

# Long Acting Reversible Contraception (LARC) to young women. Pros and cons

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**Øjvind Lidegaard**

*Department of Obstetrics & Gynaecology  
Rigshospitalet,  
Faculty of Health Sciences  
University of Copenhagen*

**Seminars in contraception, Tromsø,  
November 10, 2017**

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# LARC to young women

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## Background

- Among young women attending for an induced abortion, about one half have user failure with their contraceptive method
  - Induced abortion in young women is generally considered as a bad thing
  - Therefore attempts are done to improve compliance with contraceptives among young women
  - Should LARC contribute to that attempt?
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# LARC to young women: Myths

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- Young women have more contraceptive compliance problems than older
  - Hormone-IUDs are generally easy to apply in adolescence girls
  - Induced abortion in young women may bring about long lasting mental problems
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ORIGINAL ARTICLE

# Induced First-Trimester Abortion and Risk of Mental Disorder

Trine Munk-Olsen, Ph.D., Thomas Munk Laursen, Ph.D.,  
Carsten B. Pedersen, Dr.Med.Sc., Øjvind Lidegaard, Dr.Med.Sc.,  
and Preben Bo Mortensen, Dr.Med.Sc.

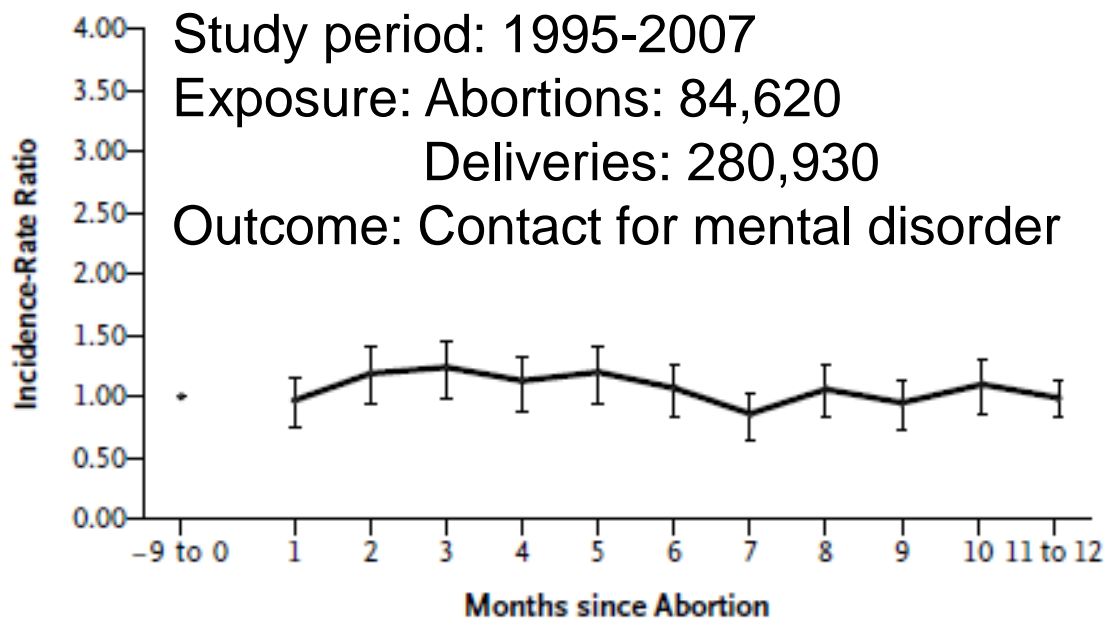
ABSTRACT

**BACKGROUND**

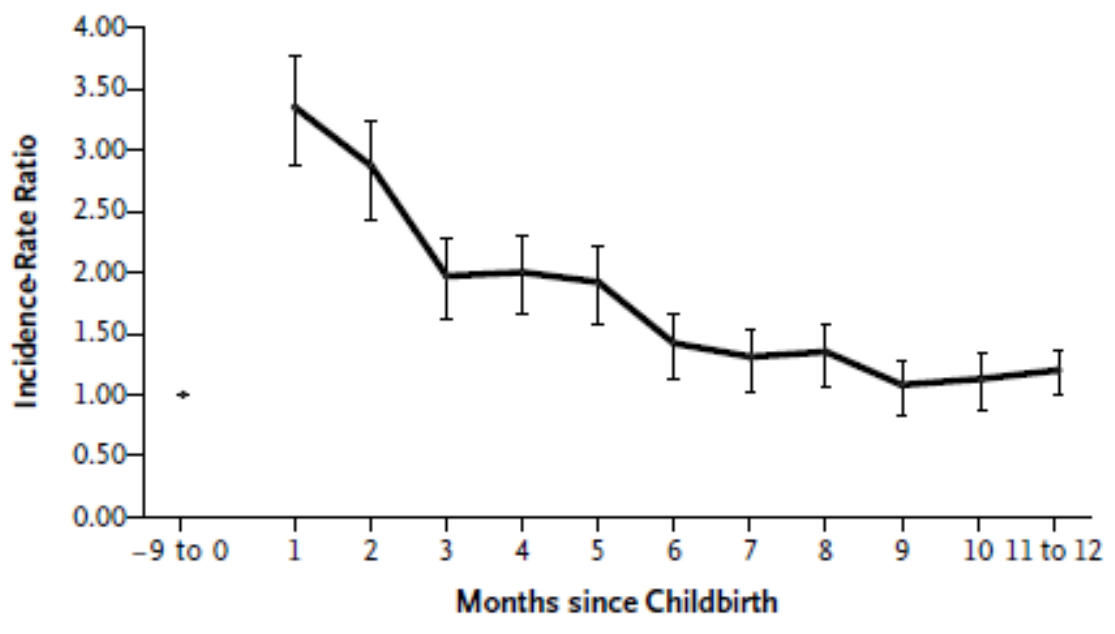
Concern has been expressed about potential harm to women's mental health in association with having an induced abortion, but it remains unclear whether induced abortion is associated with an increased risk of subsequent psychiatric problems.

# Relative risk of mental disorder after induced abortion

**A Abortion**



**B Childbirth**



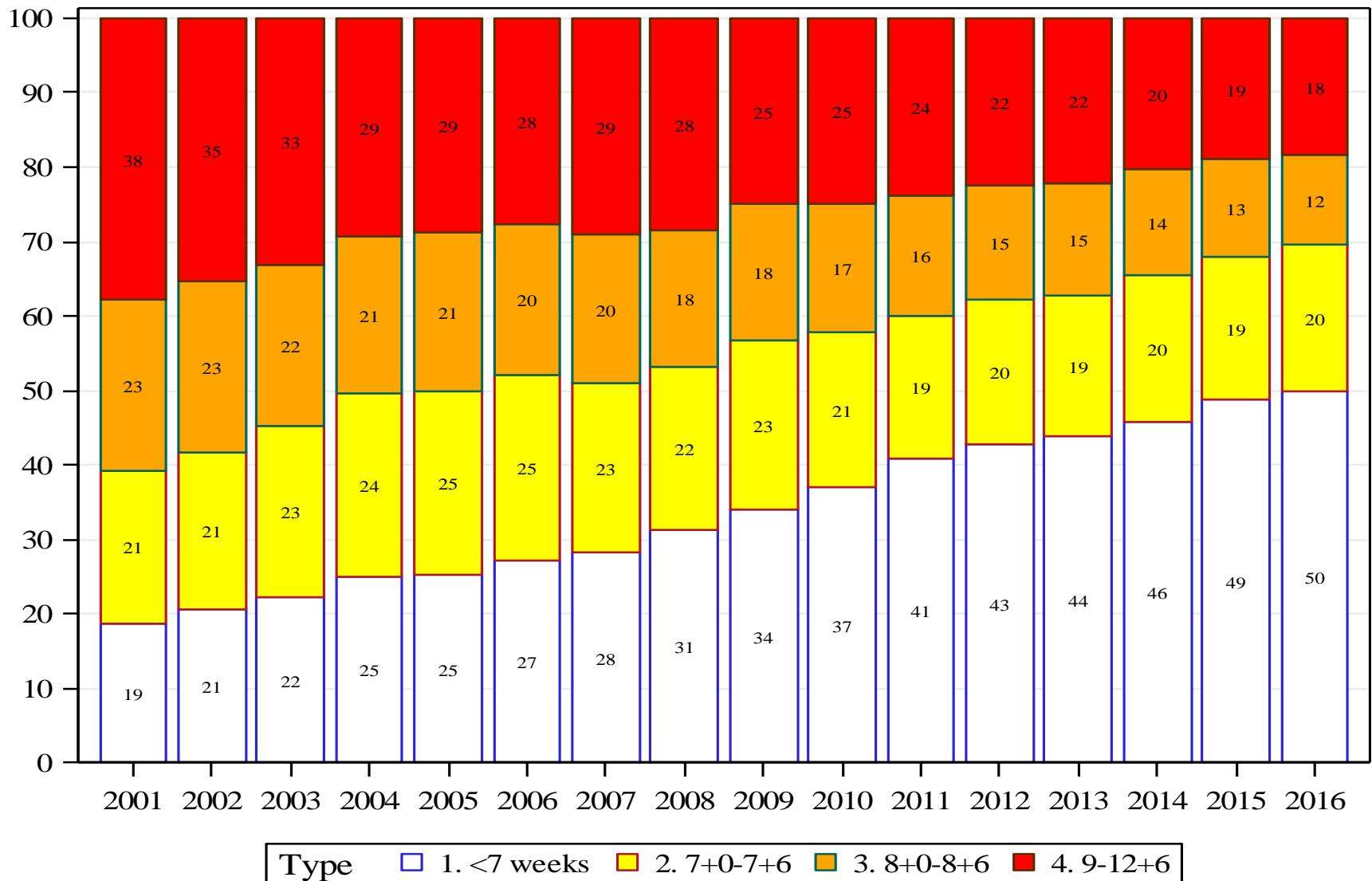
Munk-Olsen et al. *N Engl J Med* 2011; 364: 332-9

