



Implementing *Count the Kicks* to Prevent Stillbirth in Maryland

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Objectives

By the completion of the presentation, the learner will be able to

1. Discuss the impact of stillbirth nationally and in Maryland
 2. Describe the Count the Kicks program and how it can be implemented to engage patients and improve obstetric outcomes.
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Stillbirth

- ▶ A stillbirth is the death or loss of a baby before or during delivery.
- ▶ Specifically, the loss of a baby at or after 20 weeks of pregnancy.
 - ▶ Stillbirth is further classified as either early, late or term.
 - An early stillbirth is a fetal death occurring between 20 and 27 completed weeks of pregnancy.
 - A late stillbirth occurs between 28 and 36 completed pregnancy weeks.
 - A term stillbirth occurs between 37 or more completed pregnancy weeks.

Causes of Stillbirth

- ▶ Birth defects or genetic problems
- ▶ Problems with the placenta and umbilical cord
- ▶ Certain health conditions in the mother (for example, uncontrolled diabetes, high blood pressure, or obesity).

**Around half of the two million
stillbirths occurring worldwide
each year are preventable.**



Stillbirth by the numbers

National Data

- ▶ 1 in 175 pregnancies end in stillbirth¹
- ▶ Racial disparities persist¹
 - ▶ Native Hawaiian or Other Pacific Islander pregnancies: 1 in 101
 - ▶ Black pregnancies: 1 in 101
 - ▶ American Indian or Alaska Native: 1 in 133
 - ▶ Hispanic pregnancies: 1 in 207
 - ▶ White pregnancies: 1 in 206
 - ▶ Asian pregnancies: 1 in 253

Source: CDC, www.cdc.gov/nchs/data/nvsr/nvsr71/nvsr71-04.pdf



Racial Disparities

Why are there disparities in birth outcomes?

- ▶ Research identifies the following contributors:
 - ▶ **Systemic racism**
 - ▶ **Epigenetics**
 - ▶ **Preexisting conditions**
 - ▶ **Access to healthcare**
 - ▶ **Socioeconomic barriers.**
 - ▶ **Research shows education is NOT a determining factor**

SOURCES: [Management of Stillbirth, ACOG](#) [Epigenetics and Child Development, Harvard University](#)
[What is Structural Racism, AMA](#)



Stillbirth In Maryland

Our goal is to make kick counting a common practice for every parent in the third trimester of pregnancy. Learn more about the impact of stillbirth in your state.

477

Maryland loses 477 babies a year on average to stillbirth.

6.78

In Maryland, the stillbirth rate is 6.78 per 1,000 live births.

153

We believe *Count the Kicks* can save an average of 153 babies per year in Maryland.

Read more about the evidence behind *Count the Kicks*.
Statistics according to 5-year averages (2017-2021) from
CDC Wonder.

Impact of Stillbirth

- ▶ Results in significant physical and psychological complications for birthing individuals and their families.
- ▶ **Maternal Mortality** Ray et al. (2018) found that more than 15% of maternal deaths within 42 days of delivery occurred in women who experienced a stillbirth.
- ▶ **Severe Maternal Morbidity** “risk of severe maternal morbidity among stillbirth deliveries was more than fourfold higher (adjusted RR 4.77; 95% CI 4.53–5.02) compared with live birth deliveries”
 - ▶ most often caused by hypertensive disorders of pregnancy and/or placental conditions (Wall-Wieler et al., 2019)
- ▶ **Prolonged and complex grief**
 - ▶ bereaved parents have higher rates of mental health disorders such as depression, anxiety, post-traumatic stress disorder, and suicidal ideation (Burden et al., 2016).
- ▶ **Economic Burden**
 - ▶ financial instability due to employment difficulties, reliance on substances to cope with the grief, or increased costs associated with hospital bills and funeral expenses

History of Fetal Movement Counting

- ▶ Hypothesized that much of stillbirth occurs due to placental insufficiency (ACOG, 2021).
- ▶ Due to the acute or chronic fetal hypoxemia associated with placental insufficiency fetal movements may decrease as the fetus slows to conserve energy and a period of decreased movements may proceed death (Bellussi, et al. 2020; Pollock et al., 2020; Mangesi, Hofmeyr, G. J., Smith, V., & Smyth, 2015).
 - ▶ In a case-control study comparing 153 individuals who had experienced stillbirth with 480 people with an ongoing pregnancy or live delivery, those who had a stillbirth **were much more likely to have had reduced fetal movements in the preceding two weeks** (adjusted odds ratio 14.1 (95% confidence interval 7.27 to 27.45)).

