Rural Health Research Gateway

The History and Future of Rural Health Research: Celebrating 30 Years

ruralhealthresearch.org

Rural Health Research Gateway Webinar
June 4, 2018

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Funded by the Federal Office of Rural Health Policy
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For 30 years, the Rural Health Research Centers have been conducting policy-relevant research on healthcare in rural areas and

providing a voice for rural communities in the policy process.

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The Rural Health Research Center Program and Gateway are funded by the Federal Office of Rural Health Policy, Health Resources & Services Administration

Rural Health Research Gateway

U.S. Department of Health & Human Services
HRSA Federal Office of Rural Health Policy

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Provide access to research publications and projects funded through FORHP

- Aim to reach diverse audiences
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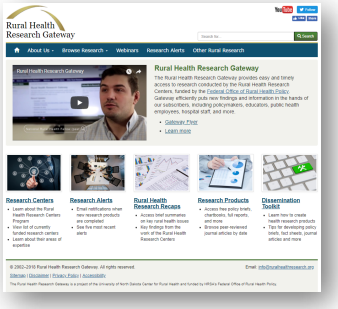
  - Rural Health Providers
  - Students
  - Policy Makers
  - Other Health Researchers
  - Rural Health Professionals/Organizations/ Associations



https://www.ruralhealthresearch.org

Using Gateway

This online resource or rural health research connects you to:

- Research and Policy Centers
- Reports & Journal Publications
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- Policy Briefs
- Research Projects
- Email Alerts
- Free Webinars
- Experts
- Dissemination Toolkit

Rural Health Research Centers

- Funded by the Federal Office of Rural Health Policy
- National research agenda
- Celebrating 30 years of research

Maine Rural Health Research Center
Health Insurance and the Uninsured, Long Term Services and Supports, Rural Health Clinics (RHCs), Mental Health, Substance Abuse

North Dakota and NORC Rural Health Reform Policy Research Center
Health Policy, Health Services, Frontier health, Workforce

North Carolina Rural Health Research and Policy Analysis Center
Medicare, Medicaid and S-CHIP, Healthcare Financing, Health Policy

RUPRI Center for Rural Health Policy Analysis
Health Policy, Medicare, Medicare Advantage (MA), Health Insurance and the Uninsured, Health Services

Rural and Underserved Health Research Center
Substance Use Treatment, Primary Care, Emergency Department Access

Rural Telehealth Research Center
Telehealth, Health Information Technology, Technology

South Carolina Rural Health Research Center
Health Disparities, Minority Health, Health Services

Southwest Rural Health Research Center
Health Insurance, Maternal and Child Health, Aging, Diabetes, Substance Abuse

University of Minnesota Rural Health Research Center
Quality Measurement and Improvement, Women's Health, Perinatal Care, Aging, Disability, Social Determinants of Health

WWAMI Rural Health Research Center
Workforce, Health Services

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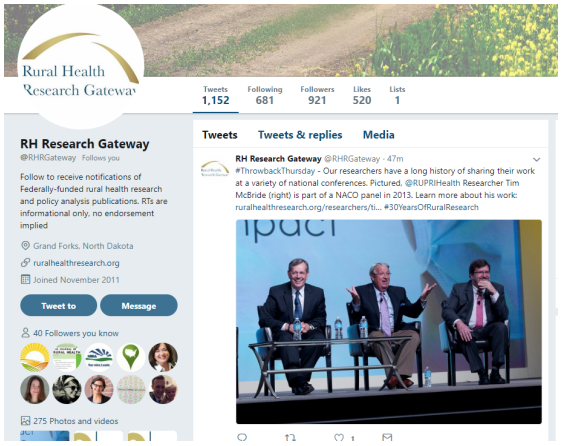

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UNIVERSITY of WASHINGTON

Celebrating 30 Years

30 Years of Research at the WWAMI Rural Health Research Center

ERIC H. LARSON, PHD

Director, WWAMI Rural Health Research Center

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Celebrating 30 Years

Acknowledgements and Disclaimer

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FORHP funding of RHRCs has:

- Provided timely, objective, policy relevant research results to policy-makers, the rural health community, health educators, and the public for 30 years.
- Fostered the long-term development of rural health services subject matter expertise in centers located across the U.S.

All the RHRCs have their own stories to tell- this is a personal take on the history of one.

