

# PATTERNS OF TEENAGE PREGNANCY IN ESTONIA OVER THE LAST THREE DECADES

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No conflict of interests to declare

BACKGROUND

# Republic of Estonia

1.3 million inhabitants

13 146 live births 2021

Independent republic since 1918

Soviet and German occupation 1940-1991

very closed society for 50 years

Regained independence in 1991

Parliamentary democracy

EU, NATO member since 2004

World Bank high-income economy  
country 2006

≈69% Estonians

≈31% (mainly) Russian-speaking  
minority

datlasbook.com

## Europe



## ESTONIA, SINCE THE BEGINNING OF 1990ies:

- Major **health care reform** (health insurance based on solidarity), **educational reform**
- Introduction of **mandatory sexuality education** lessons to school curricula in 1996
- Network of **youth-friendly sexual health services**, a grass-root initiative
- **Choice and availability of modern contraceptives** (subsidized by the Estonian Health Insurance Fund; emergency contraception over-the-counter)
- **Health care statistics** (Estonian Medical Birth Registry 1992, Estonian Abortion Registry 1994, population based surveys)

# TRENDS IN TEENAGE SEXUAL BEHAVIOUR

- first sexual intercourse **17.5 years among 25-29 y olds** (2015) – decreased **1 year** during the study period
- the higher the educational level by the end of 20ies - the later the first sexual intercourse
- **2/3 18-year-olds** have experienced sexual intercourse (2015)
- Studies starting from **2003** show that **20-22%** of under 16 year olds have experienced sexual intercourse; in **2015** this proportion was **15%** (statistically significant decrease)






## ABORTION LEGISLATION

- abortion on request legal since 1955 up to 12 weeks of pregnancy
- no parental consent for abortion needed for the minors (except in 2009-2015)
- 30% of the Health Insurance price of the abortion paid by woman
- all minors are covered by Health Insurance

RESEARCH ARTICLE



## Abortion: legislation and statistics in Europe

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### ABSTRACT

**Objective:** The Parliamentary Assembly invited the member states of the Council of Europe to 'guarantee women's effective exercise of their right of access to a safe and legal abortion'. While abortion legislation and statistics give an impression of the legislative, cultural, and religious views of the societies and the socio-economic health of the female population, only one study conducted in 2011 looked into the current legislation and trends in terminations of pregnancy in the European Union.

**Materials and Methods:** From January 2017 to December 2018, a group of experts, the authors of the present article, liaised with colleagues practising in 32 European countries to collect data on abortion legislation and statistics using three different questionnaires.

**Results:** The article presents the results of this initiative and compares the status quo and recent trends in abortion legislation and statistics across Europe.

**Conclusions:** The European legislations are still very heterogenous and abortion rates vary widely between countries, confirming that laws do not correlate with abortion rates. This compilation of data, also available on a website ([www.abort-report.eu](http://www.abort-report.eu)), may help to change laws to better meet the needs of women who decided to have an abortion as a solution to the underlying problem of an unwanted pregnancy.

