

Supply and Demand of Health Care Workers in Minnesota

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About MDH's Health Workforce Analysis Unit

Division of **Health Policy**,
Office of **Rural Health and Primary Care**



We collect data on licensed providers*:

- How many, where, and how much they work
- Demographics
- Education / career laddering
- Career plans
- Work satisfaction
- Use of telemedicine and EHRs
- Team-based care

*Physicians, PAs, Nurses, Mental Health, Oral Health, and some Allied Health providers.



DATA



KNOWLEDGE



ACTION

For today:

Labor supply and demand in key occupations

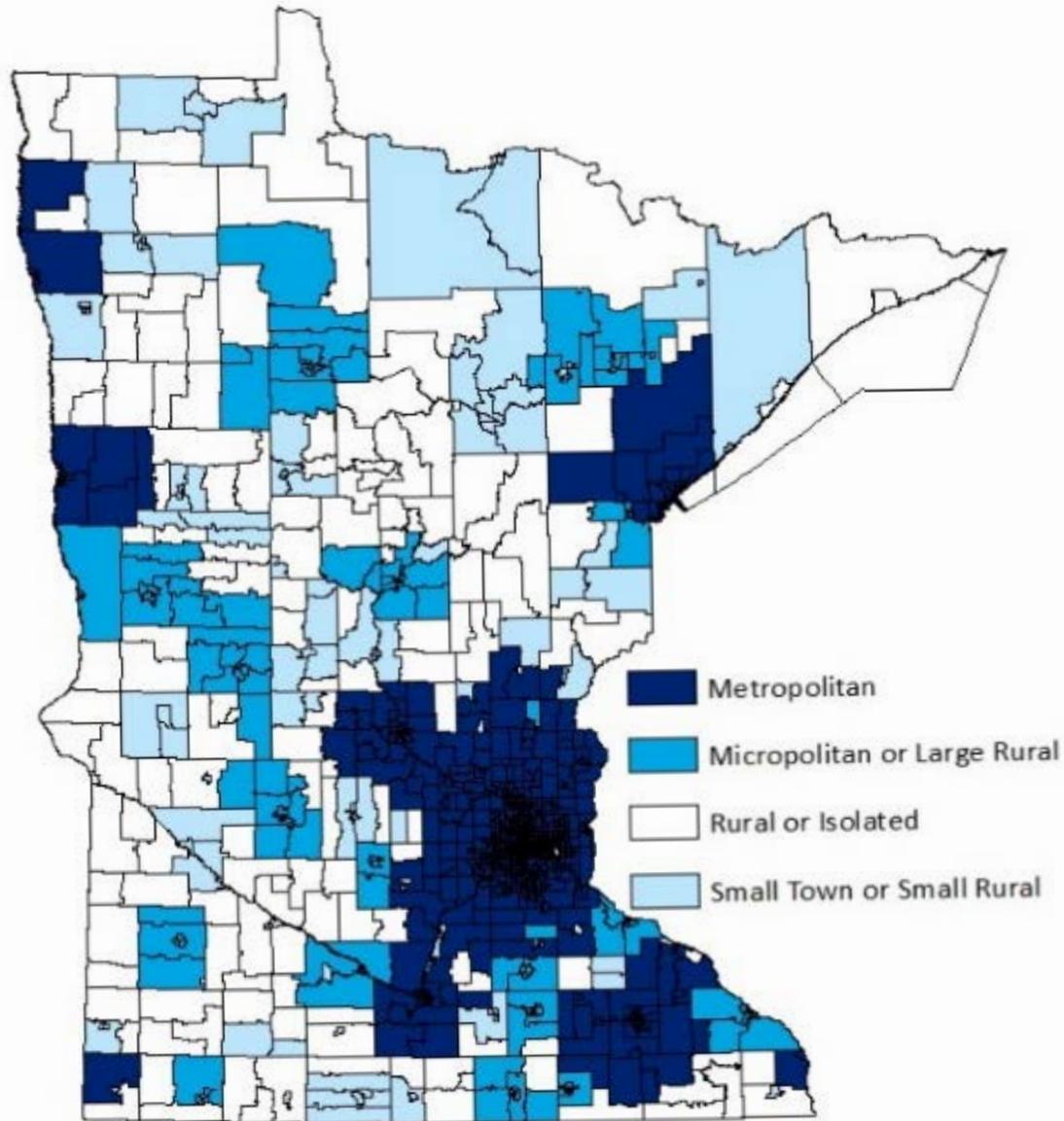
Possible solutions?

The rural health workforce challenge

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- Recruitment** can be difficult
 - Older population** = greater need for health services (and an aging workforce)
 - Lower wages in rural areas for most health occupations

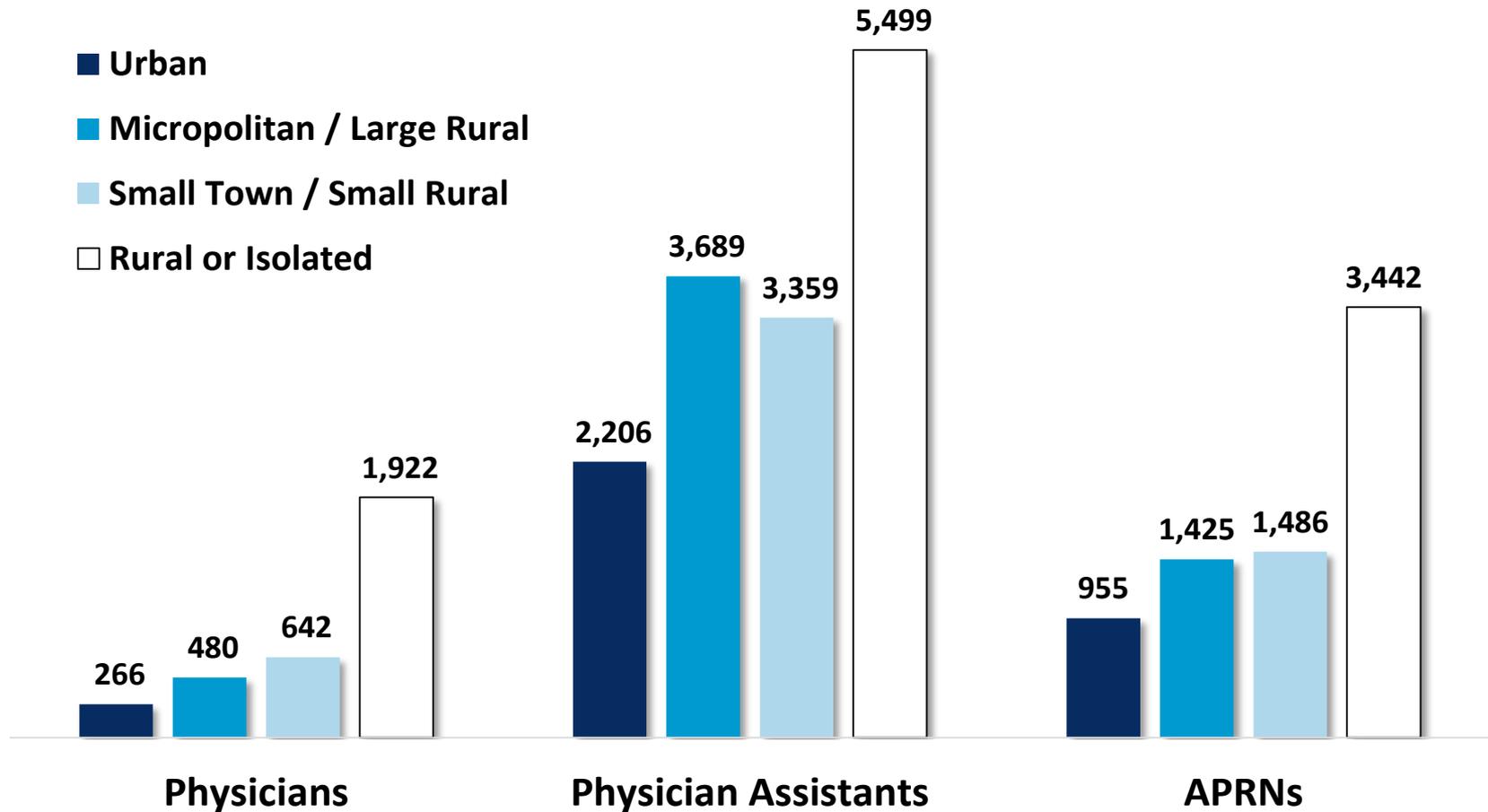
“There isn’t a shortage, there’s a maldistribution.”