Context: Two key rural health issues in the 1980s

Rural hospital closures

- 10% of rural hospitals closed in the 1980s

Rural/urban differences in perinatal outcomes

- Rural neonatal mortality rates remained persistently higher than urban rates

Leadership

The UW was well positioned to take on health services research in this area guided particularly by Roger Rosenblatt and Gary Hart.

The Rural Hospital Project – the "Proto-WWAMI RHRC"

"We propose a regionalized demonstration project designed to restructure the service configuration of a selected number of marginal rural hospitals in the states of Washington, Alaska, Montana and Idaho. The objective of this proposal is to determine those inpatient services which can be provided safely and efficiently in hospitals serving a spectrum of rural communities."

(Proposal to the WK Kellogg Foundation, 1982)

Outcomes of The Rural Hospital Project

- Worked successfully with 6 struggling hospitals on governance, scope of service, finance, workforce, planning, community involvement.
- Dissemination of a Community Health Services Development process based on the RHP process and using the same core staff. Worked with over 60 communities in the WWAMI region.
- The WWAMI Rural Health Research Center

Responding to Crisis

About 70% of the work in the first 10 years of the Center concentrated on:

- Rural Obstetrics
  - Perinatal outcomes
  - Access to OB care
  - Regionalization of OB care
- Rural hospitals
  - Scope of services
  - Hospital boards
  - Financing
  - Local perspectives on closure

Rural Hospital Research at the WWAMI RHRC

- Surgical outcomes
- MI outcomes
- Hospital closure
- Scope of service
- Rural Hospital boards and administration

Hospital studies – two examples

- ***Readmission after surgery in Washington State rural hospitals*** – examined 4 common surgeries and found no difference in 7 or 30 day readmission rates between rural/urban hospitals. (Welch, Larson, Hart, Rosenblatt- 1992)
- ***Rural hospital inpatient volume: cutting edge service or operating on the margin?*** – examined surgical volume at small hospitals and explored issues around the safety of low volume/higher complexity surgery in small hospitals. (Williamson, Hart, Pirani, Rosenblatt- 1993)

…and lots more

OB Access & Outcomes Research at the WWAMI RHRC

- Rural/urban differences in rates of poor birth outcome
- Rural/urban differences in utilization of prenatal care
- Regionalization of perinatal care
- Declining participation in OB by rural family physicians
- Impact of increasing costs of OB malpractice insurance
- Obstetric technology in rural hospitals

Example: Does local OB care matter for better rural outcomes?

- ***Local access to OB care in rural areas: effect on prenatal care, birth outcomes and costs*** – Found that poor local access to OB care impaired access to the larger regionalized system of perinatal services and was associated with higher newborn charges and some adverse birth weight specific perinatal outcomes.

  (Nesbitt, Larson, Rosenblatt, Hart 1994)

Other OB Access/Outcomes work

- ***Obstetric practice patterns in Washington State after tort reform: has the access problem been solved?*** (Rosenblatt et al. 1990)
- ***Trends in perinatal and infant health disparities between rural American Indians/Alaska Natives and rural whites*** (Baldwin et al., 2009)
- ***Low birth weight rates among racial and ethnic groups in the rural United States*** (Baldwin et al., 2013)

…. And lots more

WWAMI RHRC Themes in the 2000s-

- Defining rurality (RUCAs)
- Methods for estimating provider supply ("Off with their heads!")
- Access to cancer care
- Access to specialist care

And especially…the rural health workforce

- Safety net providers
- Primary care provider supply
- IMGs
- Rural provider education
- Rural residency training
- Nurse workforce
- NP/PA workforce
- Dental workforce
- EMS

The WWAMI RHRC is now focused (mostly) on workforce

Some recent/current projects

- Outcomes of Rural Family Medicine residency training programs
- Which PA training programs produce rural PAs?
- What is the potential of community paramedicine to fill rural health care gaps?
- The supply of behavioral health providers in rural America
- The supply of physicians waivered to treat opioid addiction in rural America

Background

The United States is in the midst of a severe opioid abuse epidemic.

In 2015, an estimated 2.0 million people, 12 and older, had a pain reliever use disorder, and 591,000 people had heroin use disorder.

In 2016, an estimated 42,249 people died of opioid overdose.

