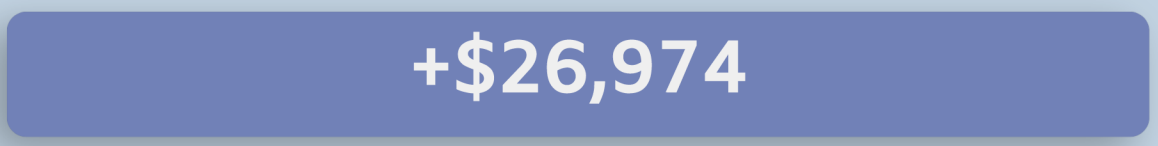
Where a maternity unit closes, local income growth falls behind

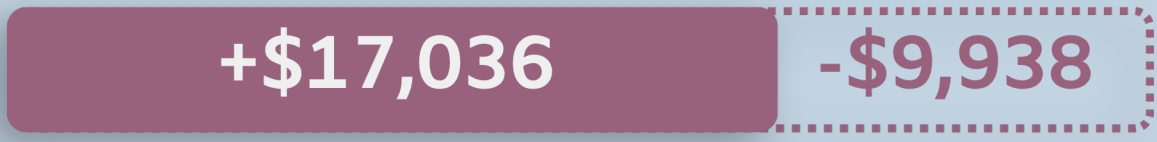
In Maine, communities that lost hospital-based obstetric services before 2015 saw median household income rise almost $10,000 **less** over the following eight years than communities that kept these services close to home.

CHANGE IN MEDIAN HOUSEHOLD INCOME IN MAINE, 2015-23

Kept local obstetrics through 2023 • 974 block groups



Lost local obstetrics prior to 2015 • 17 block groups



37% smaller income growth in Census block groups within 30-minute drive time of closed OB unit (and no other remaining local OB hospital) (p=0.028)

Communities that lost local OB services were also observed to age more over the long run than those that maintained them, though these changes were not statistically significant at α=0.05.

Maine median age change, 2015-23: +1.77 years (closure) vs. +1.40 years (non-closure)

PANDEMIC INFLUENCE

The income gap is less visible in the pandemic window.

From 2020 to 2023, income growth was nearly equal (+$13,734 vs. +$14,366) in Maine. **Pandemic stimulus efforts, such as enhanced unemployment benefits, may have masked the closure effect during this period.** Directional significance emerges over the longer run.

Aging patterns reversed during the pandemic.

Closure communities became significantly **younger** (-1.55 vs. +0.24 years, p=0.048) during the pandemic, possibly due to disproportionate COVID deaths among older residents where hospitals show signs of strain (e.g., prior OB closure) or due to pandemic-era rural in-migration.

“It’s going to mean economic collapse for a lot of rural communities”

– Certified Nurse Midwife, Hancock County, Maine

What the data did not show:

New Brunswick age and income change, 2016-21: No apparent pattern or significant differences.

Gianna DeJoy, PhD, MSSW • Margaret Chase Smith Policy Center • University of Maine

RESEARCH BRIEF: OBSTETRIC RESOURCE LOSS AND ADAPTIVE CAPACITY INDICATORS, MAINE, U.S. AND NEW BRUNSWICK, CANADA, 2000-2025

Public vs. private healthcare system resilience: Who closed OB units after the COVID-19 pandemic?

Share of a jurisdiction's OB hospitals closing or ending OB service lines, 2021-25:

Maine • 9 closures



New Brunswick • 1 closure

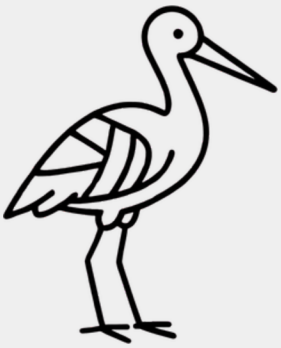


The single-payer province leans on temporary diversions, which are easier to reverse than closures. Its system is still stretched, with long wait times, overcrowded hospitals, and fewer total and per capita OB resources than Maine.