Rural-Urban Definitions (“RUCA”)



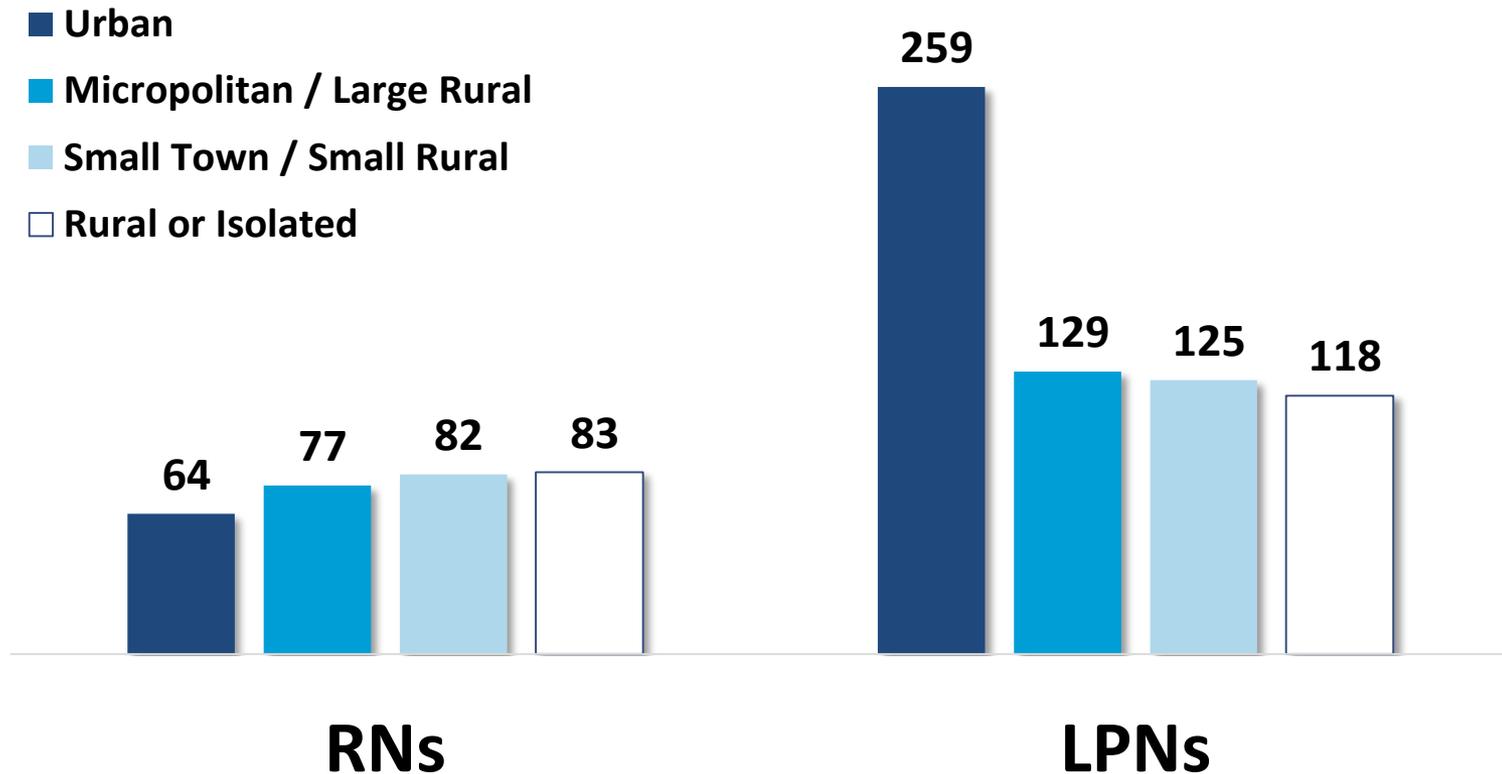
Number of people per provider by RUCA

Physicians and Mid-Levels



Source: MDH geocoding and analysis of Board of Medical Practice business address data.

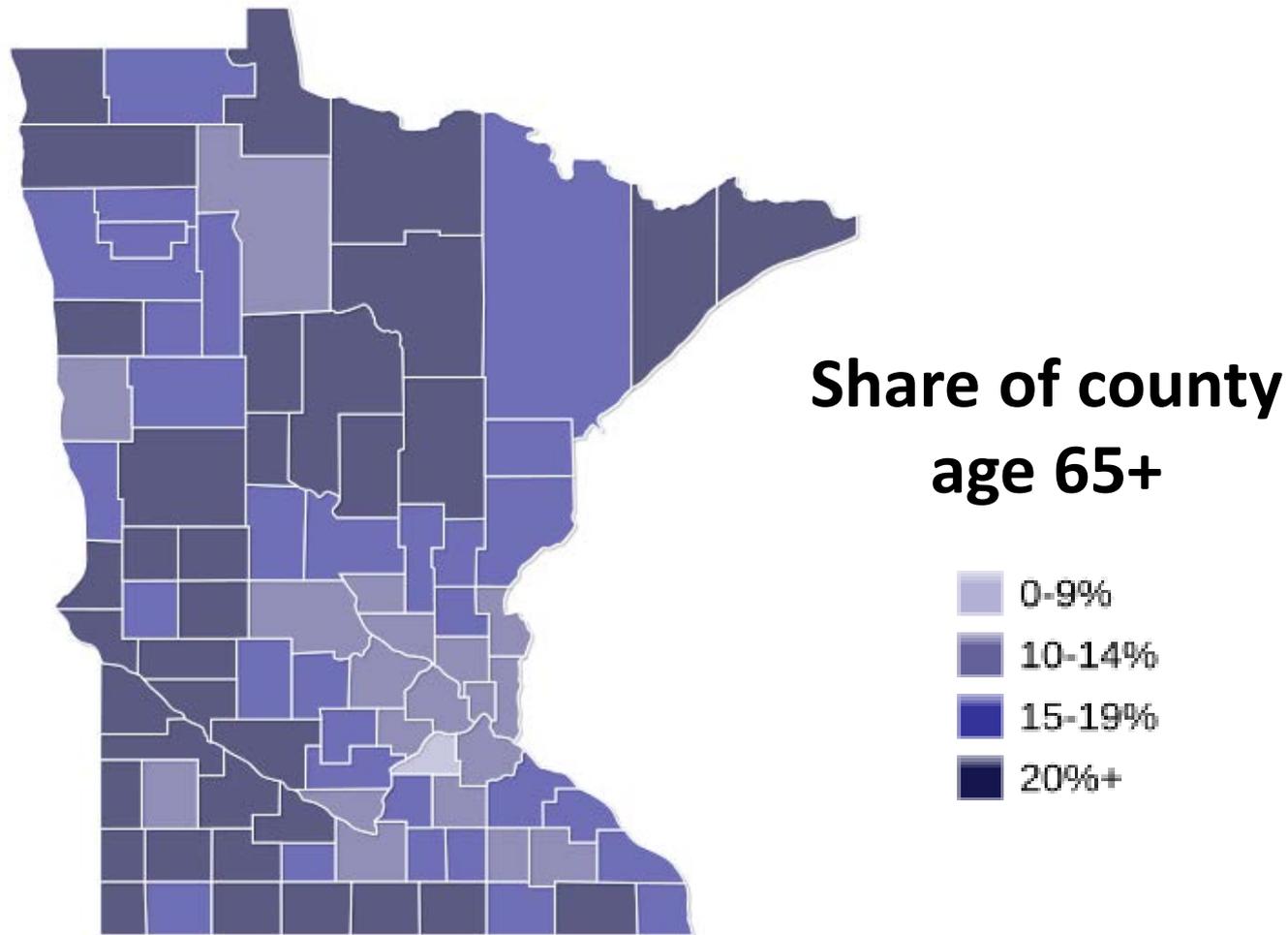
Number of people per provider by RUCA RNs and LPNs



