Challenges in Access to Rural Obstetric Care

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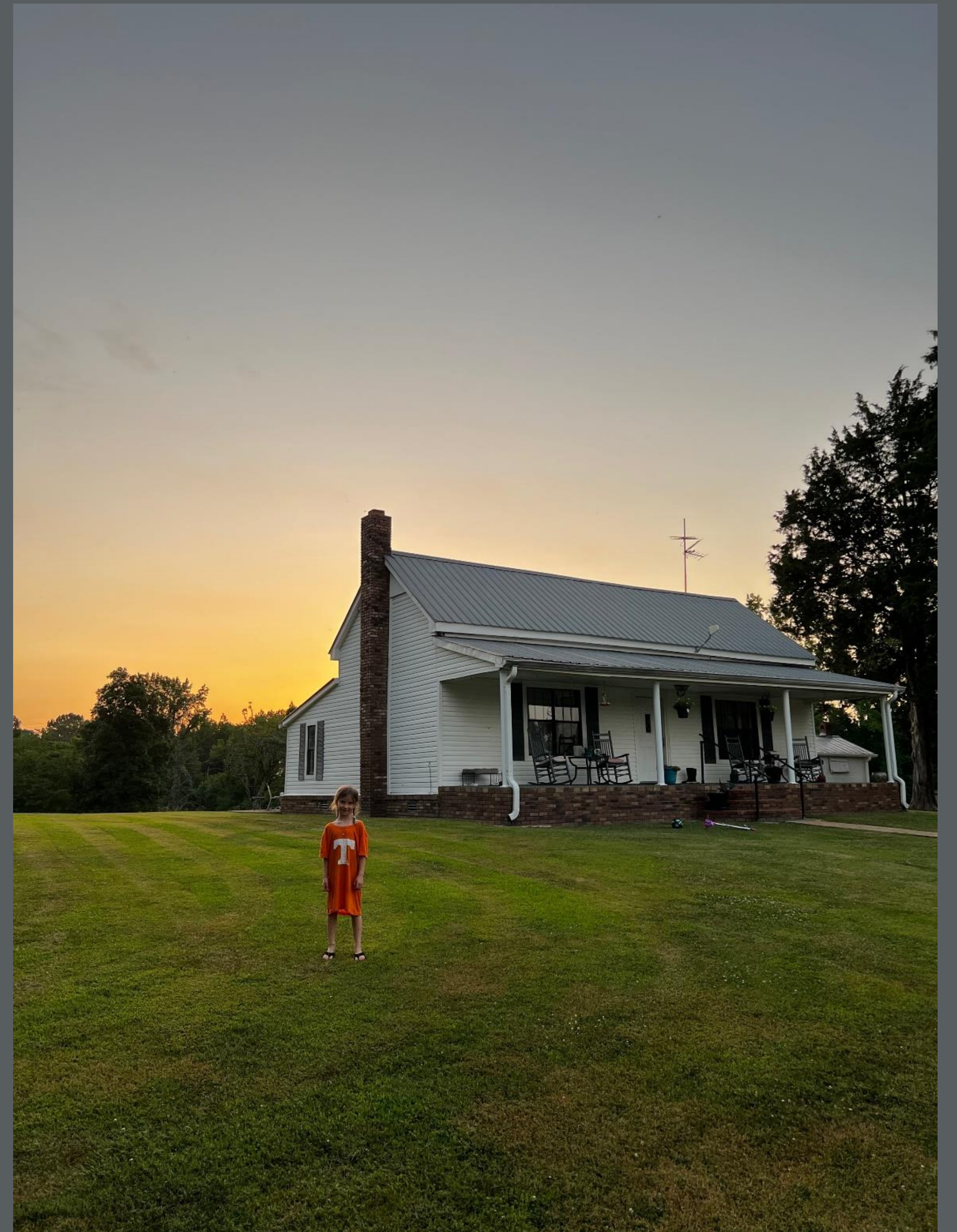
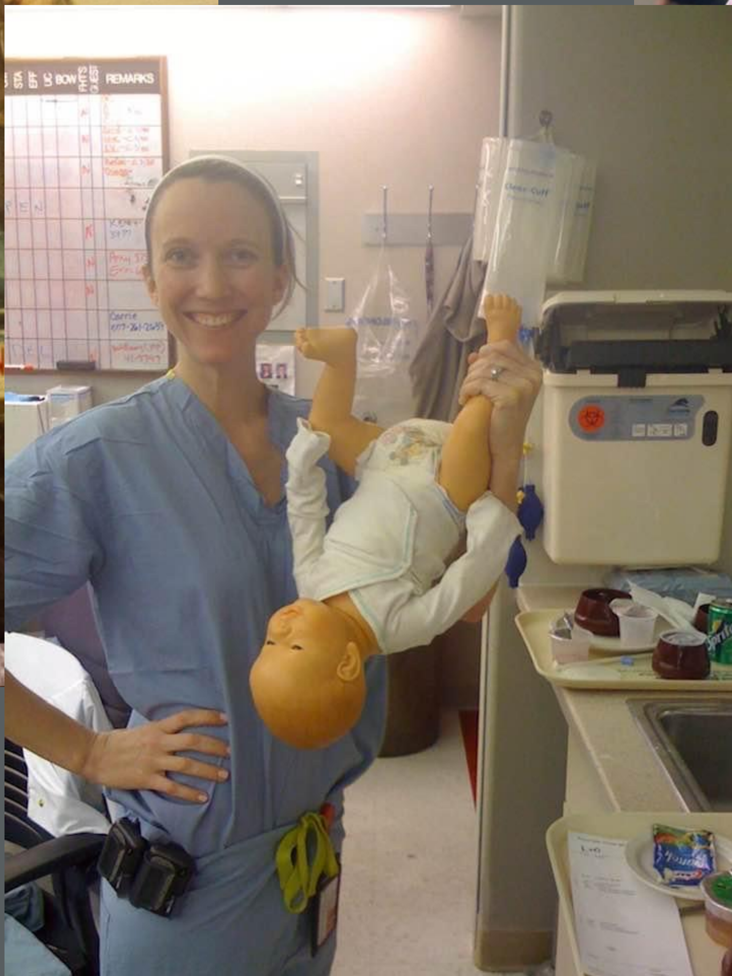