Heazell AEP, Warland J, Stacey T, et al.. Stillbirth is associated with perceived alterations in fetal activity - findings from an international case control study. BMC Pregnancy Childbirth 2017;17:369. 10.1186/s12884-017-1555-6

History of Fetal Movement Counting

- ▶ Fetal movement counting recommended to pregnant people during prenatal care since the 1970s and 80's
- ▶ There is little standardization to whom and how fetal movement counting is taught (Barros, Rosado, Ayres-de-Campos, 2021; Bellussi, et al. 2020; Daly et al., 2019; Hayes et al., 2023; Mangesi, Hofmeyr, G. J., Smith, V., & Smyth, 2015; Pollock et al., 2020).
 - ▶ Provision of written instructions, charts, when and how to count, and who is instructed to count all vary (Mangesi, Hofmeyr, Smith, & Smyth, 2015).
- ▶ The Sadovsky method
 - ▶ assess the number of movements that the baby has made over a period of time (i.e., 30 minutes or 2 hours), typically after meals
- ▶ The Cardiff Count to Ten method
 - ▶ assess the amount of time it takes to perceive ten movements

Public Health Campaigns

- ▶ Fetal death is a significant issue for society, birthing people, and their families
- ▶ Can be prevented
- ▶ Can be widely successful in improving outcomes ~ think Safe to Sleep
- ▶ Over 21,000 babies are born still each year in the U. S, this is approximately 7 times the number of those lost to sudden unexpected infant death (CDC, 2023).
 - ▶ Public Health Crisis
- ▶ Public health campaigns aimed at reducing rates of stillbirth have been successfully implemented in the Netherlands and Australia (Chan et al., 2023)

Chan, L., Owen, K. B., Andrews, C. J., Bauman, A., Brezler, L., Ludski, K., Mead, J., Birkner, K., Vatsayan, A., Flenady, V. J., & Gordon, A. (2023). Evaluating the reach and impact of Still Six Lives: A national stillbirth public awareness campaign in Australia. *Women and birth: journal of the Australian College of Midwives*, 36(5), 446–453. <https://doi.org/10.1016/j.wombi.2023.02.006>

Wright J. R., Jr (2017). A Fresh Look at the History of SIDS. *Academic forensic pathology*, 7(2), 146–162. <https://doi.org/10.23907/2017.017>



What is *Count the Kicks*?

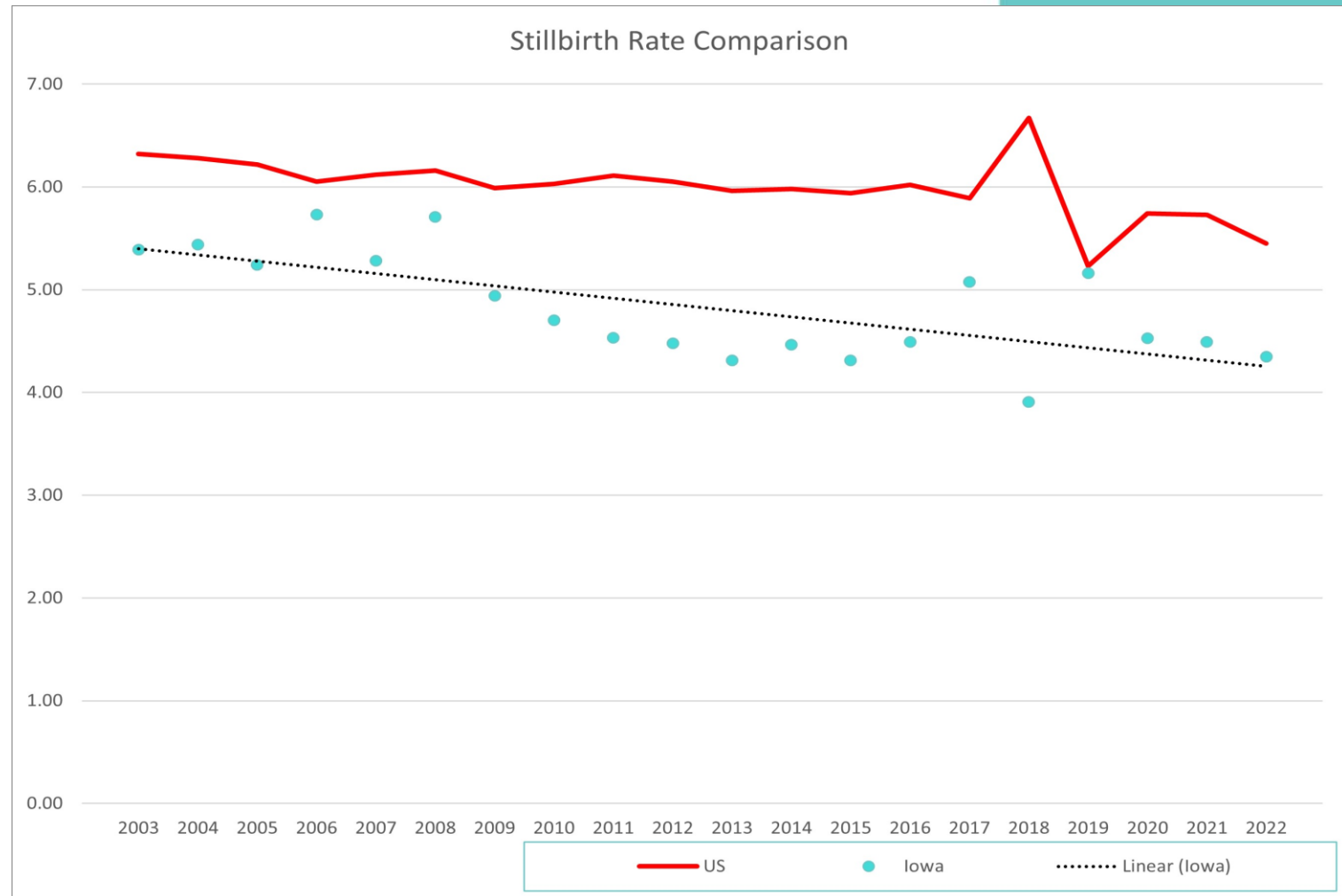
- ▶ **Evidence-based** stillbirth prevention program
- ▶ **Educates** expectant parents on the importance of tracking fetal movement
- ▶ **Empowers** expectant parents to speak up to providers if there is a concern