Source: MDH geocoding and analysis of Board of Nursing address data.

AGE

In many rural counties, 20% of residents are age 65+.

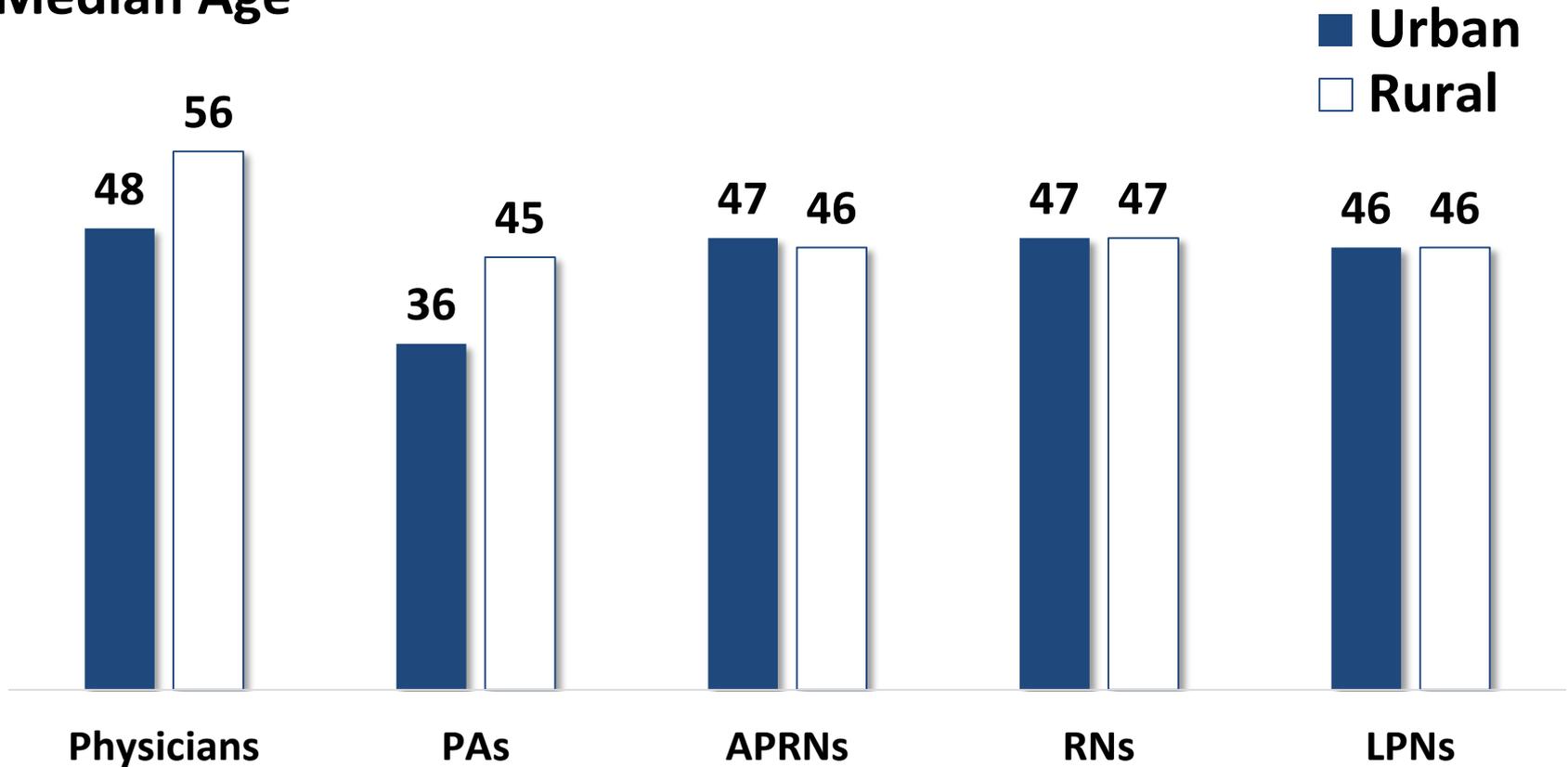


Source:
Minnesota Compass,
Analyzing U.S.
Census Data

AGE

Rural physicians and PAs are older than urban ones

Median Age



Source: MDH's analysis of the MN Board of Medical Practice and Board of Nursing data.

