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Perspective

A NICE Delivery — The Cross-Atlantic Divide over Treatment Intensity in Childbirth

Neel Shah, M.D., M.P.P.

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Article

Audio Interview

Interview with Dr. Neel Shah on new guidelines from the United Kingdom on the safety of midwife-guided deliveries. (7:00)

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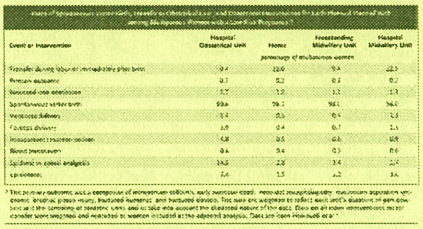
FOR GENERATIONS, BOTH BRITISH AND AMERICAN MOTHERS HAVE ASSUMED THAT THE SAFEST way to give birth is to spend many hours, if not days, in a hospital bed under the supervision of an obstetrician. Now, new guidelines are challenging these deeply held beliefs.

After completing an evidence-based review, the United Kingdom's National Institute for Health and Care Excellence (NICE) concluded that healthy women with straightforward pregnancies are safer giving birth at home or in a midwife-led unit than in a hospital under the supervision of an obstetrician.[1] Across the pond, eyebrows went up. The *New York Times* editorial board (and others) wondered, "Are midwives safer than doctors?"[2] How can homes be safer than hospitals? And what implications will the British guidelines have for the United States?

Currently, 9 out of 10 babies born in the United Kingdom are delivered in physician-led hospital maternity units (in the United States, the rate is closer to 99 out of 100).[1,3] NICE does not dictate a clinician type or birth setting and makes it clear that women should have freedom to make choices consistent with their needs and preferences. Yet Britain's National Health Service believes that when the new guidelines are implemented, these preferences may change. Thousands more British women per year are expected to avoid hospitals willingly — at least in part out of concern for their own safety and with the expectation that their babies will be no worse off.



Rates of Spontaneous Vertex Birth, Transfer to Obstetrical Care, and Obstetrical Interventions for Each Planned Place of Birth, among Multiparous Women with a Low-Risk Pregnancy.

The safety argument against physician-led hospital birth is simple and compelling: obstetricians, who are trained to use scalpels and are surrounded by operating rooms, are much more likely than midwives to pick up those scalpels and use them (see table).[4] For women giving birth, the many interventions that have become commonplace during childbirth are unpleasant and may lead to complications, including hospital-acquired infections. For babies, the interventions rarely appear to be helpful. Among multiparous women in a large cohort study, babies born with "serious medical problems" — which included diagnoses ranging from encephalopathy to stillbirth — were equally rare (0.2 to 0.3%) in high- and low-intervention settings.[1]

Of course, there are caveats. The NICE guidelines apply to low-risk pregnancies only. The pregnancies of a majority of women fall into this category, but pregnancies in women who are obese or have diabetes, for example, are excluded. In addition — and perhaps most important for a woman with a low-risk pregnancy — labor may become complicated without warning. Determining the appropriate time to intervene is a judgment call based more on art than science.

Like most evidence-based guidelines, childbirth recommendations are based on measures of central tendency. But what is true for the average woman is not true for everyone. As it turns out, not one of my patients believes she is average, and I suspect that many of them are correct. That's why I personally never perform cesarean sections that are unnecessary: if the baby initially has low Apgar scores, I'm convinced I did the cesarean just in time; if the baby initially has great Apgar scores, I still did the cesarean just in time. Without a counterfactual, and with limited data to guide me (generally speaking, pregnant women are not excited about becoming experimental subjects), I can believe that my decision making is always accurate.

Or is it? We know that even mothers who appear healthy — those who might be considered statistically "average" — can start hemorrhaging or have umbilical cord prolapse or another unanticipated emergency. In these uncommon cases, surgical obstetrical care saves lives. On both sides of the Atlantic, tolerance for the possibility of catastrophe at a moment that's expected to be profoundly joyful is understandably low.

