

Translating Surgical Research into Clinical Excellence

Waddah B. Al-Refaie, MD, FACS

Dr. & Mrs. Arnold W. Lempka Endowed Chair and Professor in Surgery
Chair of Surgery at Creighton University School of Medicine
Chair of Surgery at CHI Health

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2025 KFAS-NASEM Roundtable
Washington DC



Back to The DC Wharf!



Sources of Funding

- KFAS (*PI: Al-Ibrahim*)
- NIH R01: RECOVER (*m-PI: Shara & Al-Refaie*)
- State of Nebraska LB595 Program Grant (*PI: Al-Refaie*)
- Kick's For a Cure (*PI: Al-Refaie*)
- CMSS and Doris Duke Foundation Encoding Equity Grant (*m-PI: Simpson-Mason and Al-Refaie*)

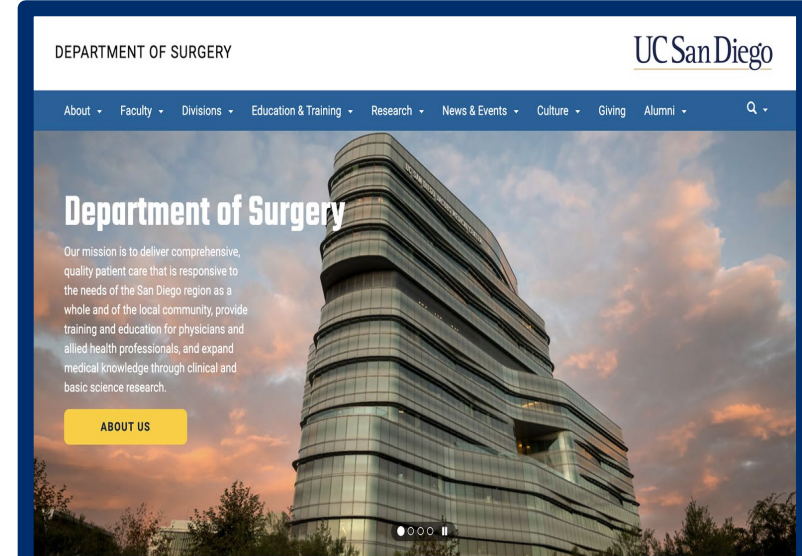
Contents

- My journey (proxy for the US-Kuwait relationship)
- Pilot Collaborative Project with KFAS
- Innovating Rural Surgery: Creighton's strategic Initiative
- Innovation with Impact

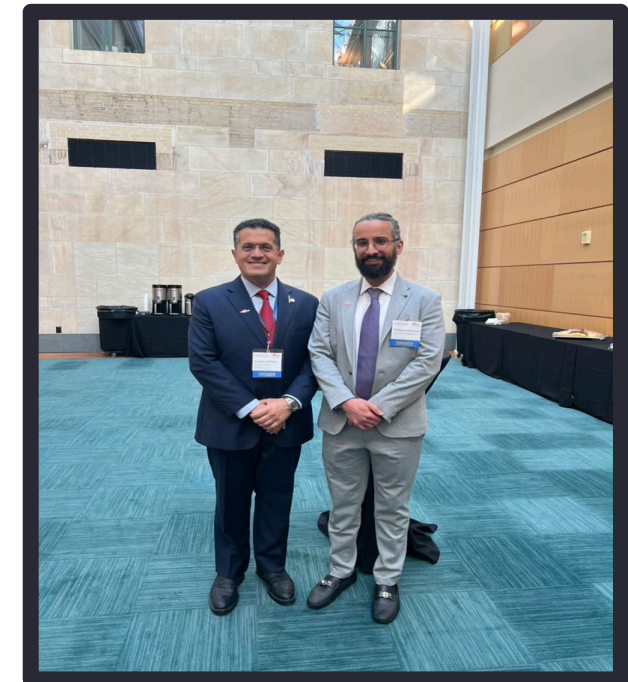
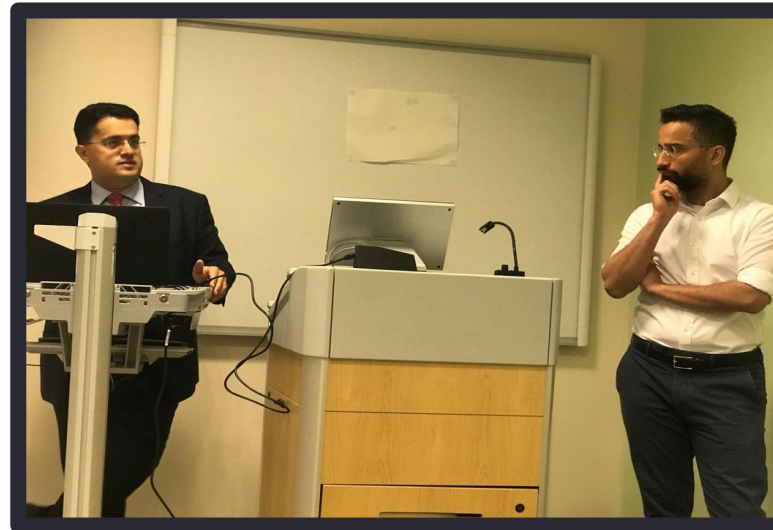
From Desert Sands to Prairie Fields: My Journey



Kuwait's Long Lasting Impact



US – Kuwait Relationship



Annual Kuwait Postgraduate Assembly in Surgery



Giving Back



Pilot Collaborative Grant with KFAS



Team-Based Cancer Care in Kuwait

Assessing the Continuum of Cancer Care

Abdullah Alibrahim, Waddah Al-Refaie

KFAS Presentation

July 17, 2025



Increase in Demand for Cancer Services

5x

increase in prevalence
of cancer in the last 30
years

+20%_{yoy}

increase in monthly Med
Onc Visits in the last



Research Phases



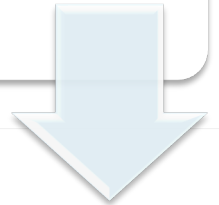
Quantitative Assessment of Patient Care Pathways
and Cross-Specialty Provider Engagement



