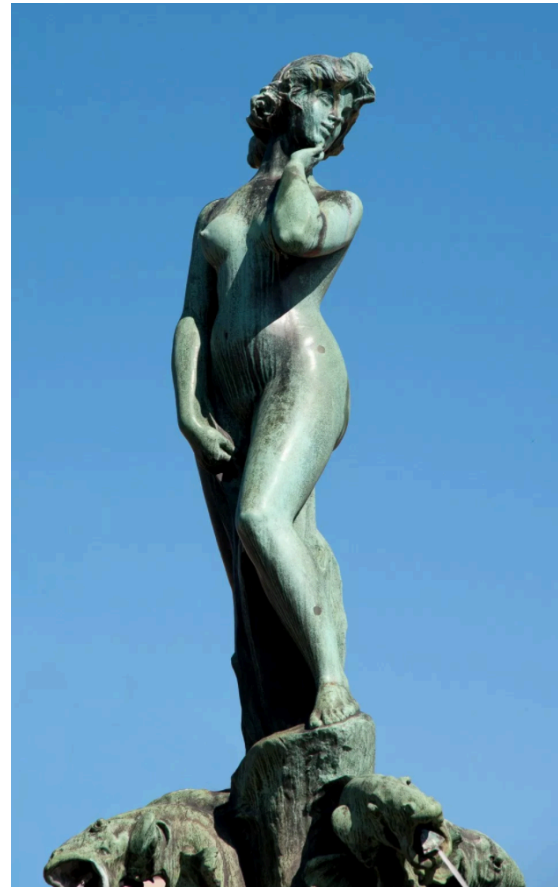


# Immediate contraception after medical abortion

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*FIAPAC2018, Nantes*



***Havis Amanda***  
Ville Valgren, Helsinki, 1908

# OHeikinheimo conflicts of interest

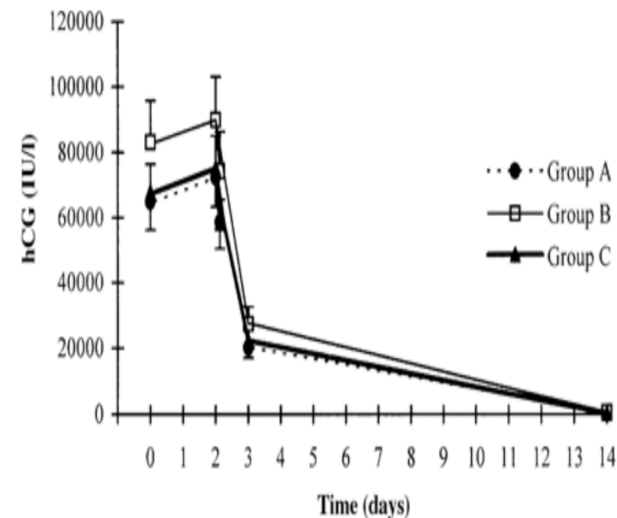


- **Employed by**
  - Hospital district of Helsinki and Uusimaa
  - University of Helsinki
  - Duodecim medical society
- **Lectures, ad-board memberships**
  - Bayer AG
  - Gedeon Richter
  - Sandoz
  - HRA Pharma
- **Board member**
  - Finnish Medical Foundation
  - Finnish Society of Obstetrics and Gynecology

# Women undergoing an abortion are fertile

## - return of ovarian function after medical abortion

- Rapid decline in hCG after medical abortion
- Prompt return of folliculogenesis & ovulation
- ~80% of women ovulate by 6th postabortal week
- **Immediate initiation of postabortal contraception important**



# **Multiple risk factors for the need of subsequent abortion..**

Niinimäki et al., Obstet Gynecol 2009, Mentula et al., Am J Obst Gyn 2010

- **Risk factors for repeat abortion can be recognized**
  - Young age
  - Parity
  - Previous abortion
    - Previous second trimester abortion!
  - Regular smoking
- **Contraceptive choices make a difference**
  - Postponement of contraceptive initiation - risk ↑
  - Use of intrauterine contraception - risk ↓