# LARC to young women: Myths

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- Young women have more contraceptive compliance problems than older
  - Hormone-IUDs are generally easy to apply in adolescence girls
  - Induced abortion in young women may bring about long lasting mental problems
  - Especially young women are prone for mental complications after an abortion
  - An abortion in week 5 implies the same considerations as an abortion in week 9 or week 15.
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# Gestational age of 1 trim abortions



# LARC to young women: Myths (cont)

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- The only alternative to pregnancy in young women is a safe contraceptive method
  - Young women are generally more irresponsible than older women
  - Young women are generally more sexually active as compared to older women of reproductive age
  - LARC in terms of hormone-IUD or implants are well tolerated also in young women
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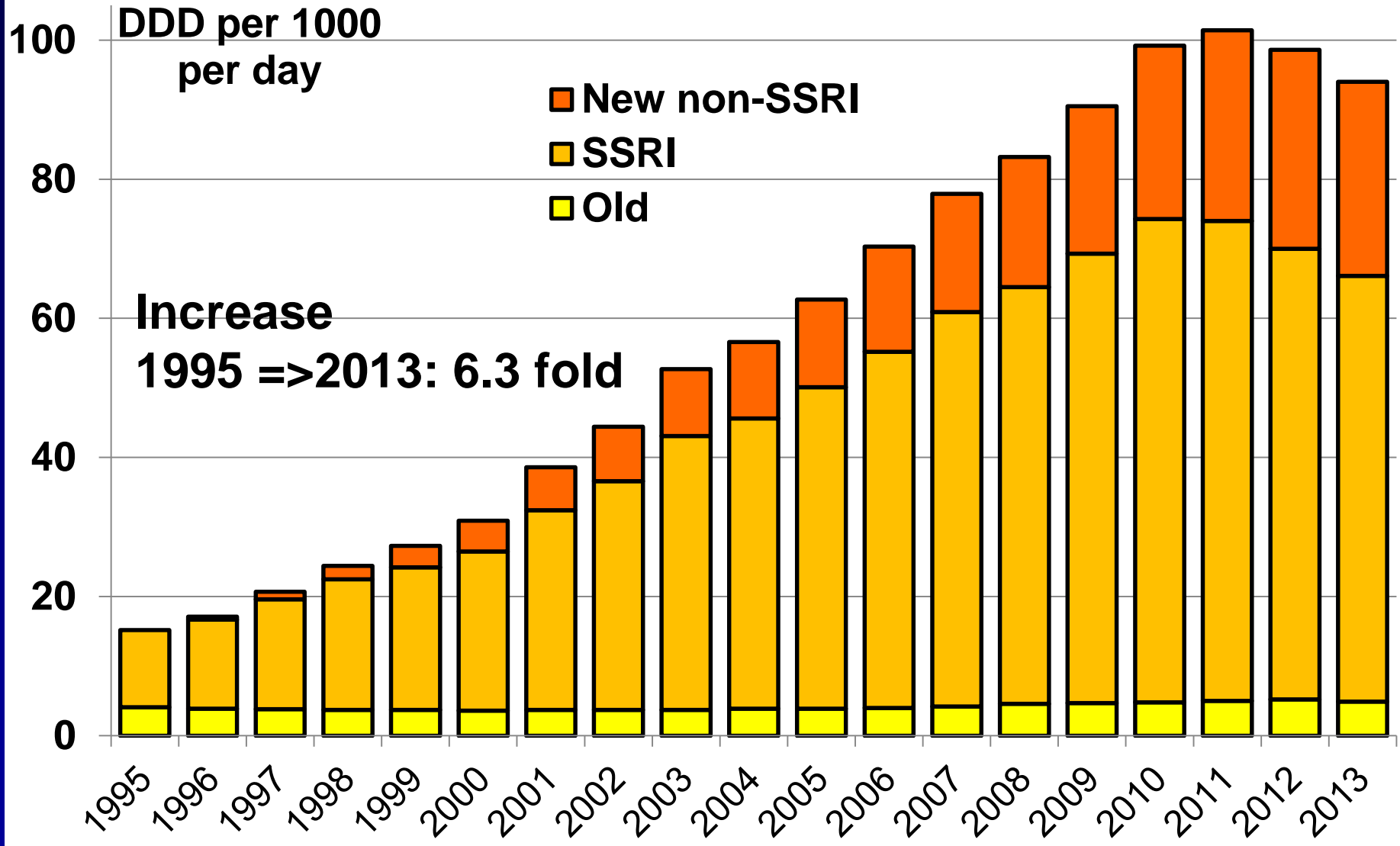


