambi MI, Glasser DB. - Epidemiology of erectile dysfunction in four countries: cross-national study of the prevalence and correlates of erectile dysfunction. Urology. 2003 Jan;61(1):201-6.
3: Parazzini F, Menchini Fabris F, Bortolotti A, Calabro A, Chatenoud L, Colli E, Landoni M, Lavezzari M, Turchi P, Sessa A, Mirone V. Frequency and determinants of erectile dysfunction in Italy. Eur Urol. 2000 Jan;37(1):43-9.
4: McKinlay JB, Digruttolo L, Glasser D, Sweeney M, Shirai MF - International differences in the epidemiology of male erectile dysfunction. Int J Clin Pract Suppl. 1999 Jun;102:35. No abstract available.

Indicator 17:

Self-reported sexual health status		Comments
Routine national collection	No	
Data Source		

Indicator 18:

Sexual violence during pregnancy		Comments
Routine national collection	No	
Data Source		

Regional Information Systems

REGION	HIV	STD	HYSTER	PHARM	COMMENTS	CONTACTS
Abruzzo						**Osservatorio epidemiologico, mobilità e controllo qualità** **Responsabile:** dott.sa Capodicasa **Tel.:** 085 7672638 • **Fax:** 085 7672637 **Email:** oer@regione.abruzzo.it
Basilicata					Non specific DRG data	**Osservatorio Epidemiologico Regionale** **Responsabile:** dott.sa Gabriella Cauzillo **Tel.:** 0971 668839 **Fax:** 0971 668900 **E mail:** gacauzil@regione.basilicata.it **Indirizzo web:** www.regione.basilicata.it/Sanita/
Calabria						**Asl 4 Cosenza. Servizio di Epidemiologia e Biostatistica Sanitaria** **Responsabile:** dott. Sconza **Tel.:** 0984 893583 • **Fax:** 0984 893581 **Email:** epidem@interfree.it epidemiologia@interfree.it
Campania						**Struttura Operativa Analisi dei Bisogni di Salute e Monitoraggio dei Livellidi Assistenza** **Responsabile:** dott. Sergio Lodato **Tel.:** 081 6060230 **Fax:** 081 6060246 **Email:** slodato@arsan.campania.it **Indirizzo web:** www.arsan.campania.it
Emilia Romagna					[a]Modena	**Azienda Usl Modena Servizio di Epidemiologia** **Responsabile:** dott. Carlo Alberto Goldoni **Tel.:** 059/435175/435144 **Fax:** 059 435157 **Email:** c.goldoni@ausl.mo.it g.degirolamo@ausl.mo.it
Friuli Venezia Giulia						**Agenzia Regionale della SanitàArea della programmazione attuativa, dell'osservatorio epidemiologico e della qualità** **Responsabile:** dott. Giancarlo Miglio **Tel.:** 0432 549111 **Fax:** 0432 549280 **E mail:** agenzia.fvg@sanita.fvg.it **Indirizzo web:** www.sanita.fvg.it
Lazio						**Agenzia Regionale Sanità** **Responsabile:** prof. Franco Splendore **Tel.:** 06 83060301 **Fax:** 06 83060302 **Email:** segrdir@asplazio.it **Indirizzo web:** www.asplazio.it
Liguria						**Università di Genova, Dipartimento Scienze della Salute, Sezione Igiene e Medicina Preventiva, Laboratorio di Epidemiologia Prevenzione delle Malattie da Infezione** **Responsabili:** prof. Giancarlo Icardi, prof. Pietro Crovari, prof. Roberto Gasparini **Tel.:** 010 3538523/3538530 /3538505 **Fax:** 010 3538407 **E mail:** icardi@unige.it • crovari@unige.it • gasparini@unige.it **Indirizzo web:** www.dissal.unige.it

