Advanced Maternal Age

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Evidence Based Birth® Articles

Poll: What percentage of your clients or friends are having babies at 35 and older?

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Disclaimer

- Watching this webinar does not mean that we have entered into a patient-care provider relationship
- Nothing in this course shall be construed as medical advice
- Talk with a care provider before putting this information into practice
- Content is not guaranteed to be 100% accurate or up to date

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How will today's webinar work?

- Teaching/Discussion
- Resources
- Q & A
- Lecture handout

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What we'll cover!

1. Language
2. Stats on Risk
3. Options for pregnant people 35+

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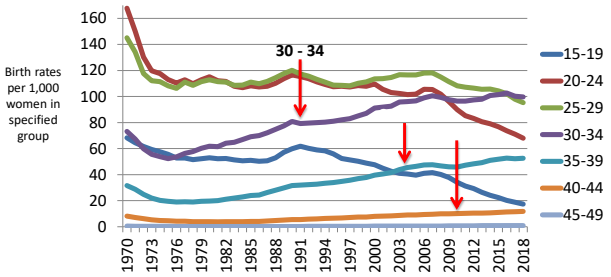
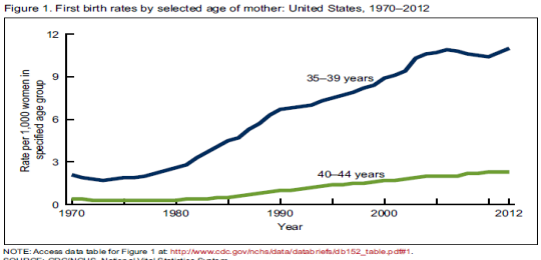
Birth Rates by Age over Time



Data from Martin et al. (2019). National Vital Statistics Reports: Births: Final Data for 2018

First Births to Pregnant People ≥35

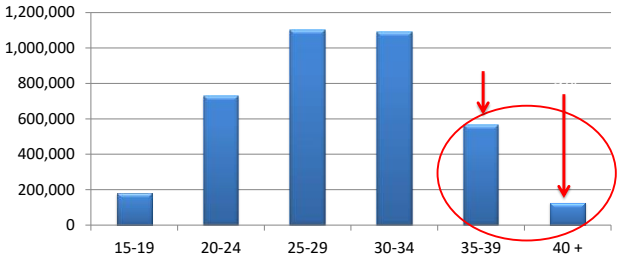
Figure 1. First birth rates by selected age of mother: United States, 1970–2012



NOTE: Access data table for Figure 1 at: http://www.cdc.gov/nchs/data/databriefs/db152_table.pdf#1.
SOURCE: CDC/NCHS, National Vital Statistics System.

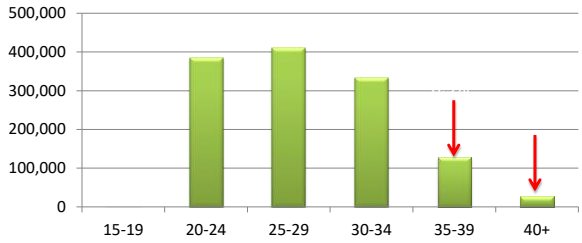
Data from Mathews and Hamilton (2014). NCHS Data Brief No. 152.

What age are people giving birth today?



Data from Martin et al. (2019). National Vital Statistics Reports: Births: Final Data for 2018

What age are people giving birth for the first time?



Data from Martin et al. (2019). National Vital Statistics Reports: Births: Final Data for 2018

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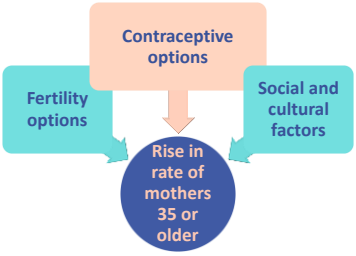
What is going on?



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Language

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Language

Elderly

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Mature Geriatric High Risk

Obstetrically old but chronologically young

In their reproductive twilight years

ICD-10 Code

- O09.5 Supervision of elderly primigravida and multigravida
  - O09.51 Supervision of elderly primigravida
    - O09.511 ..... first trimester
    - O09.512 ..... second trimester
    - O09.513 ..... third trimester
    - O09.519 ..... unspecified trimester
  - O09.52 Supervision of elderly multigravida
    - O09.521 ..... first trimester
    - O09.522 ..... second trimester
    - O09.523 ..... third trimester
    - O09.529 ..... unspecified trimester

Urban Dictionary

- Elderly Primigravida
  - N. – An older flea market Prada bag that is just starting to show its wear and tear

"It was my first time at fashion week, and I did my best to hide my "elderly primigravida."

