

# Rural Healthcare Workforce: Innovations and Outcomes for North Dakota

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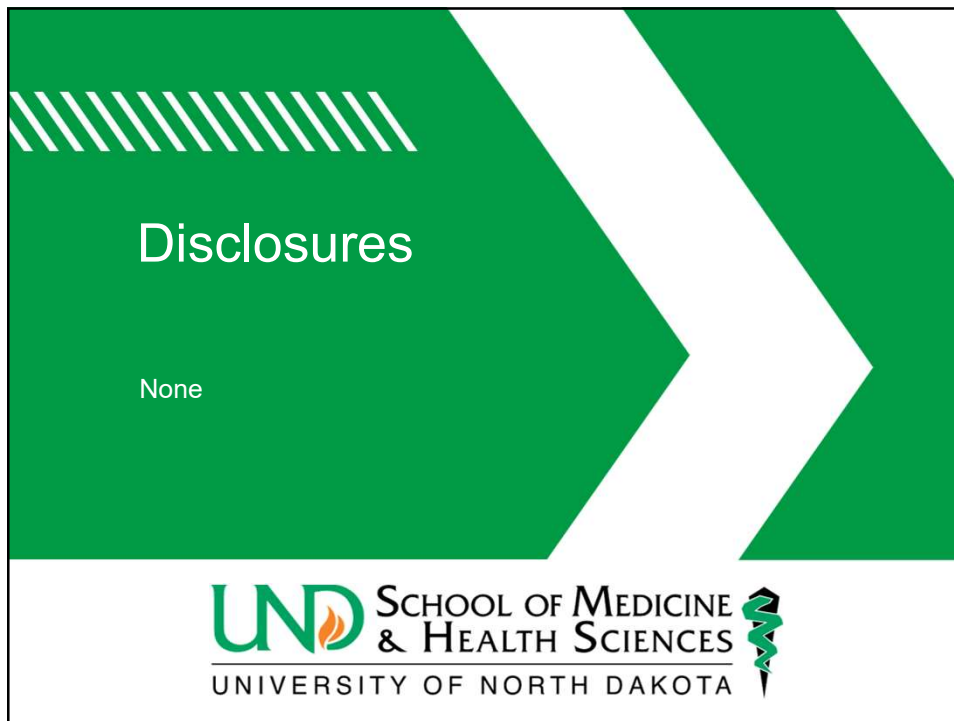
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# Disclosures

None

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## Acknowledgements

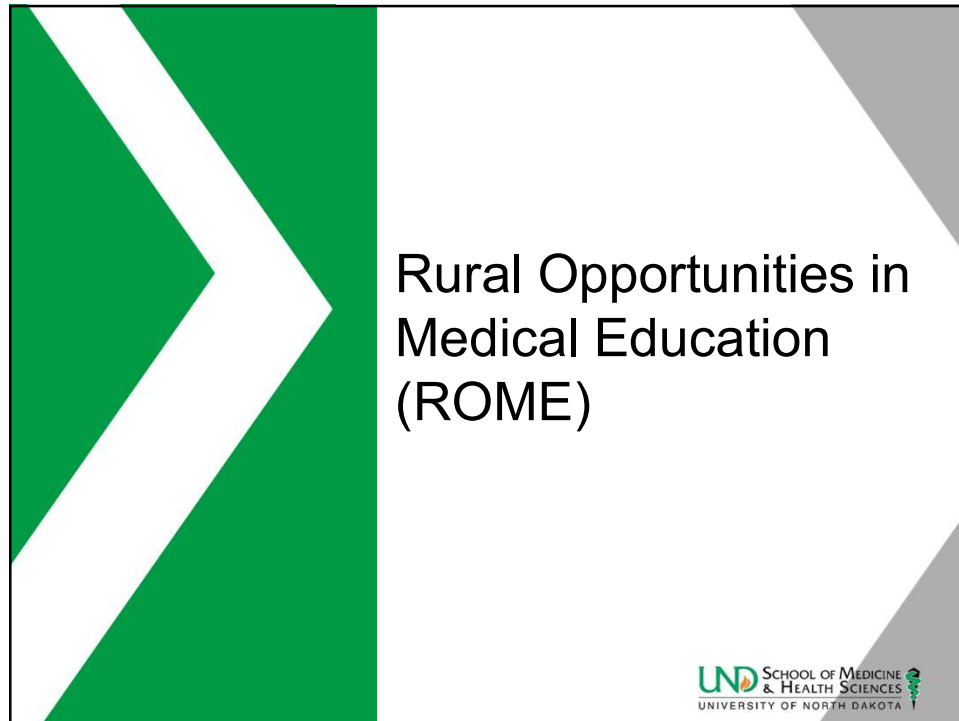
- North Dakota State Office of Rural Health
- Ed Baker, PhD, Professor and Director, Boise State University, Center for Health Policy
  - Lisa Mackenzie, MHS, Senior Research Associate
- Kristin Juliar, Montana State Office of Rural Health
- Mandi-Leigh Peterson, MA, GISc, Senior Research Analyst, North Dakota Healthcare Workforce Center, UND
- and many others...from North Dakota to Australia