Our goal is to get information on kick counting to all expectant parents in the state through distribution of educational materials on **Count the Kicks** to all birthing hospitals and health departments.

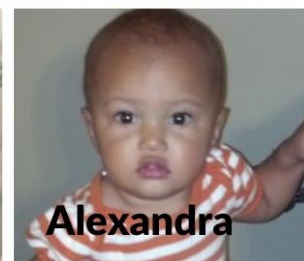
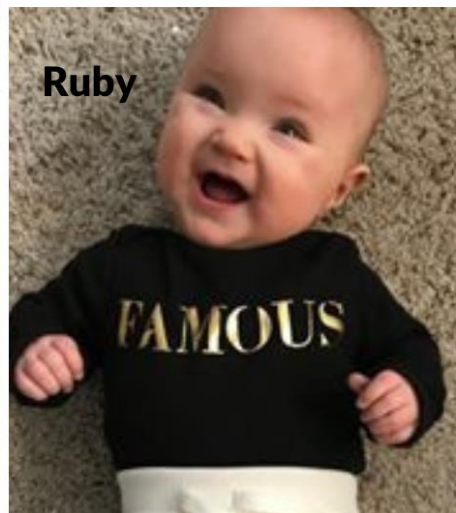
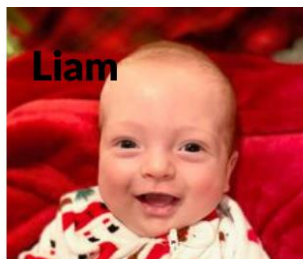


Rates of Stillbirth in Iowa after Count the Kicks

- Research shows Iowa's stillbirth rate declined one percent every three months for a decade while the U.S. remained relatively stagnant.
- Iowa's African American stillbirth rate decreased by 39% in the first five years of our program.



We want to help save babies with you.



www.CountTheKicks.org

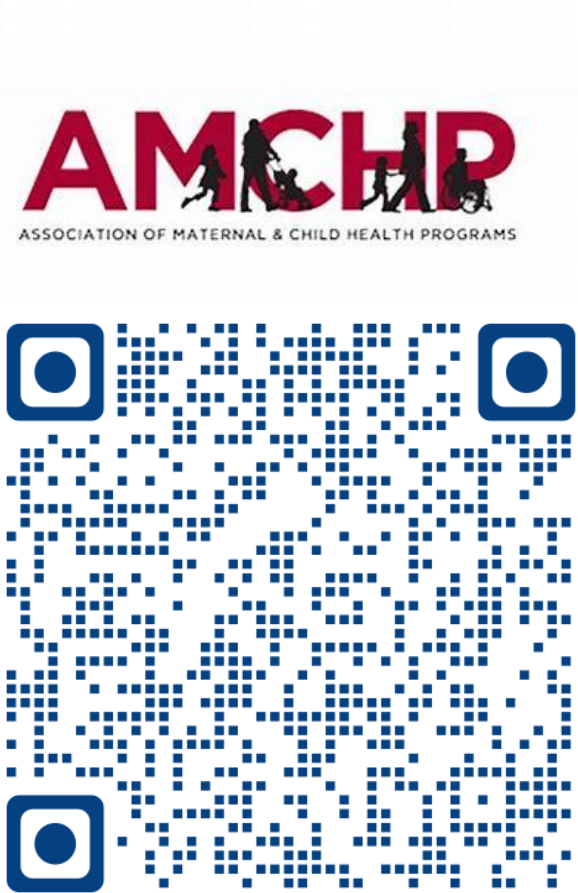


Count the Kicks Evidence

Published in AJOG and BJOG, evidence shows that expectant parents who utilize *Count the Kicks* have better birth outcomes.



Association of Maternal Child Health Programs (AMCHP) Best Practice



<https://bit.ly/AMCHPBestPractice>

AMCHP ASSOCIATION OF MATERNAL & CHILD HEALTH PROGRAMS

Innovation Station Practice Summary and Implementation Guidance

innovation station Sharing Best Practices in MCH

Count the Kicks

An Innovation Station Best Practice

Purpose: This document supports MCH professionals to implement a practice found in Innovation Station. This resource provides the information needed to replicate the practice and is divided into two sections: the first section provides a high-level overview of the practice while the second section describes how to implement the practice. For additional information on any of the content provided below, please reach out to the practice contact located at the bottom of this document.