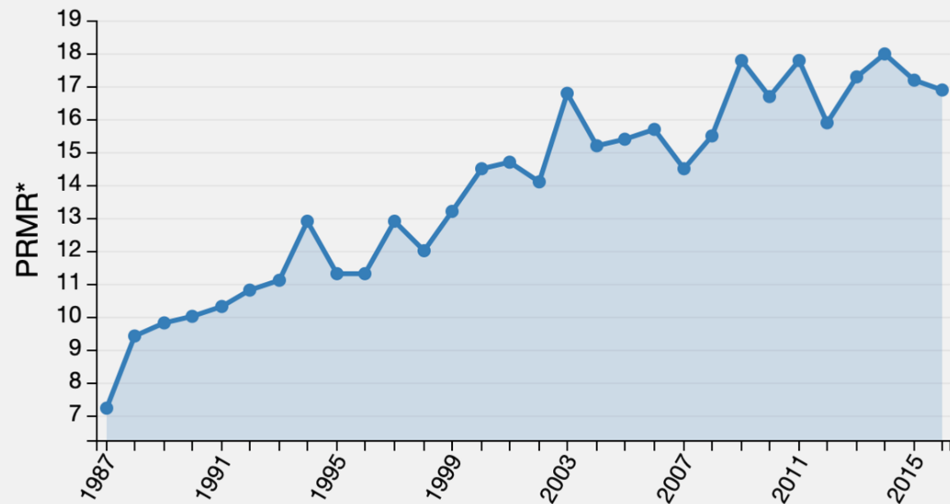
LMN


REMARKS

Objectives

- Describe current state of rural inpatient obstetric care.
- Identify and discuss challenges to patients, providers and hospitals.
- Cultivate discussion about possible solutions and strategies to improve access.

