

# IT TAKES A VILLAGE

A Pilot Review of Barriers to and Facilitators of Rural Medical Student Matriculation  
and a Discussion on Minnesota's Rural Health Workforce Challenges

Katie McLaughlin, MS3, JD & Sandra Stover, MD, FAAFP



INNOVATION & RESEARCH FORUM

March 16, 2024



**MEDICAL SCHOOL**

UNIVERSITY OF MINNESOTA

**Driven to Discover®**

# Disclosures

No disclosures (only our love for rural Minnesota!)



**MEDICAL SCHOOL**

UNIVERSITY OF MINNESOTA

**Driven to Discover®**

# MINNPOST

News **Health**

Workforce shortages plague rural hospitals, legislation to address it stalls

by **Liz Carey**

01/10/2024



## AXIOS Twin Cities

Jan 31, 2024 - News

Nearly half of Minnesota's rural hospitals don't offer labor and delivery



Torey Van Oot

## Minnesota Legislature

February 21, 2022 5:33 PM

Student loan forgiveness pitched as possible solution to rural health worker shortage

By Tim Walker

## MPRnews

Minnesota Now

State taskforce looking to solve EMS staffing and funding crisis

Cathy Wurzer and Lindsey Seavert

January 9, 2024 11:53 AM

## MPRnews

COVID-19

Minnesota rural hospital workers feel the strain as colleagues leave, COVID stays

Catharine Richert Aitkin, Minn. February 17, 2022 4:00 AM

## TRI-COUNTY NEWS

Serving Eden Valley, Kimball, Watkins and surrounding communities

Shortage of direct-care workers poses greater problem for us here in rural Minnesota

[Open Audio Article Player](#)

August 09, 2023

## StarTribune

LOCAL

Minnesota could face 'alarming' health care worker shortage within five years

More such professionals are reporting burnout and considering career changes.

By Ryan Faircloth Star Tribune | APRIL 12, 2022 — 5:02PM

## INFORUM

Powered by The Forum and WDAY

Dental difficulties: Workforce issues dampen rural Minnesotans' access to dental care



By **Dené K. Dryden**

January 29, 2023 at 12:36 PM

## DULUTH News Tribune

CONNECTED • ENGAGED • ENTRUSTED >>>

OPINION COLUMNS

Local View: Rural Minnesota needs quality health care, too

From the column: "Another challenge we face is the substantial shortage of health care workers. In Minnesota alone, there are currently 45,000 openings across the industry."

Opinion by **Dr. David Herman**

November 15, 2023 at 9:49 AM

## AGWEEK

New report shows unmet need for mental health professionals in rural Minnesota

The report was made in partnership with the Center for Rural Behavioral Health, Minnesota State University, Mankato.



MEDICAL SCHOOL

UNIVERSITY OF MINNESOTA

Driven to Discover®

# 4.3%

DECEMBER 2019 38:12 HEALTH AFFAIRS

THE PRACTICE OF MEDICINE

By Scott A. Shjman, Andrea Wendling, Karen C. Jones, Iris Kover-Gough, Janis M. Orłowski, and Julie Phillips

## The Decline In Rural Medical Students: A Growing Gap In Geographic Diversity Threatens The Rural Physician Workforce

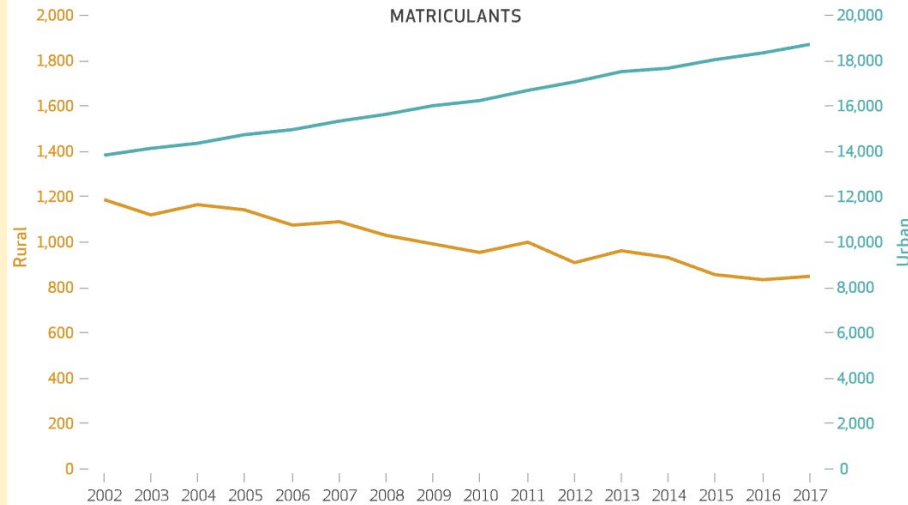


## Should I Stay or Should I Go? Factors Associated with Health Care Professionals' Choice to Practice in Rural Minnesota

By [Teri Fritsma](#), Minnesota Department of Health  
December 2023

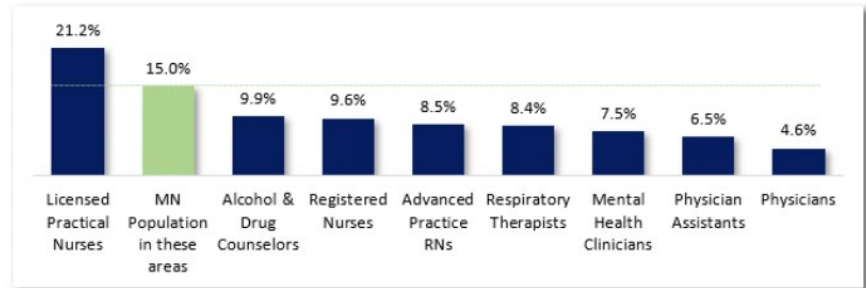
### EXHIBIT 3

Matriculants to medical school for academic years beginning 2002-17, by rural or urban background



**SOURCE** Authors' analysis of data from the American Medical College Application Service for 2002-03 through 2017-18. **NOTE** Rural or urban background could not be ascertained for 2.2 percent of the matriculants included in the study.