Regional Information Systems

REGION	HIV	STD	HYSTER	PHARM	COMMENTS	CONTACTS
Lombardia						**Osservatorio epidemiologico e flussi informative** **Responsabile:** dott. Carlo Zocchetti **Tel.:** 02 67653277 **Fax:** 02 67653328 **Email:** carlo_zocchetti@regione.lombardia.it **Indirizzo web:** www.sanita.regione.lombardia.it
Marche					Zip file DRG	**Agenzia per il Servizi Sanitari Regionali Rete Epidemiologica Marche (REM)** **Responsabile:** dott.sa Giovanna Valentina De Giacomi **Tel.:** 071 8064071 (responsabile REM) 071 8064057 (segreteria dell'Agenzia Sanitaria) 071 8064063 **Fax:** 071 8064056 **Email:** rem@regione.marche.it gdg@regione.marche.it cristina.mancini@regione.marche.it Dzenana.Hazurovic@regione.marche.it **Indirizzo web:** www.ars.marche.it
Molise						**Assessorato alle Politiche Sanitarie Settore Piani Sanitari** **Responsabile:** dott. Giuseppe Santoro **Tel.:** 0874 429378 **Fax:** 0874 429358 **Email:** ass.molise@sanita.it
Piemonte					[b] Proposed-in planning stages	**Dr. Donatella Tiberti** **Tel.:**+390131307842 **Fax:**+390131307847 **Email:** tibertidonatella@asl20.piemonte.it **Indirizzo web:** www.asl20.piemonte.it/SEPI/index.htm **Servizio Sovranazionale di Epidemiologia-SSEPI-ASL 5 Hospital Discharge Information** **Tel:** 011 40188221 **Fax:** 011 40188201 **Email:** sepi@epi.piemonte.it
Puglia						**Università degli Studi di Bari Osservatorio Epidemiologico Regionale • Dipartimento di Medicina Interna e Medicina Pubblica - Sezione di Igiene** **Director:** prof. Salvatore Barbuti **Tel.:** 080 5478481 **Fax:** 080 5478472 **Email:** staff@oerpuglia.uniba.it **Indirizzo web:** www.oerpuglia.uniba.it **Referente:** dott.sa Cinzia Germinario **Email:** c.germinario@igiene.uniba.it
Sardegna						**Osservatorio Epidemiologico Regionale** **Responsabile:** sig. Roberto Massacci **Tel.:** 070 6066806 **Fax:** 070 6066815 **Email:** sanita.oer@regione.sardegna.it **Indirizzo web:** www.regione.sardegna.it/sanita/index.html
Sicilia						**Dipartimento Osservatorio Epidemiologico Regionale Director:** dott. Antonio Mira **Tel.:** 091 6969318 **Fax:** 091 6969333 **Email:** gruppo01_doe@regione.sicilia.it **Indirizzo web:** www.regione.sicilia.it /funzionigramma /d1056.htm#G1767

Regional Information Systems

REGION	HIV	STD	HYSTER	PHARM	COMMENTS	CONTACTS
Toscana						**Osservatorio di Epidemiologia** **Director:** dott.sa Eva Buiatti **Tel.:** 055-4624326 **Fax:** 055-4624330 **Email:** elena.marchini@arsanita.toscana.it
Azienda						**Ospedaliera Senese Unità Operativa di Epidemiologia** **Director:** prof. Nicola Nante **Tel.:** 0577 585892 **Fax:** 0577 586172 **E mail:** nante@unisi.it **Indirizzo web:** www.unisi.it / ricerca /it/igiene/laboratori/u_epi.htm
Trentino						**Trento Ripartizione Sanità**
Alto Adige						**dell'Assessorato alla Sanità e agli Affari Sociali - Provincia Autonoma di Bolzano Osservatorio Epidemiologico Provinciale** **Director:** dott.sa Carla Melani **Tel:** 0471411567/411561**Fax:**0471411579 **Email:** carla.melani@provincia.bz.itanto nio.fanolla@provincia.bz.it **Indirizzo web:** www.provincia.bz.it **Osservatorio Epidemiologico Trento** **Director:** dott. Silvano Piffer **Tel.:** 0461 364639 **Fax:** 0461 364645 **E mail:** piffer.s@mail.apss.tn.it
Umbria						**Osservatorio Epidemiologico** **Director:** Paola Casucci **Tel.:** 0755045205/5045238 **Fax:** 075 5045569 **Email:** saniosservatorio@regione.umbria.it
Valle d'Aosta						**Regione Autonoma Valle D'Aosta. Assessorato Sanità Salute e Politiche Sociali • Osservatorio Regionale Epidemiologico e per le Politiche Sociali (OREPS)** **Responsabile:** dott.sa Patrizia Vittori **Tel.:** 0165 274238 **Fax:** 0165 238914 **E mail:** p.vittori@regione.vda.it **Indirizzo web del servizio:** www.regione.vda.it
Veneto					Zip file-hospital interventions available	**Servizio di Epidemiologia e Sanità Pubblica** **Responsabile:** dott. Giovanni Gallo **Tel.:** 041 2791354 **Fax:** 041 2791355 **E mail:** giovanni.gallo@regione.veneto.it federica.michieletto@regione.veneto.it **Indirizzo web:** www.prevenzioneveneto.com

Reproductive Health Indicators in Germany

Albrecht Jahn, University of Heidelberg

Availability of data related to the suggested REPROSTAT Indicators from Germany

Indicator 1:
HIV seroprevalence among pregnant women

This indicator is defined as the percentage of pregnant women attending antenatal care, and screened for HIV, who were found HIV-positive. In Germany, however, only data on HIV incidence in the total population is available. That is explained by the fact that pregnant women are not screened systematically during ANC.