Pregnancy Morbidity and Mortality



- 700 women per year die of complications related to pregnancy in the US
- 2022: US maternal mortality rate of 22.3 deaths per 100,000 live births
- At least two-thirds of these deaths are preventable.
- Leading causes: cardiovascular complications, infection/sepsis, cardiomyopathy, hemorrhage and other non-cardiovascular events

CDC

U.S. Maternal Mortality vs. Other High-Income Countries

Maternal deaths per 100,000 live births

50
40
30
20
10
0

Country	Maternal deaths per 100,000 live births
Norway	0
Switzerland	1.2
Sweden	2.6
Netherlands	2.8
Japan	3.4
Australia	3.5
Germany	3.5
United Kingdom	5.5
France	7.6
Canada	8.4
South Korea	8.8
U.S. - Asian	13.2
New Zealand	13.6
Chile	14.3
U.S. - Hispanic	16.9
U.S. - White	19
U.S.	22.3
U.S. - Black	49.5

Source: The Commonwealth Fund • Chart: Julia Haines/U.S. News & World Report
All country data from OECD Health Statistics 2023 extracted on February 29, 2024, except data for US are 2022 data from the Centers for Disease Control and Prevention. 2015 data for FRA; 2017 data for UK; 2018 data for NZ; 2020 data for CAN and SWIZ; 2021 data for AUS, GER, JPN, KOR, NETH and SWE; 2022 data for CHL (provisional), NOR and US. The maternal mortality ratio is defined as the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

Disparities exist by race and geographic location

- Maternal mortality disproportionally affects black and American/Indian/Alaska Native women in the US
- Rural Areas have pregnancy related mortality ratio of 29.9 per 100,000 live births versus 18.2 in urban areas in 2015.