Section I: Practice Overview

Location:	Iowa	Title V/MCH Block Grant Measures Addressed
Designation:	Best Practice	NPM 3: Risk-Appropriate Perinatal Care
Date Submitted:	01/2021	

Practice Description

Count the Kicks is an evidence-based stillbirth prevention campaign that teaches expectant parents the method for and importance of tracking their baby's movement in the third trimester of pregnancy, with the goal of lowering the country's stillbirth rate and saving babies across the nation. Our mom-focused campaign offers home visitors, social service agencies, community organizations, maternal health providers and our entire community a way to discuss the impact of stillbirth in an informative and empowering way. *Count the Kicks* is the leading U.S. resource for tracking fetal movement in the third trimester of pregnancy. In the first five years of our campaign in Iowa, the stillbirth rate among Black women went down a promising 39 percent.

The *Count the Kicks* campaign is a project of *Healthy Birth Day, Inc.*, a 501(c)(3) organization dedicated to the prevention of stillbirth, that was founded in 2008 by five Iowa moms who all lost daughters to stillbirth or infant death in the early 2000s. After being connected through friends and pastors, a strong bond quickly formed between the women, and they decided to channel their grief into stillbirth prevention efforts to keep other families from facing the pain of losing a baby. Their efforts created the *Count the Kicks* campaign, which is based on public health research in Norway that demonstrated a 30% reduction in stillbirth by teaching pregnant women how to monitor fetal movement during the third trimester of pregnancy by doing kick counts on a daily basis.

Research shows that a change in baby's movement can be a sign of potential problems and is an indication that a baby should be checked by a provider. Many doctors believe fetal movement is a vital sign and should be monitored closely in the third trimester. When expectant moms use the *Count the Kicks* app daily in the third trimester of pregnancy, they will get to know what is normal for their baby (how long it takes their baby to get to 10 movements each day), so they can call their provider right away if there is a change.

According to the Centers for Disease Control and Prevention, we lose approximately 24,000 babies to stillbirth every year in America. Statistically, it means 1 out of every 167 pregnancies ends in stillbirth, with a disproportionate number of babies born still to African American, Hispanic, and Native American women. According to the CDC, a Black woman is more than twice as likely to lose her baby to stillbirth, statistically a 1 in 94 chance of losing a baby in the final weeks of pregnancy.

In the first decade of *Count the Kicks* in Iowa when our non-profit organization worked closely with the Iowa Department of Public Health, the state's stillbirth rate decreased nearly 32% while the rest of the country remained relatively stagnant. Iowa went from the 33rd worst stillbirth rate to one of the lowest in the nation. If every state implemented our *Count the Kicks* program, we have the potential of saving 7,500 babies from preventable stillbirths each year. As of January 2021, we are proud to partner with Florida Department of Health, South Carolina Department of Health and

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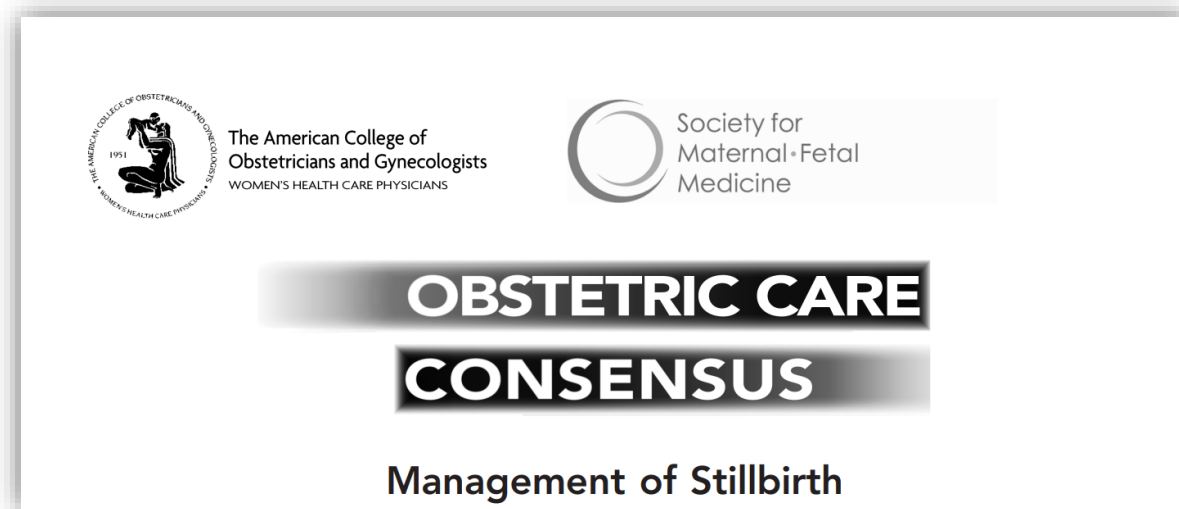
innovation station Sharing Best Practices in MCH



ACOG (2020)

ACOG (2020) does not have specific recommendations on fetal movement counting, they state that best practices in fetal movement counting include

- encouraging patients to be aware of fetal movement patterns,
- providers should be attentive to the complaint of reduced fetal movements
- address reports of decreased fetal movements in a systematic way, and
- use shared decision-making to employ interventions safely.