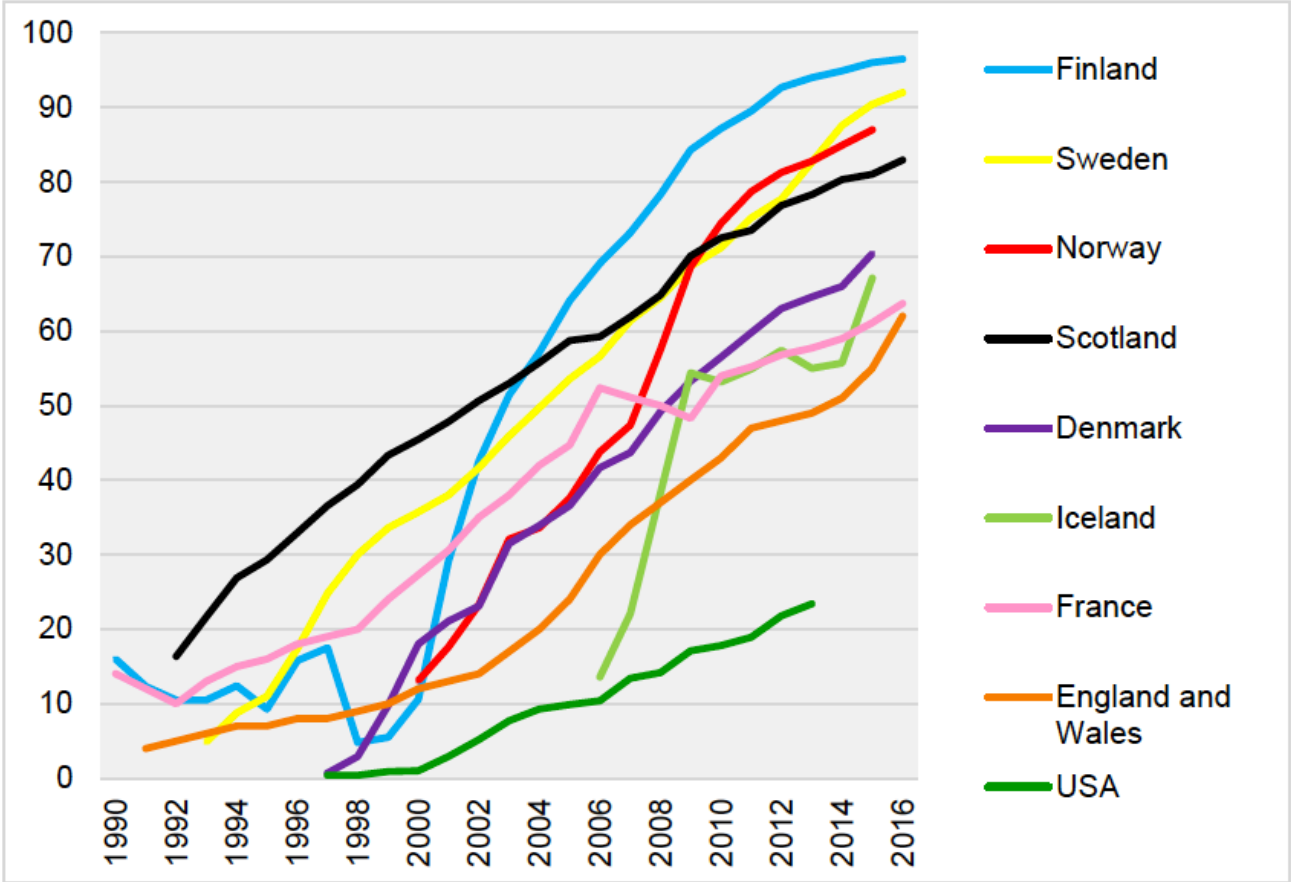


# **Factors affecting real life contraceptive efficacy**

*Steiner et al., Ob&Gyn 1996*

1. Capacity to conceive
2. Frequency & timing of intercourse
3. Degree of compliance with the method
4. Efficacy of the method