AGE

Physician retirements

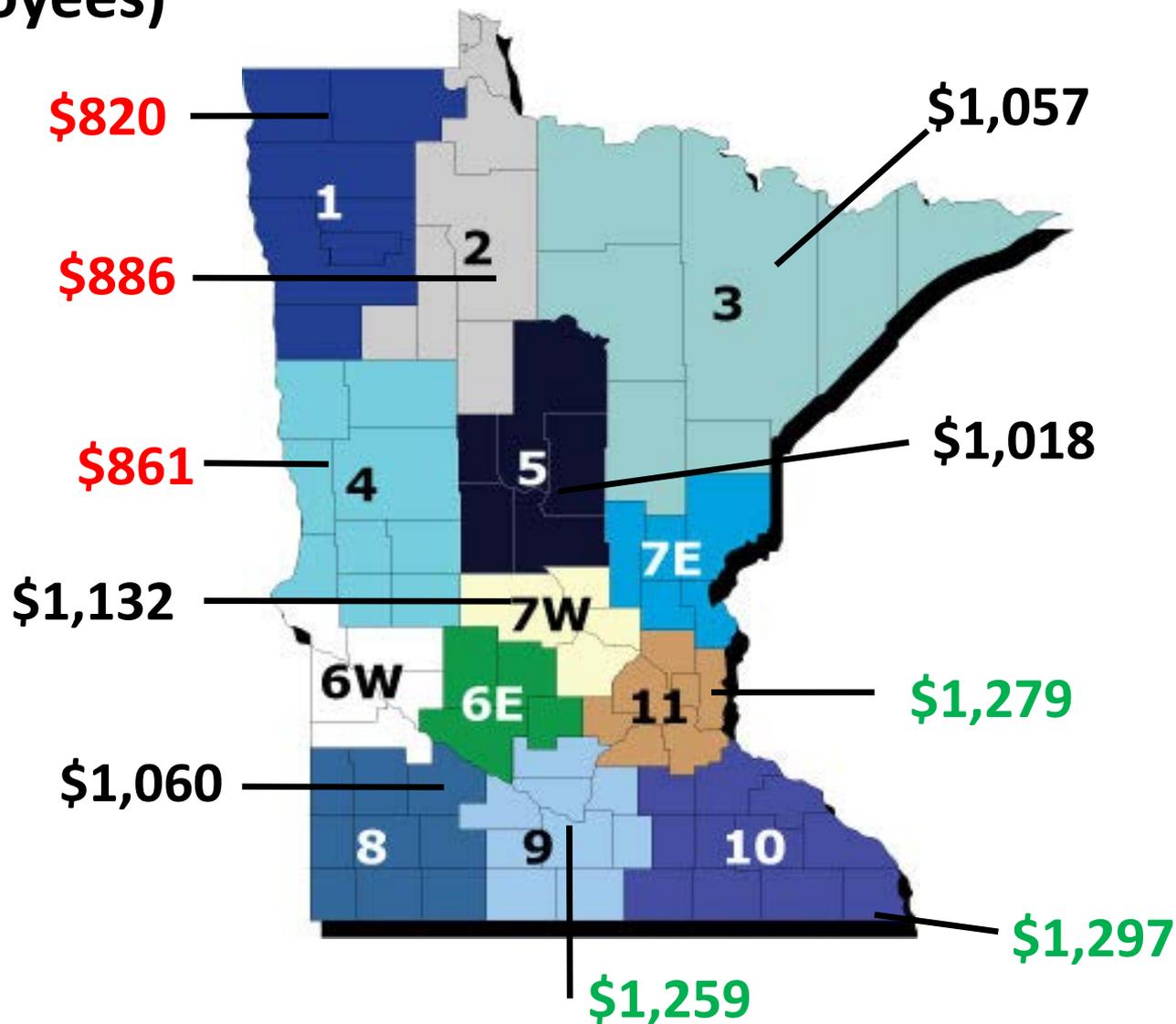
33% of **rural** physicians plan to leave the workforce within 5 years.

(Compared to 16% of urban physicians)



WAGES

Average weekly wages in hospitals, by region (all employees)



Source:
Minnesota
Department of
Employment
and Economic
Development,
2nd Quarter
2016

All rural areas face shortages. But where should we be *most* concerned?

Number of people per provider in rural Minnesota
(by Region and Provider)

Rural Region*	Physicians	PAs	APRNs	RNs	LPNs
Rural Central	1,500	4,300	4,300	95	130
Rural Northeast	1,100	10,300	2,400	81	140
Rural Northwest	2,700	4,900	3,900	86	110
Rural Southeast	2,500	6,100	2,800	66	140
Rural Southwest	1,900	6,500	3,100	78	120
ALL RURAL AREAS OF MINNESOTA	1,900	5,500	3,400	82	120

Source: MDH's analysis of licensing boards' business address data. Pink-shaded boxes represent the condition when the population-to-provider ratio in that region is larger than the same ratio for all rural areas of the state.

For today:

The rural health workforce challenge

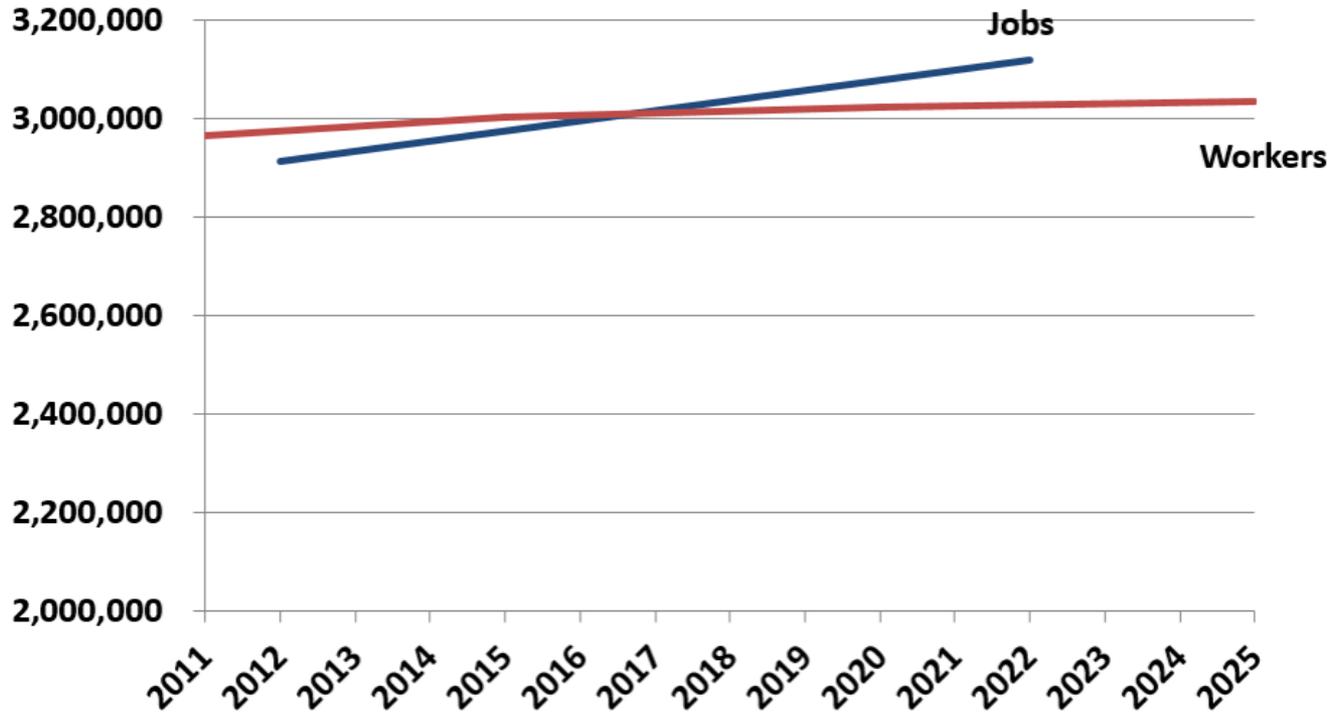
Labor supply and demand in key occupations

Possible solutions?

GENERAL CONTEXT:

Minnesota's labor market is only getting tighter

Projected job growth and projected labor force growth



Source: MN State Demographer's Office and the MN Department of Employment and Economic Development.

Selected direct care staff (except CNAs):

Occupation	Statewide Vacancies Due to Growth & Turnover*	Wage Offer*	Projected Annual Openings Due to Growth & Turnover**	Number of College Graduates in MN, 2013-2014 (γ)
Home Health Aides	1,446	\$12.02	1,619	
Medical Assistants	383	\$13.65	333	959
Pharmacy Aides	12	\$9.76	32	
Phlebotomists	37	\$12.57	75	105
Psychiatric Aides	339	\$12.79	30	
Retail Sales Clerks	5,825	\$10.70	3,530	
Minnesota, Total	97,580	\$14.00		

Source: *Department of Employment and Economic Development Job Vacancy Program; **Employment Projections Program, and (γ) the Integrated Post-secondary Education Data System (IPEDS)

NURSING

Nurses are the backbone of the hospital and health care workforce.