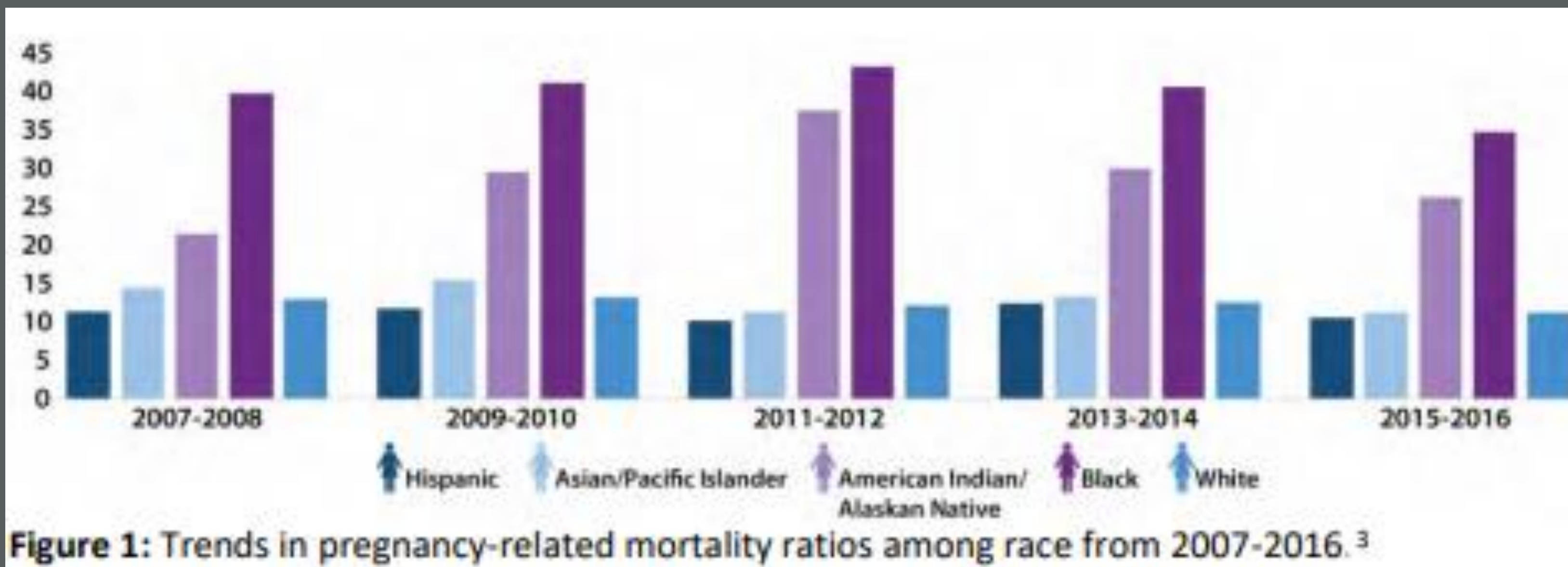
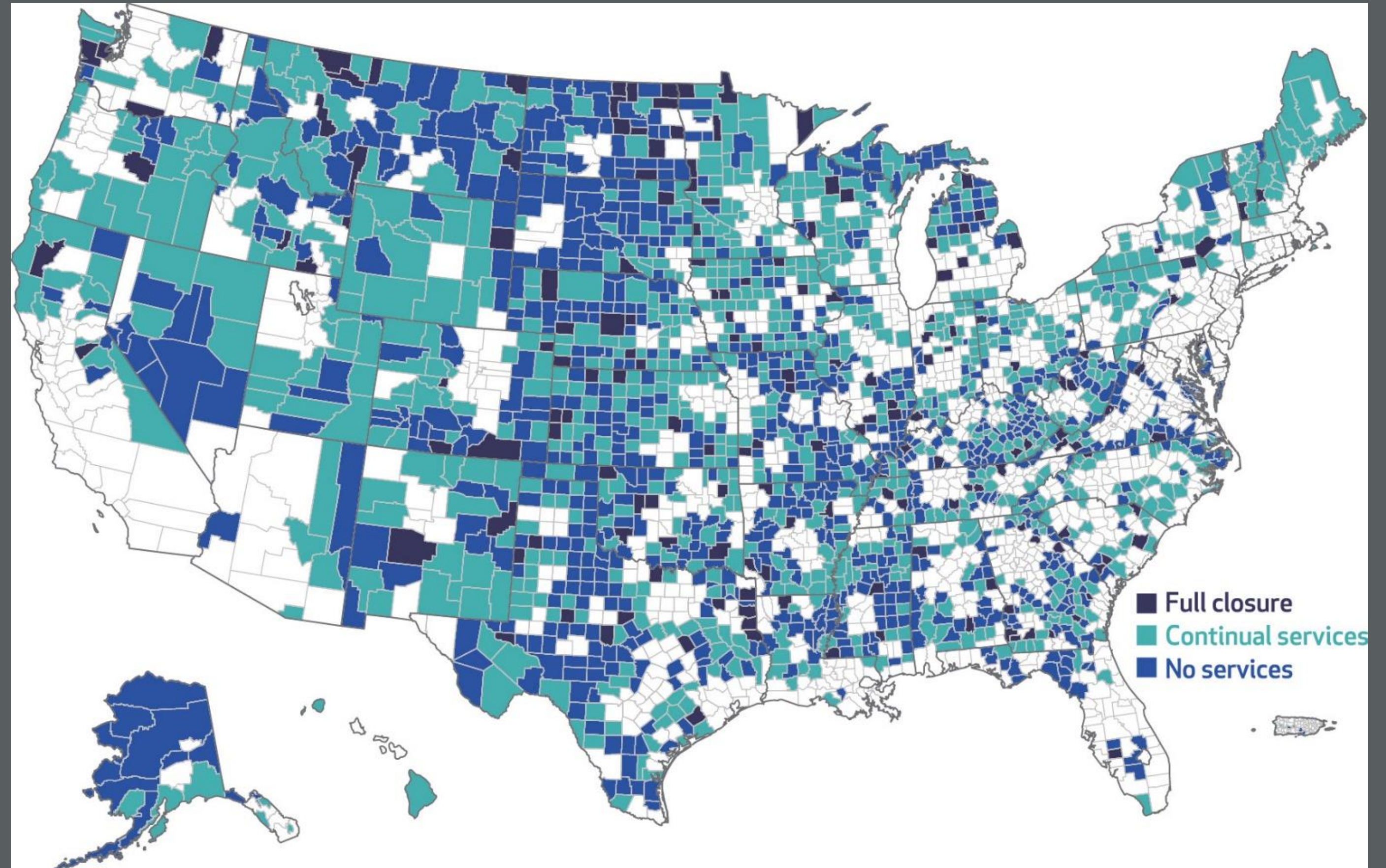