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## Presentation Overview

1. ROME outcomes study results
2. HPERC Community Apgar update
3. CAH CEO Community Apgar update
4. Future Projects and Planning (Interactive)
5. Questions/Comments for Discussion

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A slide with a green header bar containing the title "ROME Program Description". Below the header is a list of two bullet points. The UND School of Medicine & Health Sciences logo is in the bottom right corner.

## ROME Program Description

- <https://med.und.edu/admissions/rome/>
- ROME is a 20-28 week interdisciplinary experience in a rural primary care setting, open to Phase 2 students at the UND School of Medicine & Health Sciences

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## History of the ROME program

- Related to UND SMHS mission

### Mission

To promote health and well-being and develop a culturally aware public health workforce through innovative and collaborative approaches to education, scholarship, and service within local communities, our region and the world.

- 20 years of rural medical education
  - ROME started with 2 students in 1998



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## Outcomes Research: ROME

- ROME outcome data utilized AMA Masterfile and NPI data sets
- Greater than 24% of ROME grads are in rural practice
  - Urban 76%
  - Large Rural 18%
  - Small Urban 3%
  - Isolated Rural 3%



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## Next Steps in Rural Medical Education in North Dakota

- Future of ROME
  - Recent expansion of sites
- Future of Rural Medical Education in ND
  - Innovations in curriculum

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## Health Professions Education in Rural Communities (HPERC)

Year 2 update

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## Community Apgar - Background

- **How did we get here – Why research?**
  - Boise State University: Ed Baker, PhD
  - University of North Dakota: Dave Schmitz, MD
  - Idaho Bureau of Rural Health and Primary Care: Mary Sheridan
  - An intersection of workforce, education and advocacy
  - Practical knowledge, relationships, experience and investment
  - Answering needs and necessary questions
  - Applied research: Development of tools
  - Partnerships with those with “skin in the game”
    - 3RNet
    - NOSORH
    - University of Melbourne, Australia

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## Apgar Score for Newborns

- Devised in 1952 by Virginia Apgar, an anesthesiologist, as a simple and repeatable method to quickly and summarily assess the health of newborn children immediately after birth
- Determined by evaluating the newborn baby on five simple criteria (**A**ppearance, **P**ulse, **G**rimace, **A**ctivity, **R**espiration) on a scale from zero to two, then summing up the five values thus obtained



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## A New Response to the Same Old Problem...

What if there was a similar test for hospitals – quick and repeatable with intervention measures on standby – to assess readiness for participation in health professions education programs?

- Something new
- Something based on quantifiable data
- Something that incorporates the whole community
- Something that shows people on graphs and charts where they are and how to achieve their goals



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## A History of Community Apgar

### Year 1 (2007)

Idaho Family Physician Rural Work Force Assessment Pilot Study [Published in the *Journal of Rural Health*]

### Year 2 (2008)

Critical Access Hospital Community Apgar Questionnaire (CAH CAQ) [Published in the *Rural & Remote Health Journal*]

### Year 3 (2009)

- Examining the Trait of Grit and Satisfaction in Idaho Physicians [Published in the *Journal of the American Board of Family Medicine*]
- Community Apgar Program (CAP) Pilot for Critical Access Hospitals in Idaho
- Nursing Community Apgar Questionnaire (NCAQ) [Published in *Rural & Remote Health Journal*]

