Rural Health Disparities in U.S.
- 20% U.S. rural population vs. only 10% U.S. rural physician practices
- Rural residents are less healthy & more so disadvantaged compared to urban/suburban residents

Rural Medicine in Undergraduate Medical Education
- Many medical schools have developed rural medicine experiences to promote rural primary care
- Limitations of current research on these experiences:
  - Conducted at allopathic medical schools, despite research indicating osteopathic physicians are more likely to pursue rural primary care
  - Focus on clinical rotations (3rd/4th year) instead of didactic courses (1st/2nd year)
  - Limited outcome measures

Study Context
- Elective, didactic rural medicine course at DUMI-COM
- Interprofessional, interinstitutional collaboration
- 5 six-hour sessions throughout academic year
- Lecture, small group discussions & experiential learning components
- Example topics:
  - Agriculture-related injuries & toxic exposures
  - Disaster planning & response in rural communities
  - Political advocacy for rural health
  - Telehealth

Outcome Variables
- Knowledge of rural population health
- Health disparities: rural vs. urban/suburban
- Barriers to healthcare in rural areas
- Attitudes toward rural patients & rural healthcare providers
- Biases/stereotypes toward rural patients
- Sources of negative judgment from healthcare providers
- Attitudes toward & intention to pursue rural practice career

Hypotheses
Comparing medical students who participated in a rural medicine didactic course with students who did not, course participants will demonstrate:
1. Greater knowledge of rural population health
2. Fewer negative attitudes toward rural patients
3. Increased interest in a rural practice career

Subjects, Procedures & Measures
- Survey response rate: 75.9% (60/79 subjects)
- Course participants reported more positive attitudes (p<0.005) & greater intention (p<0.001) to pursue a rural practice career (Figure 2)

Present Findings
- Overall, subjects demonstrated fair knowledge of rural population health
- Course participants identified additional important barriers to healthcare in rural communities:
  - Lack of community-based mental health & transportation services
- Course participation predicted awareness that HIPAA compliance is challenging in rural areas
- Previous research indicates rural communities may lack resources for safeguarding protected health information (PHI)
- Although studies identify concerns about the sharing of PHI in rural communities, their close-knit nature
- Both groups failed to identify several health disparities & barriers to healthcare:
  - Rural risk factors: sedentary lifestyles, fatal injuries in car accidents
  - Social determinants of rural health - income, education
- Over half of subjects reported patients in rural healthcare setting may receive unequal treatment based on:
  - Insensitivity to cultural differences
  - Community political views
  - Patient sexual orientation
- Disappointing proportion of subjects agreed with statements conveying negative attitudes
- Controlling for rural background, course participants reported significantly greater interest in a rural practice career

Limitations
- Single osteopathic medical school setting
- Rural state
- Primary care orientation
- Pre-/post-course design would better reflect growth attributable to course
- Self-report measures may not reflect actual attitudes & behaviors

Areas for Future Research
- Expand study to other institutions
- Examine students before & after completion of medical school curricula
- Examine the perceptions of rural patients

References

Table 1. Respondent Characteristics

Table 2.3. Knowledge of Barriers to Healthcare in Rural Areas

Table 3. Logistic Regression Analyses

Figure 1. Rural vs. Urban/Suburban Background

Figure 2. Practice Intentions by Community Type

Table 4. Sources of Bias Toward Rural Patients

Table 5. Logistic Regression Analyses

Discussion
- No differences in attitudes toward rural patients between groups, yet >50% subjects agreed with statements conveying negative attitudes toward rural patients
- Insensitivity to cultural views, community political views, & patient sexual orientation as potential sources of negative judgment toward rural patients (Table 4)

Course participants reported significantly greater interest in a rural practice career (Table 5)

Survey participants expressed greater knowledge of rural population health and fewer negative attitudes toward rural patients

Analysis
- P-values calculated by Fisher’s exact test (two-sided)