### ARTICLE HISTORY

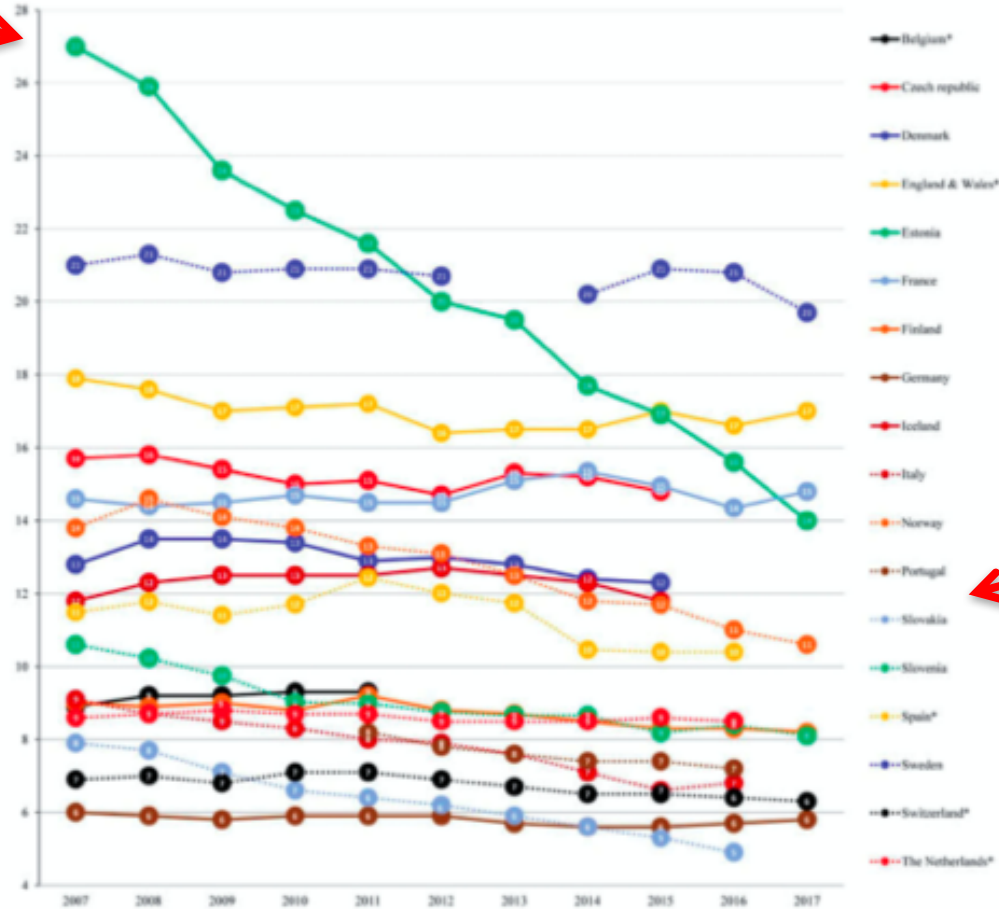
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### KEYWORDS

Abortion; Europe;  
legislation; statistics



1992  
abortion rate 69.6  
(15-49y)



2021  
abortion rate 11.9  
(15-49y)



Figure 4. Abortion rate in women of childbearing age (15–49 years) by European country. x-axis: years; y-axis: abortion rate per 1000 women of childbearing age (15–49 years). \*According to national statistics childbearing age is comprised between 15 and 44 years.

## Adolescent Pregnancy, Birth, and Abortion Rates Across Countries: Levels and Recent Trends



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Article history: Received February 11, 2014; Accepted September 4, 2014

Keywords: Teen pregnancies; Cross-national comparisons; Pregnancy trends; Pregnancy outcomes

### A B S T R A C T

**Purpose:** To examine pregnancy rates and outcomes (births and abortions) among 15- to 19-year olds and 10- to 14-year olds in all countries for which recent information could be obtained and to examine trends since the mid-1990s.

**Methods:** Information was obtained from countries' vital statistics reports and the United Nations Statistics Division for most countries in this study. Alternate sources of information were used if needed and available. We present estimates primarily for 2011 and compare them to estimates published for the mid-1990s.

**Results:** Among the 21 countries with complete statistics, the pregnancy rate among 15- to 19-year olds was the highest in the United States (57 pregnancies per 1,000 females) and the lowest rate was in Switzerland (8). Rates were higher in some former Soviet countries with incomplete statistics; they were the highest in Mexico and Sub-Saharan African countries with available information. Among countries with reliable evidence, the highest rate among 10- to 14-year olds was in Hungary. The proportion of teen pregnancies that ended in abortion ranged from 17% in Slovakia to 69% in Sweden. The proportion of pregnancies that ended in live births tended to be higher in countries with high teen pregnancy rates ( $p = .02$ ). The pregnancy rate has declined since the mid-1990s in the majority of the 16 countries where trends could be assessed.

**Conclusions:** Despite recent declines, teen pregnancy rates remain high in many countries. Research on the planning status of these pregnancies and on factors that determine how teens resolve their pregnancies could further inform programs and policies.

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### IMPLICATIONS AND CONTRIBUTION

Adolescent pregnancy rates declined since the mid-1990s in most developed countries with reliable trend data, but the rate remains exceptionally high in the United States. Rates are even higher in Sub-Saharan Africa and in some former Soviet countries where data quality is variable. The proportion of pregnancies ending in abortion varies widely across countries.