### Year 4 (2010)

- Community Health Center Community Apgar Questionnaire (CHC CAQ) [Published in the *Rural & Remote Health Journal*]
- CAP for Community Health Centers in Idaho
- Community Apgar Solutions Pilot Project

### Years 5-11 (2011-2017)

- Expansion of the CAP for Critical Access Hospitals and Community Health Centers
  - Wyoming, North Dakota, Wisconsin, Alaska, Indiana, Utah, Montana, and Iowa (CAH)
  - Maine (CHCs)
- Rural Community Variation in Physician Recruitment Readiness [Published in *Journal of Health Science*]
- Nursing CAP in Idaho
- Assessing Idaho Rural Family Physician Scope of Practice over Time [Published in the *Journal of Rural Health*]

### Years 9-13 (2015-2023)

- Expansion of the CAP to Nursing in Australia.
- Expansion of the CAP to Rural Health Clinics and CEO/ Administrators

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# Community Apgar Suite of Research Tools



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# Community Apgar Suite of Research Tools



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## HPERC Community Apgar Questionnaire (CAQ) Development

- Goal

Develop an objective measurement tool to assess the characteristics and parameters of rural communities related to successful health professions education

- Process

Research the scientific literature

Expert opinions

Collaboration

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## HPERC Development

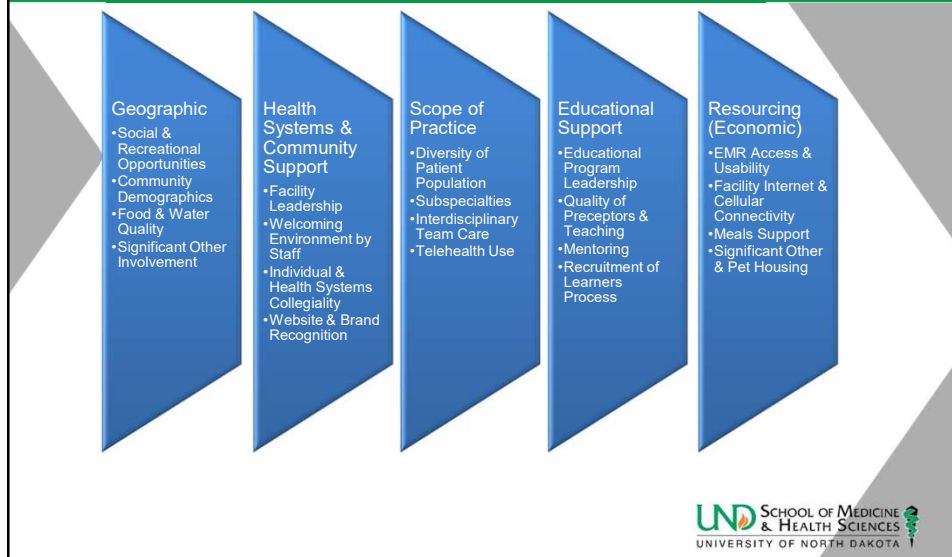
- The HPERC CAQ

- Questions aggregated into five classes
- Each class contains 10 factors for a total of 50 factors/questions representing specific elements related to participation in health professions education programs
- Three open-ended questions



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## HPERC CAQ Development: Class/Factor Examples



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## HPERC CAQ Development: Class/Factors

### Geographic

- Social & Recreational Opportunities
- Religious & Cultural Opportunities
- Community Demographics
- Community & Environmental Health
- Community Well-Being
- Food & Water Quality
- Shopping & Other Services
- Proximity to Home Campus
- Family & Friends
- Significant Other Involvement

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## HPERC CAQ Development: Class/Factors

### Health Systems & Community Support

- Facility Leadership
- Welcoming Environment by Staff
- Welcoming Environment by Patients
- Individual & Health System Collegiality
- Community Engagement & Support
- Website & Brand Recognition
- Personal Internet & Cellular Connectivity
- Clinical Training Opportunities Inpatient
- Clinical Training Opportunities Outpatient
- Clinical Training Opportunities – Other