Buprenorphine-naloxone is an effective medication-assisted treatment (MAT) for opioid use disorder (OUD) that can be provided in an office-based setting.

WWAMI RHRC Opiate Related Studies

1. 2012 geographic distribution of physicians with a DEA waivered to prescribe buprenorphine.
2. Prescribing practices of physicians with a DEA waiver to prescribe buprenorphine.
3. Barriers rural physicians face prescribing buprenorphine for opioid use disorder.
4. Update of the geographic distribution of physicians with a DEA waivered to prescribe buprenorphine.
5. Estimated potential additional MAT treatment slots provided by NPs and PAs in rural counties.
6. 2017 update of the geographic distribution of providers with a DEA waivered to prescribe buprenorphine.
7. Recommendations from waivered physicians on how to overcome MAT prescribing barriers.

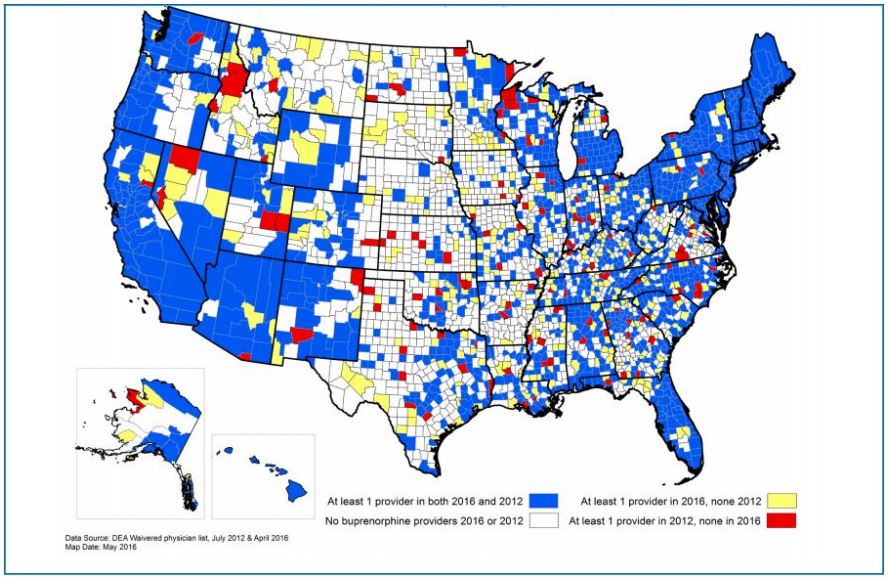
Example 1 - Update of the Geographic Distribution of Waivered Physicians

Study goal: Compare the changes in the supply of physicians waivered to provide MAT from 2012 to 2016.

Key findings:

- 1,648 counties (52.5%) nationally had at least 1 waivered provider in 2016, up from 1,465 (46.6%) in 2012.
- 1,188 rural counties (60.1%) had no waivered providers in 2016, down from 1,377 (67.1%) of rural counties in 2012.

U.S. Counties with Buprenorphine Providers



Example 2- Potential Additional MAT Treatment Slots Provided by NPs and PAs in Rural Counties

Study goal: quantify the potential increase in the number of rural MAT providers and treatment slots as NPs and PAs become DEA waivered providers.

Key findings:

- Allowing NPs and PAs to obtain a DEA waiver and provide buprenorphine treatment for OUD, increases the national estimated number of rural treatment slots by 10,777 (15.2%).
- NPs and PAs with a DEA waiver have the potential to substantially increase the accessibility of MAT for many patients.

Continuity and Change at the WWAMI RHRC since 1988

- What's stayed the same?
- What's changed?
- What's next?

What's next?

"Prediction is very difficult, especially about the future." --Niels Bohr

Where do new issues come from?

- Changes in the natural world
  - e.g. New diseases, new disease geographies, climate change, etc.
- Changes in technology
  - e.g. Drugs, laparoscopic surgery, telemedicine, new tools, etc.
- Changes in politics, policy, culture, the socio-economic milieu, etc
  - e.g. ACA, CARA, CMS policy, recessison, opioid crisis, shifts in culture, etc.