# LARC to young women: Facts

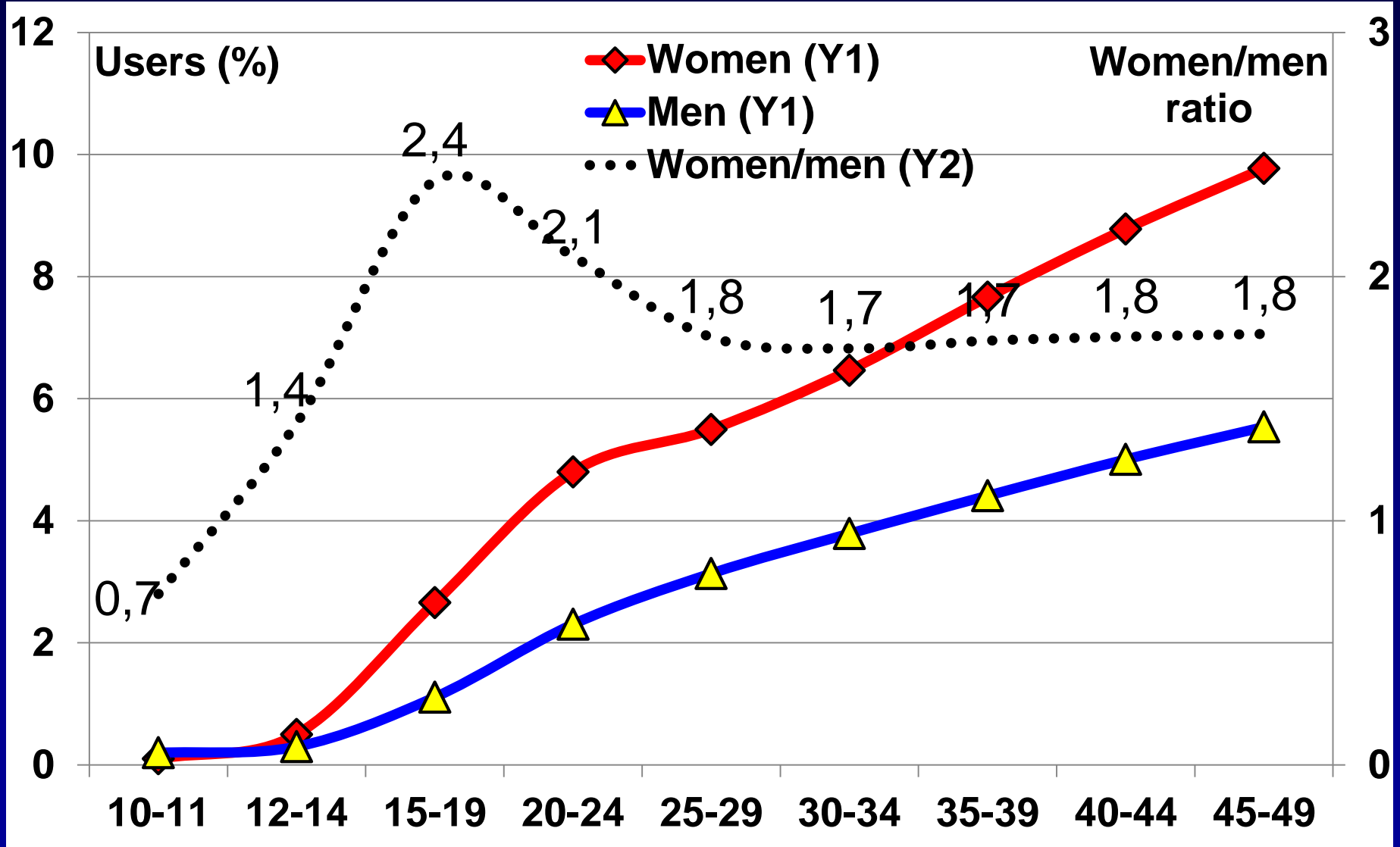
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- Adolescent women are particularly sensitive to endogenous and exogenous hormones
  - Estrogen generally improves womens' mood whereas progestogens worsens mood