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## HPERC CAQ Development: Class/Factors

### Scope of Practice

- Diversity of Patient Population
- Subspecialties
- Mental & Behavioral Health
- Dental Health
- Ancillary Health Services
- Interdisciplinary Team Care
- IPE (Interprofessional Education)
- Service & Research Opportunities
- Telehealth Use
- On-Call Hours

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## HPERC CAQ Development: Class/Factors

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## HPERC CAQ Development: Class/Factors

### Educational Support

- Educational Program Leadership
- Clinicians Willing to Precept
- Quality of Preceptors & Teaching
- Mentoring
- Recruitment of Learners Process
- Learner Policies
- Administrative Onboarding & Exiting
- Connectivity to Campus
- Educational Communication with Campus
- Longitudinal Programming

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## HPERC CAQ Development: Class/Factors

### Resourcing (Economic)

- EMR Access & Usability
- Facility Internet & Cellular Connectivity
- Meals Support
- Housing Support for Learner
- Significant Other & Pet Housing
- Travel Support & Scholarships
- Learner Clinical Support
- Preceptor Compensation
- Employee & Preceptor Diversity
- Learner Recruitment to Retention Program

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## Purpose of the HPERC Community Apgar

- A tool used to assess a rural community's assets and capabilities for participation in health professions education programs
- Designed to be a real-time assessment tool providing guidance for the most helpful interventions at the present
- Presentation of individual CAQ Scores facilitating discussions with key decision makers in each community for specific strategic planning and improvements
- The HPERC CAQ can also be used to track a community's progress over time, similar to the clinical use of Apgar scores in newborns

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## Use of the HPERC CAQ

- This assessment allows for identification of both modifiable and non-modifiable factors and also may suggest which factors are most important for a community to address with limited available resources.
- The HPERC CAQ may be used by communities to assess their relative strengths and challenges, the relative importance of CAQ factors, and to gain a better understanding of which CAQ factors are seen as most important.

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## Making the most of the HPERC CAQ

Assessing a rural community's assets and capabilities for participation in health professions education programs:

- Community self-evaluation
- Prioritizing improvement plans
- Informing community promotions as a health professions education site
- Enhancing opportunities for effective collaboration

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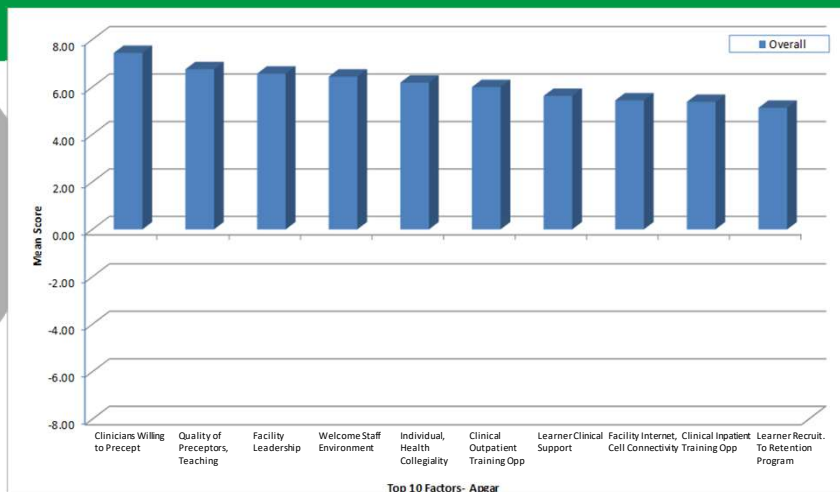
# HPERC Community Apgar: ND Outcomes and Next Steps

- Top scoring factors for ND:
  - Clinicians Willing to Precept
  - Quality of Preceptors, Teaching
  - Facility Leadership
  
- Bottom scoring factors for ND:
  - Travel support, Scholarships
  - Mental, Behavioral Health (education)
  - Significant Other Involvement