According to the Robert Koch Institute, it is estimated that during the last years in Germany about 200 HIV infected pregnant women delivered a baby each year, a number that is currently increasing. To determine the HIV-status early in pregnancy voluntary HIV-testing of all pregnant women is recommended in Germany.

In 2000, 586 AIDS cases were reported in Germany, 138 (23,5%) were women (Epidemiologisches Bulletin, RKI, 2000). Vertical transmission (mother to child) is < 1 % of cases (RKI, 2000) and <0.2 per 1000 live births in Germany are HIV positive (Law MG et al. Time trends in HIV infection among pregnant women in Europe. AIDS 1998 Jan 22;12 (2): 211-6.

There are no data on sero-prevalence, but on incidence based on a system of compulsory reporting of positive tests. There are about 2000 sero-conversions per year.

Indicator 2:
Chlamydia prevalence

Chlamydia prevalence is the percentage of positive persons (male and female) under 25 years old tested through NAAT (nucleic acid amplification technique).

According to the WHO (Global prevalence and incidence of selected curable STD, 2001), chlamydia prevalence in Italy is 2,7% and 8% in Iceland. In Germany there are data from Berlin stating a sero prevalence of 3,6% and an adjusted prevalence of 2,9% for women 20-39 in Germany in general (Koch J, Kirschner K, et al, 2002, RKI: http://www.rki.de/INFEKT/INFEPIFO/I972PVCT.HTM).

Indicator 3:
Reported condom use at last higher risk sex

The percentage of respondents who have had sex with a non-marital, non-cohabiting partner in the last 12 months of all respondents reporting sexual activity in the last 12 months.

Data on Germany was not available. Condom use at last higher risk sex data in other EU countries, i.e. France, Spain and UK, can be found in the Millenium Indicators, UN Statistics Division.

Indicator 4:
Mean age at first intercourse

This indicator is defined as the age by which one half of young people aged 15-24 have had penetrative sex (median age). Note that the age group used in Germany is 14-17 years, however as experience with penetrative sex is > 60%, the median can still be calculated.

Data available shows that the median age at first intercourse in Germany is 16.5 years (Jugendsexualität, Bundeszentrale für gesundheitliche Aufklärung, 2001).

Indicator 5:
Contraceptive use at first intercourse

We did not find data on this indicator, but data related to protection at first and latest intercourse.

.According to the Report on Sexuality and Young people (Bundeszentrale für gesundheitliche Aufklärung, 2001) 63% use condom the first time. However, 16% (girls) and 21% (boys) do not use any reliable method, 12% (girls) and 15% (boys) do not use any protection.

Indicator 6:
Age-specific birth rates in teenagers

The number of births in women aged (at delivery) less than 20 years per 1000 women of the same age (by 1 or 5 year intervals) in a given year.

According to UNICEF (A league of teenage births in rich nations, 2001) the birth rate in German teenagers aged 15 to 19 years is 13.1/1000.

Indicator 7:
Contraceptive Prevalence Rate (CPR)

CPR is defined as the percentage of women of reproductive age (15-49) who are using (or whose partner is using) a contraceptive method at a particular point in time. Contraceptive methods include female and male sterilisation, injectable, oral, subdermal hormones, intrauterine devices and systems, diaphragms, spermicides and condoms, natural family planning, lactational amenorrhea and coitus interruptus.

In a 1992 governmental census in Germany, it was estimated that 76% of married women were using a contraceptive method (http://www.census.gov/ipc). More recent data shows that 72% of women between 15-49 use modern methods, while 75% use all methods (IPPF, UNICEF, 2002)

Indicator 8:
Mean age at first child birth

That is the average age of women at the birth of their first child. In Germany it is 29 years (National Perinatal Register Hessen 2000)

Indicator 9:
Total Fertility Rate

This indicator is defined as the total number of children a woman would have by the end of her reproductive period if she experienced the currently prevailing age-specific fertility rates throughout her childbearing life.