**16 countries with reliable data  
from mid-1990s until 2011  
the steepest annual percentage decline (4%) took place in Estonia**

- the percentage of teenage mothers from all parturients was 14.6% in 1992 and 1.4% in 2021
- the percentage of adolescents from all women terminating pregnancy was 11.4% in 1992 and 7.9% in 2021
- mean age of primipara
  - 22.7 in 1992
  - 29.4 in 2021

## AIM OF THE STUDY

- to analyse trends in teenage pregnancies in Estonia since 1992 (deliveries) and 1996 (abortions) through 2019
- to examine delivery and abortion rates among younger and older adolescents
- to examine delivery and abortion rates among Estonian and non-Estonian teens
- to study trends in repeat teenage pregnancies in more detail

# METHODS

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## Trends in teenage delivery and abortion rates in Estonia over more than two decades: a nationwide register-based study

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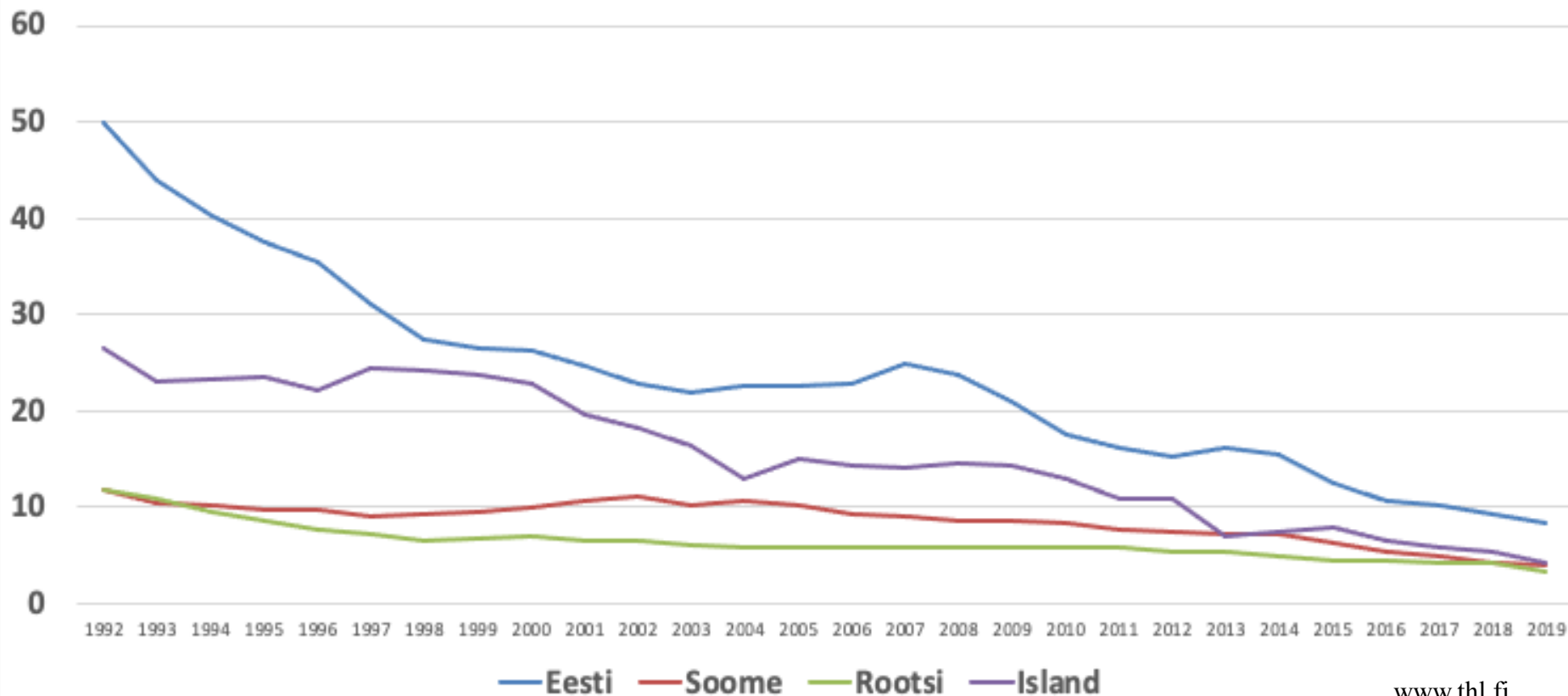
**Background:** In the last 30 years, Estonia has undergone major socio-economic changes, including profound educational and healthcare reforms. The study aimed to analyse trends in teenage delivery and induced abortion rates among younger and older teens, including Estonians and non-Estonians, and to study trends in repeat teenage pregnancies in more detail. **Methods:** The register-based study included data on 29 818 deliveries (1992–2019) and 25 865 (1996–2019) induced abortions among 15–19-year-old girls. Delivery and abortion rates per 1000 girls were calculated by age group, ethnicity and reproductive history. Poisson regression models were applied to estimate average annual percentage changes in delivery and abortion rates over the whole period and in two sub-periods with change points in the trend in 2007. **Results:** The delivery rate decreased by 5.3% per year, from 49.9 in 1992 to 8.4 in 2019; the abortion rate decreased by 6.0% per year, from 42.4 in 1996 to 8.6 in 2019. A faster decline in delivery rates took place among Estonians than non-Estonians, but the opposite trend occurred in abortion rates. Delivery rates for first and repeat pregnancies decreased nearly at the same pace, while abortion rates for repeat pregnancies decreased faster than those for first pregnancies. **Conclusions:** A decreasing trend in teenage births is evident in parallel with society becoming wealthier. A remarkable decline in teenage abortions occurs when young people's rights to safe abortion, contraception, mandatory sexuality education and youth-friendly services are ensured. There always remains a small group of adolescents who repeatedly become pregnant.