# Medical abortion is taking over in many countries...



*Riina Korjamo, 2018*

# Postabortal contraception - when to start?

<b>Method</b>	<b>Surgical abortion</b>	<b>Medical abortion</b>
<b>Hormonal contraception</b>	At the time of abortion	At the time of abortion
<b>Intrauterine contraception</b>	At the time of abortion	<ol style="list-style-type: none"><li>1. At the time of follow-up</li><li>2. 1<sup>st</sup> menstruation</li></ol>

# Initiation of contraceptive implant or DMPA on the day mifepristone is feasible

Hum. Reprod. Advance Access published September 22, 2016

Human Reproduction, pp. 1–7, 2016

doi:10.1093/humrep/dew238

human  
reproduction

ORIGINAL ARTICLE *Fertility control*

## Immediate versus delayed insertion of an etonogestrel releasing implant at medical abortion—a randomized controlled equivalence trial

Helena Hognert<sup>1,†</sup>, Helena Kopp Kallner<sup>2,3,\*†</sup>, Sharon Cameron<sup>4</sup>,  
Christina Nyrelli<sup>5</sup>, Izabella Jawad<sup>6</sup>, Rebecca Heller<sup>7</sup>,  
Annette Aronsson<sup>3</sup>, Ingela Lindh<sup>1</sup>, Lina Benson<sup>8</sup>,  
and Kristina Gemzell-Danielsson<sup>3,\*</sup>

Obstetrics & Gynecology, 2016; 128

## Effects of Depot Medroxyprogesterone Acetate Injection Timing on Medical Abortion Efficacy and Repeat Pregnancy

*A Randomized Controlled Trial*

Elizabeth G. Raymond, MD, MPH, Mark A. Weaver, PhD, Karmen S. Louie, MS, MPH, Yi-Ling Tan, MPH,  
Manuel Bousiéguéz, MBA, Ana Gabriela Aranguré-Peraza, MD, Elba M. Lugo-Hernández, MD,  
Patricio Sanhueza, MD, Alisa B. Goldberg, MD, MPH, Kelly R. Culwell, MD, MPH, Clair Kaplan, MSN, APRN,  
Lisa Memmel, MD, MS, Sarita Sonalkar, MD, MPH, Roxanne Jamshidi, MD, MPH,  
and Beverly Winikoff, MD, MPH

Obstetrics & Gynecology, 2016; 127

*Original Research*

## Effect of Immediate Compared With Delayed Insertion of Etonogestrel Implants on Medical Abortion Efficacy and Repeat Pregnancy

*A Randomized Controlled Trial*

Elizabeth G. Raymond, MD, MPH, Mark A. Weaver, PhD, Yi-Ling Tan, MPH, Karmen S. Louie,  
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Kelly R. Culwell, MD, MPH, Lisa Memmel, MD, MS, Roxanne Jamshidi, MD, MPH, and Beverly Winikoff, MD, MPH

# Immediate vs. delayed insertion of the ETN-releasing contraceptive implant

Hognert et al., 2016

- Immediate (within 1h after mifepristone) vs. delayed (i.e. 2-4 weeks) insertion of the contraceptive implant after 1<sup>st</sup> trimester medical abortion
  - A randomized multicenter trial of 551 (275 vs. 249) women

	Immediate	Delayed	P-value
<b>Efficacy of medical abortion</b>	<b>94.2%</b>	<b>96%</b>	<b>n.s.</b>
<b>% receiving the implant</b>	<b>98.9%</b>	<b>71.6%</b>	<b>&lt;0.001</b>
<b>Implant use at 6 mo</b>	<b>71.8%</b>	<b>57.9%</b>	<b>&lt;0.001</b>
<b>Subsequent abortion by 6 mo</b>	<b>0.8%</b>	<b>3.8%</b>	<b>0.018</b>