The resource-capacity erosion cycle:



1. Disaster strains the system. A hazard occurs in a rural or otherwise vulnerable area, impacting human health and healthcare infrastructure. For example, the COVID-19 pandemic wore down healthcare staff and supplies; Climate-related hazards can hinder transport and damage facilities.



2. Healthcare resource losses follow. Disaster applies financial and operational pressures to smaller health facilities. In a private healthcare system, unprofitable OB service lines become enticing cuts.



3. Community capacity erodes. Lost jobs, longer drives to reach care, dampened morale, and poor community perception may all contribute to slower income growth and leave places less able to absorb the next shock.



Weakened communities are more exposed to future hazards and their healthcare facilities primed for further cuts.

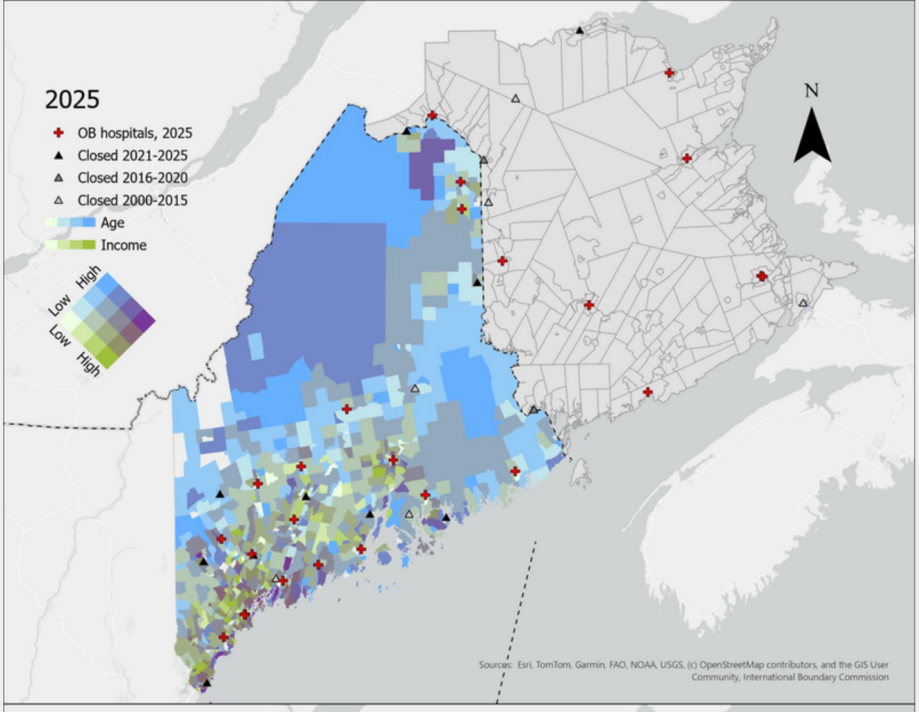
IMPLICATION

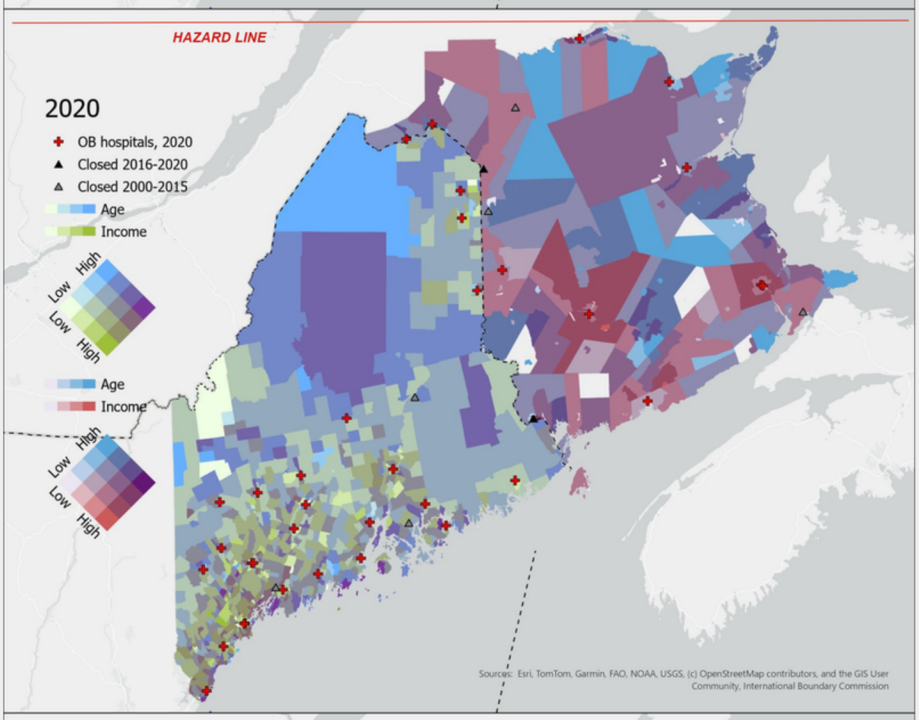
Maternity unit closures are not only a canary for health system vulnerability, but also a potential intervention point at which to invest in community health and resilience.