- Single records for teenage (<20 years of age) deliveries and induced abortions (on request or on medical grounds) were obtained from the Estonian Medical Pregnancy Information System, which comprises two separate registers – the Estonian Medical Birth Register (EMBR, 1992) and the Estonian Abortion Register (EAR, 1996)
- Information on previous pregnancies in the EMBR and EAR is based on self-reports.
- For the time trend analysis, we used the longest period available – deliveries in 1992–2019 (30 010 cases) and induced abortions (26 264 cases) in 1996–2019.
- Poisson regression models were applied to estimate average annual percentage changes (AAPC) in delivery and abortion rates over the whole period and in two sub-periods with change-point in the trend in 2007.

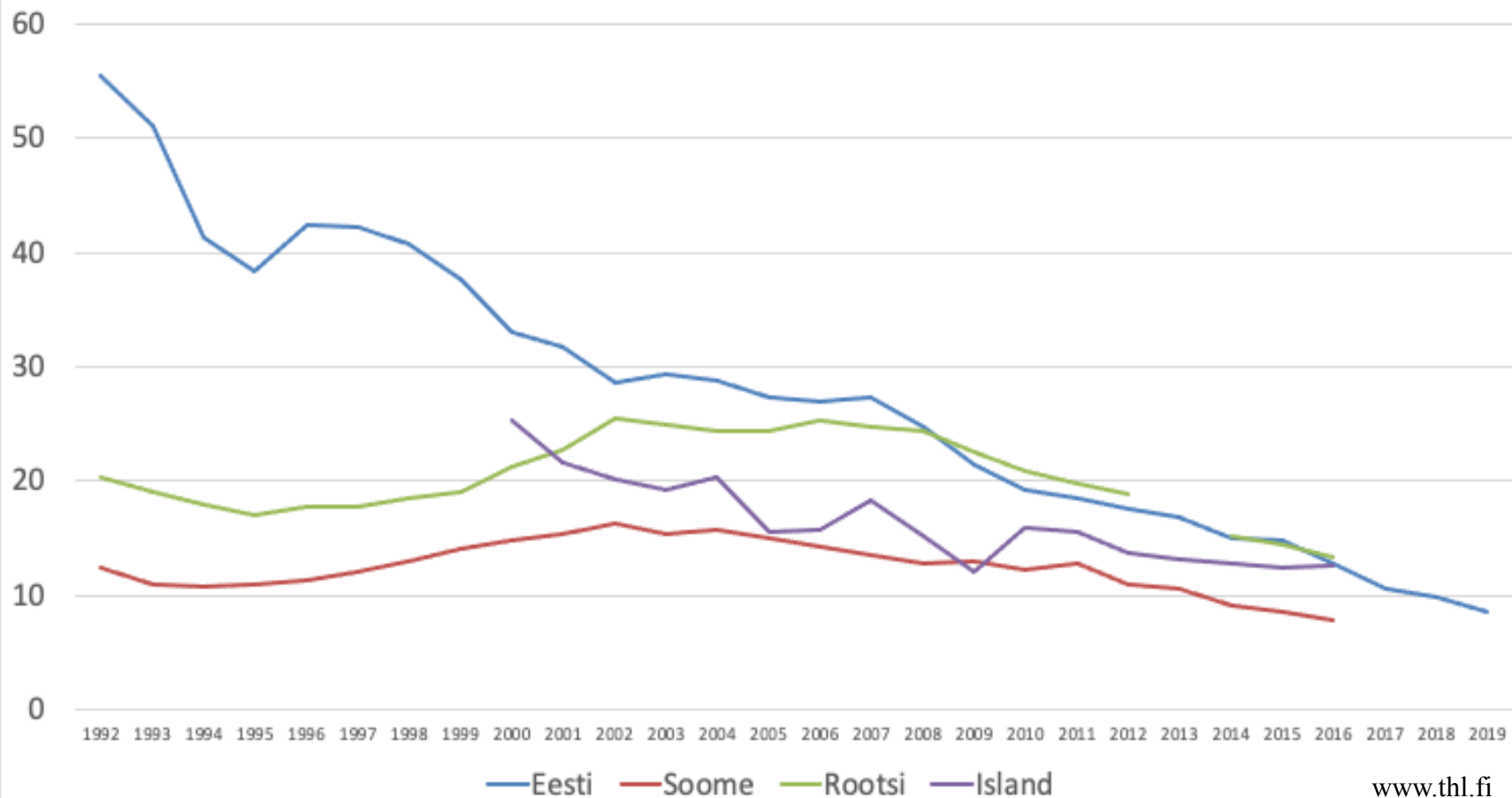


# RESULTS

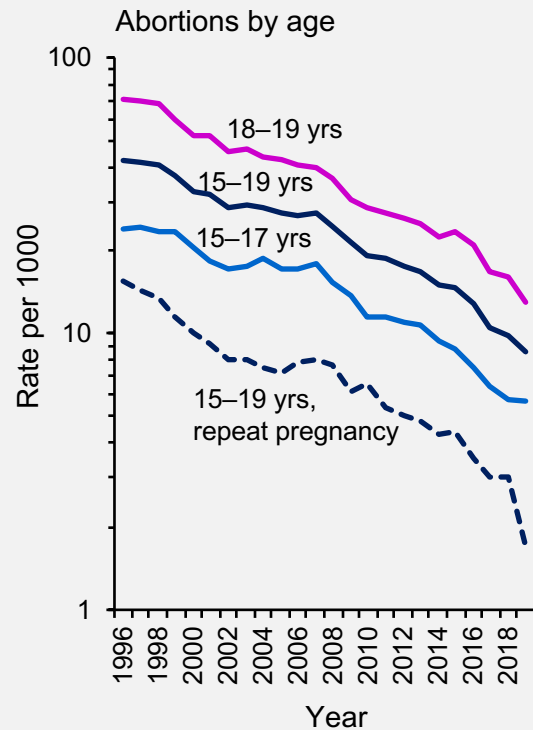
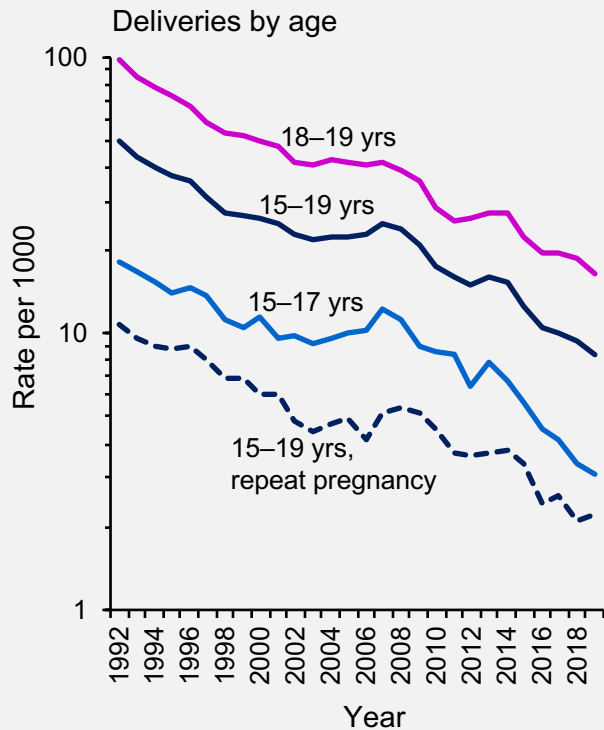
# Number of deliveries (Estonia), number of live births (Finland, Sweden, Iceland) per 1000 women, 15-19-year-olds, 1992-2019