According to IPPF (2002) the fertility rate in Germany is 1.3.

Indicator 10:
Percentage of women at risk of pregnancy who report trying to get pregnant for one year or more

That is the percentage of women of reproductive age (15-49) at risk of pregnancy (not pregnant, sexually active, non-contraception and non-lactating) who report trying to get pregnant for one year or more.

Unfortunately, we could not find any survey showing this data for Germany.

Indicator 11:
Percentage of pregnancies after assisted reproductive technology (ART)

This indicator is defined as the number of women delivering live or stillborn babies after ART divided by the total number of women delivering live or stillborn babies.

This indicator was not found in the German context. Need to look at birth registers, etc.?

We found other related data to ART, notably, delivery rate per initiated ART cycle (0 14%) and multiple birth rate in ART treatment cases (= 24%).

Indicator 12:
Induced abortions

This is the ratio of induced abortions per 1000 women of reproductive age (15-49 years old). For Germany, we found that the ratio was 8/1000 (2000/01 from www.svsss-uspda.ch) and 3.6/1000 in women 15-19 years (www.advocatesforyouth.org)

Indicator 13:
Hysterectomy Rate

Age standardised rate for hysterectomies provided to inpatients in acute care hospitals per 100.000 women age 20 and above. Data for Germany is available at the Frauengesundheitsbericht Bremen, 2001 (p. 60) starting from 6% in the age group 40-44 years to 40% in the age group 65 to 69 years.

Indicator 14:
Proportion of women reporting hormone replacement therapy

This indicator is defined as the percentage of women (age 50-70) interviewed in a community survey who are using hormone replacement therapy at a particular point in time.

For Germany, we could not find any recent data from community surveys. Related data from 1995 showed 23% of women between 45 and 64 years used HRT (Mueller JE, Doring A et al , 2002: Maturitas 43 (2) 95)

Indicator 15:
Reported prevalence of women with urinary incontinence

Percentage of women in a community survey reporting themselves to have urinary incontinence in the previous month. In Germany, 40 % of women after menopause suffer urinary incontinence (Gynacol. and Geburtshilfliche Rundsch, 2002; see abstract).

Indicator	Value of indicator plus data source/year	Related data (source/year)
1) HIV prevalence among pregnant women (15-40)	* In 2000, 586 HIV cases were reported in Germany, 138 (23,5%) were women (Epidemiologisches Bulletin, RKI, 2000). Regular data collection	*<0.2 per 1000 livebirths in Germany (1998: see abstract) *20% of HIV cases in Germany are women (Koch, 2000) *< 1% MTCT in Germany (Koch, June 2000) *0,04 % prevalence of HIV in female ages 15-24 (World Development Indicators, World Bank, 1999)
2) Chlamydia prevalence	Chlamydia prevalence in all women 20-39 years: 2,9% in 2001 (Study result, no routine reporting)	*Italy = 2.7 %; Iceland = 8 % (Global prevalence and incidence of selected curable STD, WHO, 2001)
3) Reported condom use at last higher risk sex		*Available data on France, Spain and UK (1990-2001, UN Statistics Division, Millenium Indicators: see table attached)
4) Median age at first intercourse (14-17 years)	16.5 years (Bundeszentrale für gesundheitliche Aufklärung "Jugendsexualität", 2001) Regular data collection from youth survey every 3 years	
5) Median age at first contraceptive use		*63% use condom the first time (Jugendsexualität, 2001)
6) Age specific birth rates in teenies (15 to 19 years)	13.1/1000 (UNICEF "A league of teenage births in rich nations", 2001)	
7) Contraceptive Prevalence Rate (CPR)	72% women bw 15-49 modern methods (IPPF) 75% use all methods (IPPF, UNICEF, 2002)	*76% of married women (www.census.gov/ipc, 1992)
8) Mean age at first child birth	29 years (National Perinatal Register, Hessen) routine data collection	
9) Total fertility rate	1.3 (IPPF, 2002)	
10) % of women at risk of pregnancy who report trying to get pregnant for one year or +		No data
11) % of pregnancies after assisted reproductive technology (ART)		*Delivery rate per initiated cycle = 14% ("The economic impact of assisted reproductive technologies", 1997 in www.nature.com, Oct 2002 *24% multiple birth rate in ART treatment cases
12) Induced abortion ration (per 1000 women aged 15-49	8/1000 (www.svss-uspda.ch, 2000/2001) also in loegd (Schwangerschaftsabbrüche, Statistik des Stat. Bundesamt)	*3.6/1000 women 15-19 (www.advocatesforyouth.org)
13) Hysterectomy Rates (age 40-69)	Frauengesunheitsbericht Bremen, 2001(page 52) 40% hysterectomies in age group 65 to 69	
14) Proportion of women reporting hormone replacement therapy (HRT)	23% in women aged 45-64 years in 1995 Study result, no routine data	
15) Reported prevalence of women with urinary incontinence	40% in women after menopause (Gynacol. Geburtshilfliche Rundsch, 2002)	
16) Erectile Disfunction (ED)	19.2% (Cologne Male Survey, 2000) Study result, no routine data	

