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Where a woman delivers her baby in Kentucky can determine how safe she is

Laura Ungar, Louisville Courier Journal

12-15 minutes

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Melissa Edmondson is a mother of two from Louisville who lost a baby boy last year after suffering pregnancy complications. Louisville Courier Journal

Where a woman delivers her baby in Kentucky can determine whether she is seriously injured in childbirth — and even whether she lives or dies.

A [USA TODAY Network investigation](#) found that nearly one in 10 women who gave birth at Harlan ARH Hospital in recent years suffered severe childbirth complications that in some cases could have killed them.

The hospital, in the heart of coal country and owned by Appalachian Regional Healthcare, has Kentucky's highest rate of childbirth complications, about seven times the state and national norm of 1.4 percent.

All of Louisville's birthing hospitals have lower-than-normal rates except University of Louisville Hospital, where 3 percent of moms suffered severe complications.

New mother Robyn Melton said it's "just awful" that rates vary so widely, and the idea that one in 10 women experience serious complications at any Kentucky hospital is "insane."

"Where have we gone wrong to say someone in a different part of the state has a higher rate of fatality than a woman in this part of the state? That's scary," said Melton, who had a positive birth experience delivering her son at Norton Women's and Children's Hospital in Louisville. "If you're not around, who's going to take care of your child?"

Related: [Hospitals blame moms when childbirth goes wrong. Secret data suggest it's not that simple.](#)

Nationally, around 50,000 women a year suffer severe childbirth complications and 700 die, making America the most dangerous country in the developed world to give birth.

To examine the issue at a hospital level, USA TODAY Network reporters analyzed usually secret billing data for 2014-17 that hospitals supplied to state agencies for more than 1,000 birthing centers in 13 states, including Kentucky.

They concentrated on delivery admissions in which the patient experienced "severe maternal morbidity," a federally defined set of complications among mothers that includes blood transfusion, hysterectomy, ventilation, eclampsia, shock, sepsis and heart failure.

They found that about one in eight hospitals that deliver babies in the U.S. — and one in nine in Kentucky — have complication rates at least double the median.

Officials at Kentucky hospitals say they are constantly working to reduce risks by reviewing cases, training medical staff and abiding by proven safety practices. But the USA TODAY Network's investigation showed that such measures aren't always used.

A [story published in July](#) found that thousands of women suffer life-altering injuries or die from childbirth because hospitals and medical workers across the nation skip safety practices known to save lives.

That needs to change, said Melissa Edmondson, a mother of two from Louisville who lost a baby boy last year after suffering pregnancy complications.

"I've got two daughters," she said. "I hope it's not like this when my kids grow up."

[Click here to read the full series from the USA TODAY Network](#)

Why so many complications?

Obstetricians at Kentucky hospitals generally attribute high rates of complications to a challenging mix of patients, including moms who are obese or who have pre-existing medical conditions or those who don't get prenatal care.

ARH hospital officials would not answer the Courier Journal's questions about complications at company hospitals despite repeated requests.

When a reporter was in Eastern Kentucky in January, a spokeswoman said she was checking on the availability of the system's chief medical officer, but no interview was scheduled. Officials also did not answer questions emailed by the Courier Journal.

So, it's unclear why Harlan ARH hospital's rate of 9.7 percent is so much higher than other hospitals in Kentucky, including those within the company.

ARH owns another hospital in Hazard, about 56 miles away from its Harlan hospital, that has a complication rate around the state average.

Poverty rates are lower in Perry County, where Hazard is located — 26 percent compared with 42 percent in Harlan County. But hospital records the USA TODAY Network analyzed show that the portion of mothers on Medicaid was nearly identical at both hospitals: 80 percent in Harlan and 77 percent in Hazard.

One big difference is that Harlan's first-time cesarean section rate is much higher — 32 percent compared with 13 percent in Hazard. When subsequent C-sections are factored in, Harlan's rate shoots to 48 percent and Hazard's to 24 percent.

From September: [What states aren't doing to save new mothers' lives](#)

C-sections put women at greater risk for bleeding, infection and other complications.

At U of L Hospital, obstetrician/gynecologist Dr. Sara Petruska said the C-section rate there — 20 percent from 2014-17 among first-time moms — may be one of the reasons behind that hospital's higher-than-average complication rates.

U of L treats many obese moms, who are more likely to require C-sections, she said, "reflecting the underlying health of the population."

Petruska said being a referral center also pushes up complication rates at U of L. Other hospitals send U of L patients at risk for heart or renal failure or those with eclampsia, a pregnancy-related condition in which high blood pressure causes seizures.

"So we concentrate those patients here," she said. "So, just like you would expect a stroke center to have more stroke patients, we expect to see more of those patients here."

Petruska said Louisville women with existing medical problems also come to U of L to have their babies.

"And because we're an academic medical center, we have the ability to take care of those very complex patients," she said. "So, when you have patients who are in their early 20s with significant obesity and hypertension and diabetes, they are at risk for a lot of things that appear in the (severe maternal morbidity) index.

"So, I think that also has a lot to do with it."

Petruska said the quality of maternal care also comes into play, but she said she couldn't say how much it factors into the childbirth complication rate.

