

# Anti-D

## When is it Required?

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### Affiliations:



**YOUR BODY,  
YOUR CHOICE,  
YOUR FUTURE.**

Royal Cornwall Hospitals  
NHS Trust



Royal College of  
Obstetricians &  
Gynaecologists

**NICE** National Institute for  
Health and Care Excellence

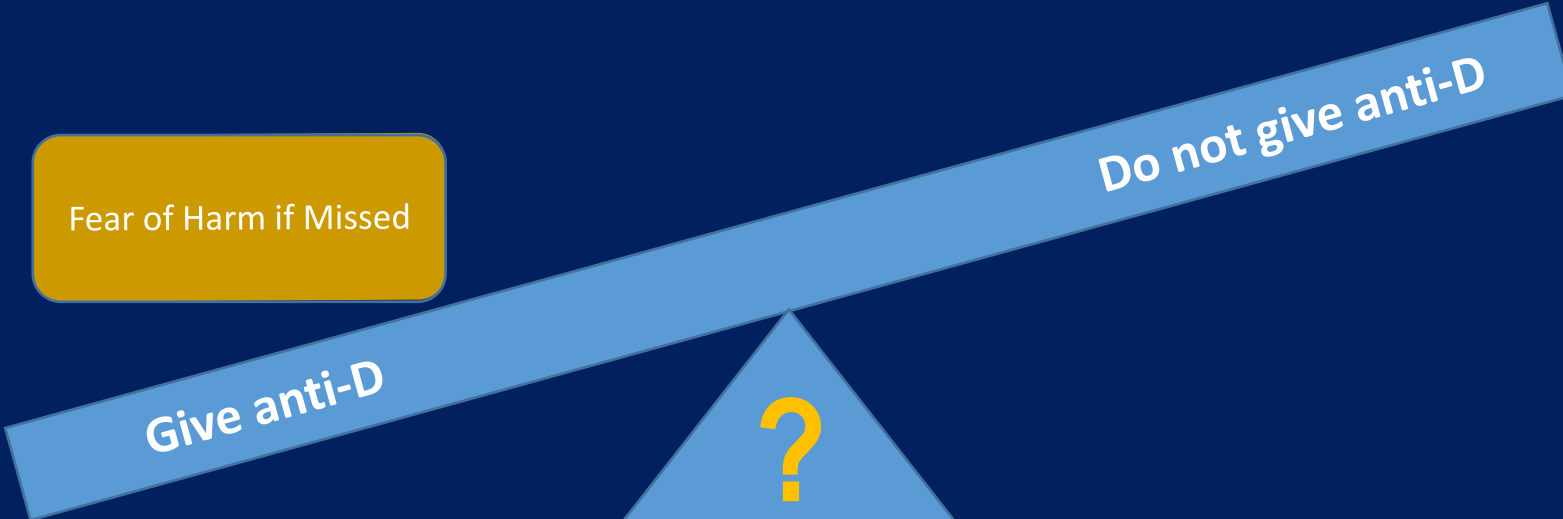
Thanks to Sarah Horvath, University of Pennsylvania

Fear of Harm if Missed

Give anti-D

?

Do not give anti-D



# What Do We Know?

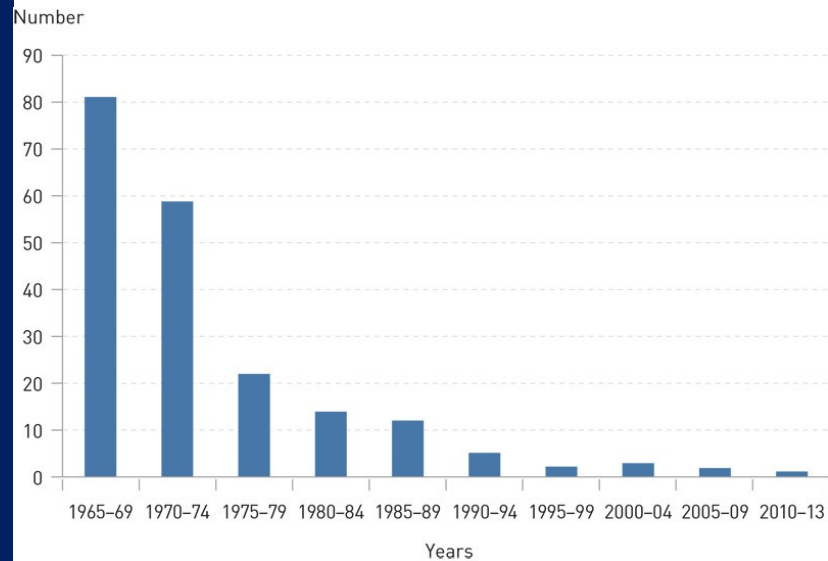
## England & Wales / year:

37 deaths, 8 major developmental problems

NICE Routine antenatal anti-D prophylaxis [TA156], 2008

- Prophylaxis with anti-D huge benefit in obstetrics – at least at 28 & 34 weeks

Deaths due to haemolytic disease of the fetus and newborn (HDFN), 1969 – 2013 [Norway]



Akkök 2016



Tradition

Fear of Harm if Missed

Give anti-D

Do not give anti-D



Little Impact to Patient  
or Service

Tradition

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**Do not give anti-D**



Less Likely Forgotten  
when Matters  
(e.g. late miscarriage)

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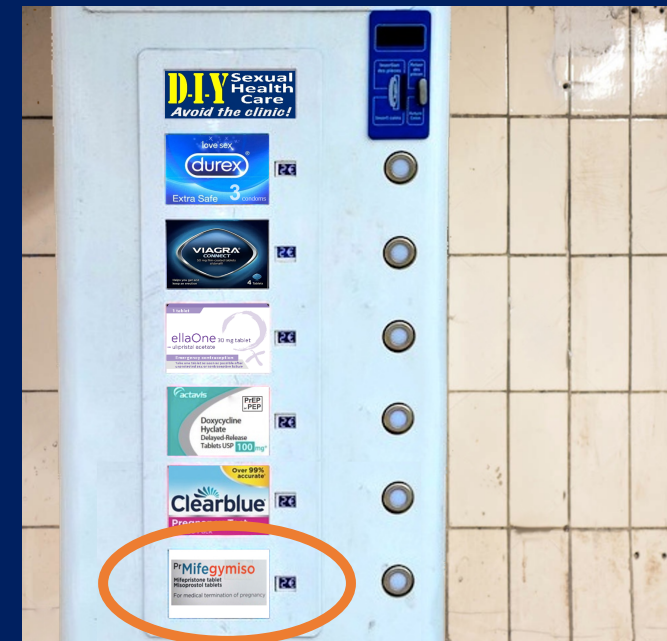


# Why Question Anti-D Now?



## Consequences:

- Introduces delays
- Removes patient autonomy
- Considerable resource cost:
  - Staff time (much better uses)
  - Cost – £1.2m for anti-D alone (<10/40), ~£12,000 per unit / year





# Theoretical Base

## Science

- Rhesus antigen expressed from 7/40; fetal blood from 8/40
- 0.1mls RhD<sup>+</sup> red blood cells can cause sensitisation ( $\cong$  250 fetal rbc / 10m adult)
- Consensus that sensitisation is possible >12/40

Jabara, 2003. Am J Obstet Gynecol

Horvath, 2020. Contraception

WHO, 2022

## Problems

- Studies from 1950's - 70's – no scan to assess gestation
- Kleihauer detects both fetal cells and maternal fetal Hb (significant after 8/40)
- No correlation between feto-maternal haemorrhage & development of anti-D
- Sensitisation following first trimester pregnancy despite correct anti-D
- Reassurance that minimal FMH after D & E up to 23 weeks



Jabara, 2003. Am J Obstet Gynecol

Horvath, 2020. Contraception

Hollenbach, 2019. Contraception

SHOT, 2022. [www.shotuk.org](http://www.shotuk.org)

Flynn, 2022. Contraception



Contents lists available at ScienceDirect

# Contraception

journal homepage: [www.elsevier.com/locate/con](http://www.elsevier.com/locate/con)



Original Research Article

## The concentration of fetal red blood cells in first-trimester pregnant women undergoing uterine aspiration is below the calculated threshold for Rh sensitization ☆



Sarah Horvath <sup>a,\*</sup>, Patricia Tsao <sup>b</sup>, Zhen-Yu Huang <sup>b</sup>, Ling Zhao <sup>b</sup>, Yangzhu Du <sup>b</sup>, Mary D. Sammel <sup>c</sup>, Eline T. Luning Prak <sup>b,2</sup>, Courtney A. Schreiber <sup>a,2</sup>

