



Why Maternal Digital Health is Needed in Rural America

Curtis Lowery, MD

Professor, OB/GYN-MFM

*Founder & Director, ANGELS and the
Institute for Digital Health & Innovation*

University of Arkansas for Medical Sciences

UAMS[®]

| Institute for Digital
Health & Innovation

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Why Maternal Digital Health is Needed in Rural America



- The participants will understand why designing and implementing a digital health platform is important.
- The participants will understand how multidisciplinary providers, linked through technology, will form a new patient centered system of care
- The participants will learn why it impossible to continue to delivery care under the traditional model

Are Hospitals Becoming Obsolete?

NY Times Op Ed (2018)

By [Ezekiel J. Emanuel](#)



Consider this: What year saw the maximum number of hospitalizations in the United States?

The answer is 1981 (171 admissions per 1,000 Americans).

There is now a lower rate of hospitalizations than in 1946.

Number of hospitals has declined to 5,534 in 2018 (6,933 in 2017)

Battle of Giants



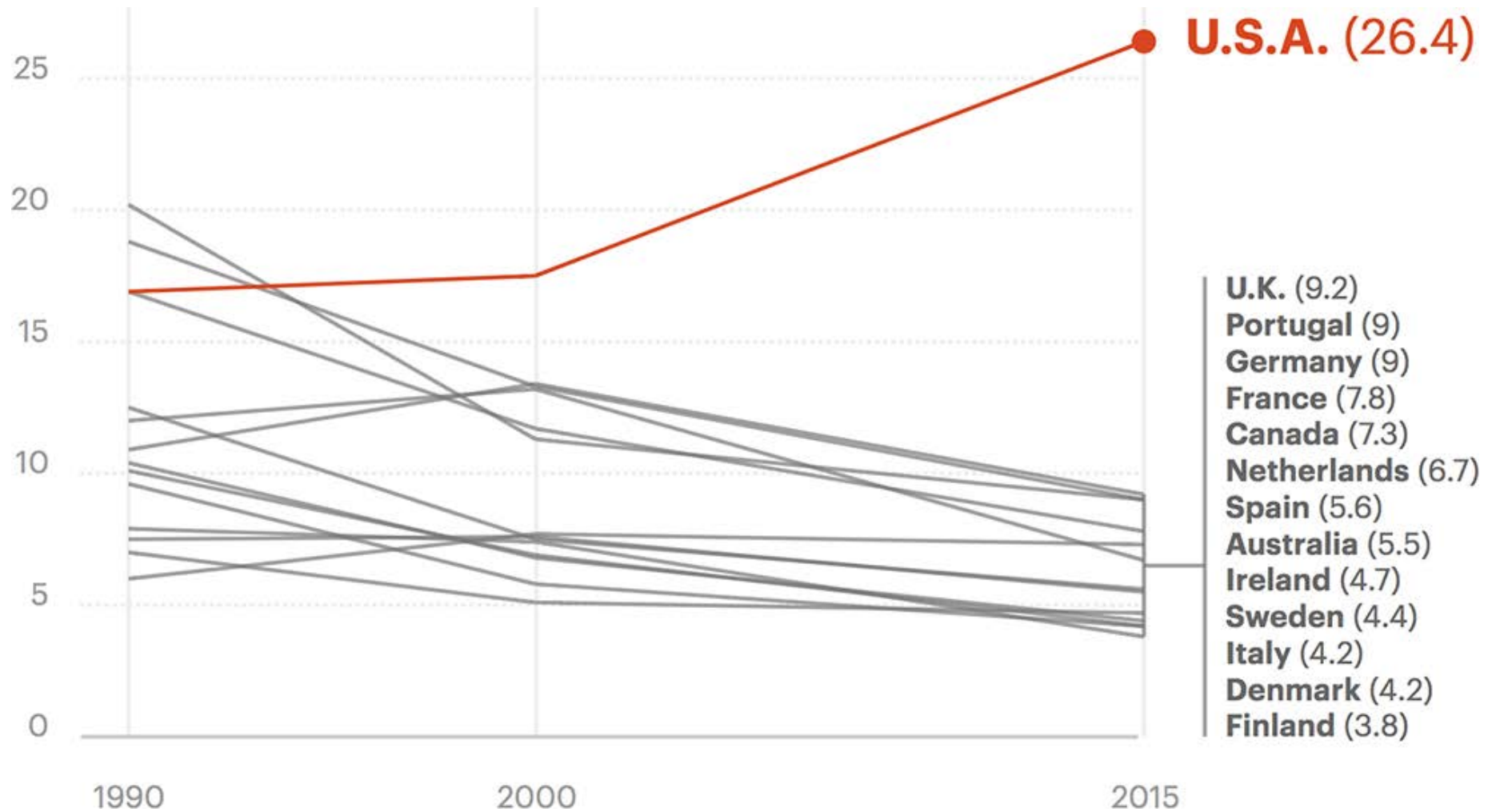
Breaking care



Mothers Should not Die!



MATERNAL MORTALITY



Worst and Best State Comparisons

State	Total	Non-Hispanic Hispanic	Non-Hispanic White	Non-Hispanic Black	Native American	Asian