120,600

Total hospital employment (2015)

33,800

RNs and APRNs

8,000

Nursing Assistants

4,200

LPNs

3,700

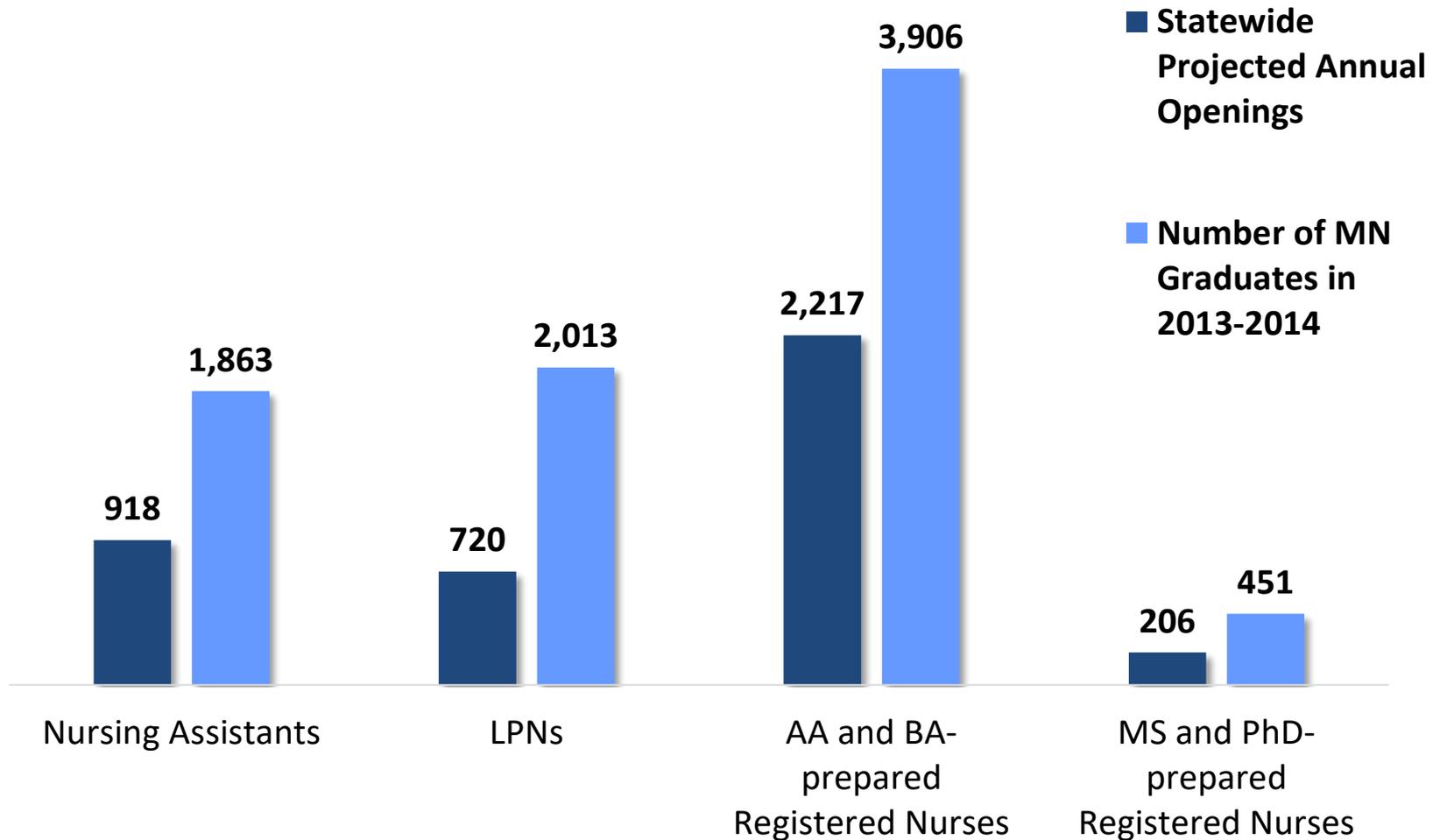
Janitors and Housekeepers

**≈ 1,000
each**

Physicians; Medical Assistants; Physical, Respiratory Therapists; Pharmacists, EMTs, Medical Transcriptionists

NURSING

Supply and Demand of MN Nurses



Sources: MN Department of Employment and Economic Development Employment Projections and the Integrated Postsecondary Data System (IPEDS)

NURSING

But on the ground, we're hearing about nursing shortages. Why?

- Maybe demand models don't account for the quick increases in access due to expanded coverage and an aging population?
- Inpatient nursing is now competing with outpatient settings for supply.
- Is there a mismatch between what hospitals need and what educators are producing? (Experience, certain types of clinical specialties, etc.?)
- Younger LPNs and RNs leaving the workforce, not wanting as many hours, or moving up the career ladder to more advanced roles?

PHYSICIANS

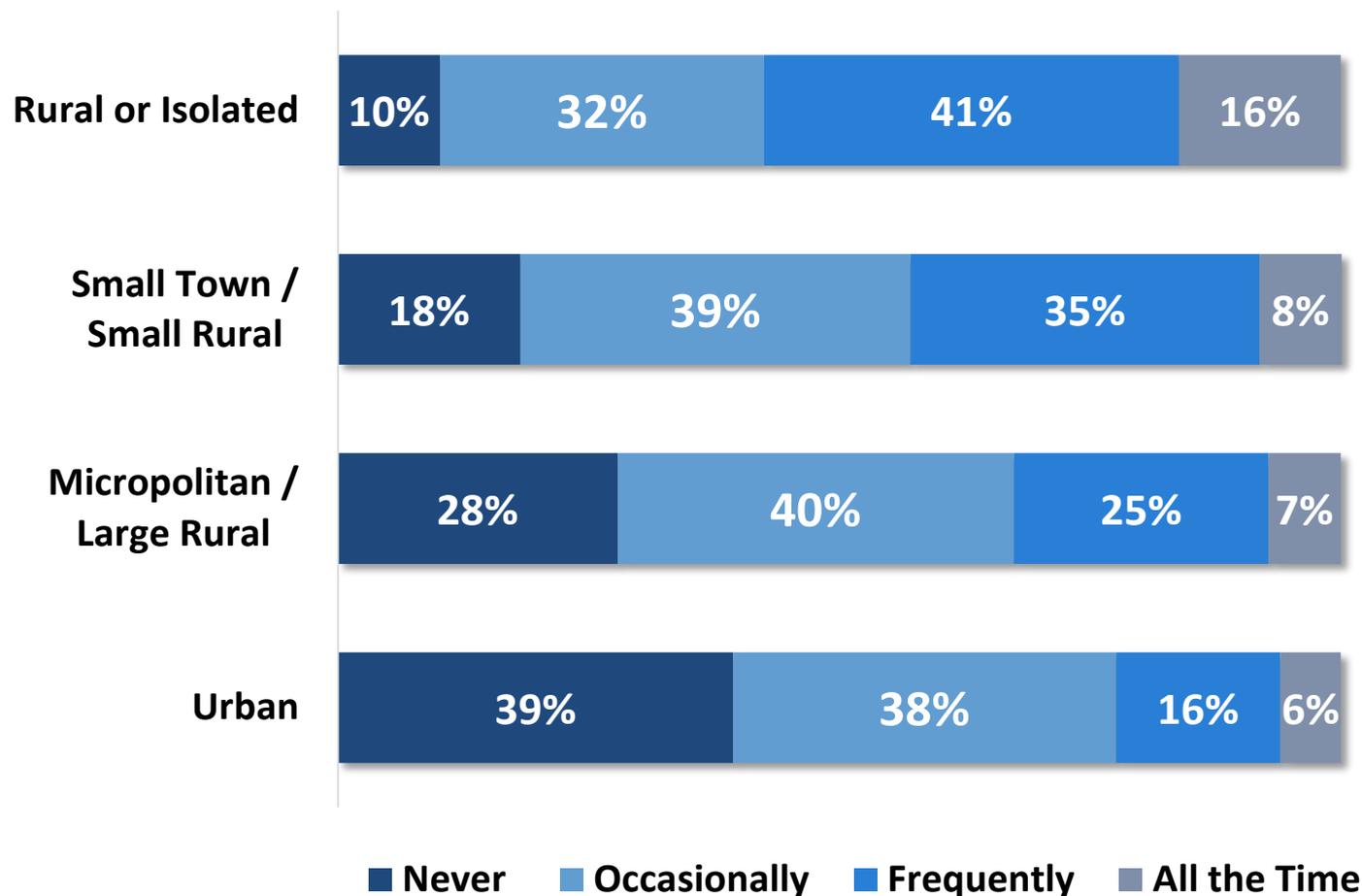
Number of MN Physicians with Selected Specialties, by RUCA