<https://doi.org/10.1016/j.contraception.2020.02.011>

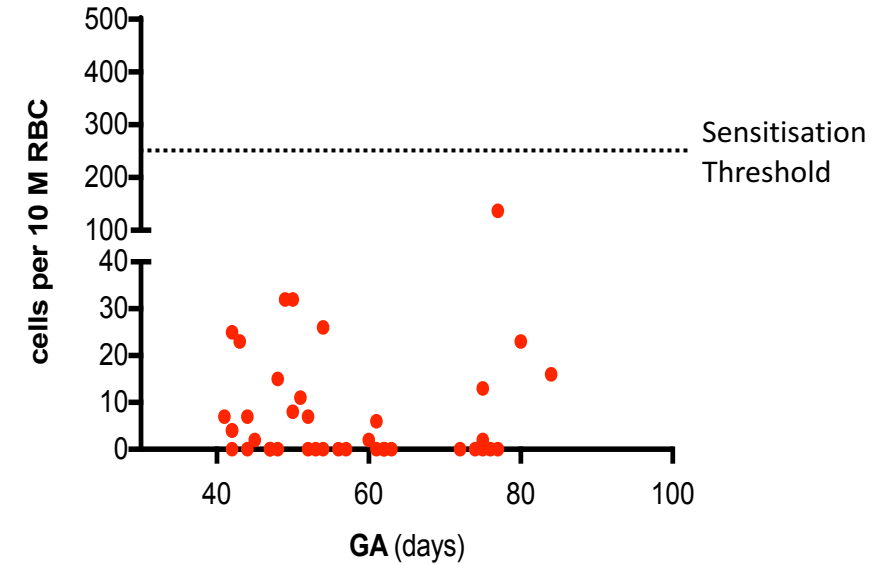
Population – no prior bleeding; mostly TOP

n = 42

Gestation – 5<sup>+</sup>6 – 12<sup>+</sup>6 weeks

### fRBCs

(maternal blood, post procedure)



No fetal RBCs cross the threshold for sensitization

(≡ 0.1mls fetal blood)

No Contrary Evidence

Less Likely Forgotten  
when Matters  
(e.g. late miscarriage)

Little Impact to Patient  
or Service

Tradition

Fear of Harm if Missed

Expensive

Causes delay

Forces in-person  
assessment

**Give anti-D**

**Do not give anti-D**



No Contrary Evidence

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Little Impact to Patient  
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Tradition

Fear of Harm if Missed

Not patient-centred

Expensive

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**Give anti-D**

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No Contrary Evidence

Less Likely Forgotten  
when Matters  
(e.g. late miscarriage)

Little Impact to Patient  
or Service

Tradition

Fear of Harm if Missed

No Evidence of Benefit

Not patient-centred

Expensive

Causes delay

Forces in-person  
assessment

**Give anti-D**

**Do not give anti-D**



# No evidence of benefit



Since data collection began in 2012, 65% of those found to be immunised had received 'ideal care' in the preceding pregnancy [2021].

The numbers of sensitisations arising following a previous first-trimester loss were minimal.

<https://www.shotuk.org/wp-content/uploads/myimages/Chapter-25-Immune-Anti-D-in-Pregnancy-2021.pdf>









# Abortion care guideline

<https://srhr.org/abortioncare/chapter-3/pre-abortion-3-3/clinical-services-recommendation-8-rh-isoimmunization-for-abortion-at-gestational-ages-12-weeks-3-3-3/>

## What

### **CLINICAL SERVICES Recommendation 8 (NEW):** Rh isoimmunization for abortion at gestational ages < 12 weeks

For both medical and surgical abortion at < 12 weeks **Recommend against** anti-D immunoglobulin administration.

#### **Remark:**

- Standard of care applies for anti-D administration at gestational ages  $\geq$  12 weeks.



Contents lists available at [ScienceDirect](#)

## Contraception

journal homepage: [www.elsevier.com/locate/contraception](http://www.elsevier.com/locate/contraception)



Review Article

### Society of Family Planning committee consensus on Rh testing in early pregnancy

Sarah Horvath<sup>a,\*</sup>, Vinita Goyal<sup>b</sup>, Sarah Traxler<sup>c</sup>, Sarah Prager<sup>d</sup>

<https://doi.org/10.1016/j.contraception.2022.07.002>

Rh testing and administration are not recommended prior to 12 weeks' gestation for patients undergoing spontaneous, medication, or uterine aspiration abortion

? curettage

Allow patient choice

# Summary

Anti-D provides significant benefits in obstetrics – ✓ prophylaxis 28 weeks

No evidence of benefit in first trimester

Traditional practice now inhibiting service development & woman-centred pathways

Cost of >£1m per year to NHS

**WHO & SFP:**  
Do not use <12/40

**NICE** National Institute for  
Health and Care Excellence



Society  
of  
Family  
Planning  
& SFP RESEARCH FUND

Involve patient in decision making, especially where there are uncertainties

# BSACP

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**Friday 7<sup>th</sup> October 2022**

***Abortion Care – Focussing on the Future***

[www.bsacp.org.uk](http://www.bsacp.org.uk)