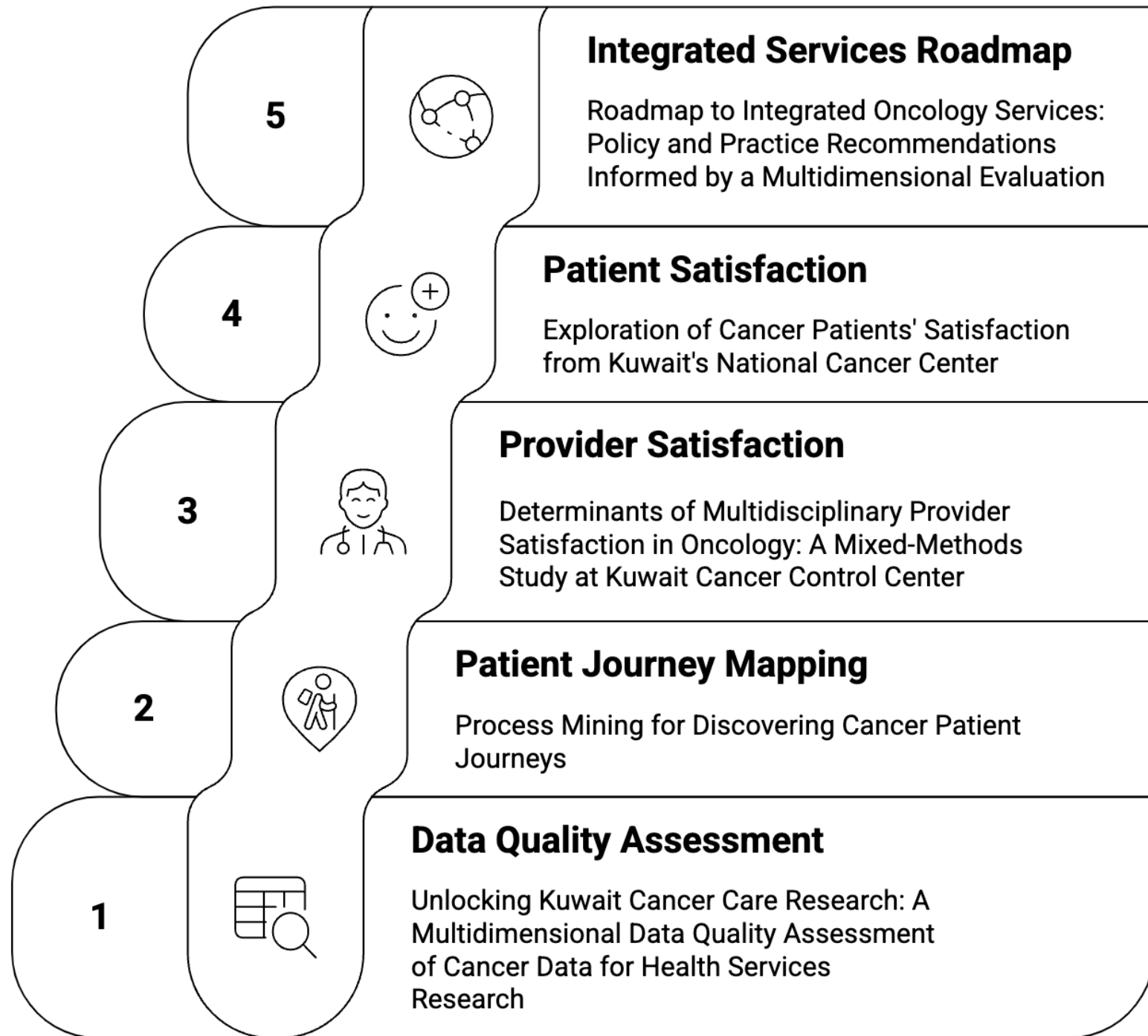
Qualitative Assessment of Attitudes and
Experiences of Cancer Care Coordination and
Delivery



**Synthesis and Development of
Recommendations** for Strengthening Team-Based
Cancer Care and Facilitating Care Coordination