# Effect of immediate compared with delayed insertion of ETN implant on medical abortion efficacy and repeat pregnancy

Raymond et al., 2016

- Immediate vs. delayed (i.e. when abortion complete [within 31 days]) insertion of the contraceptive implant after outpatient medical abortion
  - A randomized multicenter trial of 476 (240 vs. 236) women from USA and Mexico

	Quickstart	Afterstart	P-value
Need of surgery	3.9%	3.9%	n.s.
Satisfied with the group	79%	54%	<0.001
Received the implant	100%	83%	<0.001
Pregnancy within 6 mo	0.5%	1.4%	n.s.

# Effect of depot MPA injection timing on medical abortion efficacy and repeat pregnancy

Raymond et al., 2016

- DMPA injection at the time of mife vs. delayed (i.e. when abortion complete) in women choosing outpatient medical abortion
  - A randomized multicenter trial of 461 (240 vs. 236) women from USA and Mexico

	Quickstart	Afterstart	P-value
Need of surgery	6.4%	5.3%	n.s.
On-going pregnancy	3.6%	0.9%	Signif.
Satisfied with the group	73%	44%	<0.001
Pregnancy within 6 mo	2.3%	3.2%	n.s.

# DMPA on the day of misoprostol administration

Downloaded from <http://srh.bmj.com> on September 10, 2018 - Published by [group.bmj.com](http://group.bmj.com)

Research

Initiating intramuscular depot medroxyprogesterone acetate 24–48 hours after mifepristone administration does not affect success of early medical abortion

Christina Lang,<sup>1</sup> Zhong Eric Chen,<sup>2</sup> Anne Johnstone,<sup>2,3</sup> Sharon Cameron<sup>2,3</sup>

- Case-control study from Edinburgh
- **No increased risk of continuing pregnancy among women starting DMPA at the time of miso** (1 or 2 days after mife) compared to no/barrier/fast track IUD -methods (0.2 vs. 0.4%).
- Risk of continuing pregnancy associated with longer duration of gestation ( $\geq 8$  weeks; OR 3.8) and history of TOP (OR 5.2)



# Immediate postabortal insertion of intrauterine devices

Grimes et al., 2010 and Okusanya et al., 2014



- **Immediate vs delayed insertion of IUD in surgical abortion – conclusions**
  - Immediate insertion is safe and practical
    - Similar risk of genital infection
  - Expulsion (RR 2.9 [95%CI 1.3-6.7]) and removal (2 [1.0-4.0]) rates higher following immediate postabortal insertion
  - IUD use is higher at 6 mo following immediate insertion (1.4 [1.2-1.6])

# IUD/IUS reduces the need of subsequent abortion – similar results from different continents

Authors	Country	Risk of repeat abortion	Reference
Goodman <i>et al</i>	USA	<b>HR 0.38</b> [0.27-0.53] IUD / IUS vs non-IUD contraception	Contraception 2008, 78: 143
Heikinheimo <i>et al</i>	Finland	<b>HR 0.33</b> [0.16-0.7] Cu-IUD <b>HR 0.38</b> [0.18-0.83] LNG-IUS vs COC	Contraception 2008, 78: 149
Roberts <i>et al</i>	New Zealand	<b>OR 0.3</b> [0.2-0.5] IUD vs COC	Contraception 2010, 82: 260
Rose and Lawton	New Zealand	<b>HR 0.36</b> [0.17-0.77] IUCD vs OC	Am J Obst Gynecol 2012, 206: e1

# Efficacy of IUD/IUS contraception after medical abortion

Human Reproduction, Vol.0, No.0 pp. 1–8, 2015

doi:10.1093/humrep/dev233

human  
reproduction

ORIGINAL ARTICLE *Fertility control*

## Provision of intrauterine contraception in association with first trimester induced abortion reduces the need of repeat abortion: first-year results of a randomized controlled trial