American College of Obstetricians and Gynecologists, Society for Maternal-Fetal Medicine in collaboration with, Metz, T. D., Berry, R. S., Fretts, R. C., Reddy, U. M., & Turrentine, M. A. (2020). Obstetric Care Consensus #10: Management of Stillbirth: (Replaces Practice Bulletin Number 102, March 2009). American journal of obstetrics and gynecology, 222(3), B2–B20. <https://doi.org/10.1016/j.ajog.2020.01.017>





How to *Count the Kicks*

To see the same reduction in stillbirth as Iowa requires standardization in our implementation



MOVEMENTS MATTER – Let's Start Counting!

When should a mom start counting movements?

- ACOG recommends beginning counting at 28 weeks gestation or 26 weeks if considered high risk or pregnant with multiples. This is when research indicates baby has established a consistent pattern that mom can feel and track.

What counts as a movement?

- Rolls, kicks, jabs, swishes, pushes – anything EXCEPT for hiccups (these are involuntary movements).

How to *Count the Kicks*



**Counting Kicks
is What You Should Do.
It's Important and Easy Too!**

Here's How: Starting at the 3rd trimester, begin counting.



Monitor your baby's movements with the FREE *Count the Kicks* app or web counter. Or, visit CountTheKicks.org to download a paper movement monitoring chart.



Count your baby's movements every day — preferably at the same time. Try to pick a time when your baby is normally active.



Time how long it takes your baby to get to 10 movements, and rate the strength of your baby's movements.



After a few days, you will begin to see an average length of time it takes to reach 10 movements.



Call your provider right away if you notice a change in strength of movements or how long it takes your baby to get to 10 movements.