Dr. John Moore (1956)

- "If I were an obstetric patient, even in the 35 to 40+ age group, I think I would resent the adjective 'elderly.' If the term persists, we may find ourselves speaking of such an inconsistency as geriatric obstetrics!"

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Proposed New Language from EBB

"Pregnant at age 35 and older/greater/beyond"

Thoughts about language?
Go ahead and post them below…

Stats on Risk

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Fertility Decline

- Fertility decline starts at age 32 and progresses more rapidly after 37
- In up to 12 menstrual cycles in which women with sterile partners received monthly artificial insemination:
  - 74% of women <31 will get pregnant
  - 62% of women 31-34 will get pregnant
  - 54% of women ≥ 35 will get pregnant

ACOG Committee Opinion No. 589 (Reaffirmed 2020)

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Genetic Risks

- Age is a strong predictor of Down Syndrome and other abnormalities
- Observed in large population-based trials, as well as in-vitro fertilized embryos
- Risk of Down Syndrome at 16 weeks:
  - 1 in 1,120 at age 25
  - 1 in 733 at age 30
  - 1 in 265 at age 35
  - 1 in 60 at age 40
  - 1 in 23 at age 45

Rodeck and Whittle (2009). *Fetal Medicine: Basic Science and Clinical Practice*, 2nd ed, Elsevier

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Risk of Miscarriage

- The rate of spontaneous miscarriage climbs gradually with age
- Researchers estimate the spontaneous miscarriage rate is about:
  - 9% at age 22
  - 18% at age 30
  - 20% at age 35
  - 40% at age 40
  - 84% at age 48

Nybo Andersen et al. (2000)

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Absolute vs. relative risk

- Absolute risk: the actual risk of something happening to you
  - "Among pregnant people 35-39 years of age, X number of babies out of every 1,000 births are stillborn."
- Relative risk: the risk of something happening to you in comparison to somebody else
  - "Compared to people 18-34 years of age, those aged 35-39 are X% more likely to experience stillbirth."

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When discussing risk…

- Talk about absolute risk!
- Absolute risk: the actual risk of something happening to you
- Helps families make decisions based on understandable information

Factors known to affect the risk of stillbirth

- Age less than 15 years or greater than 35 years
- Being pregnant with your first baby
- Body mass index ≥ 30
- Preexisting diabetes, chronic high blood pressure
- Smoking, alcohol use
- Having a pregnancy using assisted reproductive technology
- Being pregnant with multiples
- Male fetal sex
- Unmarried status
- Placenta previa
- History of a previous stillbirth

ACOG/SMFM, 2020

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Racial disparities

- Black people are 1.5 to 2x more likely than White people to have a stillbirth at every week of pregnancy (Muglu et al. 2019)
- Evidence-based solutions to mitigate the health effects of systemic racism: (Williams and Mohammed, 2013; Bailey et al. 2017)
  - Doula support during pregnancy and childbirth (Bohren et al. 2017)
  - Comprehensive easy access midwifery-led care (e.g., The JJ Way®) (Josephs and Brown, 2017)

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Huang's Systematic Review

- 24 out of 31 studies found that older pregnant people were more likely to have a stillbirth than younger pregnant people
- The increased relative risk of stillbirth with age was not due to other known risk factors for stillbirth
- The results make it seem like there is a drastic increase in risk at age 35; however, the risk likely increases gradually each year

Huang et al. (2008). CMAJ 178(2): 165-172.