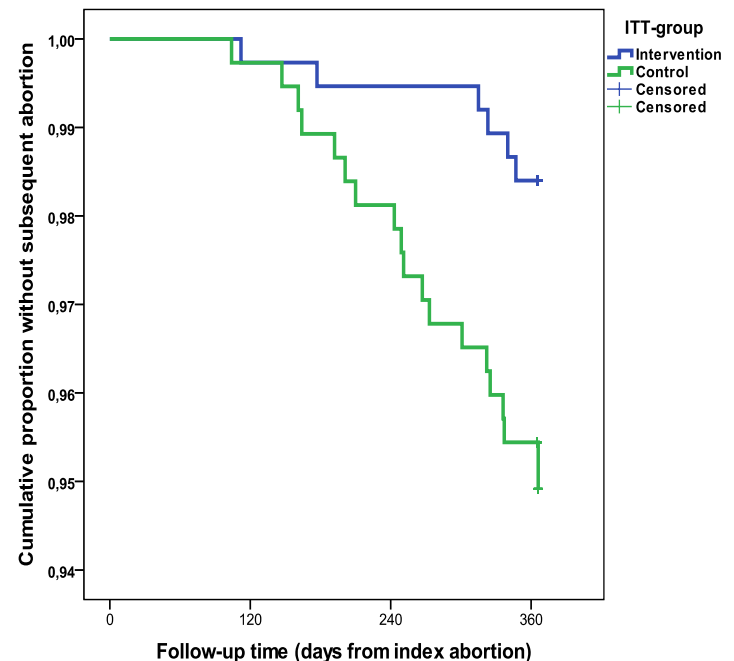
**Elina Pohjoranta<sup>1,†</sup>, Maarit Mentula<sup>1,†</sup>, Mika Gissler<sup>2</sup>, Satu Suhonen<sup>3</sup>, and Oskari Heikinheimo<sup>1,\*</sup>**

<sup>1</sup>Department of Obstetrics and Gynaecology, University of Helsinki and Helsinki University Hospital, Kätilöopisto Hospital, PO Box 610, Helsinki 00029-HUS, Finland <sup>2</sup>National Institute for Health and Welfare, Helsinki, Finland <sup>3</sup>Centralized Family Planning, Department of Social Services and Health Care, City of Helsinki, Helsinki, Finland

# First year results of the KIEKU-study

## Risk of repeat abortion in IUD vs. Control groups

	IUD	Control	<i>p</i>
<b>No (%) of women with repeat abortion</b>			
ITT-analysis	6 (1,6%)	18 (4,8%)	0.012
HR (95%CI)	1	3,0 (1.2 to 3.7)	
<b>All unwanted pregnancies</b>			
	9 (2,4%)	20 (5,4%)	0.038



- IUD provision as part of abortion service more than halved the rate of repeat abortion
- Is this cost-effective?

# What does the WHO say?

## When to start intrauterine contraception following abortion?

	Medical abortion		Surgical abortion	
	1. trimester	2. trimester	1.trimester	2.trimester
<b>IUD</b> Cu-IUD / LNG-IUS	- After verified abortion (?) - At 1-3 weeks	- At 2-3 weeks?	- At the time of abortion	- At the time of abortion

- IUD insertion at  $\sim$ / $>$ 1week after first trimester medical abortion safe (Sääv et al., 2012)
- **Immediate insertion after medical abortion?**

# Fast-track/immediate vs delayed insertion of the LNG-IUS after medical abortion



Contraception

Contraception 96 (2017) 344–351

Original research article

Fast-track vs. delayed insertion of the levonorgestrel-releasing intrauterine system after early medical abortion — a randomized trial

Riina Korjamo, Maarit Mentula, Oskari Heikinheimo\*

Department of Obstetrics and Gynecology, University of Helsinki and Helsinki University Hospital, Helsinki, Finland