Back to the Beginning - Takeaways

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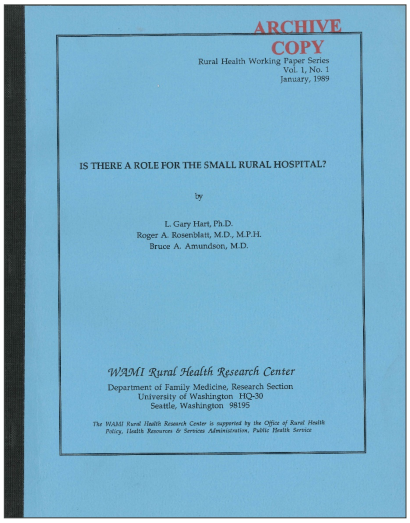

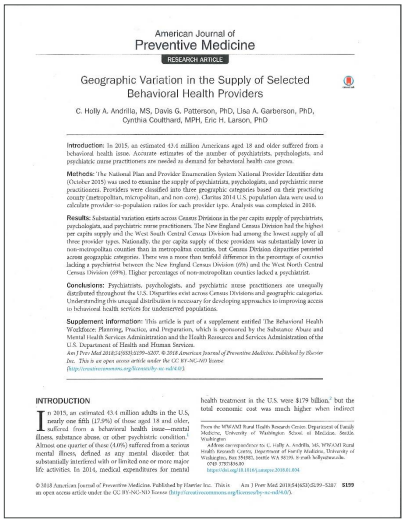

FORHP Charge to RTRC: Help Build the Telehealth Evidence Base

Marcia M. Ward, PhD
Professor, Health Management and Policy, University of Iowa
Director, Center for Health Policy and Research
Director, Rural Telehealth Research Center

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Rural Telehealth Research Center

- The Federal Office of Rural Health Policy (**FORHP**) is located within the Health Resources and Services Administration (HRSA) of DHHS.
- Among other funding, FORHP uses cooperative agreements to fund seven Rural Health Research Centers
- We are the one **Telehealth-Focused Rural Health Research Center** supported by HRSA
- Our collaboration consists of partners from three Rural Health Research Centers:
  - **University of Iowa**
  - **University of North Carolina – Chapel Hill**
  - **University of Southern Maine**

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Overview of HRSA-funded Projects

- **Project 1** - Identify existing measures suitable for Tele-ED, score according to established criteria, and select optimal set
- **Project 2** - Review measures with 6 HRSA EB-TNGP grantees, modify data collection tool, write protocol, and launch data collection in their sites
- **Project 3** - Collect data on Tele-ED encounters from 6 HRSA EB-TNGP grantees using data collection tool
- **Project 4** - Analyze data on Tele-ED encounters from 6 HRSA EB-TNGP grantees and write papers
- **Project 5** - Follow the same sort of process to identify measures for 21 HRSA School-Based TNGP grantees

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Telehealth in the Emergency Room (eg., Tele-ED, Tele-Stroke, Tele-Trauma)

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HRSA-funded Project to Identify Measures for Tele-ED (with Mathematica)

- Phase 1
  - Conducted a **systematic literature review** of telehealth application in the ED
  - Identified measures that were used in empirical studies
- Phase 2
  - Searched for **standardized measures** using search tools:
    - AHRQ National Quality Measure Clearinghouse (NQMC)
    - CMS, NQF, TJC, HHS, Professional Societies and many others
- Phase 3
  - **Scored >400 measures** using NQF-like criteria
  - 6 HRSA-funded Evidence-Based Telehealth Network Grant Program (EB-TNGP) grantees scored resulting measures
- Phase 4
  - **Identified final set** of 25 measures

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HRSA-funded RTRC Project to Modify Measures for Use with EB TNGP Grantees

- Phase 1
  - **Reviewed options** for collecting a uniform set of measures from the six EB TNGP Grantees
- Phase 2
  - Worked with the six EB TNGP Grantees to **modify the measures** identified in the previous study
- Phase 3
  - **Revised the** Tele-Emergency Performance Assessment Reporting Tool (**T-PART**)
  - **Pilot tested** the T-PART, **made adjustments,** and **wrote protocol**
- Phase 4
  - **Launched data collection**

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Who Are the EB TNGP Grantees?