  - About four per cent of women 15-24 years are on antidepressant therapy. That is 2.2 times higher than among men of same ages
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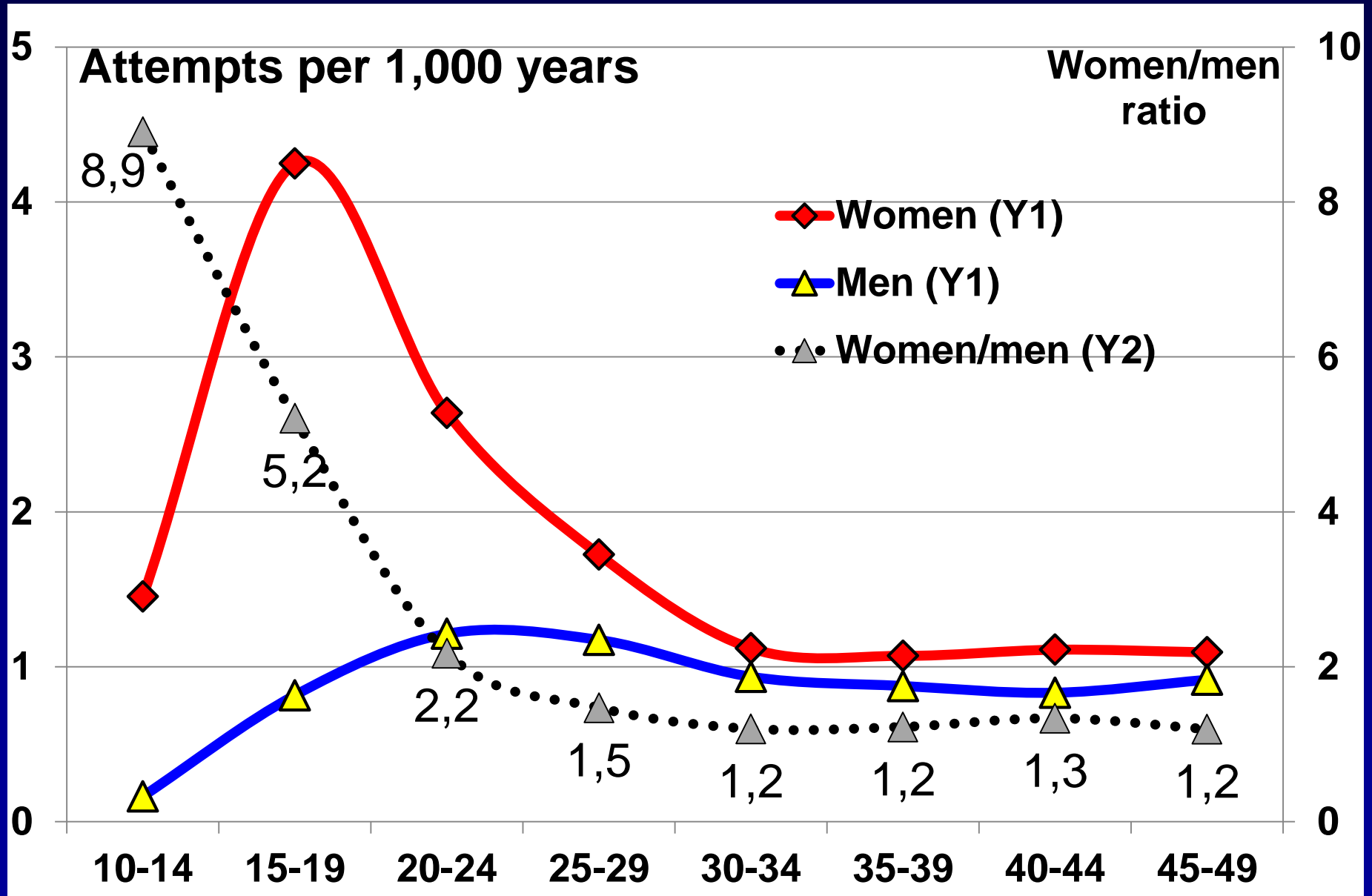
# Use of AD in women 1995-2013