What differs between Britain and the United States is the way this possibility is presented and managed. NICE and the American College of Obstetricians and Gynecologists (ACOG) both recognize that babies born at home face risks that might be avoided in a hospital setting. For first-time mothers in particular, the risk of delivering a baby with serious medical problems is two to three times as high at home as it is in a hospital.[1,3] As a result, 45% of British first-time mothers who intend to give birth at home ultimately get transferred to a hospital obstetrical unit during the course of labor.[1] Still, NICE presents home birth as a reasonable, preference-sensitive option and emphasizes the risks of overintervention in hospitals.[1] By contrast, ACOG strongly emphasizes the risks of underintervention and states unequivocally that "hospitals and birthing centers are the safest setting for birth."[3]

At its core, this debate is not about the superiority of midwives over doctors or hospitals over homes. It is about treatment intensity and when enough is enough. Nearly all Americans are currently born in settings that are essentially intensive care units (ICUs): labor floors have multipaneled telemetry monitors, medications that require minute-by-minute titration, and some of the highest staffing ratios in the hospital. Most labor floors are actually more intensive than other ICUs in that they contain their own operating rooms.

Surely every birth does not require an ICU. At present, 5 of the 10 most common medical interventions performed in the United States are related to childbirth, and cesarean sections are the most commonly performed major surgery worldwide. The risks that concern the British are real. Major complications such as hemorrhage, severe infection, and organ injury are three times as likely to occur with cesarean deliveries as they are with vaginal deliveries (2.7% vs. 0.9%).[5]

One reason the risks associated with physician-led hospital birth appear starker in Britain is that underintervention is less likely there than it is in the United States. Access to care is a given. British women who give birth outside the hospital receive focused, one-on-one attention from a qualified midwife. When more intense care is needed, there are clear protocols and mechanisms to facilitate transfer to a hospital. The fact that nearly half of first-time mothers who initially intend to have a home birth are transferred to

hospitals may be a sign of a working system rather than a failing one. In this context, particularly for multiparous women, who have lower transfer rates, giving birth in the comfort and privacy of home not only seems reasonable — it seems preferable.

In the United States, access to obstetric care that is coordinated among homes, birthing centers, and hospitals is both unreliable and uncommon. Nearly half of all U.S. counties have no practicing obstetricians or midwives, so women are often forced to drive to distant facilities offering needlessly complex care.[2] Lower-level care facilities that could potentially fill this gap — such as midwifery-led birthing units — are few and far between. As a first step, ACOG and the Society for Maternal–Fetal Medicine released a consensus statement in February 2015 providing definitions for facility-based levels of maternal care. Unlike our British counterparts, however, U.S. obstetricians lack clear protocols for determining when and how to transfer patients to risk-appropriate facilities. Moreover, U.S. facilities often lack formal referral relationships and may face financial disincentives to transfer patients.

As a U.S.-trained obstetrician, I have little doubt that the United States offers outstanding care for medically complicated pregnancies. But there are lessons to be learned from the British system. The majority of women with straightforward pregnancies may truly be better off in the United Kingdom.

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Author Affiliations

From Beth Israel Deaconess Medical Center, Harvard Medical School, and the Ariadne Labs for Health Systems Innovation — all in Boston.

Supplementary Material

Disclosure Forms	PDF	82KB

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VALERIE KING, MD
Jun 10, 2015

We need a U.S.-based Birthplace study

Dr. Shah--I commend your recent piece in this journal for its clarity and raising the question of whether higher treatment intensity is actually achieving better results.Colleagues and I have recently done a systematic review to inform a state Medicaid coverage policy on out of hospital birth (OOHB). The review gathered information on the risks of perinatal mortality for women electing OOHB compared to those planning a hospital birth. While there are clear benefits for low-risk mothers, the fetal and neonatal risks are much less clear. Only 10 studies published over the last decade included perinatal mortality, four of these reported the outcome by parity. and only one of these was U.S.-based. The risk of perinatal mortality is thankfully very low among all women experiencing normal pregnancies at term, high quality data is scarce and international differences inhibit fair comparison. Despite including over a million births, these 10 studies do not agree about whether there are slight increases or decreases in this risk for women planning OOHB. There will never be a high-

quality randomized trial of planned OOHB. What we need for the U.S. is a large, prospective "Birthplace" study.