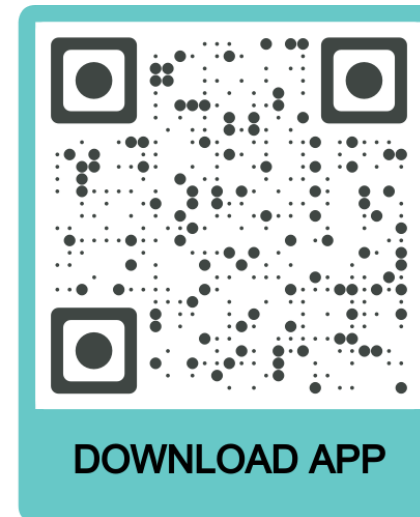


Count the Kicks App

Free and Easy to Use

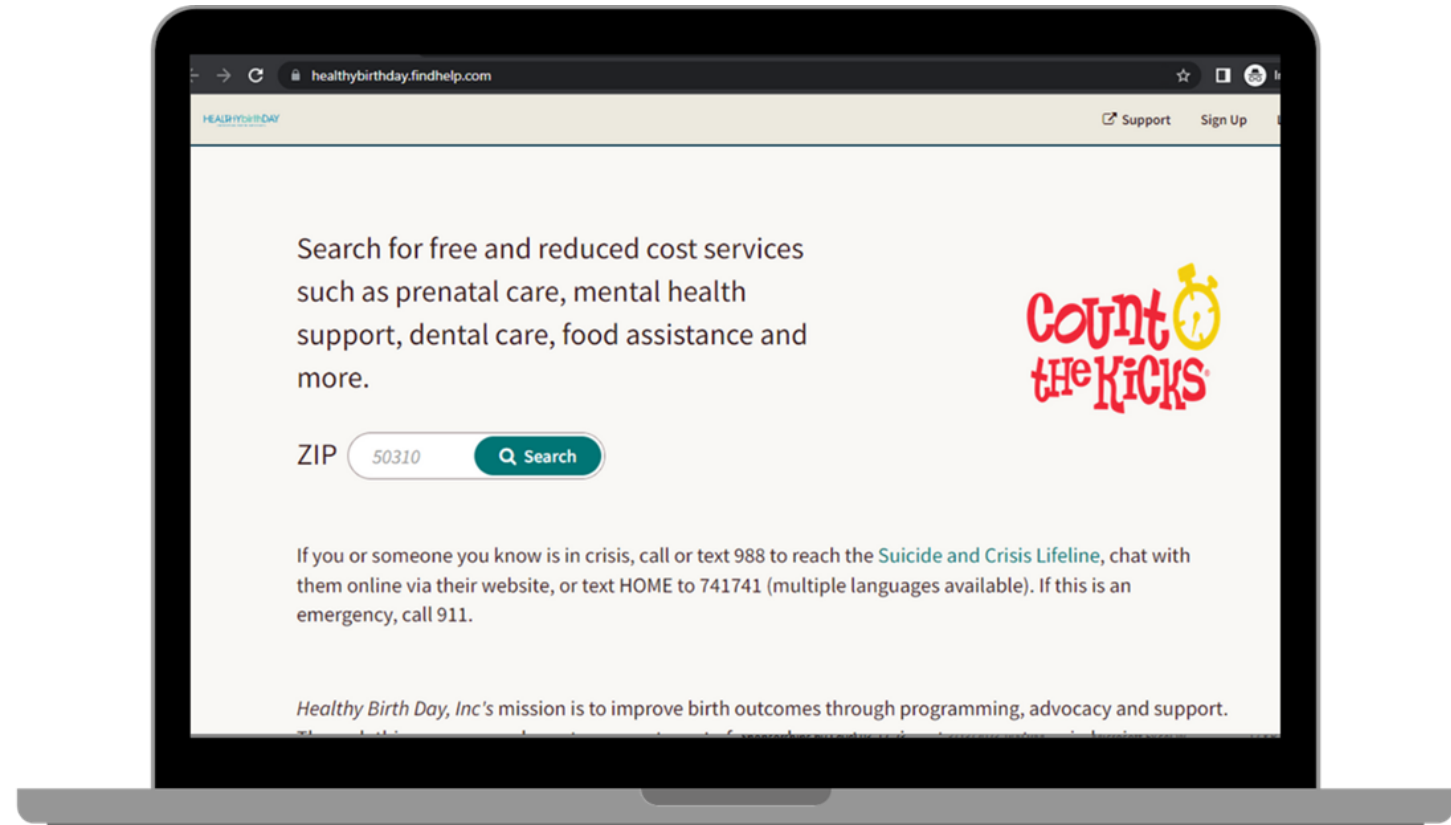
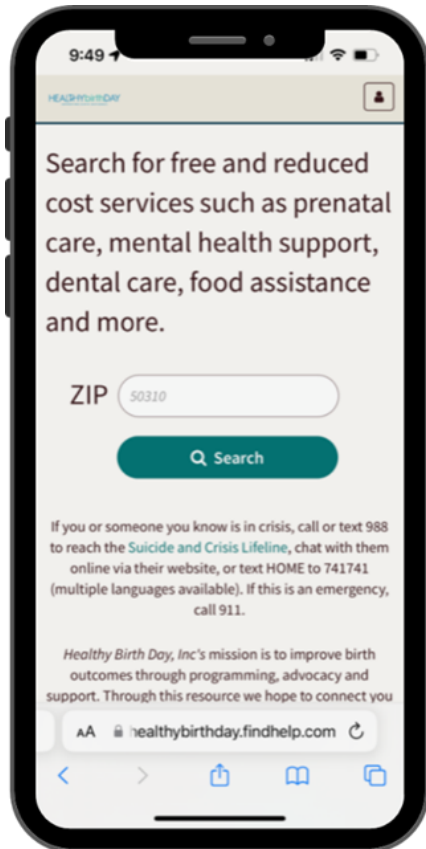


- Our FREE app is evidence-based and available in [16 languages](#)
- Available for Apple and Android products
- **Set a daily reminder to *Count the Kicks***
- Download history to share with their provider, family or friends via text or email



We do not share or sell app user information.

Find Local Resources



Visit www.HealthyBirthDay.findhelp.com to search for free and reduced cost resources in your local community.



Implementing Count the Kicks

Hospitals and Outpatient Offices



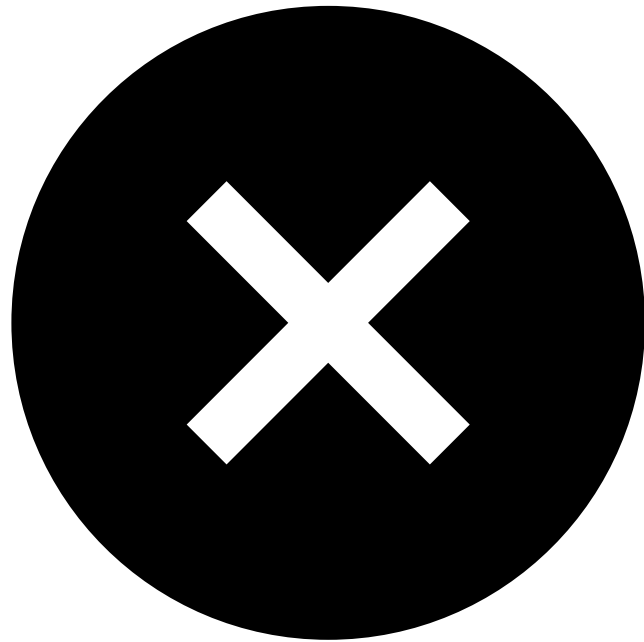
Poll: What are some questions you have received about fetal movement monitoring?