GENERAL Specialty	Urban	Micropolitan / Large Rural	Small Town / Small Rural	Rural or Isolated
Family Medicine	1,766	355	306	150
Internal Medicine	1681	133	48	13
OB/GYN	276	38	13	1
Pediatrics	747	57	8	1
Psychiatry	340	38	8	1
General Surgery	250	53	35	6
Subspecialties or Mixed Specialties	1601	148	30	8

Source: MDH analysis of MN Board of Medical Practice data, January 2017.

PHYSICIANS

“How often do you provide care that a different specialist might otherwise offer if they were available/accessible?”



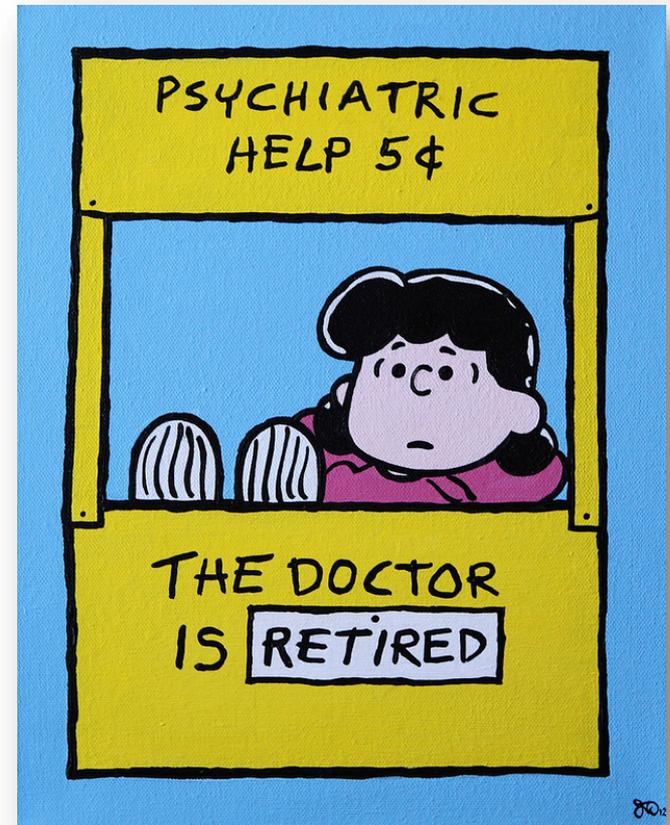
PHYSICIANS

Mental health services are the biggest gap across the state, from urban to rural areas.

63 percent of rural physicians say they have to fill gaps in mental health services “frequently” or “all the time.”

Other big gaps: **pediatric** and **OB/GYN** services.

Orthopedics, dermatology, addiction medicine, and oral health also mentioned.



For today:

The rural health workforce challenge

Labor supply and demand in key occupations

Possible solutions?

A few (!) state investments aimed at helping

MDH

- Loan Forgiveness Expansion
- Primary Care Residency Expansion Grant
- Rural Family Medicine Residency Grant
- International Medical Graduate (IMG) program
- Home & Community Based Services Scholarship program
- Summer Health Care Internship Program
- MERC (Medical Education Research Costs)

Healthforce Minnesota

- Scrubs Camp
- Mental Health Workforce Summit & Legislation
- Minnesota Clinical Laboratory Workgroup

DHS

- DHS Direct Care Workforce Summit



Loan Forgiveness Expansion

- In 2015, the Legislature added \$2.5 million to the state's Loan Forgiveness program and created eligibility for three new professional categories:
 - Mental Health Professionals (Urban and Rural)
 - Dental Therapists (Rural)
 - Public Health Nurses (Rural)
- Participants apply on their own behalf and secure their own employment. They must agree to practice in an eligible geographic area for a **minimum of three years** with an optional fourth year.



The next funding cycle opens November 1st!