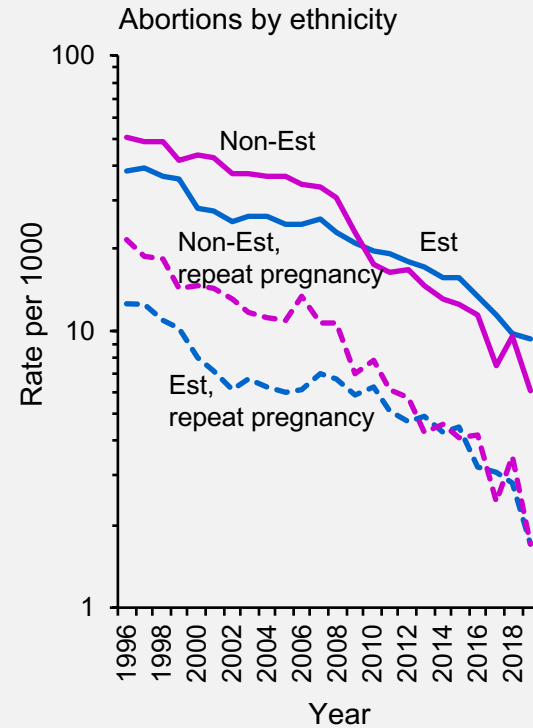
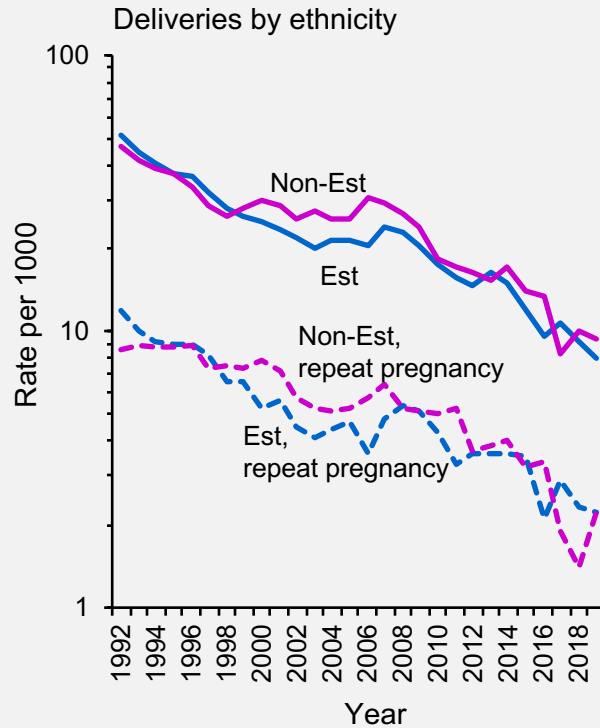
## Number of induced abortions per 1000 women, 15-19-year-olds, Estonia, Finland, Sweden, Iceland, 1992-2019



# DELIVERY AND INDUCED ABORTION RATES AMONG ADOLESCENTS IN ESTONIA BY AGE



# DELIVERY AND INDUCED ABORTION RATES AMONG ADOLESCENTS IN ESTONIA BY ETHNICITY



# RESULTS

- Teenage **delivery and abortion rates have decreased** dramatically since Estonia reformed its educational and health care systems and restored democratic society
- Analysis of the AAPCs of these rates showed that the **decline became sharper from 2007** onwards
- Delivery rates for first and repeat pregnancies decreased nearly at the same pace
- Abortion rates for repeat pregnancy decreased faster than those of first pregnancies
- Teenage pregnancy rates dropped for both ethnic groups, whereas a faster decline in abortion rates occurred among non-Estonians than among Estonians. The opposite trend was observed in delivery rates.

- We did not investigate causality, but we noticed that trends in teenage births decrease as society becomes wealthier
- A substantial decrease in teenage abortion rates occurs in the context of legal and safe abortion, liberal legislation, easy access to contraception, youth-friendly services and mandatory holistic sexuality education lessons in schools.
- There always remains a small group of adolescents who repeatedly become pregnant; these adolescents need individualized approaches and support and should not be stigmatized.
- Differences in teenage pregnancy rates in ethnic groups with divergent sexual cultures can change over time.

# FUTURE CHALLENGES

- To keep and further the environment which has positive effect on sexual and reproductive health of young people
  - abortion service delivery environment
  - legal context of abortion
  - financial access to services
  - abortion stigma
  - development
- The increasingly widespread use of medical abortion (misoprostol with or without mifepristone) will make it more difficult to measure abortion incidence?
- Influences from other sexual cultures (refugees, immigration etc)



THANK YOU!