Publication Plan



Building Institutional Bridges for Sustainable Impact

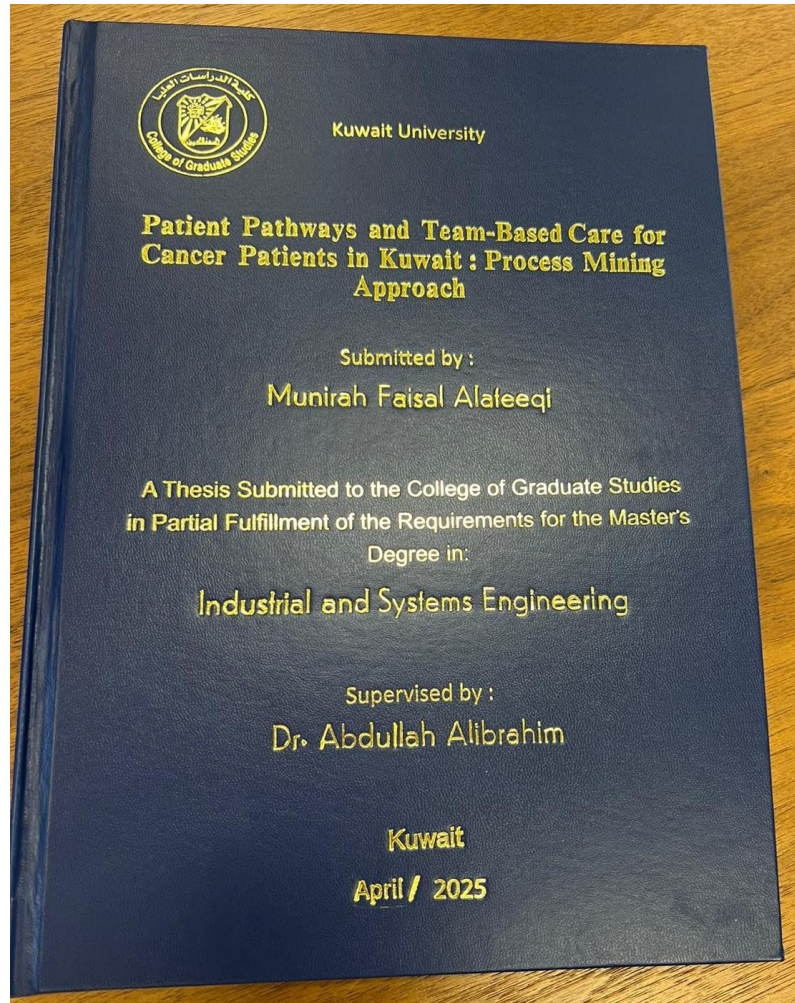


Meeting with Collaborators at
Kuwait Cancer Center



Meeting with the President of
Kuwait University

Student Achievements and Capacity Building



Master's Thesis Submitted by
Eng. Munirah Alateeqi



Soliman Abdullah, MS  • 1st

Industrial & Management Systems Engineer | Master of Science in Suppl...
8mo • 

It was a privilege to present our abstract, titled "A Digital Twin of Outpatient and Day Care Services in Kuwait Cancer Control Center: Data to Action," at the 2024 INFORMS Annual Meeting in Seattle, Washington.

This presentation provided a valuable opportunity to disseminate our research, which focuses on the integration of real-time data, dynamic analysis, and validated models to enhance operational efficiency in cancer care delivery. This work represents a significant advancement in the application of digital twin technology within healthcare systems. I am deeply grateful for the collaboration and insights of the distinguished experts involved in this endeavor:

Dr. [Abdullah I. Alibrahim](#)

Dr. Abdulwahab J. Al-Tourah

Dr. Waddah Al-Refaie

I look forward to further advancing this research and contributing to the development of data-driven solutions that improve healthcare outcomes.



Conference Presentation Delivered by
Eng. Soliman Abdullah

Advancing International Collaboration



Surgery Grand Rounds – Creighton
University School of Medicine
Department of Surgery

Creighton
UNIVERSITY
School of Medicine

June 18, 2025

Abdullah I. Alibrahim, PhD
College of Engineering and Petroleum
Kuwait University
Kuwait City, Kuwait

Dear Dr. Alibrahim:

I am pleased to appoint you as Associate Clinical Professor in the Department of Surgery at Creighton University School of Medicine. This appointment is effective immediately and is good through June 30, 2031.

Adjunct Associate Clinical Professor in the
Department of Surgery at Creighton
University School of Medicine

Innovating Rural Surgery: Creighton's Strategic Initiatives





Rural Surgery at Creighton

Mission: Creighton University School of Medicine aims to become a center of excellence in rural healthcare. Addressing rural surgical access and equity aligns with our Jesuit mission of service and advocacy for the underserved, and our geographic location positions us uniquely to champion rural patients and providers.

Commitment: The Department of Surgery is dedicated to addressing rural healthcare disparities through research and excellent clinical practice.

Initiatives:

- Rural Equity Research Interest Group
- Formed a dedicated team to support high-quality research in rural healthcare disparities
- Inaugural Creighton-CHI Health Equity in Rural Surgery Symposium
- Resident rotations in CHI Critical Access Hospitals
- Resident Research Year focused on Rural Equity Research

Creighton-CHI Surgical Equity Research Team



Waddah Al-Refaie
Chair, Dept. of Surgery



Ayushi Kaul
Medical Student



Nawar Shara, PhD
Chief, Research Data Science,
Director of Biostatistics and
Bio-informatics



Gabe Wolpert
Medical Student



**Scott Shipman,
MD, MPH** Executive
Director, Institute for
Population Health



Joy Doll, OTD, OTR/L
Program Director, Health
Informatics Program



Jillian Timperley
Research Assistant



Naomi Schmalz, PhD
Assistant Professor



Emily Brown, MD
General Surgery Resident



Yanick Tadé
Medical Student



Scott Reetz, MD, MPH
General Surgery Resident



Mark Pedersen
Research Assistant



Kathleen Guinn
Senior Research
Program Coordinator



**Maureen Tierney,
MD, MS**
Associate Dean, Clinical
Research and Public Health



Dillon Wade, MD
General Surgery Resident



**Ryan W. Walters,
PhD**
Vice Chair, Dept of Clinical
Research and Public Health



James Hazen, MD
General Surgery Resident

UNIVERSITY
School of Medicine

CHI Health
James Hazen, MD
General Surgery Resident

2025 Creighton-CHI Access in Rural Surgery Symposium



Innovation with Impact: The Spirit of Research at Creighton





REmote symptom COllection to improVE postopeRative care (RECOVER)

NIMHD R01 \$3M

Multiple-PI:

Nawar Shara and Waddah Al-Refaie

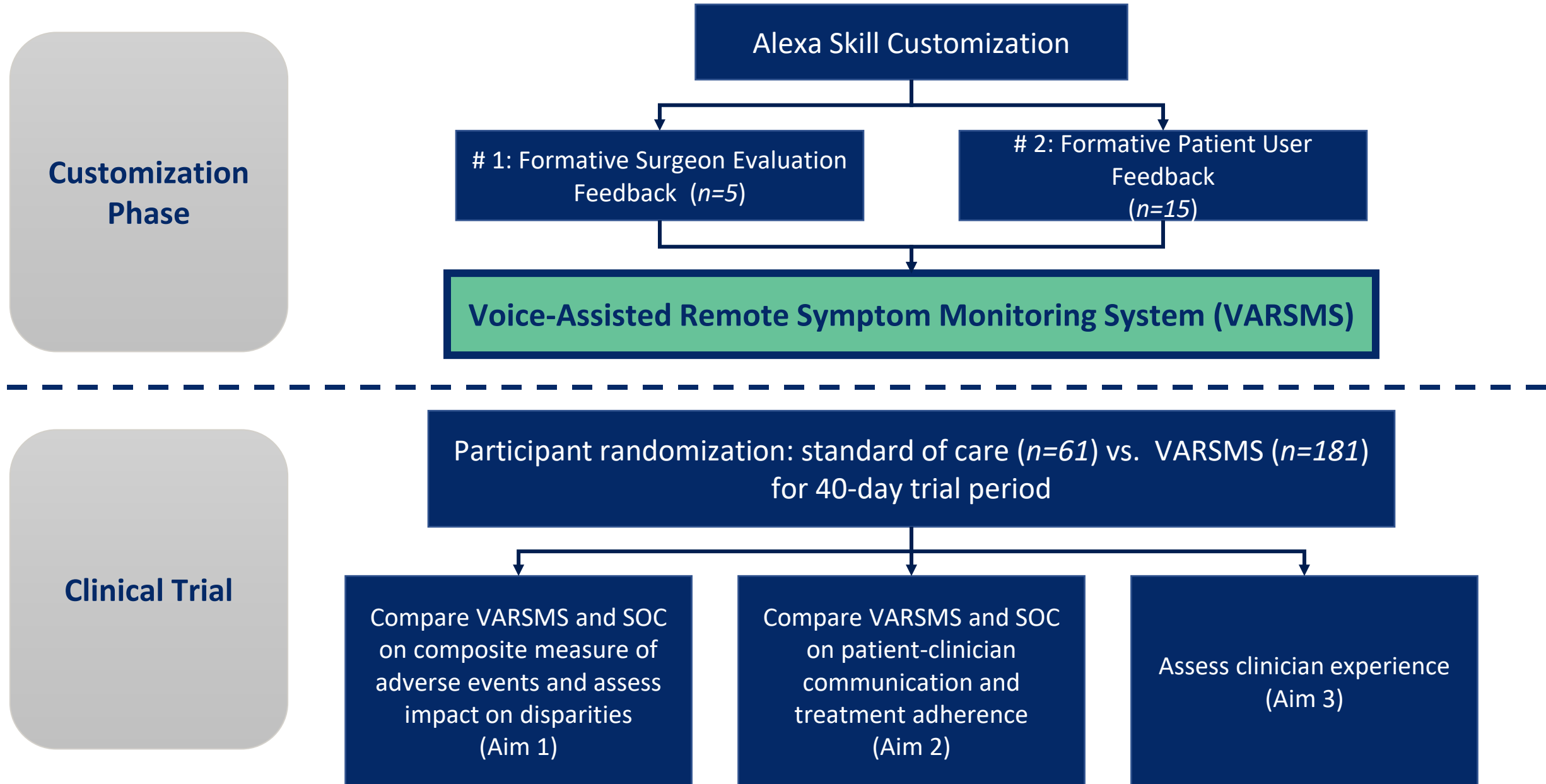
A partnership with Georgetown University and Medstar
Health to examine the role of AI in post-surgical
recovery from GI Cancer surgery.