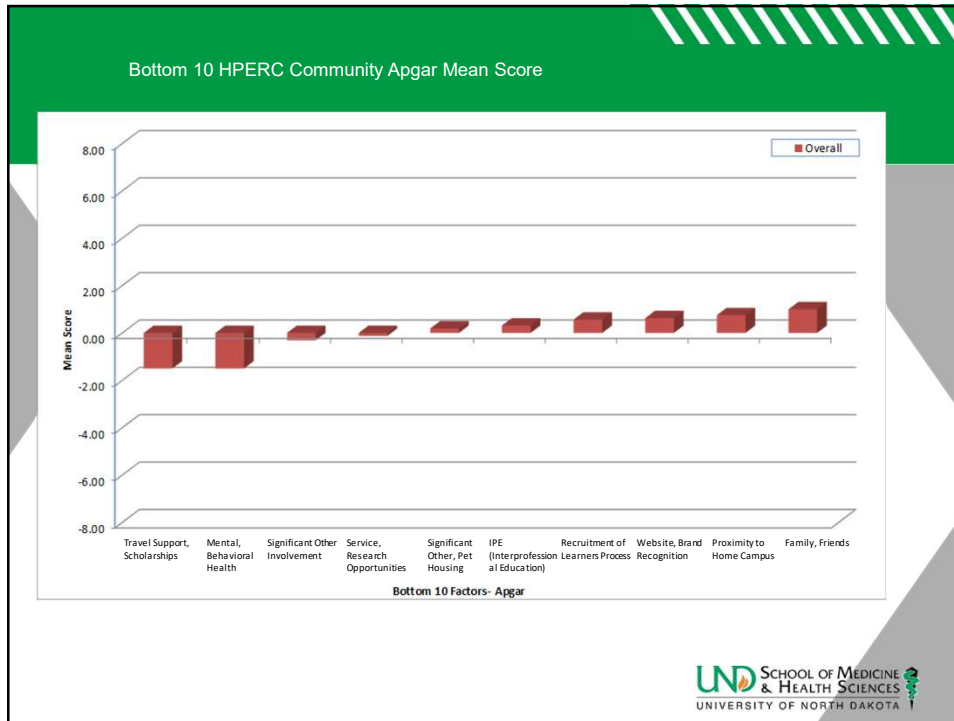


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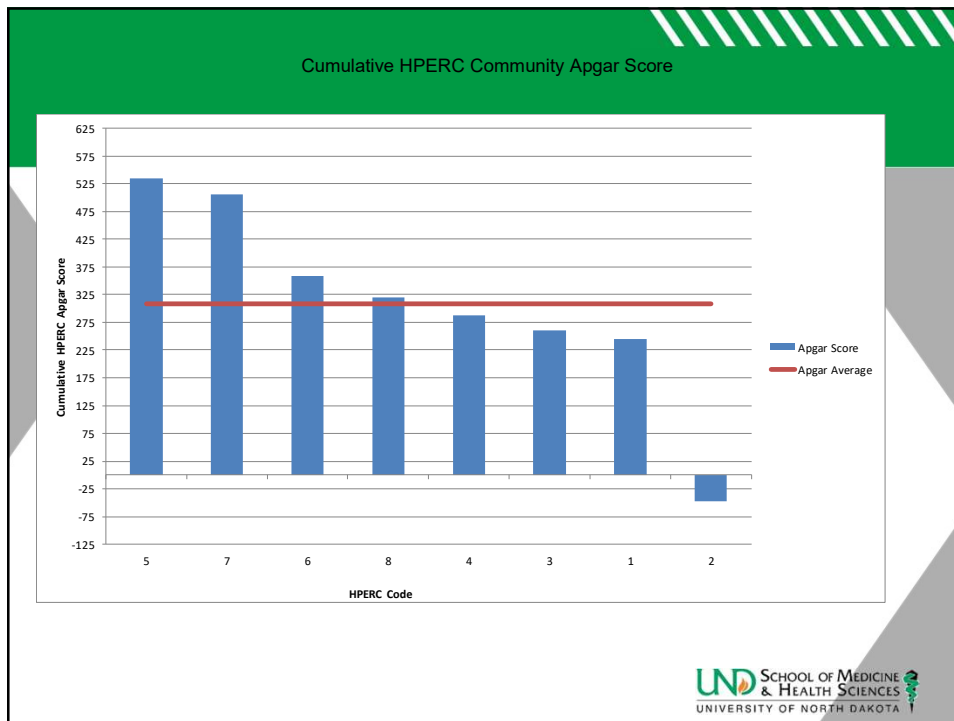
Top 10 HPERC Community Apgar Mean Score



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CAH CEO Apgar Update

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This slide features a large green arrow pointing right on the left side. The title 'CAH CEO Apgar Update' is centered in black text. The UND logo is in the bottom right corner.