Received 13 February 2017; revised 18 July 2017; accepted 23 July 2017

- Randomized comparison of early ( $\leq 3$ d [n=134]) vs delayed (2-4 weeks [n=133]) of LNG-IUS after medical abortion
  - Early I trimester ( $\leq 9$  weeks)
  - Late I trim + II trimester ( $\leq 20$  weeks)
- **Primary outcome - Rate of expulsion**
- **Secondary outcomes - Adverse events, bleeding patterns, continuation and new pregnancies up 1 year.**

**Expulsions and adverse events following immediate and later insertion of a levonorgestrel-releasing intrauterine system after medical termination of late first- and second-trimester pregnancy: a randomised controlled trial**

R Korjamo, M Mentula, O Heikinheimo

Department of Obstetrics and Gynaecology, University of Helsinki and Helsinki University Hospital, Helsinki, Finland  
Correspondence: Prof O Heikinheimo, Department of Obstetrics and Gynaecology, Kattilopisto Hospital, Helsinki University Hospital, PO Box 610, 00029-HUS, Helsinki, Finland. Email oskari.heikinheimo@helsinki.fi

Accepted 30 June 2017. Published Online 16 August 2017.

**Immediate versus delayed initiation of the levonorgestrel-releasing intrauterine system following medical termination of pregnancy – 1 year continuation rates: a randomised controlled trial**

R Korjamo, M Mentula, O Heikinheimo

Department of Obstetrics and Gynaecology, University of Helsinki and Helsinki University Hospital, Helsinki, Finland  
Correspondence: O Heikinheimo, Department of Obstetrics and Gynaecology, Kattilopisto Hospital, Helsinki University Hospital, P.O. Box 610, 00029-HUS, Helsinki, Finland. Email oskari.heikinheimo@helsinki.fi

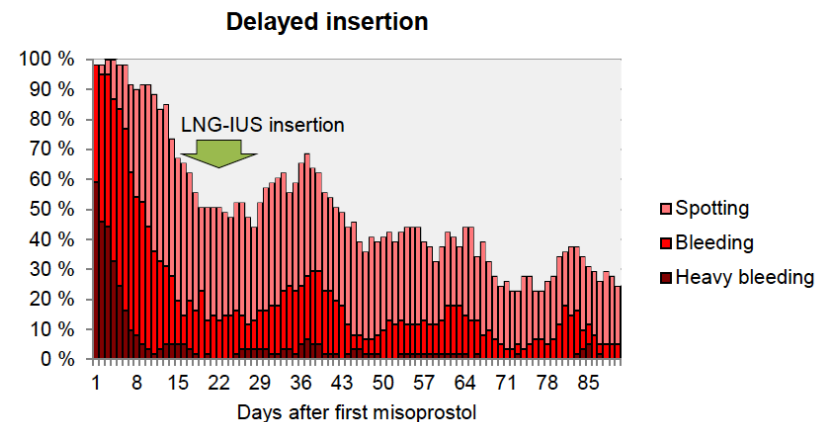
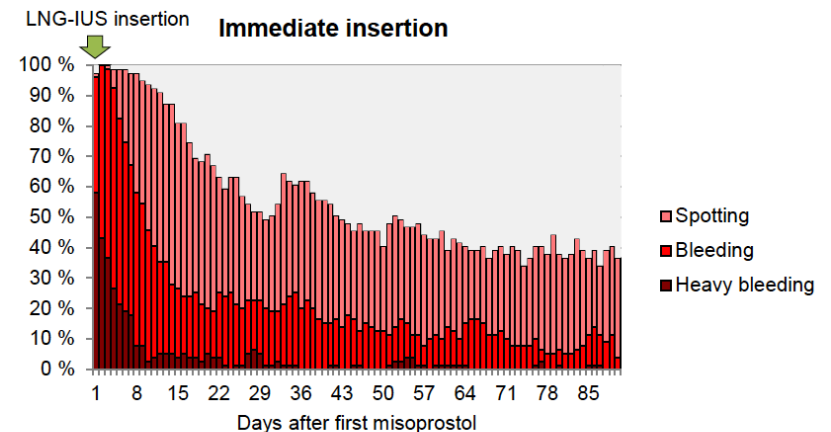
Accepted 19 June 2017. Published Online 2 August 2017.