GEORGETOWN
UNIVERSITY



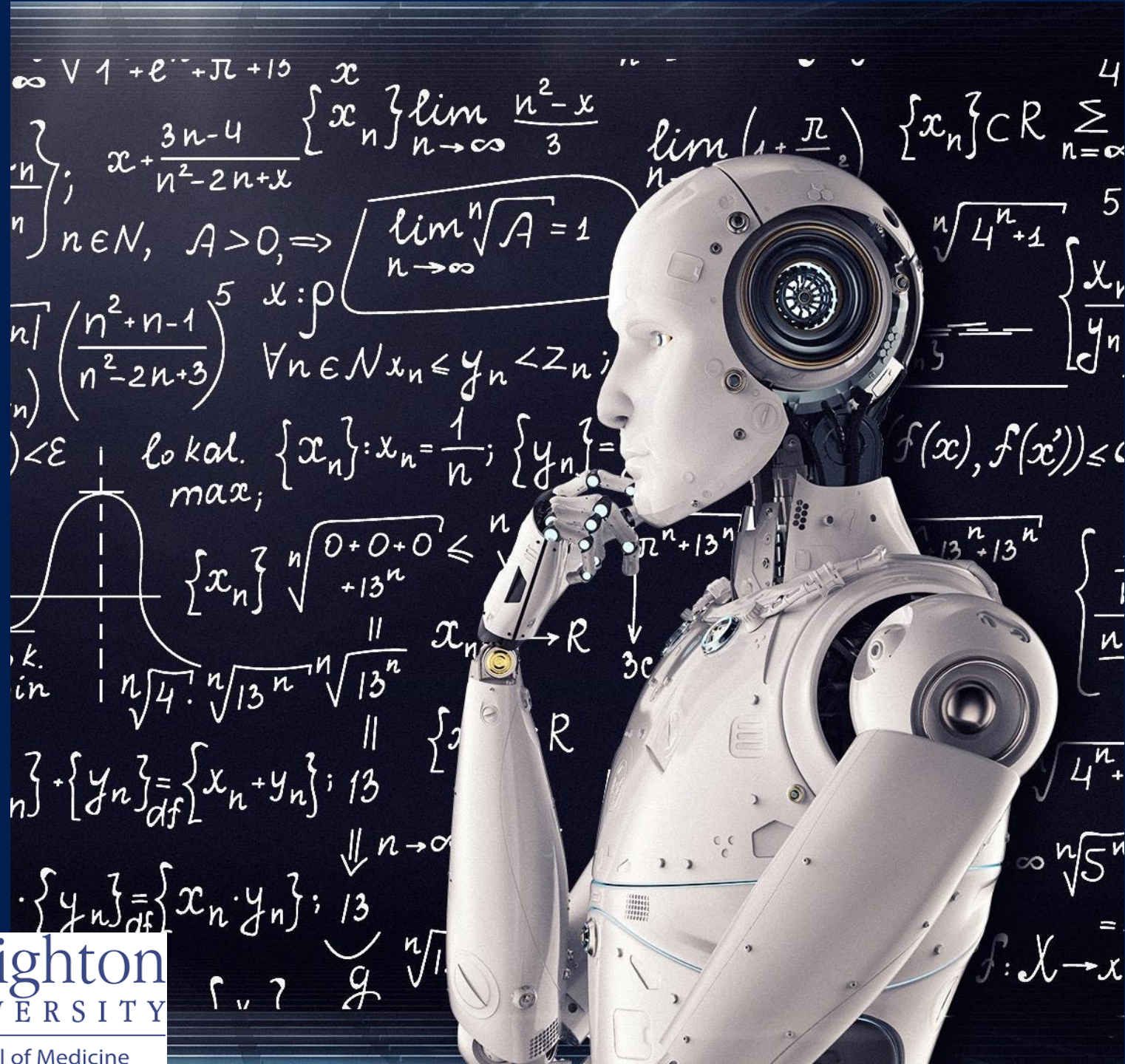
MedStar Health

Creighton
UNIVERSITY
School of Medicine



Lessons Learned from Customization:

- Bridging the Digital Divide
- Flexible AI Solutions
- Provider/Staff Perceptions
- High Retention and Compliance
- Enhancing Relationships and SDOH Insights



Developing a Research Agenda in Rural Surgical Cancer Care: Advancing Access and Quality.

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ACS / AMERICAN COLLEGE
OF SURGEONS



**THE AMERICAN
BOARD OF SURGERY**

\$2,300,000

Developing A Rural Surgery-Centered Research Framework and Curriculum to Improve Surgical Cancer Care

Jillian Timperley BS, Naomi Schmalz PhD, Kyle Cassling MD, Bonnie Simpson Mason MD

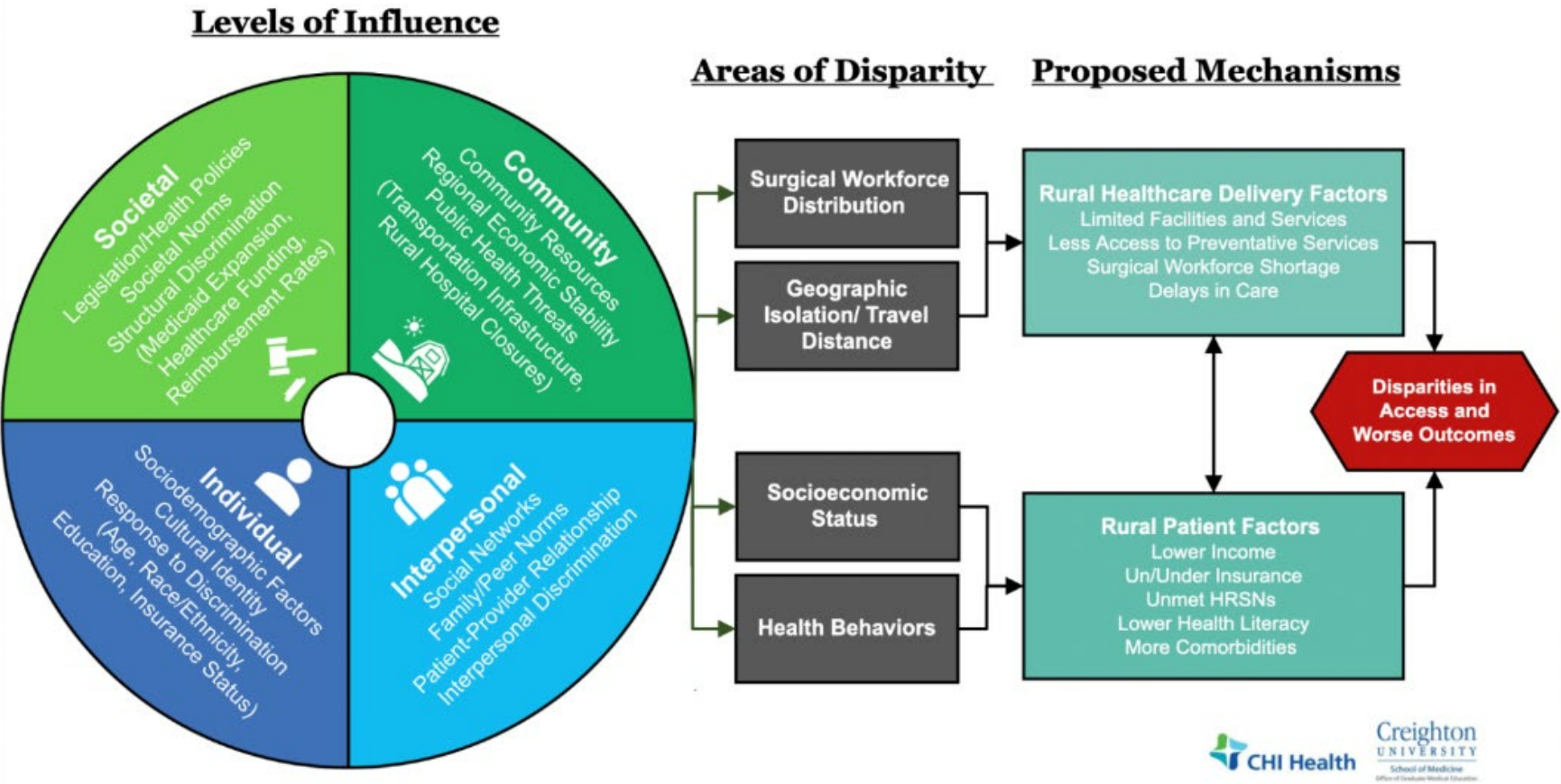
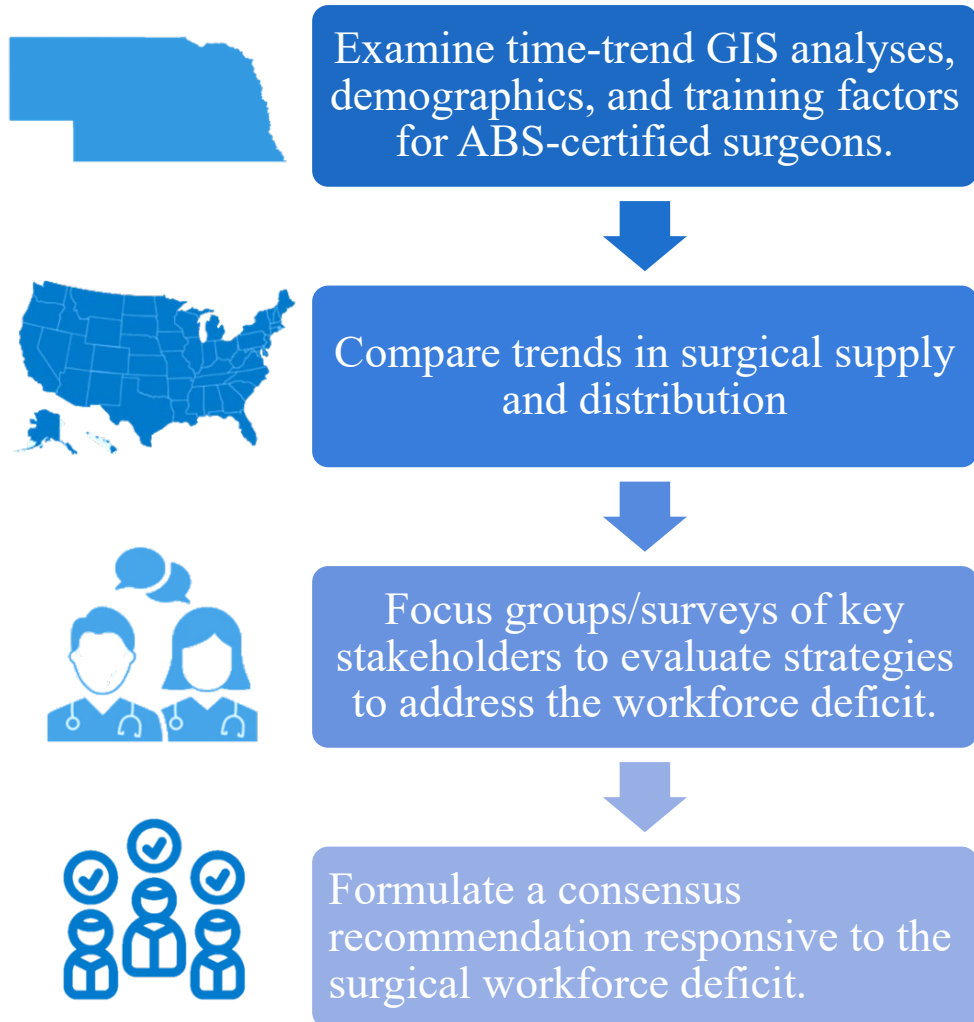