Figure 1: Trends in pregnancy-related mortality ratios among race from 2007-2016.[3]

Obstetric Service Closures

- 2004: 45% of all rural US counties has no L&D unit
- 2014: 54% of all rural US counties had no L&D unit
- 2015-2019: Trend continues, another 89 obstetric units in rural hospitals closed– *American Hospital Association*



P. Huang et al. Access to Obstetric Services in Rural Counties Still Declining. 2017 Sept 1:36(9): 1663-1671.

Association of Driving Distance to Maternity Hospitals and Maternal and Perinatal Outcomes

Minion, Sarah C.; Krans, Elizabeth E.; Brooks, Maria M.; Mendez, Dara D.; Haggerty, Catherine L.

Obstetrics & Gynecology140(5):812-819, November 2022.

	Composite Maternal Outcome*		NICU Admission†	
Distance (km)	Unadjusted RR (95% CI)	Adjusted RR (95% CI)‡	Unadjusted RR (95% CI)	Adjusted RR (95% CI)‡
1	Ref	Ref	Ref	Ref
5	0.95 (0.92–0.99)	0.99 (0.95–1.02)	0.96 (0.95–0.97)	1.02 (1.01–1.03)
10	0.91 (0.84–0.97)	0.97 (0.89–1.05)	0.92 (0.90–0.94)	1.05 (1.02–1.07)
20	0.91 (0.81–1.00)	0.95 (0.84–1.06)	0.87 (0.85–0.90)	1.11 (1.08–1.14)
30	1.01 (0.91–1.10)	0.96 (0.86–1.06)	0.89 (0.87–0.91)	1.20 (1.16–1.23)
40	1.16 (1.05–1.27)	1.01 (0.90–1.12)	0.97 (0.95–1.00)	1.32 (1.28–1.36)
50	1.33 (1.21–1.46)	1.10 (0.97–1.22)	1.13 (1.10–1.15)	1.49 (1.44–1.54)
60	1.53 (1.38–1.67)	1.22 (1.07–1.36)	1.35 (1.32–1.39)	1.70 (1.65–1.76)
70	1.74 (1.56–1.93)	1.36 (1.19–1.53)	1.65 (1.60–1.69)	1.96 (1.90–2.02)
80	1.99 (1.74–2.24)	1.53 (1.31–1.75)	2.01 (1.95–2.06)	2.25 (2.18–2.33)

NICU, neonatal intensive care unit; RR, relative risk; Ref, referent.

* Patient-level analyses.

† Neonatal-level analyses.

‡ Adjusted for age, number of previous live births, race, education, insurance, NICU level of delivery hospital, multifetal pregnancy, marital status, WIC (Special Supplemental Nutrition Program for Women, Infants, and Children) use, smoking during pregnancy, address or centroid geocode, county of residence's Urban Influence Code, prepregnancy diabetes, gestational diabetes, prepregnancy high blood pressure, gestational hypertension, previous preterm birth, obstetrician count in 15-km radius, Census tract percentage of poverty, and Census tract percentage of female-headed households.