# Users of AD acc to age 1995-2013



# Suicide attempts in DK 1995-2013



# LARC to young women: Facts

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- Adolescent women are particularly sensitive to endogenous and exogenous hormones
  - Estrogen generally improves women's mood whereas progestogens worsens mood
  - About four per cent of women 15-24 years are on antidepressant therapy. That is 2.2 times higher than among men of same ages
  - Progestogen only contraception confer a higher risk of depression than combined products, especially hormone-IUD
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# Association of Hormonal Contraception With Depression

Charlotte Wessel Skovlund, MSc; Lina Steinrud Mørch, PhD; Lars Vedel Kessing, MD, DMSc;  
Øjvind Lidegaard, MD, DMSc

**IMPORTANCE** Millions of women worldwide use hormonal contraception. Despite the clinical evidence of an influence of hormonal contraception on some women's mood, associations between the use of hormonal contraception and mood disturbances remain inadequately addressed.

**OBJECTIVE** To investigate whether the use of hormonal contraception is positively associated with subsequent use of antidepressants and a diagnosis of depression at a psychiatric hospital.

[+ Supplemental content](#)

Skovlund et al.  
JAMA Psychiatry  
2016; 73:1154-1162

## Altmetric Attention Score of 2572.

ALL RESEARCH OUTPUTS:	#173	of 8,619,033 outputs
OUTPUTS FROM JAMA PSYCHIATRY:	#1	of 1,238 outputs
OUTPUTS OF SIMILAR AGE ALL JOURNALS	#8	of 254,398 outputs

So far Altmetric has tracked 1,238 research outputs from this source. This one has done particularly well, scoring **higher than 99% of its peers**.

# First use of antidepressants in prevalent users of hormonal contraception 15-34 years. Never use ref.

Low risk <1.5		Med. Risk 1.5-1.9			High risk ≥2		No data	
EE dose	NETA Norethisterone	LNG Levonorgestrel	NGM Norgestimate	DGS Desogestrel	GSD Gestodene	DRSP Drospirenone	CPA Cyproterone-acetate	
<b>Combined products All COC: 1.7 (1.66-1.71)</b>								
Middle 30-40 ug	1.4 1.3-1.6	1.7 1.67-1.77	1.7 1.6-1.7	1.8 1.74-1.87	1.7 1.6-1.7	1.9 1.8-1.93	2.0 1.96-2.10	
Low 20 µg EE				1.6 1.55-1.62	1.6 1.55-1.62	1.9 1.76-1.95		
Nat E2	2.4 2.0-2.9		E2V-dienogest			Few events		E2 NOMAC
Non oral	Patch → 2.6 2.4-3.0		2.2 2.1-2.3		← Vaginal Ring			
<b>Progestogene only products All POP: 1.8 (1.7-1.9)</b>								
Oral	1.7 1.6-1.9		Desogestrel → 1.9 1.8-2.0		MPA depot			
Non oral	← LNG-IUS 1.9 1.8-2.0		2.8 2.7-3.0		← Implant		3.6 3.3-3.9	