Figure 1: Timperley J, et al. *Am J Surg*. 2025;0(0):116150.

Optimizing Surgical Workforce in NE: A Collaborative with The American Board of Surgery

Jennifer Tseng MD, MPH, Scott Shipman MD, MPH, Ryan Walters PhD, Waddah Al-Refaie MD



Aim: To provide a deeper understanding of the surgical workforce deficit and generate consensus-driven stakeholder recommendations to mitigate it.



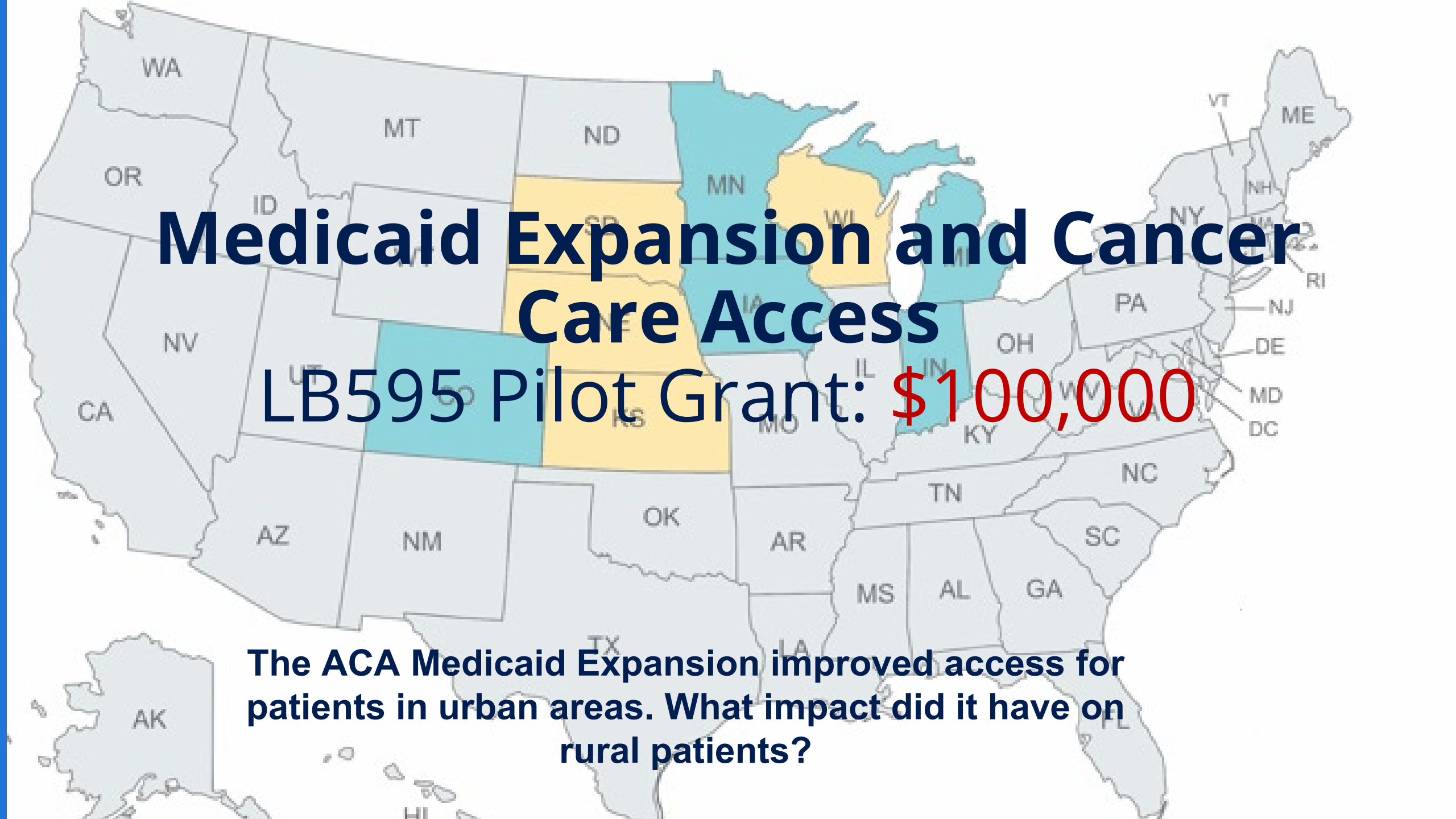
Leveraging Artificial Intelligence to Optimize Recovery After Cancer Surgery in NE