OBSTETRICS & GYNECOLOGY

Number of Births in Oregon Rural Hospitals in 2023

Columbia Memorial Hospital
227 Astoria

Providence Seaside Hospital
54 Seaside

CLATSOP
COLUMBIA
TILLAMOOK
WASHINGTON

Adventist Health Tillamook
94 Tillamook

MULTNOMAH
HOOD RIVER

Providence Hood River Memorial Hospital
320 Hood River

The Dalles
Mid-Columbia Medical Center

Good Shepherd Health Care System
378 Hermiston

CHI St Anthony Hospital
276 Pendleton

WALLOWA
MORROW
UMATILLA

Wallowa Memorial Hospital
43 Enterprise

Providence Newberg Medical Center
597 Newberg

109 McMinnville

CLACKAMAS
SHERMAN
GILLIAM

Pioneer Memorial Hospital & Nursing Facility
0 Heppner

Grande Ronde Hospital
245 La Grande

YAMHILL
UNION

Willamette Valley Medical Ctr

Samaritan North Lincoln Hospital
Lincoln City 106

West Valley Hospital
Dallas 0

1247 Silverton
Legacy Silverton Medical Center

WASCO
LINCOLN
POLK

177 Stayton
Santiam Hospital

MARION
WHEELER
GRANT
BAKER

Saint Alphonsus Medical Center - Baker City
43 Baker City

Samaritan Pacific Communities Hospital
137 Newport

St Charles Madras
150 Madras

JEFFERSON
LINN

207 Lebanon
Samaritan Lebanon Community Hospital

BENTON

Blue Mountain Hospital
28 John Day

St Charles Prineville
0 Prineville

Redmond 1
St Charles Redmond

PeaceHealth Peace Harbor Medical Center
33 Florence

LANE
CROOK

Saint Alphonsus Medical Center - Ontario
Ontario 368

PeaceHealth Cottage Grove Community Medical Center
0 Cottage Grove

Lower Umpqua Hospital
0 Reedsport

DESCHUTES
MALHEUR

Harney District Hospital
51 Burns

Bay Area Hospital
574 Coos Bay

Coquille Valley Hospital
0 Coquille

Bandon 0

Mercy Medical Center
632 Roseburg

DOUGLAS

Southern Coos Hospital & Health Center

COOS
HARNEY
LAKE
KLAMATH
JACKSON

Curry General Hospital
0 Gold Beach

Asante Three Rivers Medical Center
Grants Pass 675

CURRY
JOSEPHINE

Asante Ashland Community Hospital
232 Ashland

Sky Lakes Medical Center
621 Klamath Falls

Lake District Hospital
51 Lakeview

Legend:
00 Number of Births
Main Roads
Frontier Counties

0 50 mi

*birth counts from Apprise

6/7/2024

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OREGON OFFICE of RURAL HEALTH
ORH

Closer to home…

Legacy reverses course on closure of Gresham birth center

Facing scrutiny from health officials, Legacy signaled it is assembling doctors in staff to reopen the maternity center within 90 days

HEALTH

Community upset with Saint Alphonsus' decision to close Baker City maternity unit

Some people believe the closure could have devastating impacts on the small eastern Oregon town.

Rural Labor and Delivery Units: Challenges

- Workforce shortages (nurses, physicians, CNM).
- Low volume births may be associated with higher rate of complications.
- Geographic isolation leading to travel difficulties. Distance is a disparity.
- Limited access to healthcare services to support complicated pregnancies.
- EMS availability to transport patients.

Impact of Gaps in Care on Maternal and Infant Health

- Higher rates of preterm births and maternal mortality in rural areas.
- Delayed prenatal care due to lack of services.
- Increased need for emergency transportation to distant hospitals for labor and delivery.

Financial constraints

- 24-hour anesthesia coverage
- Operating room availability
- Blood product availability
- High RN patient ratio
- Obstetric provider on-call 24/7

Gender bias exists in Medicare reimbursements for female-specific services

- A 1997 study found male services were paid more in 80% of similar procedures. *Goff et al. Gynecologic Oncology V 66:2, Aug 1997, 313-319*

- A 2021 study showed improvement in disparity but male-specific cases still had higher reimbursement rates than female ones. *Polan et al. Obstet Gynecol. 2021 Dec 1; 138(6): 878–883.*

- Medicaid covers ~ 41% of births in the U.S.

Malpractice

- Obstetrics faces one of the highest medical-malpractice insurance rates.
- 64% of ob-gyns have been sued, compared to 16% of psychiatrists and 17% of pediatricians (AMA).
- High litigation rates have led many ob-gyns to reduce deliveries or limit high-risk patient care (ACOG).

Improving skills and patient safety

- Ensure participation in deliveries by all healthcare professionals.
- Rotate staff to higher-volume regional facilities for clinical experience.
- Provide structured orientation and training for new staff.
- Conduct regular multidisciplinary drills and simulations.
- Establish regional systems for consultation, education, and data analysis.