If a woman shows up with eclampsia, she said, "is there a quality issue that could be part of that? Could you miss some early warning symptoms ... and because of the quality of your care be responsible for

not preventing seizures as well as you could have?

"I think that's theoretically possible. And those are the things we look for when we review these cases."

Read more: [Louisville mom hoped for a perfect birth but nearly died in delivery](#)

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High blood pressure took one mom's life. Excessive bleeding left another with a hysterectomy. Would long-known safety practices have saved both? USA TODAY

Complications are an issue everywhere

Complications can arise even at hospitals with low rates.

"I think it's a misconception that we can completely eliminate maternal morbidity and mortality. Pregnancy is essentially a very traumatic event for a mother," said Dr. Keehn Hosier with the OB Hospitalist Group, a team leader at Norton. "But we're doing as much as we can."

Edmondson, 35, gave birth to her son at Norton Women's and Children's hospital, which has a complication rate among the state's lowest, at 0.4 percent.

She had suffered several complications in a previous pregnancy but said medical professionals failed to do enough to prevent them from happening again, such as sending her to a high-risk specialist.

She wound up going to the emergency room for bleeding three times while pregnant with her son but was released each time without testing.

"We were sent home with nothing," Edmondson said. Concerns were "shrugged off" and she was told things were normal, that the bleeding was probably due to sex with her husband. "I don't think a mom should feel that she's not being listened to."

When she was about five months pregnant, she passed a clot the size of a grapefruit on her bathroom floor and went to the hospital, where her water broke. She received two blood transfusions, and doctors delivered her son by C-section on Dec. 28.

Edmondson ultimately was diagnosed with the same complications as in her previous pregnancy: chorioamnionitis, an infection of the membranes around the fetus and the amniotic fluid; placental abruption, when the placenta separates from the inner wall of the uterus before birth; and preterm, premature rupture of membranes.

Her son Levi was born at 24 weeks, 4 days' gestation, at 1 pound, 9 ounces. He lived just three weeks before his kidneys failed, and the family made the wrenching choice to end life support.

Doctors wouldn't comment on Edmondson's case, citing patient confidentiality. But Hosier and Dr. Jennifer Evans, system president of women's and pediatric services at Norton, said they continually review protocols and take other steps to reduce infections among pregnant and postpartum women.

"We're doing all we can to reduce the infection rate whenever possible," Hosier said. "We're constantly looking at what we could do better and reduce the risk to mothers and babies."

To help raise awareness of chorioamnionitis, Edmondson created a Facebook page called [Levi's Voice](#).

She calls Levi her "precious angel boy."

Related: [The secret number maternity hospitals don't want you to know, and why we're revealing it](#)

Hospitals say they're seeking solutions

Officials at Kentucky hospitals say they're taking steps to reduce all childbirth complications.

At Norton, for example, a group of nurses and doctors dedicated to reducing C-section rates analyzes charts to examine reasons for the procedure.

Hospitals have "hemorrhage carts" with equipment for severe bleeding, big posters outlining protocols in operating rooms and checklists of procedures. Medical staff do drills at least quarterly on handling maternal hemorrhage and high blood pressure.

Norton has a doctor with the OB Hospitalist Group available around the clock.

U of L takes similar steps, Petruska said. The hospital has put in place four "safety bundles" from the Alliance for Innovation on Maternal Health — information on sets of best practices.

It's working toward implementing seven more bundles addressing various complications. U of L posts protocol reminders, such as a summary for management of severe hypertension, in a physician workroom.

Every other month, the hospital hosts drills using a maternal-fetal simulator to train medical workers how to deal with complications such as eclampsia and postpartum hemorrhage.

Petruska said medical staff review cases of severe maternal morbidity and learn from them.

[Click here to see how your local hospital lies in maternal mortality rates](#)

On a state level, the legislature in 2018 passed a law saying Kentucky's established child fatality review team will now also review maternal deaths.

Last year, [Congress passed a measure](#) to bolster and improve maternal mortality review panels nationally.

Dr. Jeffrey Goldberg, legislative chair of the Kentucky section of the American College of Obstetricians and Gynecologists, said the change will require hospitals, state health officials and medical professionals to work together and share solutions.

Petruska said she'd like Kentucky to create a "perinatal quality collaborative," a statewide network of teams that work to improve maternal and infant health.

"Most deaths are preventable," Goldberg said, adding that the stakes couldn't be higher. "It is horrible to lose a young mother. To leave children without a mother is one of the worst things imaginable."

To protect themselves, moms advised pregnant women to talk openly with doctors and nurses about risks so they can make informed decisions about where to deliver their babies safely.

Hillary Rush of Louisville, who delivered her first child at TJ Samson Community Hospital in Glasgow and her second at Norton Women's and Children's, said neither women nor medical professionals typically raise the issue of complication rates.

But they should, she said.

"I would've liked to have known the rates," said Rush, 30. "I would advise women to ask a lot of questions. If they're not giving you the answers you want, it might not be the best fit for you in your most critical moments."

Expecting a baby?: [Here's how to choose a hospital, obstetrician or midwife](#)

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