# Fast-track/immediate vs delayed insertion of the LNG-IUS after medical abortion

	Fast track	Delayed	RR (95%CI)	P-value
<b>Insertion</b>	95.5%	84.7%	1.13 (1.04–1.22)	0.004
<b>Expulsion (total or partial) by 3 mo</b>	20.7%	4.0%	5.22 (1.88–14.55)	
<b>Verified IUS use at 3 mo</b>	72.2%	57.3%	1.26 (1.05–1.51)	0.014
<b>Verified IUS use at 1y</b>	62.4%	39.7%	1.57 (1.23-2.02)	<0.001
<b>New pregnancy by 1y</b>	4.5%	12.2%	0.37 (0.15–0.91)	0.027

# Adverse events and bleeding profiles following immediate vs delayed insertion of the LNG-IUS after medical abortion

- **No difference in the rates of:**
  - Residual tissue
    - **5.3 vs 11.5%** (RR 0.46 [0.19–1.09])
  - Early surgical operation
    - **6.8 vs 6.1%** (RR 1.11 [0.44–2.78])
  - Infection
    - **12.8 vs 9.2%** (RR 1.40 [0.69–2.81])
  - Bleeding
    - **6.0 vs 11.5%** (RR 0.53 [0.23–1.20])
  - Any problem
    - **24.1 vs 29.0%** (RR 0.83 [0.55–1.24])
  - Various parameters of the initial 90-day bleeding profiles
- **Safe to provide IUD early after medical abortion**

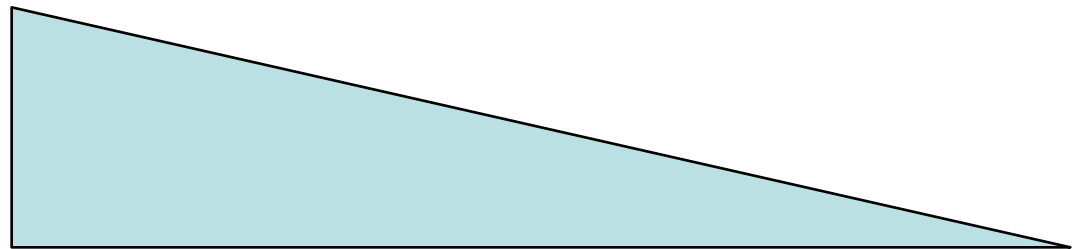




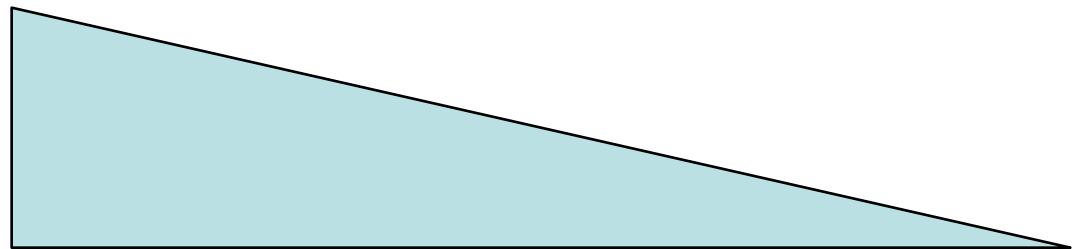
# Fast track/immediate vs delayed initiation of IUD contraception after medical abortion