Policy

- US Senator Ron Wyden proposed legislation, Keep Obstetrics Local Act (KOLA)
- Increase Medicaid payments at eligible rural and "high-need" urban hospitals.
- Low-volume hospitals would receive "standby" payments to cover staffing and capital costs
- Require states to study and report costs of providing obstetric services in rural and underserved areas
- Require 12 months postpartum Medicaid coverage

Additional support for low volume facilities

- Policies for timely transport of patients requiring urgent care.
- Maintain essential obstetric medications, supplies, and diagnostic tools.
- Utilize telemedicine and teleconsultation to support care coordination.
- Emphasize shared responsibility among community, government, payers, and facilities to retain obstetric services and skills in rural settings.

Innovative Approaches in Rural Maternity Care

- Telemedicine programs for real-time consultations and diagnostics.
- TeleOB staffed by OB Hospitalists at tertiary L&D
- Real-time audio-visual robot devices for 17 EDs and 8 L&Ds across 2 states
- Shared fetal monitoring system accessible in real-time

Telemed J E Health. 2024 Jun;30(6):1600-1605. doi: 10.1089/tmj.2023.0358. Epub 2024 Feb 13.

Future Directions for Rural Labor and Delivery Units

- Sustainable funding and support.
- Community-based solutions and local training.
- Training and incentives for rural obstetric professionals
- Ongoing research into maternal health outcomes in rural settings.

Thank you!

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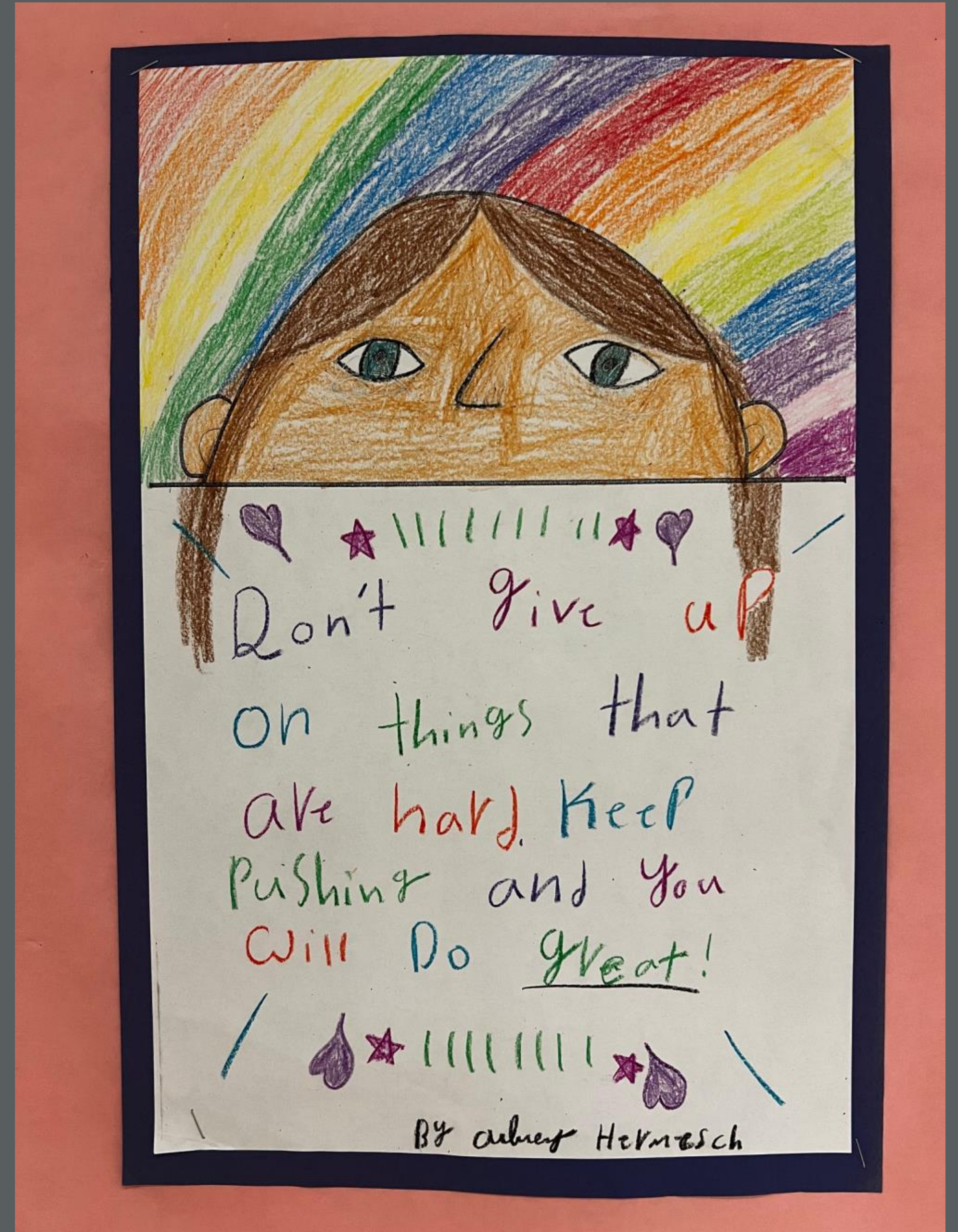