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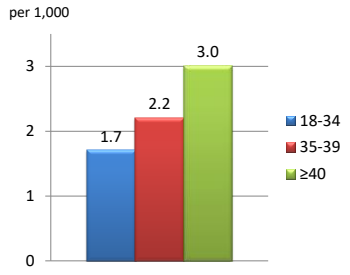
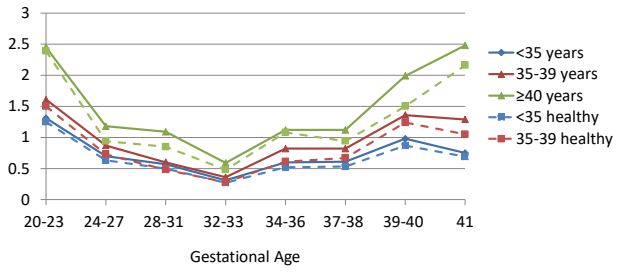
Actual risk of stillbirth- Netherlands Registry

- 1999-2010
- Compared those age:
  - 18-34 (n = 1,321,366)
  - 35-39 (n = 286,717)
  - ≥40 (n = 40,909)



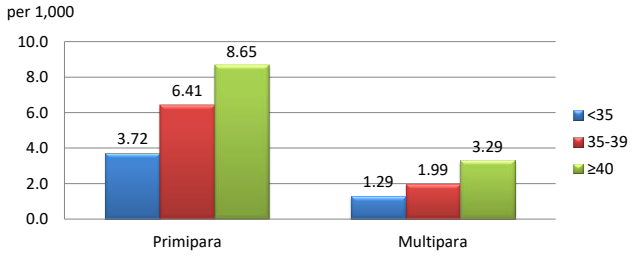
Kortekaas et al. 2020. Acta Obstet Gynecol Scand. 99:1022–1030

Overall vs. healthy only (dashed lines)



Data from Reddy et al. (2006). AJOG 195, 764-70.

Stillbirths at term according to parity and age



Data from Reddy et al. (2006). AJOG 195, 764-70.

Risks are Real

- 1st time giving birth at term
  - <35 = 3.72 per 1,000 or **1 in 268**
  - 35-39 = 6.41 per 1,000 or **1 in 156**
  - 40+ = 8.65 per 1,000 or **1 in 115**

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Risks are Real

- Previously given birth at term
  - <35 = 1.29 per 1,000 or **1 in 775**
  - 35-39 = 1.99 per 1,000 or **1 in 502**
  - 40+ = 3.29 per 1,000 or **1 in 303**

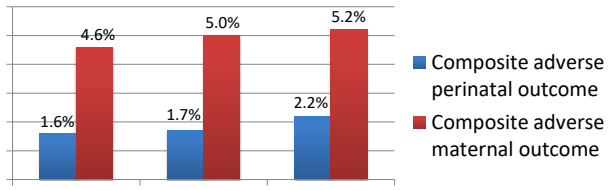
Cause of increased stillbirth?

…. is unknown.

- Other health problems that are more likely to occur with aging? That doesn't fully explain it.
  - The risk is still increased when we remove these risk factors
- Placental factors? "A logical avenue to explore."
  - A meta-analysis found that older age was linked to increased risk of fetal growth restriction, placental abruption and preeclampsia- all conditions related to placental pathology/dysfunction and to stillbirth
- Advanced paternal age? Needs more research.
  - At least one study has found it to be an independent risk factor

(Lean et al. 2017)

Composite adverse outcome- Netherlands Registry



Kortekaas et al. 2020. Acta Obstet Gynecol Scand. 99:1022–1030

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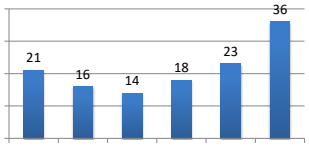
Risks to the pregnant person

- Retro study, included all singleton births to residents of Washington State, 2003-2013
- Included 800,000+ births
- Rate of serious maternal complications low, but increased with age



Lisonkova et al. (2017)

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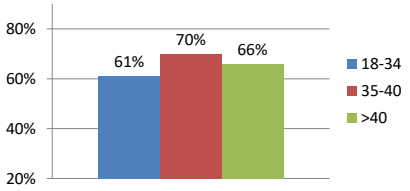
Benefits?

- More likely to breastfeed



Jolly et al. (2000). Human Reproduction 15(11): 2433-2437.

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Other benefits of being an older parent?

- Maturity, life experience
- Greater economic security
- Advance education, career
- Social support

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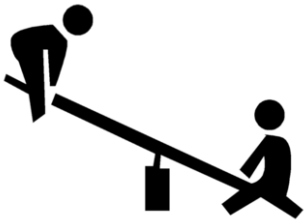
Opposite ends of the spectrum…



Pregnant people 35+ seen as in "imminent danger"

vs.