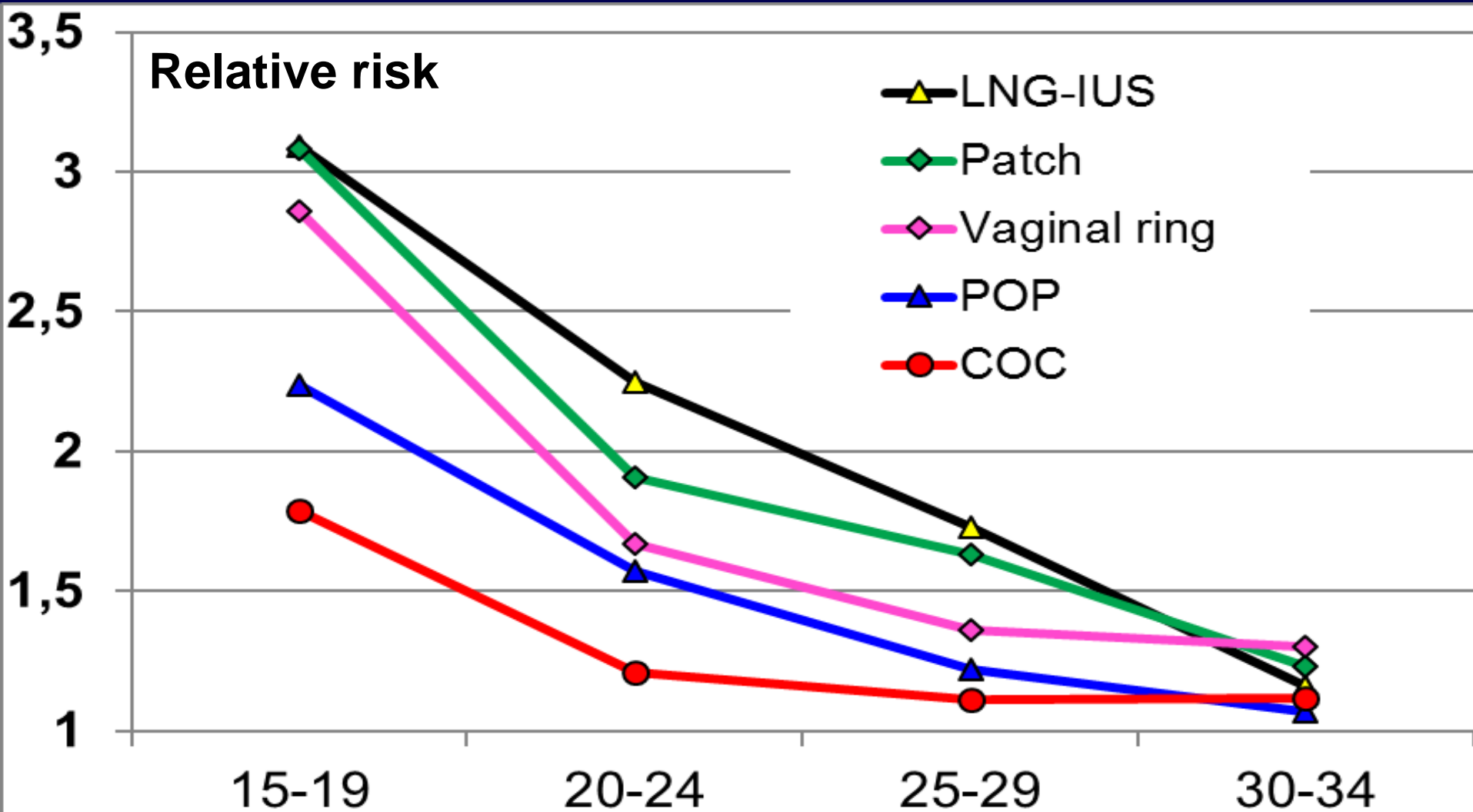
# LARC to young women: Facts

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- The younger the age of a woman, the higher is the risk of depression development with use of hormonal contraception
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# First use of AD in first year of HC use according to age. Reference non-users



# LARC to young women: Facts

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- The younger the age of a woman, the higher is the relative risk of depression development with use of hormonal contraception
  - New digital methods combining knowledge of ovulation time with condom use/withdrawal practice on fertile days.
  - Changed alcohol habits among young people may in itself reduce unwanted pregnancies, with additional improved health consequences
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# Balancing pros and cons

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## Pro LARC

Less risk of user failure  
Less risk of thrombosis  
You don't need to consider alternative strat. such as alcohol interv.  
Fewer abortions

## Against LARC

Depression sensitivity  
Risk of VTE already low  
COC better alternative  
New digital methods  
Alcohol intervention  
Mental conseq. overest

## Conclusion

Better alternatives available.

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