Waddah Al-Refaie MD, FACS. Nawar Shara, PhD, Erin Gillaspie, MD, MPH, FACS, Anne O'Keefe, MD, MPH



Aim: Harness the potential of AI by improving daily patient tracking during cancer surgery recovery, expanding access for rural populations, and monitoring well-being and social determinants of health (SDOH).



A map of the United States with state boundaries and abbreviations. Several states are highlighted: Minnesota (MN), Wisconsin (WI), Illinois (IL), Indiana (IN), Michigan (MI), Ohio (OH), Pennsylvania (PA), New York (NY), Vermont (VT), New Hampshire (NH), Maine (ME), Rhode Island (RI), Connecticut (CT), New Jersey (NJ), Delaware (DE), Maryland (MD), and the District of Columbia (DC). Additionally, Colorado (CO) is highlighted in light blue, and Nebraska (NE), Kansas (KS), and Oklahoma (OK) are highlighted in yellow.

Medicaid Expansion and Cancer Care Access

LB595 Pilot Grant: \$100,000

The ACA Medicaid Expansion improved access for patients in urban areas. What impact did it have on rural patients?

Colorectal Cancer Surgery (CRC) Utilization and Outcomes

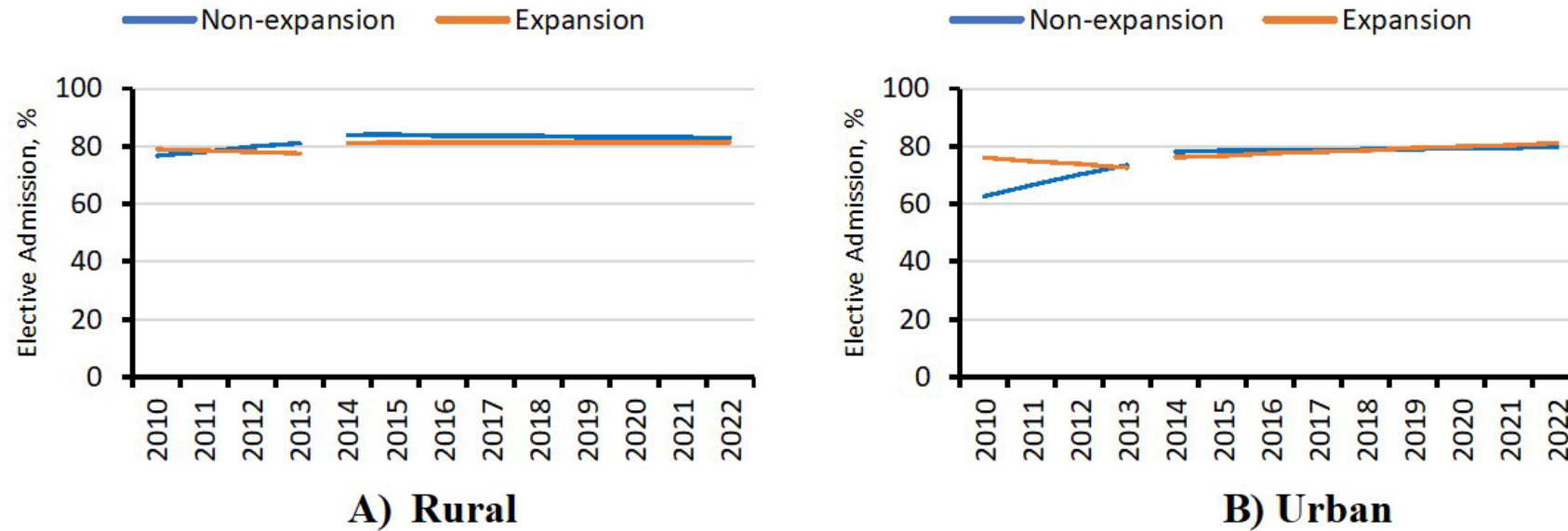
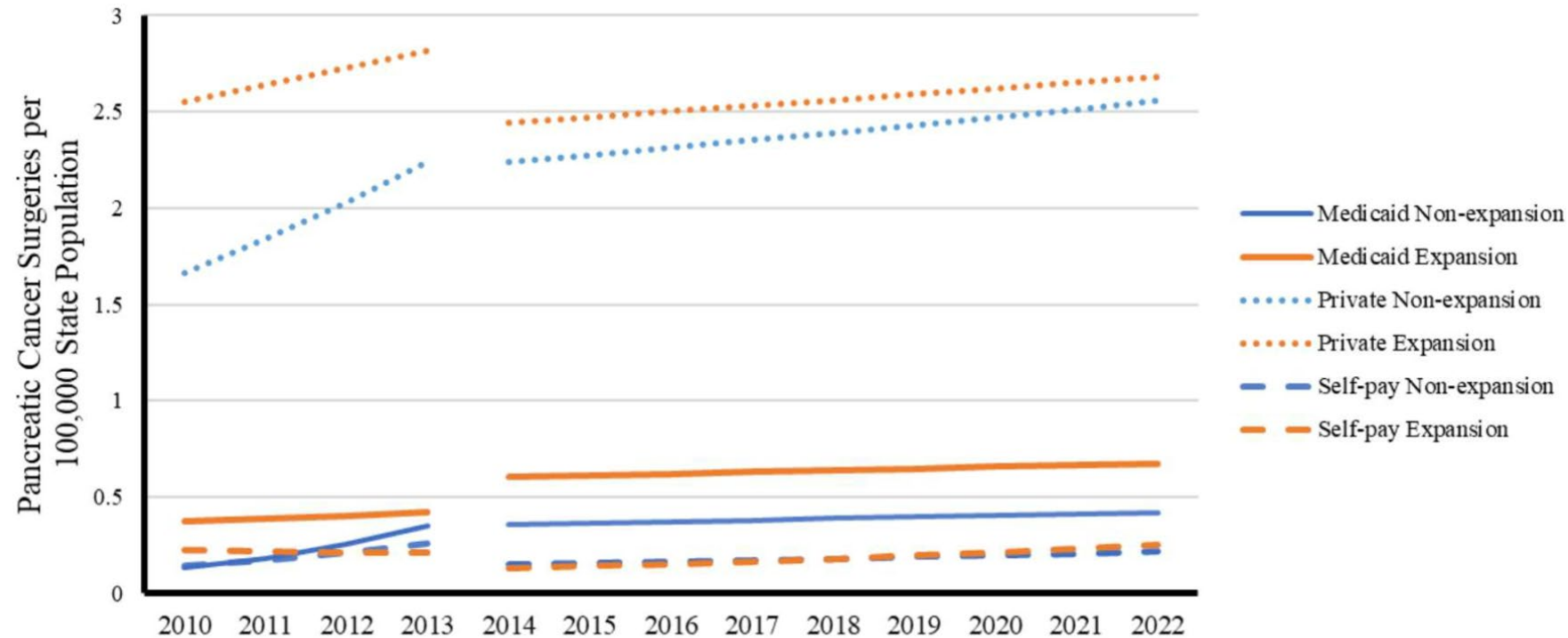