Monitoring Fetal Movement Makes Birthing People Anxious

- ▶ Owens and Libertus (2022) reported that mothers who engaged in fetal kick-counting reported fewer negative perceptions about their child.
- ▶ Delaram and Shams (2016) found that those who performed fetal movement counting from 28 to 37 weeks gestation had significantly lower state and trait anxiety scores than those who did not.
- ▶ 77% of those who used the Count the Kicks app reported that the app helped lower their anxiety and 84% stated the app helped them bond with their baby.



Monitoring Fetal Movement Increases Interventions

- ▶ Although, some studies have not shown clear improvements in outcomes through fetal movement counting (Bellussi, et al. 2020), a recent meta-analysis by Hayes et al. (2023) analyzed data from 18 studies and found that encouraging awareness of fetal movement may be associated with reduced adverse neonatal outcomes such as decreased rates of NICU admission and Apgar scores <7 at five minutes without an increase in rates of c-section or induction.

Common Misconceptions about Fetal Movement



FALSE

My baby is always active, so I don't need to count kicks.



FALSE

Only those experiencing a high-risk pregnancy should pay attention to their baby's movement.



FALSE

My baby should get 10 kicks in 2 hours.



FALSE

I can just use a Doppler device to monitor my baby's well-being.

False: Common Misconceptions



FALSE

If baby isn't moving, I should drink something cold or eat something sugary to get baby moving.



FALSE

Babies kick less near the end of pregnancy.



FALSE

Triage doesn't need any Count the Kicks education.

Five ways to improve the conversation

Be Equitable

Listen & Learn

Be Clear &
Concise

Be Honest

Check for
Understanding



Instructions

- Instructions on fetal movement counting to **ALL** patients
- Counting should start in the third trimester (28 weeks)
- Starting timing—how long does it take to get 10 movements?
- Track same time each day
- Not just kicks—Movements include rolls, kicks, jabs, swishes, pushes –anything EXCEPT for hiccups (these are involuntary movements).
- Determine what is normal movement for their baby

Wrap Up

3rd trimester?



Start Counting!

Counting kicks is
what you should do.

It's important and easy too!

ASK HOW. ASK NOW.



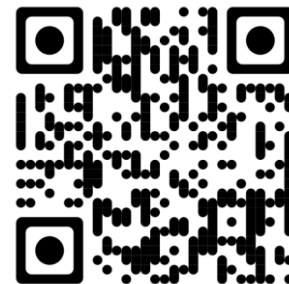
Download the **FREE**
Count the Kicks app today!

 [CountTheKicks.org](https://www.CountTheKicks.org)

Free Educational Materials

- ▶ Posters in English and Spanish
- ▶ App Card Reminders in English and Spanish
- ▶ At a Glance Materials
- ▶ Magnets
- ▶ Brochures in English and Spanish
- ▶ Additional free resources like printable kick-counting charts

www.CountTheKicks.org



**Count
the Kicks** 

Implementing Count the Kicks

Create a documented workflow to ensure information on CTK is given to all patients