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CAH CEO Community Apgar Questionnaire (CAQ) Development

- Goal: Develop an objective measurement tool to assess the characteristics and parameters of rural communities related to successful recruitment and retention of CEOs to CAHs
- Process: Research the scientific literature → Expert opinions → Collaboration

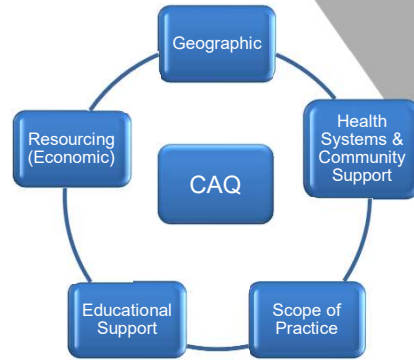
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The slide has a green header with the title. Below, a large blue arrow points right, containing the goal text. Underneath, three smaller blue arrows point right, containing the process steps: 'Research the scientific literature', 'Expert opinions', and 'Collaboration'. The UND logo is in the bottom right corner.

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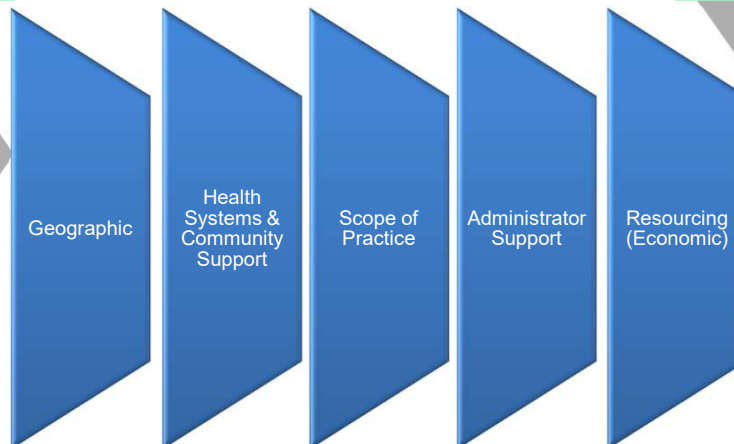
## CAH CEO Development

- The CAH CEO CAQ
  - Questions aggregated into five classes
  - Each class contains 10 factors for a total of 50 factors/questions representing specific elements related to participation in health professions education programs
  - Three open-ended questions



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## CAH CEO CAQ Development: Class/Factor Examples



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## CAH CEO CAQ Development: Class/Factors

### Geographic

- Access to a larger community
- Housing
- Perception of community
- Recreational opportunities
- Religious and Cultural opportunities
- Schools
- Shopping/restaurants and other entertainment
- Social Networking
- Spousal/ significant other satisfaction
- climate

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## CAH CEO CAQ Development: Class/Factors

### Health Systems & Community Support

- Salary
- Benefits package
- Competition from other health systems
- Financial Stability of health system
- Hospital Budget constraints
- Hospital sponsored educational and professional development
- Hospital sponsored career growth opportunities
- Retention bonus
- Signing bonus/moving allowance
- Philanthropy/ Foundation

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## CAH CEO CAQ Development: Class/Factors

### Scope of Practice

- **CEO financial skills requirement**
- Environment of change management for CEO
- CEO leadership & management skills requirement
- Management of Non-clinical staff
- Management of Nursing Workforce
- Management of Physician Workforce
- Requirement for public relations skills
- **Board Directors relationships**
- Community stakeholder management requirement
- **Administrative call**

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## CAH CEO CAQ Development: Class/Factors