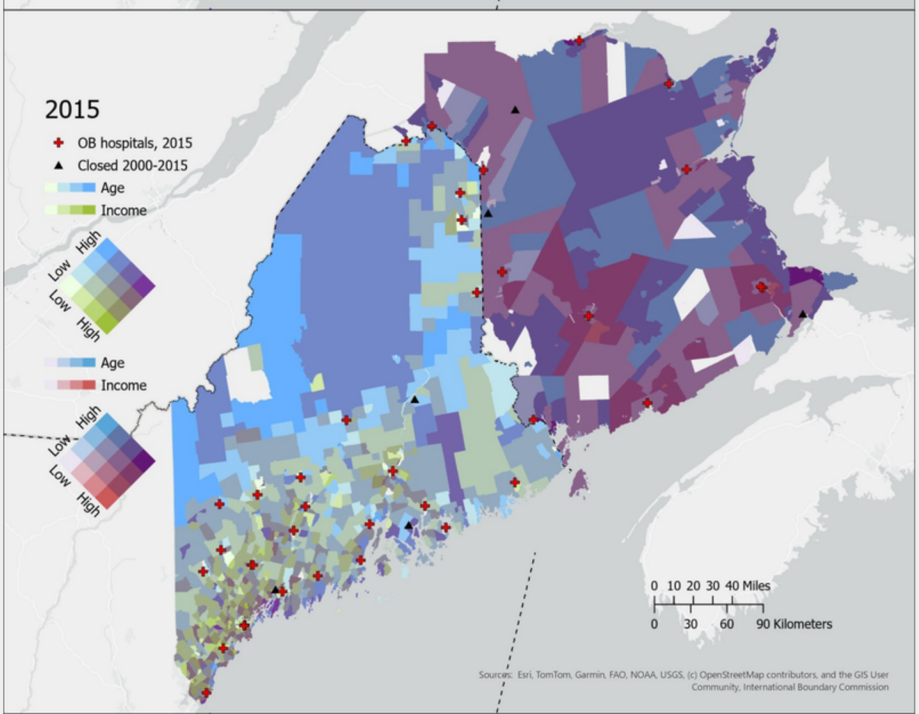
Methods: ArcGIS Pro analysis of median age and median household income change in U.S. Census block groups (ACS 2015/2020/2023) and Canadian Census subdivisions (Census 2016/2021) within 30-minute drive time catchments of closed and open hospital-based OB units (2000-2015) between 2015/2016-2020/2021 (ME & NB), 2020-2023 (ME), and 2015-2023 (ME).

Limits: Association is not evidence of causation; mechanisms of change are not identified. Age and income are imperfect proxies for adaptive capacity. Small number of pre-2020 closures mean sample sizes are limited. Impact of nine post-2020 Maine closures could not be measured at time of analysis. No post-COVID Census data available from New Brunswick at time of analysis. Ongoing surveillance is called for.

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Gianna DeJoy, 2026