Educate your staff on how to educate patients

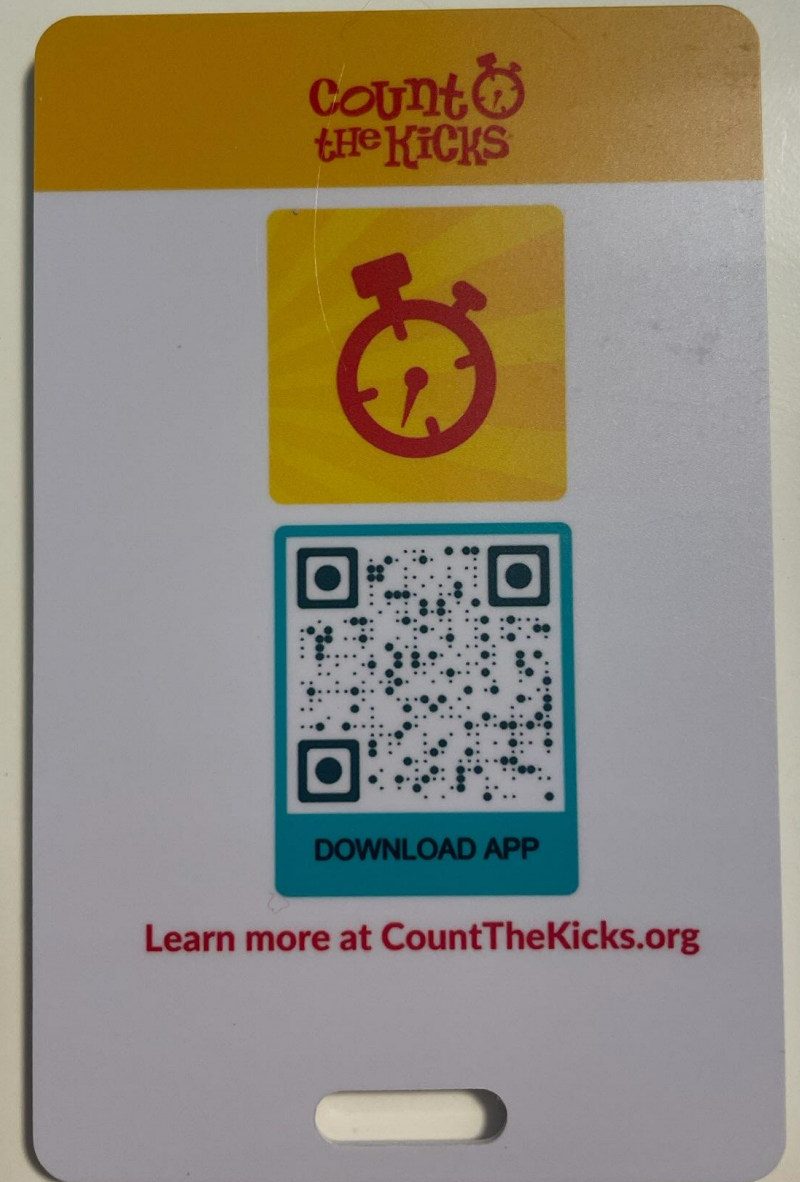
Monitor your implementation

How will you/we measure your success?

- Number of app downloads...
- Materials ordered

If you want badge buddies email me with your address

Do you have a protocol that outline how to clinically evaluate pregnant people who present with decreased fetal movement



System Implementation



Discharge Process



Training for Team



Intake – After Visit
Summary

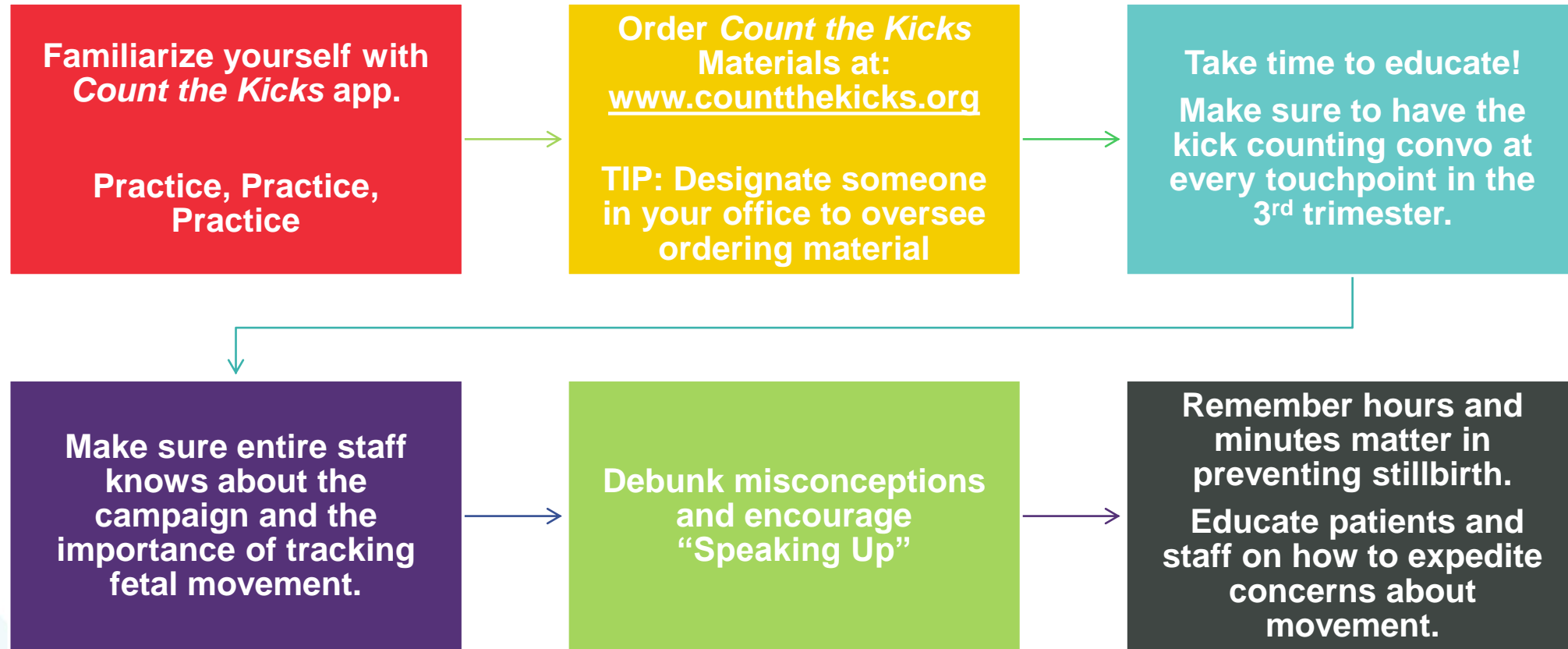


Procedure – wait
downtime



Audio Recordings &
Waiting Room
Video

Next Steps



Greater than
28 Weeks?



of the time



Contact

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