Massachusetts	5.6 (3.9–6.3)	6.9	3.9 (2.1–5.6)	17.0 (7.4–26.7)	0	4.9
Mississippi	24.4 (19.6–25.8)	33.7	16.0 (10.6–21.4)	34.2 (25.8–42.7)	0	0
Arkansas	28.9 (23.6–30.4)	19.5	24.1 (18.2–30.0)	51.8 (35.5–68.0)	0	25
Dist of Col	38.8 (25.9–41.0)	7.4	0	0	70.6 (46.9–94.4)	0

Maternal Mortality: United States

For women in the United States, each year:

50,000

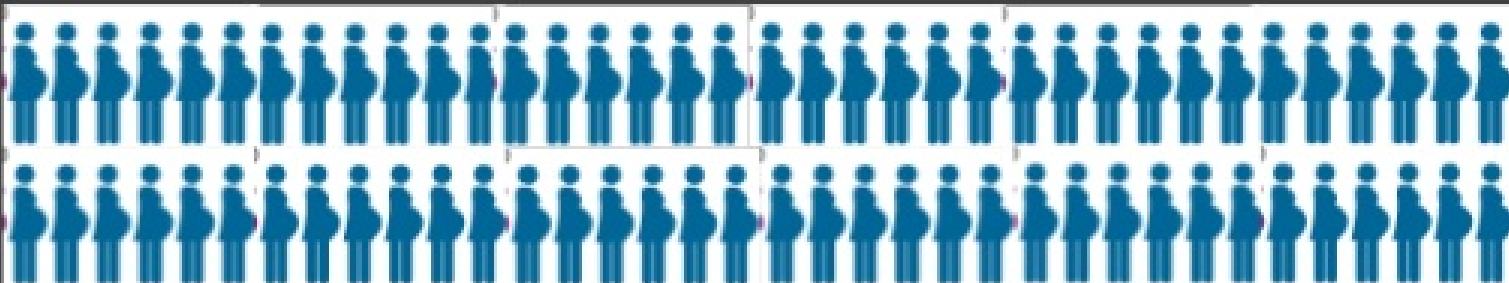
suffer severe morbidities
due to pregnancy-
related complications

650
die

due to
pregnancy-
related
complications



This means that for every 1 woman who dies due to a pregnancy-related condition, another 76 women experience a severe co-morbidity.



70%
in
20 years



Rural Maternity Services in Jeopardy

- Half a million rural women give birth in US hospitals each year
- Majority rely on local maternity services
- 10% of rural counties lost these services last 10 years
- Doubling of Infant mortality rate where counties have lost OB services

NRHA Policy Paper: Access to Rural Maternity Care Britta Anderson, Ph.D., Adam Gingery, M.B.A., Maeve McClellan, M.P.H., Robin Rose, R.N., David Schmitz, M.D., Pat Schou, M.P.H.

Powell, J., Skinner, C., Lavender, D., Avery, D., & Leeper, J. (2018). Obstetric Care by Family Physicians and Infant Mortality in Rural Alabama. *The Journal of the American Board of Family Medicine*, 31(4), 542-549.