Figure 6. Year-over-year trends in elective admissions stratified by expansion status and whether the patient lived in a rural (left) or urban (right) zip code.

Key Insights:

- ***No sustained increase in CRC surgeries after ME***
- Elective surgeries rose slightly only in urban patients in expansion states
- Rural patients saw ***no improvement*** in access
- Length of stay declined across all states
- Mortality remained very low and stable

Pancreatic Cancer Surgery Access and Outcomes



Key Insights:

- **No overall increase** in pancreatic surgeries after ME
- Self-pay patients in expansion states saw **increased access** post-2014
- Length of stay decreased in both expansion and non-expansion states
- Mortality remained low and unchanged



Medicare Advantage

Funded by Lynch Cancer Center in partnership with Kicks for a Cure: \$60,000

Mark Pedersen , Bonnie Simpson Mason MD, Ryan Walters PhD, Waddah Al-Refaie



Medicare Advantage enrollment in rural areas has quadrupled since 2010.



Prior authorization, limited provider networks, and financial impact on critical access hospitals are concerns.



How do these factors affect rural patients' access to cancer surgeries and their outcomes?



AJS The American Journal of Surgery

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EDITORIAL · Articles in Press, 116189, January 06, 2025

Medicare Advantage and Equity in Surgical Access and Quality: A Growing Program with Potentially Growing Problems

[Mark Pedersen](#)^a · [Jillian Timperley](#)^a · [Bonnie Simpson Mason, M.D., FAAOS](#)^{b,c} · [Waddah Al-Refaie, M.D., FACS](#)^{a,d}  

[Affiliations & Notes](#) ▾ [Article Info](#) ▾

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» Medicare Advantage: A Continuing Policy Priority:

Show Outline

The growing proportion of aging adults in the US population, combined with their healthcare needs, advancements in innovative technologies, and evolving insurance pricing will continue to drive focus towards Medicare growth and spending. (1) In the wake of the recent U.S. election, there has been much attention directed toward Medicare Advantage (MA) plans, especially as the Centers for Medicare and Medicaid Services (CMS) transitions to new leadership. To date, MA plans enroll over 32 million Medicare-eligible Americans accounting for over half (54%) of all Medicare beneficiaries, a number that has doubled in the last decade alone. (1) Medicare Advantage, or Medicare Part C, is a managed care program offered as an alternative to Traditional Medicare (TM) in which a private company offers an approved plan to cover Medicare Parts A, B, and usually D. (2) MA offers a wide variety of plans, such as Health Maintenance Organization (HMO) and Preferred Provider Organization (PPO), which have varying benefits. (2) These plans play a critical role in underserved communities, with nearly half of rural and ethnic/racial Medicare communities covered by MA plans. (3-5)

An aerial photograph of the Creighton University campus during sunset. The sun is low on the horizon, casting a warm glow over the city. In the foreground, a large, historic stone building with a prominent steeple and Gothic architectural features is visible. To its right is a modern, multi-story building with a grid-like facade. The campus is surrounded by trees, some of which show autumn foliage. The sky is filled with soft, wispy clouds.

Thank you.

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