### Administrator Support

- Collegial Support
- **Stability and strength of board**
- **Services responsive to community need**
- Professional environment
- Workplace organization
- Internet access
- Electronic medical records
- CEO support staff
- **Performance Feedback from Board**
- Accreditation of facility

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## CAH CEO CAQ Development: Class/Factors

### Hospital and Community Support

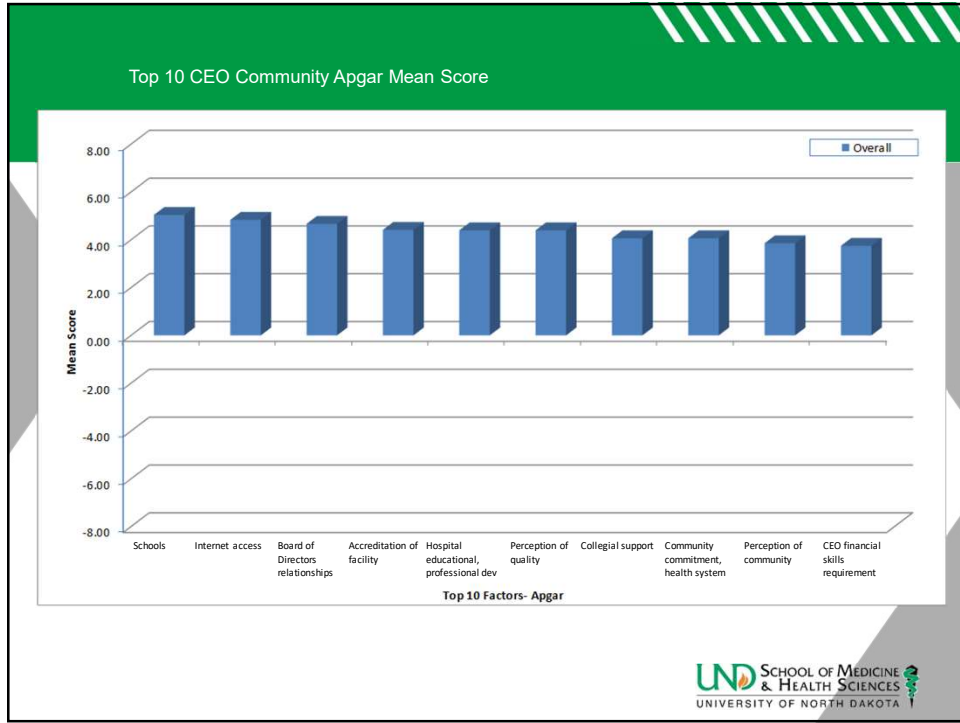
- CEO Induction and Orientation program
- Community need and support of CEO
- Household member welcoming and onboarding
- Community commitment and trust of health system
- Physical plant and equipment
- Plans for capital investment
- Information technology investment
- Marketing support
- Perception of quality
- Previous CEO groundwork

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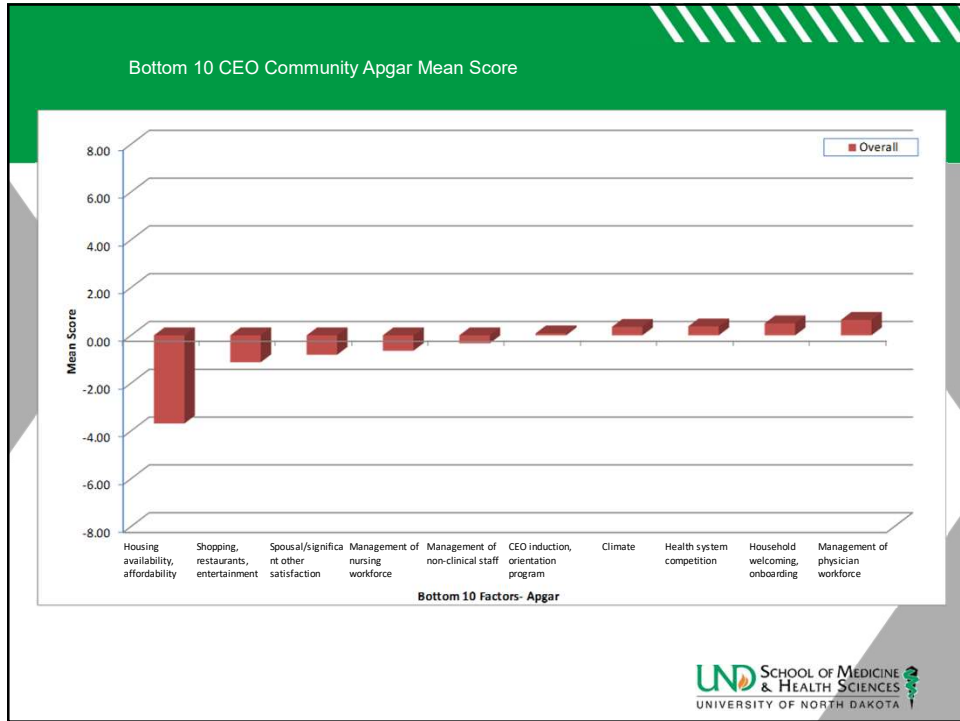
## CAH CEO Community Apgar: Outcomes and Next Steps