Kozhimannil KB, Hung P, Henning-Smith C, Casey MM, Prasad S. Association Between Loss of HospitalBased Obstetric Services and Birth Outcomes in Rural Counties in the United States. *JAMA*. 2018;319(12):1239–1247. doi:10.1001/jama.2018.1830

Distance to Obstetrical Hospitals

- Has been increasing with rural hospital closures
- Studies have linked drives of greater than 45 minutes to adverse outcomes
- Temporary housing locations are expensive (burden on poor)
- Distance deliveries associated with family stress
- May be associated with a reduction in prenatal care (can't travel)





Rural Maternity Services in Jeopardy

- 7.2% of rural hospitals had closed their obstetrics units between 2010 and 2014.
- Hospitals Discontinuing Ob are:
 - smaller in size
 - privately owned
 - communities with fewer obstetricians and family physicians
 - families have lower income and have fewer resources to overcome barriers to care
- intrapartum care “only” increased when patients traveled average of 29 miles

Regional Organization of Perinatal Services

- Distance from a tertiary care perinatal facility
- Inadequate prenatal care
- Lack of coordination
- Long transport distances, in labor

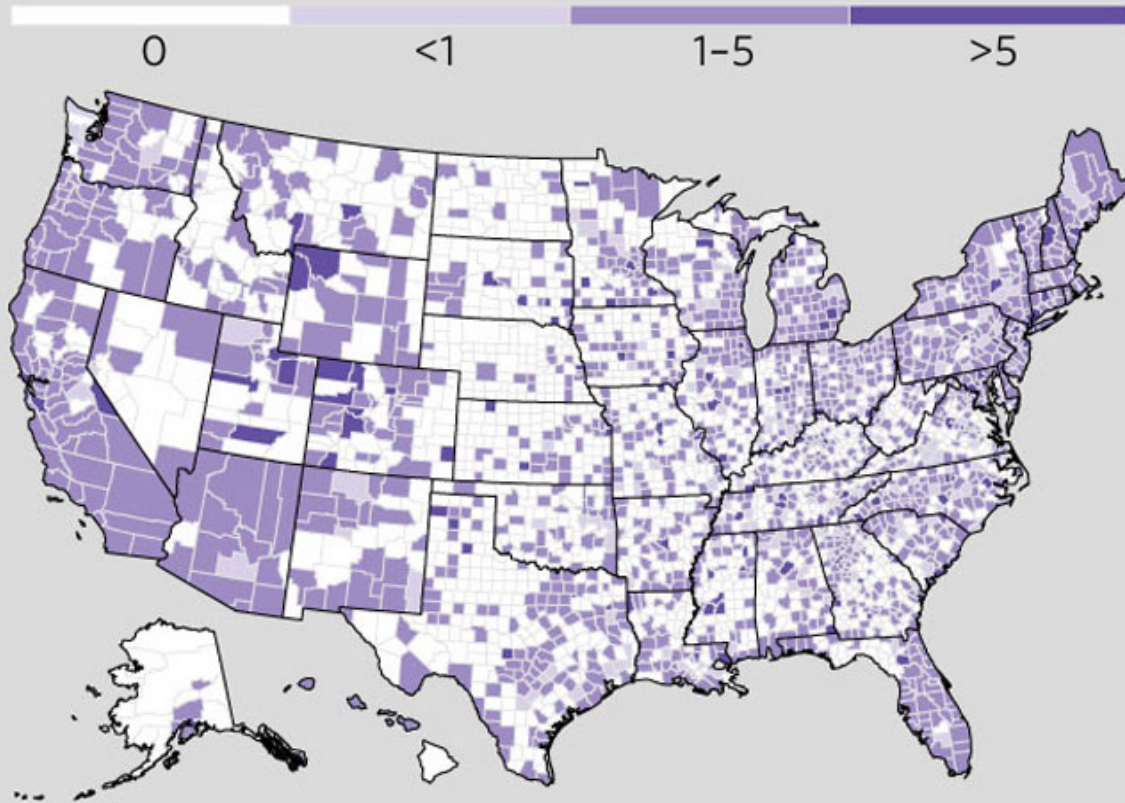


Increases the likelihood of very low birthweight infants delivering in smaller hospitals!

Maternity Deserts

Obstetrician/gynecologists are scarce in rural areas and small towns.

Number of OB/GYNs per 10,000 women aged 15+



Sources: Census Bureau; Physician data derived from American Medical Association Masterfile, March 2017