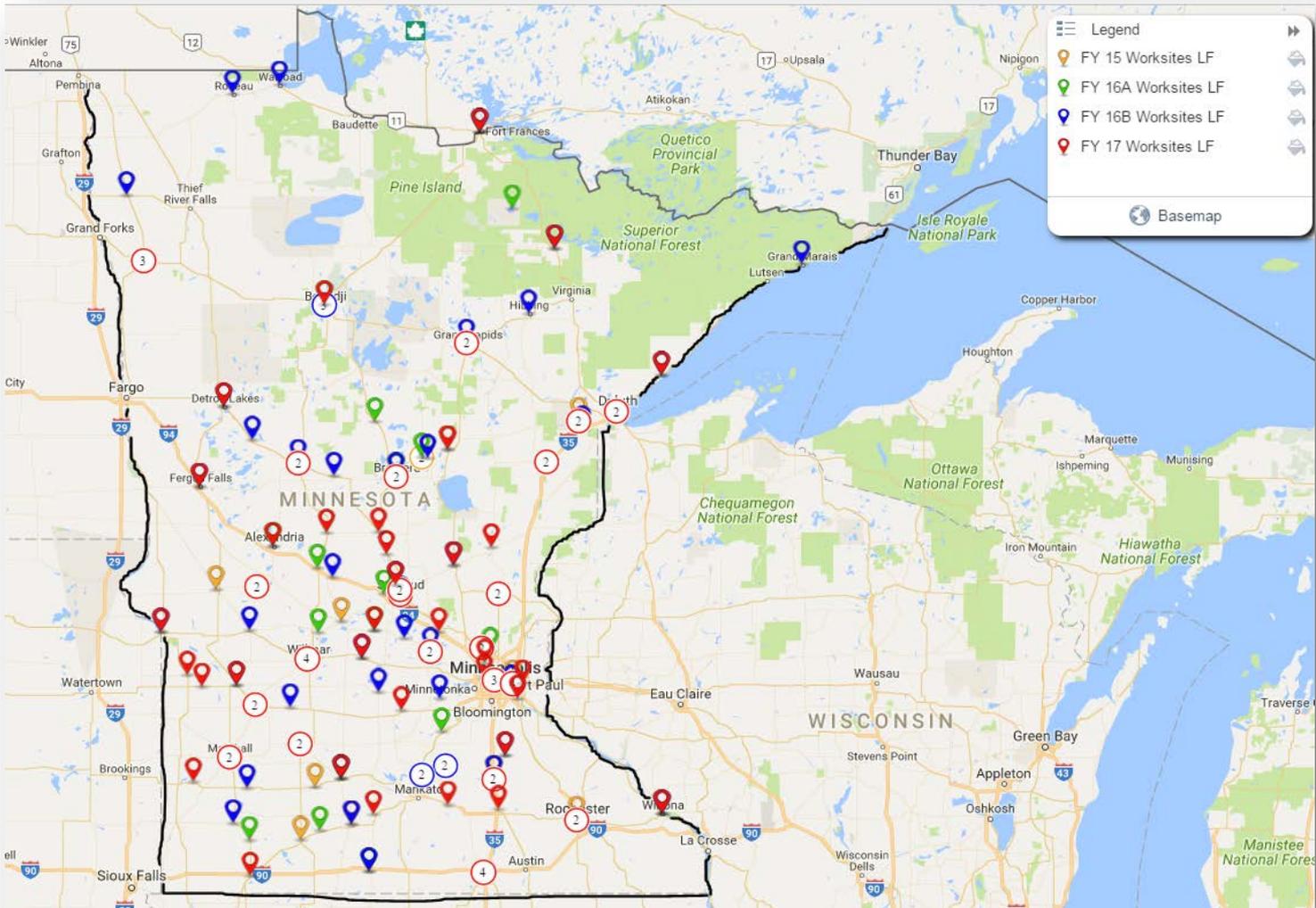
Loan Forgiveness Expansion: Results

	2015	2016A	2016B	2017
Physician	2	3	5	6
Rural Pharmacist	2	3	6	3
Dentist	1	2	1	2
Nurse Faculty	3	2	2	3
PAAs & APRNS (Midlevels)	4	3	11	11
Nurse in Nursing Homes	2	5	11	20
Public Health Nurse			10	7
Dental Therapists / Advanced Dental Therapists			6	4
Rural Mental Health Professionals			4	24
Urban Mental Health Professionals			6	9
New Participants	14	18	62	89
# of Applications	53	51	117	234



**\$2.5M increase
in program
funding; new
professions
added**

Loan Forgiveness Expansion: Results



Summer Health Care Internship Program

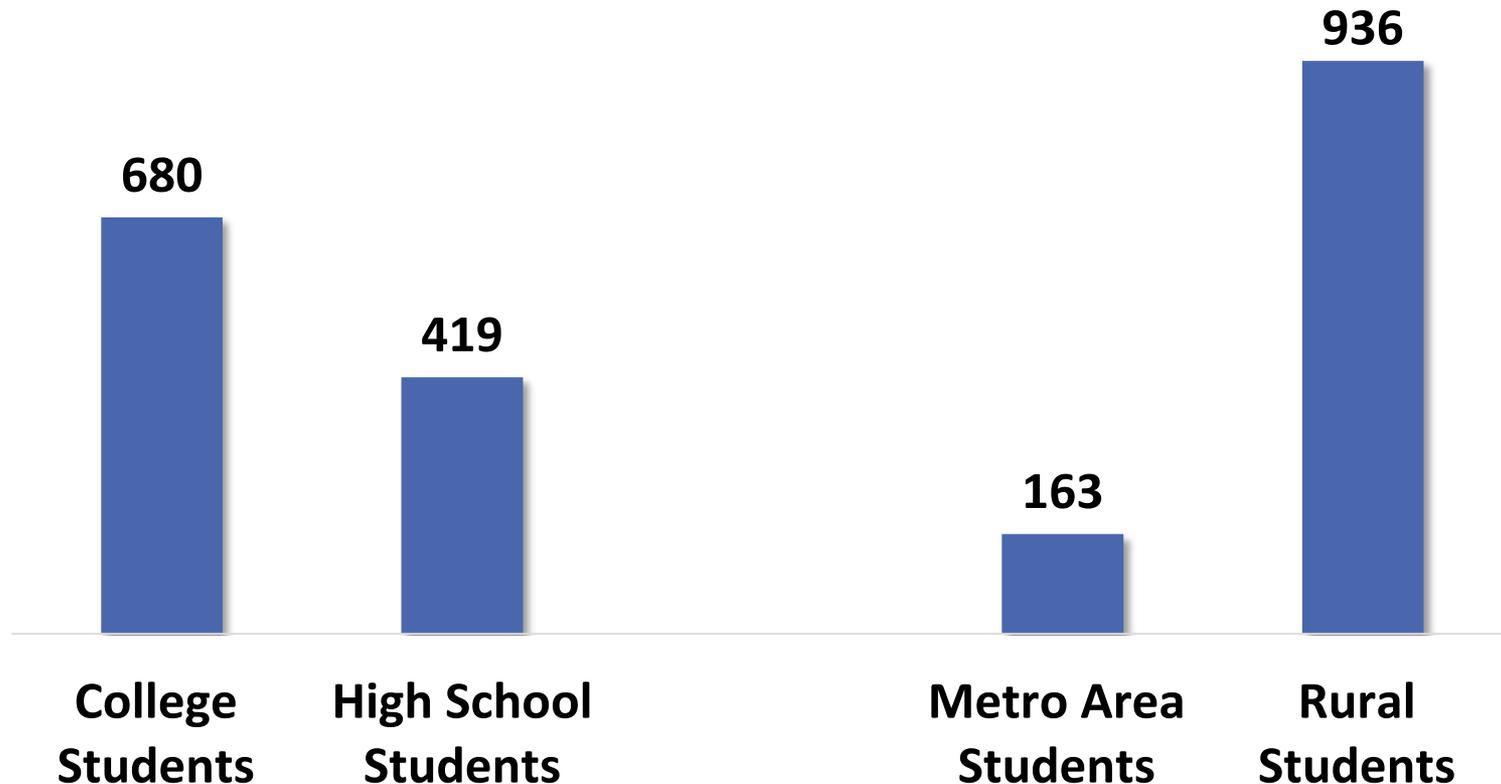
- Pays 50% of the cost for high school or college interns in health care and long-term care facilities.
- Administered by MHA on behalf of MDH.
- Areas of employment or observation:
 - Radiology
 - Laboratory
 - Nutrition/Dietary Services
 - Business office
 - Pharmacy
 - Inpatient Care
 - Respiratory Therapy
 - Chaplaincy
 - Social Services



MDH

Minnesota
Department
of Health

Summer Health Care Internship Program: Number of Students Served, 2009-2015



Any Minnesota hospital, clinic, nursing facility, home care provider or adult day programs can participate. The Employer Application is due by **Friday, April 14.**

Minnesota Clinical Laboratory Group

“Addressing a Critical Shortage of Facilities for Training”

Higher-than-average growth projected for both Clinical Laboratory Scientists and Clinical Laboratory Technician occupations.