No increased risk: "As long as you're healthy (second time mom, etc.) you'll be fine"

Post below: What's going on in your community?

- Pregnant people 35+ seen as in "imminent danger?"
- Problems getting birth plans respected?
- Bad outcomes?
- Can they find providers who will give balanced info?

The "Precious Child"

- Protect the pregnancy by "any means necessary"
- May be viewed as very high risk regardless of overall health
- Lots of fear… of losing pregnancy, genetic abnormalities, stillbirth, complications, PLUS no guarantees of any future pregnancies

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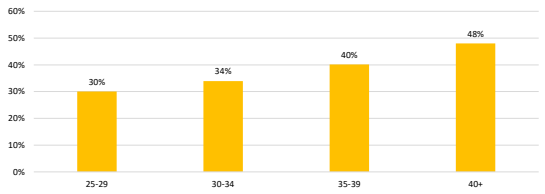
Cesarean Rates by Age (2018)



US Vital Stats, 2018 data

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From 1967

- "Perhaps because science and technology have made cesarean section a relatively safe procedure the obstetrician thinks of this maneuver first in managing patients he has been mentally conditioned to accept as high-risk individuals."

Options for pregnant people 35+

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Options for pregnant people 35+

Plan elective Cesarean OR vaginal birth?

- People 35+ are 2x more likely to have a CS on maternal request
- Low absolute risk of poor outcomes with either option; however, planned elective CS is significantly linked to higher risk of maternal death and severe complications compared to planned vaginal birth
- "When possible, planned cesarean deliveries should be avoided in this population."

Lavecchia et al. 2016

Options for pregnant people 35+

Plan elective induction OR expectant management?

- Fonseca et al. (2020) meta-analysis
- Walker et al. (2016) "35/39 Trial"
- Knight et al. (2017) Retrospective Study

Fonseca et al. (2020) meta-analysis

- A meta-analysis pools data from multiple studies into one big study
- Included over 81,000 participants from a total of 8 studies (6 RCTs, 2 observational)
- Comparing IOL vs. EM at term for pregnant people ≥35
  - Included a subgroup of participants aged 35 and older from the different studies
  - Intact membranes, singleton, cephalic

Fonseca et al. (2020)

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Findings

- At 39 weeks', over 26,600 participants aged 35+ were assigned to eIOL and over 54,500 were assigned to EM
- eIOL had no overall effect on rates of CS, vaginal birth with forceps/vacuum, or PPH
- Their study was not large enough to examine stillbirth or newborn outcomes

Fonseca et al. (2020)

Walker (2016) RCT aka "35/39 Trial"

- 600 pregnant people from the U.K. (2012-2015)
- Randomly assigned:
  - Inducing labor between 39-39.6 weeks
  - Not inducing at 39 weeks and waiting up until 41-42 weeks for induction
- Singleton babies, head-first, no GDM, no IVF from donor eggs

Walker et al. (2016)

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35/39 Trial

- Assigned to induction at 39 weeks
  - 265/305 people followed assignment for early IOL (87%)
- Assigned to expectant management
  - 297/314 followed assignment for EM (95%)
  - 49% eventually gave birth with IOL

Walker et al. (2016)

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35/39 Trial Results Results

- No difference in Cesarean rates (32-33%)
- No differences in:
  - Maternal complications
  - Birth satisfaction
  - Apgars, NICU, newborn interventions
- No deaths or stillbirths in either group

Walker et al. (2016)

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Largest retrospective study

- Knight et al. (2017), NHS hospitals in England, 2009-2014
  - Over 77,000 first-time mothers aged 35 and over
  - No difference in Cesareans or perinatal mortality with eIOL at 39 weeks vs. EM
  - Less newborn hypoxia and meconium aspiration syndrome with eIOL at 39 weeks
  - They did find a reduction in perinatal mortality with eIOL at 40 weeks: 562 inductions to prevent 1 perinatal death

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RCOG response to the Knight et al. (2017) study

"While induction is safe and studies have shown no short-term adverse impact on mother or baby, induction of labour represents an intervention, is associated with costs…and can be a more prolonged process than spontaneous labour."