Probability of

- Expulsion



- Initiation



*Fast track/immediate insertion ... Delayed*

**More IUD users at 1-year after fast track/immediate insertion!**

# When to start contraception after medical abortion?

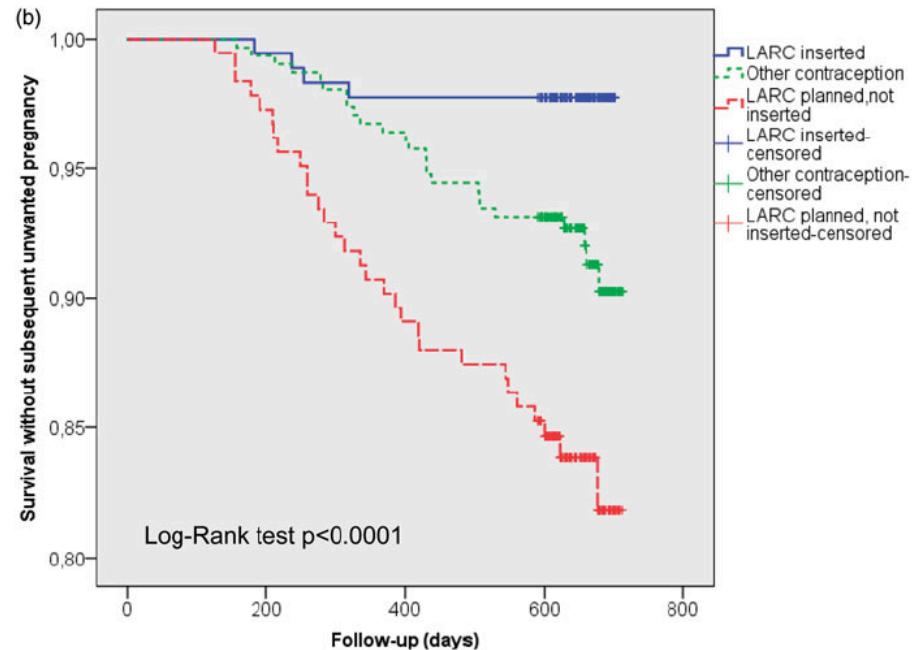
- Strategies modified according to different service provision

	DAY OF		
	Mifepristone administration	Misoprostol administration	1.-(2.) weeks after
<b>CHC/POP</b>		<b>+</b>	<b>(+)</b>
<b>Implant</b>	<b>+</b>	<b>+</b>	<b>+</b>
<b>DMPA</b>	<b>(+)</b>	<b>+</b>	<b>+</b>
<b>IUD/IUS</b>		<b>(+)</b>	<b>+</b>

# Only started - not planned - LARC prevents subsequent abortion

Korjamo et al., Eur J Contraception & Reprod Health Care, 2018

- Analysis of 666 women requesting TOP between Jan-May 2013
- All women had an opportunity to receive free LNG-IUS as part of RTC
  - 159 participated, 507 did not
  - Some (n=36) provided with LARC at hospital
  - Remaining women were prescribed OCs with further contraceptive provision in the primary health care
- Follow-up by means of the Finnish abortion registry



**What and how you provide for postabortion contraception makes the difference!**

# Immediate/early initiation of LARC in post-abortal contraception – a win-win strategy

	Immediate/early	Delayed
<b>Patient satisfaction</b>	Optimal	Decreased
<b>Uptake of the method</b>	High	Lower
<b>Compliance during follow-up</b>	Optimal	Decreased
<b>Need of additional visits</b>	Not needed	Needed
<b>Need of repeat TOP</b>	Low	Higher in some studies
<b>Cost efficacy</b>	Optimal	Decreased

# ***Identify-organize-provide***

Towards comprehensive abortion and post-abortion care...



- **Focus on the most fertile...**
  - Highly fertile young women need an effective method
- **Make contraceptive provision (incl. LARCs) part of the abortion care**
  - Patient friendly service provision
  - **Abortion and post-abortion contraception from the same address!**
- **Free contraception for young women & risk groups**
  - Teenagers/young women, after an abortion, delivery...

*Merci beaucoup!*



*Havis Amanda &  
Swedish elephants, 1964*