Programs have expanded to meet the demand, but opportunities for clinical placement have become scarce. Innovations currently under discussion include:

- **Shortening clinical education time**
- **Use of simulation for a portion or all of the clinical education**
- **Reframing the entry-level expectations of employers**
- **Utilization of additional clinical sites**

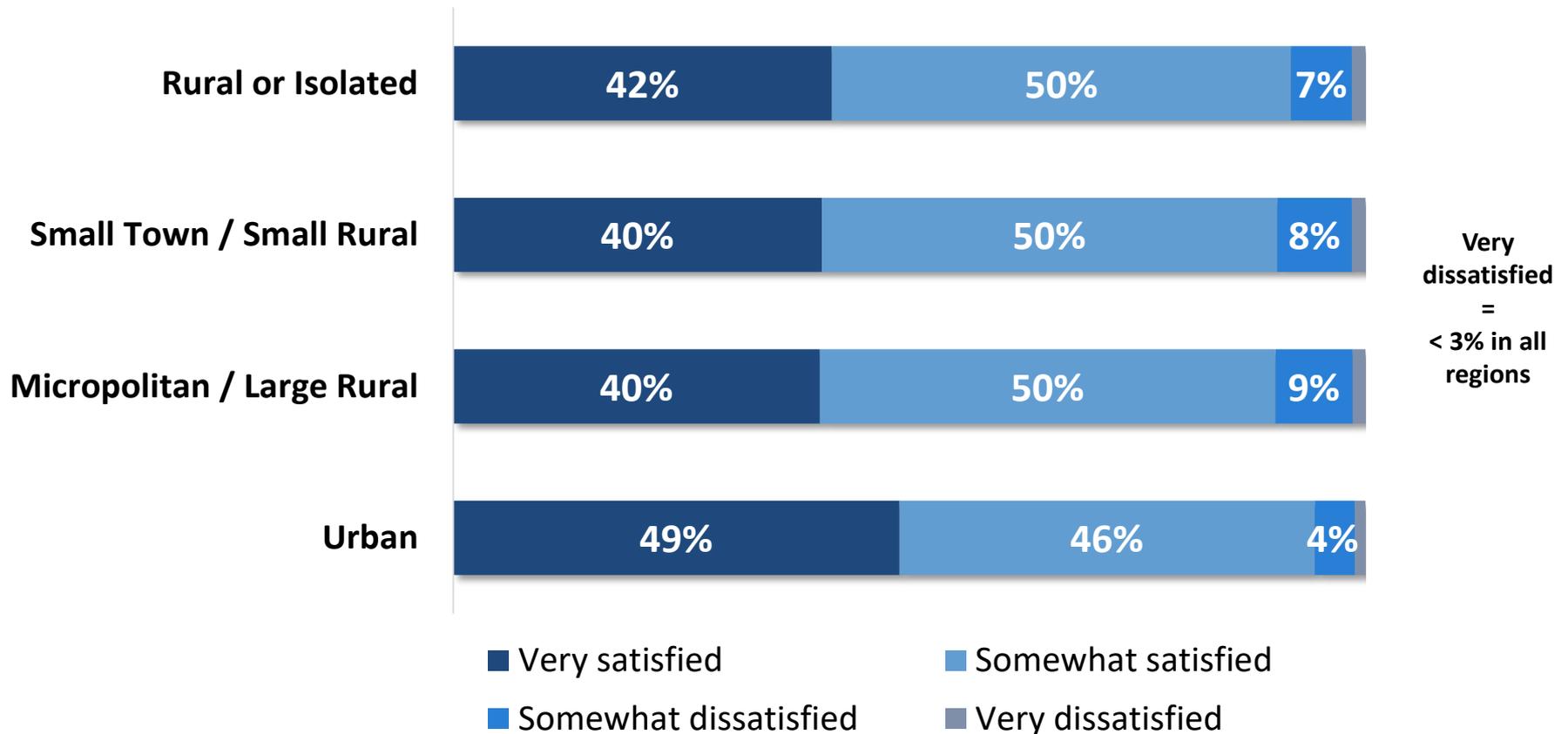


Any laboratory educators or professionals are invited to join the conversation!
Contact *HealthForce* director Valerie DeFor at vdefor@winona.edu.

RETENTION

Career Satisfaction among Physicians

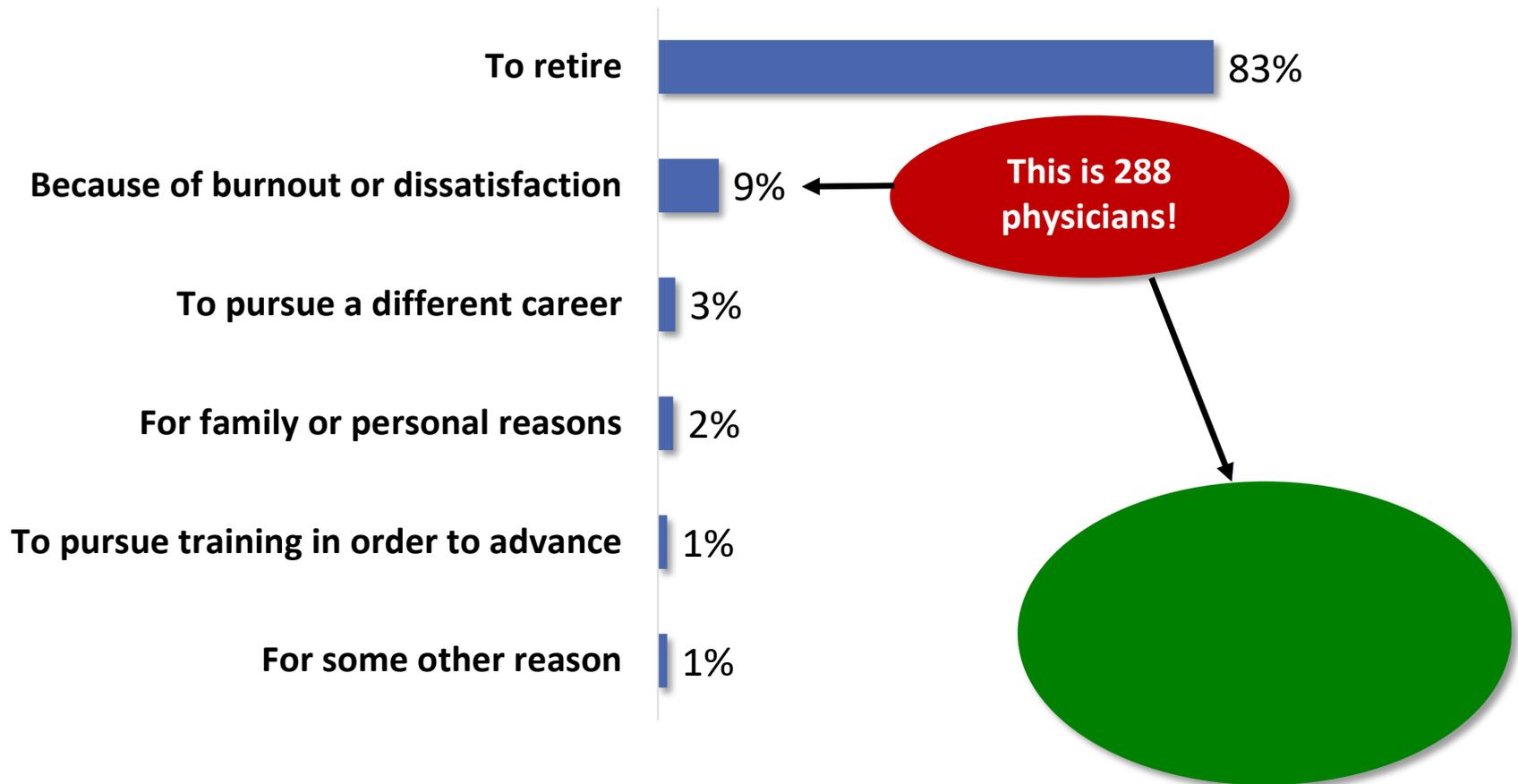
“How satisfied have you been with your career in the last 12 months?”



RETENTION

Work and Career Satisfaction among Physicians

“If you plan to leave the field within the next five years, why?”



FINAL THOUGHT

If you have found the data in this presentation useful, please...

- Thank a licensed provider, who took the time to complete our survey;
- &
- Thank any health licensing board, who partnered with us to make this data collection possible!



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