Figure 1. Share of total health care licensees who practice in small town and isolated rural communities, by profession, 2023



Data source: MDH's geocoding and analysis of licensees' practice addresses, as reported to their respective licensing boards in 2023.



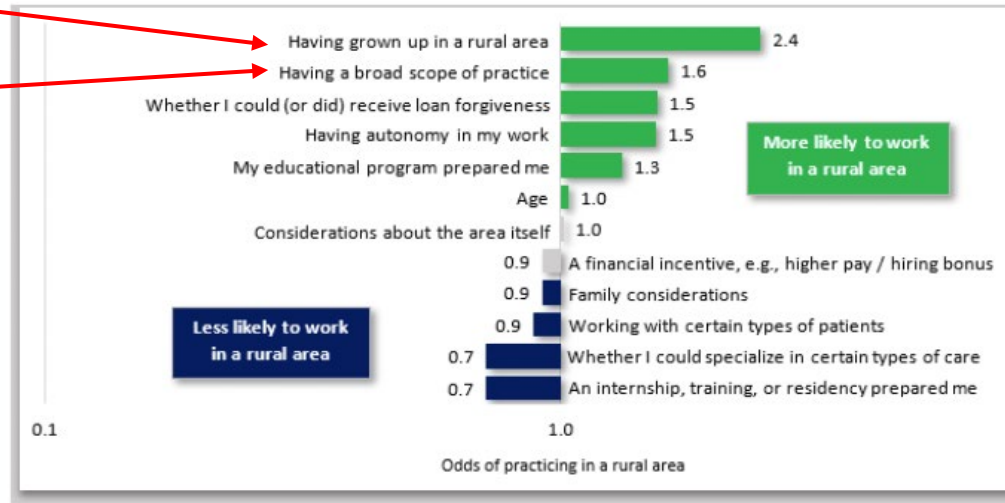
MEDICAL SCHOOL

UNIVERSITY OF MINNESOTA

Driven to Discover®

!!!  
Family  
Medicine!

Figure 3: Effect on the odds of practicing in a rural area—Physicians (N=11,019)



Data source: Analysis of data from the MDH Health Care Workforce Survey, February through December of 2022.

## Objectives:

- To survey the literature examining barriers to and facilitators of medical school matriculation for people from rural backgrounds.
- To engage Minnesota's family medicine community in discussion regarding addressing our rural healthcare workforce.



MEDICAL SCHOOL

UNIVERSITY OF MINNESOTA

Driven to Discover®

# A Pilot Review

- Databases: PubMed, MedLine, PsycINFO, Web of Science
- [Search Strategy and PRISMA Flow Diagram](#)
- Inclusion Criteria:
  - Peer-reviewed publication in English between 1/ 1/ 2013-12/ 13/ 2023
  - Any study design, including commentaries .
  - Investigation or discussion of individuals in the U.S. with rural background who are on the path or potentially on the path to medical school and the programs, policies, and practices that impact their path to medical school .
- Number of articles : 45 ([Bibliography](#) .)



**MEDICAL SCHOOL**

UNIVERSITY OF MINNESOTA

**Driven to Discover®**

# Findings

	Individual	High School	Undergraduate	Medical School
Barriers	<ul style="list-style-type: none"><li>• Financial</li><li>• Low self - efficacy</li></ul>	<ul style="list-style-type: none"><li>• Limited access to advanced coursework</li><li>• Limited early exposure/ shadowing</li></ul>	<ul style="list-style-type: none"><li>• First - generation in college and/or medicine</li><li>• Limited MCAT support</li></ul>	<ul style="list-style-type: none"><li>• Misalignmen t between social contract and admissions practices</li></ul>
Facilitators	<ul style="list-style-type: none"><li>• Supportive family/social structure</li><li>• Early mentorship</li></ul>	<ul style="list-style-type: none"><li>• AHEC collaboration</li></ul>	<ul style="list-style-type: none"><li>• Research programs for rural students</li></ul>	<ul style="list-style-type: none"><li>• Strong rural mission</li><li>• Regional campuses</li><li>• Rurally focused admissions</li></ul>



**MEDICAL SCHOOL**

UNIVERSITY OF MINNESOTA

**Driven to Discover®**

# Limitations

- U.S. samples/programs only, decreasing ability to draw ideas from strengths of international initiatives
- Peer-reviewed articles only, but there are substantial efforts noted in dissertations/theses
- Potential bias in article screening/selection due to one reviewer

# Conclusions

- Emerging evidence suggests that interventions along the pathway, from early outreach to medical school admissions policies, have potential to be effective in increasing rural matriculants
- Dearth of literature and decentralization of research on rural pre to unified policy and advocacy agenda -medical pathway poses barriers



**MEDICAL SCHOOL**

UNIVERSITY OF MINNESOTA

**Driven to Discover®**



## DISCUSSION



**MEDICAL SCHOOL**

UNIVERSITY OF MINNESOTA

**Driven to Discover®**

# THANK YOU!

Katie: [mclau256@umn.edu](mailto:mclau256@umn.edu)

Dr. Stover: [stove007@d.umn.edu](mailto:stove007@d.umn.edu)

References are linked throughout presentation. Please contact us for additional information!



**MEDICAL SCHOOL**

UNIVERSITY OF MINNESOTA

**Driven to Discover®**