Case Study: Maternity Care Deserts

- Define "Maternity Care Deserts" (areas with limited or no access to maternity care).
- Use a visual map showing maternity care deserts in the U.S.
- Discuss one or two specific rural regions as examples.

Balance

Oregon Rural Hospitals

Columbia Memorial Hospital
Astoria
Providence Seaside Hospital
Seaside
COLUMBIA
CLATSOP
TILLAMOOK
WASHINGTON
Adventist Health Tillamook
Tillamook
MULTNOMAH
Providence Hood River Memorial Hospital
Hood River
HOOD RIVER
The Dalles
Adventist Health Columbia Gorge
Providence Newberg Medical Center
Willamette Valley Medical Ctr
Newberg
McMinnville
CLACKAMAS
YAMHILL
Samaritan North Lincoln Hospital
Lincoln City
West Valley Hospital
Dallas
Legacy Silverton Medical Center
Silverton
WASCO
LINCOLN
POLK
Salem Hospital
Stayton
MARION
Santiam Hospital
Samaritan Pacific Communities Hospital
Newport
Corvallis
Good Samaritan Regional Medical Center
BENTON
Lebanon
LINN
Samaritan Lebanon Community Hospital
St Charles Madras
Madras
JEFFERSON
St Charles Redmond
Redmond
Prineville
St Charles Prineville
St Charles Bend
Bend
CROOK
PeaceHealth Peace Harbor Medical Center
Florence
LANE
PeaceHealth Cottage Grove Community Medical Center
Cottage Grove
DESCHUTES
Lower Umpqua Hospital
Reedsport
Bay Area Hospital
Coos Bay
Coquille Valley Hospital
Coquille
Mercy Medical Center
Roseburg
Bandon
Southern Coos Hospital & Health Center
DOUGLAS
COOS
JACKSON
KLAMATH
Curry General Hospital
Gold Beach
Asante Three Rivers Medical Center
Grants Pass
Asante Rogue Regional Medical Center
Medford
JOSEPHINE
CURRY
Providence Medford Medical Center
Ashland
Asante Ashland Community Hospital
Sky Lakes Medical Center
Klamath Falls
Good Shepherd Health Care System
Hermiston
CHI St Anthony Hospital
Pendleton
WALLOWA
MORROW
UMATILLA
Wallowa Memorial Hospital
Enterprise
Pioneer Memorial Hospital & Nursing Facility
Heppner
Grande Ronde Hospital
La Grande
SHERMAN
GILLIAM
UNION
WHEELER
Saint Alphonsus Medical Center - Baker City
Baker City
GRANT
BAKER
Blue Mountain Hospital
John Day
Saint Alphonsus Medical Center - Ontario
Ontario
MALHEUR
Harney District Hospital
Burns
HARNEY
LAKE
Lake District Hospital
Lakeview

Frontier Counties
hospital Critical Access Hospital (CAH)
hospital NON-CAH
A Type A
B Type B
C Type C
Rural Referral Center
X Sole Community Hospital
X RRC and Sole Community Hospital
Primary Roads

0 50 mi

3/12/2024

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