Jessica Goldstein
Jun 10, 2015

It is time for this conversation to be a national one.

I agree with Dr. Shah, there is much we can learn from the UK system. It is not naïve to think we can collaborate in the same way in the US. I have seen collaboration work when I was a fellow and our C-section trained family physician group provided back up for a free standing birthing center. I have also seen the flip side, where physicians openly discuss how they would never facilitate or provide midwifery back-up as they consider it substandard care. I personally feel that refusing to facilitate back-up and seeming to prefer midwives bringing in their patients in as "undoctored" to be a huge disservice and ultimately leads to poor outcomes.

It is possible to create a safety net here in the US. The Home Birth Summit (www.homebirthsummit.org) includes leading obstetricians, family physicians, and midwives that have been working on home birth transfer guidelines and best practices, and exemplifies the kind of national work that needs to be done.

I had a planned home birth for my third child because I thought I would receive better care, despite the fact that I deliver patients in the hospital. What does this say about our system?

Ted Adams
Jun 09, 2015

Safe, reliable relationships between home and hospital are the key

As a British OBGYN doing a Harkness fellowship in US Materity Policy, Dr Shah's perspective piece has raised the same questions that I have been asking. Avoiding unnecessary intervention is a central theme to many of the NICE guidelines. In the UK, whilst we have a nationalised health system, hospitals are still paid according to the number of deliveries they perform and hospitals employ physicians. Hospitals compete with other hospitals for their deliveries-not an overly dissimilar model to some of the US. We had our 3rd baby in the US during the Harkness fellowship. My wife (also a physician) was a low risk multigravida. She had a normal delivery in a local hospital. We knew the UK evidence meant that home birth was safer and we thought this the best way of avoiding over-internvention, but we also wanted a seamless transition if something went wrong and no-one was able to reassure us that this existed. In the UK a sense of interconnectivity exists between providers, even those competing against each other. We needed a reliable and believable package of care that could have spanned multiple providers - businesses working together for patients. It shouldn't be that difficult!

Priya Morganstern
Jun 09, 2015

Collaboration among practitioners is key

It is incredible that the conversation about hospital versus homebirth is even still happening. There are risks and benefits to any birth site, and the decision to birth out of the hospital is clearly a medically defensible one, even if it makes some people uncomfortable.

If the readers of this Journal are not familiar with the work of the Home Birth Consensus Summits, they should

be. The Summit delegates (representing consumers, physicians, midwives, hospital administrators, and legislators, as well as public health, research, ethics, payor, and liability specialists) worked hard to put aside conflict and untangle complex issues to facilitate safe homebirth. Ultimately, they shared a vision of improving equitable access to safe, high quality maternity care across all settings. The resulting 9 Common Ground Statements address a woman's autonomy, reduction of health disparities, cross-professional collaboration and communication, physiologic birth, and expansion of research to include the effects of birth place on outcomes and experience.

Let's see more of this kind of productive collaboration, where the focus is truly on the best interests of the mother and baby.

MICHAEL KLEIN, MD
Jun 08, 2015

Shah has it right

Having studied home and hospital births at National Perinatal Epidemiology Unit Oxford and attended births in both US and Canada I congratulate Shah on his accuracy and clarity. The industrialization of childbirth in US and Canada is at the heart of why these two countries fare so poorly against the UK. Those citing the dangers of home birth are using long discredited data mostly based on birth certificates where we cannot know if the birth was intended for home or not. The publication of meta analyses showing problems with home birth in the US are flawed due to the inclusion of studies that were so poor that they ought not be part of the meta analysis and other studies that ought to have been there were not. Garbage in garbage out. This is more about politics than science. In Canada well conducted studies in British Columbia and Ontario, with complete ascertainment have shown the safety of home birth. Overall, however, despite differences in the systems of medical care, the outcomes in both the US and Canada, including unacceptably high cesarean rates, reflect major training failures, too many OBs and too few midwives. Michael C. Klein MD, FAAP (neonatal/perinatal) ,FCFP

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