- Review of statewide top and bottom scoring factors  
(next 2 slides)
- Differentiation of participating communities  
(following slide)
- Delivery of confidential results to ND communities with  
identification of trends and common needs/solutions

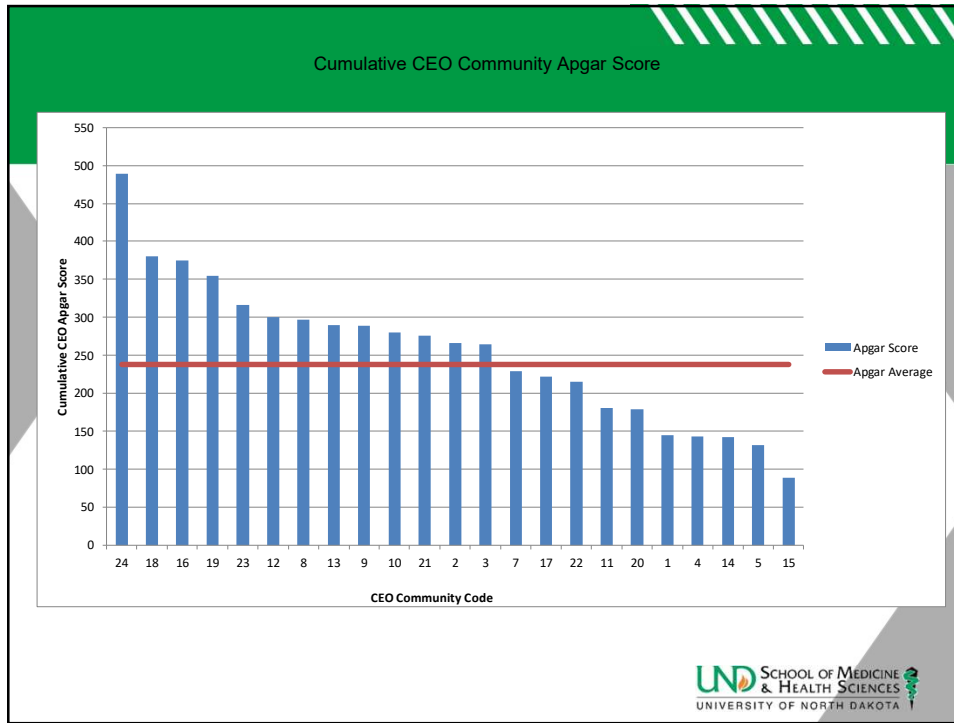
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## Future Projects and Planning

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## Future of the Community Apgar in ND

- With further research and collaboration, this tool could also be used to share successful strategies communities have used to overcome challenges which may be difficult or impossible to modify (Best Practice Model).
- CAQ surveys may be useful in identifying trends and overarching themes which can be further addressed at state or national levels.

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## Community Apgar Program

- Next Steps
  - Use "lessons learned" from HPERC CAP in North Dakota
  - Continue the CAH CEO across rural communities in North Dakota
  - Consider future Community Apgar Projects based on needs: **Nurses**, PA, NP, **Pharmacists**, others?



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## Questions/Comments for Discussion



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