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Options for pregnant people 35+

Plan midwifery-led care vs. medical model of care?

- Birthplace in England study (2008-2010)
- Low risk people ≥ 35 years between 37-42 weeks of pregnancy
  - 4,581 home birth
  - 1,923 freestanding birth center
  - 2,506 alongside midwifery unit
  - Rest gave birth in L&D unit

LI et al. (2014). BMJ Open, 4(1), e004026.

Outcomes

- Midwifery-led settings
  - Fewer interventions and Cesareans
  - No increase in risk to baby
- Hospital L & D setting
  - More interventions and Cesareans
  - More NICU admissions for women age 40+

LI et al. (2014). BMJ Open, 4(1), e004026.

Conclusions

- What does the pregnant person want?
- Evidence based care:
  - Research evidence
  - Clinical expertise
  - Person's values, goals, preferences

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In summary…

- Fertility decline begins slowly in the early thirties and speeds up in the late thirties and forties
- Genetic risks, greater chance of miscarriage
- Higher risk of stillbirth, but lower over the past few decades, and lower among people who are healthy and/or have given birth before

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In summary…

- In general, pregnancy complications go up with age
- Midwifery-led care linked to fewer interventions with no increased risk
- 1 randomized trial = no difference in CS rates with 39-week eIOL, too small to examine perinatal death
- 1 large retrospective study = lower risk of in-hospital perinatal death with 40-week eIOL

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Final thoughts

The good news is that the vast majority of people 35 and older who make it to term will have a healthy baby.

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What we covered

1. Language
2. Stats on Risk
3. Options for pregnant people 35+

What's your number one takeaway?
Post it in the chat box!

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So much more I could talk about…

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Want to Learn More?

- Elective Cesarean or vaginal birth
- Induction at a pre-determined time OR expectant management
- Midwifery-led vs. medical model of care
- Fetal monitoring at end of pregnancy
  - Kick counts, BPP, Nonstress test, amniotic fluid

Evidence Based Birth® Resources

Evidence Based Birth® Signature Articles

- ebbirth.com/inducingduedates
- ebbirth.com/duedates
- ebbirth.com/bigbabies
- ebbirth.com/prom
- ebbirth.com/inducinggdm
- ebbirth.com/ARRIVE

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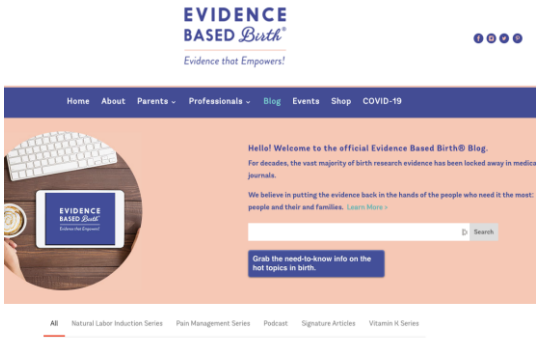

Evidence Based Birth® Podcast

EBB 151 – Updated Evidence on the Pros and Cons of Membrane Sweeping

EBB 153 – Pros and Cons of the Foley and Dilapan-S® for Cervical Ripening During an Induction

EBB 159 – Failure to Progress

EBB 164 – Updated Evidence on COVID-19 and Pregnancy

EBB 167 – Evidence on Erythromycin Eye Ointment for Newborns

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- All our continuing education courses + CEs
- Live monthly trainings (+ recordings!)
- Private community forums + FB group
- Library of all our PDFs
- Interactive Facebook Live videos
- Sneak peeks of articles + topics

Continuing Education for…

- Nurses
- Doulas
- Childbirth educators
- CPMs, CNMs, CMs
- Midwifery Bridge Certificate

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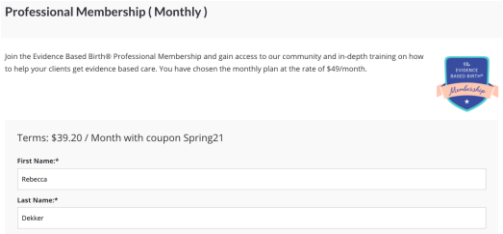
How to Join at the Reduced Rate?

How to Join at the Reduced Rate?



Where can professionals learn more?

Question & Answer

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Where can professionals learn more?

Handout

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