Participants

Agustín Montes Martínez, Professor
Preventive Medicine and Public Health Departement
Rua San Francisco, 15782 University of Santiago de Compostela.
Spain
mrmontes@usc.es

Kitty WM Bloemenkamp, MD, PhD
Leiden University Medical Centre, Dept of Obstetrics and Gynaecology and Reproductive Medicine. Building 1 K6-76. PO Box 9600, 2300 RC Leiden
The Netherlands
kwm.bloemenkamp@planet.nl

Philip Hannaford MD, PhD
University of Aberdeen, Dept. of General Practice and Primary Care.
Foresthill Health Centre, Westburn Road, Aberdeen AB25 2 AY, Scotland.
United Kingdom
p.hannaford@abdn.ac.uk

Albrecht Jahn, MD, PhD
Dept of Tropical Hygiene and Public Health
INF 324, D 69120, Heidelberg.
Germany
albrecht.jahn@urz.uni-heidelberg.de

Marleen Temmerman, MD, PhD
University Hospital
De Pintelaan 185 P3, B-9000, Gent.
Belgium
marleen.temmerman@rug.ac.be

Evangelos Makrakis, MD, PhD
24. P. Bakogianni st, Vrilissia, Athens 15235
Greece
emakrakis@hotmail.com

Mary Short, MD
Rock Court Medical Centre, 40, Main St., Blackrock, Co.Dublin.
Ireland
mashort@eircom.net

Joseph M. Kasonde, MD
WHO / EURO
International Health Consultant
24 Les Tilias, Chemin de Planche Brûlée
01210 Ferney Voltaire.
France
kasonde@wanadoo.fr

Representing:
Gunta Lazdane, MD, PhD
Acting Regional Adviser,
Reproductive Health and Research
WHO Regional Office for Europe, Copenhagen
gla@who.dk

Marie-Helène Bouvier-Colle, MD
INSERM. Unité de Recherches Épidémiologiques sur la Santé des Femmes - U 149, 122, Bd de Port-Royal. F- 75014 Paris.
France
bouvier@cochin.inserm.fr

Adriano Cattaneo, MD
Istituto per l'Infanzia
Via dell'Istria 65/1, 34137, Trieste.
Tel: 39 040 3785 236, Fax: 39 040 3785 402
Italia
cattaneo@burlo.trieste.it

Jorn Olsen MD, Professor,
Head of the Danish Epidemiology Science Centre
Vennelyst Boulevard 6, DK - 8000 Aarhus C.
Denmark
jo@soci.dk

Katarina Bremme MD, PhD
Departement of Woman and Child Health, Karolinska Institutet
Dept of Obstetrics and Gynecology, Karolinska Hospital, S 17176, Stockholm.
Sweden
Katarina.bremme@ks.se

Leo Auerbach, MD, PhD
Dept of Special Gynecology, University Vienna, Medical School
Waerhinger Guertel 18-20, 1090 Vienna
Austria
leo.auerbach@univie.ac.at

Elina Hemminki, Professor
Stakes (National Research and Development Centre for Welfare and Health).
PL 220, 00531 Helsinki
Finland
elina.hemminki@stakes.fi

Mika Gissler, Dr.
Stakes (National Research and Development Centre for Welfare and Health).
PL 220, 00531 Helsinki
Finland
mika.gissler@stakes.fi

Miguel Oliveira da Silva, MD, PhD
Instituto de Medicina Preventiva
Faculdade de Medicina de Lisboa
Av. Prof. Egas Moniz, 1649-028 Lisboa
Portugal
mos@netcabo.pt

Projecto Gráfico e Produção - g.Cb
Praceta do Comércio nº5 - Alfragide
Tel.: 21472 42 91