A 55-year-old man with no serious health conditions has a moderately severe myocardial infarction.

When Mr. Santos feels chest pain, he goes right over to the local Family Health Strategy (FHS) health post and is seen by a physician immediately. He is placed in the observation room, where he is given oxygen and a painkiller. The health post lacks electrocardiography (ECG) equipment, so the physician calls an ambulance, which, since the health post is 5 km from town, takes 20 minutes to arrive.

At the hospital, Mr. Santos is taken first to the secondary care clinic, where his myocardial infarction is confirmed on ECG. If appropriate, he is then given thrombolytic agents. However, because of the severity of the infarction, he is transferred to the university hospital intensive care unit to undergo angioplasty. He remains in the hospital for 6 days.

The day he returns home, Mr. Santos is visited by his community health agent, who lives nearby and who helps him understand the purposes of his new medications and work out an administration schedule. She also talks to him about recommended dietary changes and offers lifestyle advice on such topics as smoking cessation, weight loss, and physical activity. Then she arranges for the physician who first saw Mr. Santos at the FHS post to visit him at home. Unfortunately, the patient was not given a discharge summary, so the physician has no way of knowing what treatment he received in the hospital, except for the aspects that Mr. Santos was told about and understood. Planned technology implementation should eventually allow information transfer from the hospital to the health posts.

The physician arranges for Mr. Santos to receive home visits from a Núcleos de Apoio à Saúde da Família — a team that includes a physiotherapist and a psychologist, among others. All these services are paid for by Mr. Santos’s municipality and the Brazilian government.

Disclosures

Disclosure forms provided by the authors are available with the full text of this article at NEJM.org.

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

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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). 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.

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 scalps — which came with the expectation that their own operating rooms. Nearly all Americans are currently born in settings that are essentially intensive care units (ICUs): labor floors have multi-paneled 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%).

One reason the risks associat-
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.\(^*\)

<table>
<thead>
<tr>
<th>Event or Intervention</th>
<th>Hospital Obstetrical Unit</th>
<th>Home</th>
<th>Freestanding Midwifery Unit</th>
<th>Hospital Midwifery Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfer during labor or immediately after birth</td>
<td>0.4</td>
<td>12.0</td>
<td>9.4</td>
<td>12.5</td>
</tr>
<tr>
<td>Primary outcome</td>
<td>0.3</td>
<td>0.2</td>
<td>0.3</td>
<td>0.2</td>
</tr>
<tr>
<td>Neonatal unit admission</td>
<td>1.7</td>
<td>1.2</td>
<td>1.1</td>
<td>1.3</td>
</tr>
<tr>
<td>Spontaneous vertex birth</td>
<td>90.6</td>
<td>98.3</td>
<td>98.0</td>
<td>96.6</td>
</tr>
<tr>
<td>Ventouse delivery</td>
<td>3.4</td>
<td>0.5</td>
<td>0.4</td>
<td>1.3</td>
</tr>
<tr>
<td>Forceps delivery</td>
<td>1.9</td>
<td>0.4</td>
<td>0.7</td>
<td>1.1</td>
</tr>
<tr>
<td>Intrapartum cesarean section</td>
<td>4.0</td>
<td>0.5</td>
<td>0.6</td>
<td>0.9</td>
</tr>
<tr>
<td>Blood transfusion</td>
<td>0.6</td>
<td>0.4</td>
<td>0.3</td>
<td>0.6</td>
</tr>
<tr>
<td>Epidural or spinal analgesia</td>
<td>14.8</td>
<td>2.8</td>
<td>3.4</td>
<td>5.7</td>
</tr>
<tr>
<td>Episiotomy</td>
<td>7.4</td>
<td>1.5</td>
<td>2.2</td>
<td>3.6</td>
</tr>
</tbody>
</table>

* The primary outcome was a composite of intrapartum stillbirth, early neonatal death, neonatal encephalopathy, meconium aspiration syndrome, brachial plexus injury, fractured humerus, and fractured clavicle. The data are weighted to reflect each unit’s duration of participation and the sampling of obstetric units and to take into account the clustered nature of the data. Data on all other interventions except transfer were weighted and restricted to women included in the adjusted analysis. Data are from Hollowell et al.\(^4\)

ed 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 obstetrical 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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