EB TNGP Grantee	Service Area	Setting	Patient Population
Avera Health eCare Services	Iowa, Kansas, Minnesota, Nebraska, North Dakota, South Dakota	22 Rural EDs	Broad ED patient population
St. Vincent Healthcare	Montana	11 Rural EDs	Broad ED patient population
Union Hospital	West Central Indiana & East Central Illinois	6 Rural EDs	Behavioral health, neurology, and trauma
University of California at Davis	Northern California	16 Rural EDs	Pediatric emergency and critical care
University of Kentucky	Eastern Kentucky	7 Rural EDs	Broad ED patient population
University of Virginia	Virginia	4 Rural EDs	Stroke

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T-PART Measure Domains

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Measure Domain	Measure Examples
Patient Characteristics	Age category, Sex, Race, Ethnicity
Condition	ICD-10, Reason for visit, Severity
Timeliness	ED arrival and discharge times, Tele-ED consult begin and end times
Disposition	Disposition, Averted transfer, Transfer mode
Treatment	CMS recommended treatments for AMI, chest pain, stroke, and sepsis
Payment	Primary payer, Billed amount

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Sample Measures for Assessing Tele-ED

- A sample of measures applicable to all ED patients are:

CMS ID	Measure Title	CMS Programs
ED-1	Median Time from ED Arrival to ED Departure for Admitted ED Patients	HC + HIQR
ED-2	Admit Decision Time to ED Departure Time for Admitted Patients	HC + HIQR
OP-18b	Median Time from ED Arrival to ED Departure for Discharged ED patients	HC + HOQR
OP-20	Door to Diagnostic Evaluation by a Qualified Medical Professional	HOQR
OP-22	ED Patient Left Without Being Seen	HOQR

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T-PART for Collecting Tele-ED Data

- 6 HRSA-funded EB-TNGP Grantees are participating
- Excel-based data collection tool to collect a set of 45 data elements which will generate measures common to all conditions and condition-specific measures (ie., chest pain, AMI, stroke, sepsis)
- **Retrospective data collection** for all Tele-ED cases back to November 2015 when ICD-10 was introduced
- **Prospective data collection** to December 2017 for all Tele-ED cases
- We use characteristics of Tele-ED cases to **identify a matched set** of non-Tele-ED cases for data extraction

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T-PART Analyses Underway

- **Pediatric Tele-ED** – Comparing generalist and specialist
- **Mental Health Tele-ED** – Comparing generalist and specialist
- **Stroke Tele-ED** – Comparing generalist and specialist
- **4 Interventions** – Examining process and outcomes for 4 intervention measures (AMI, chest pain, stroke, sepsis)
- **Cost of Care** – Examining rural hospital charges comparing telemedicine cases with matched nontelemedicine comparison cases
- **ED Disposition** – Examining averted admissions, avoided transfer, and transfer distance

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Telehealth in Schools

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Who Are the SB TNGP Grantees?

EB TNGP Grantee	EB TNGP Grantee	EB TNGP Grantee
Avera Health, SD	Baptist Health Foundation Corbin, Inc., KY	Bay Rivers Telehealth Alliance, VA
Ben Archer Health Center, Inc., NM	Children's Dental Services, MN	Community Health Center of Branch County, MI
Community Health Center, Inc., CT	East Carolina University, NC	Fort Peck Assiniboine & Sioux Tribes, MT
Indiana Rural Health Association, IN	Kennedy Krieger Children's Hospital, Inc., MD	Marshfield Clinic, WI
Mary Imogene Bassett Hospital, NY	Quality of Life Health Services Inc., AL	Rector & Visitors of the University of Virginia, VA
Sunnyside Community Hospital Association, WA	University of Arkansas System, AR	University of Kansas Medical Center Research Institute, Inc., KS
University of New Mexico, NM	Volunteer Behavioral Health Care System, TN	West Virginia University Research Corporation, WV

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School-Based Telehealth Measures

- Phase 1
  - Conducted a **systematic literature review** of telehealth application in the school-based health clinics, pediatric primary care, and telehealth for treating key chronic conditions
  - Identified measures that were used in empirical studies
- Phase 2
  - Searched for **standardized measures** using search tools:
    - National School Health Alliance and many others
- Phase 3
  - **Scored >500 measures** using NQF-like criteria
  - 21 HRSA-funded School-Based Telehealth Network Grant Program grantees scored resulting measures
- Phase 4
  - **Identified final set** of 25 measures

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Research Team & Funding

- Amanda Burgess, MPPM
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- George Shaler, MA
- Chris Shea, PhD
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thank you!

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