# Introduction

- Hospital closures in rural communities have increased annually since 2010. The local aftermath of rural hospital closure in terms of how communities adapt to closure and access to health services is relatively unknown.
- This study aims to enhance knowledge regarding how rural communities adapt to hospital closure.
- Hospital closure is defined as loss of inpatient services in a rural community, as defined by the North Carolina Rural Health Research Program.

## Materials and Methods

### Identification of communities impacted by hospital closure from 2010-2017

<table>
<thead>
<tr>
<th>State</th>
<th>Number of Communities</th>
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</thead>
<tbody>
<tr>
<td>Arizona</td>
<td>3</td>
</tr>
<tr>
<td>California</td>
<td>6</td>
</tr>
<tr>
<td>Georgia</td>
<td>2</td>
</tr>
<tr>
<td>Kansas</td>
<td>3</td>
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<tr>
<td>Maine</td>
<td>6</td>
</tr>
<tr>
<td>Tennessee</td>
<td>8</td>
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</tbody>
</table>

Data from the North Carolina Rural Health Research Program

### Selection of six states of interest, accounting for 25 rural hospital closures

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<tr>
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### Literature review

- Electronic database search for closure-related articles and reports
- Local newspaper search serving the community and surrounding areas

### Theme development

- New models of care delivery
- Access to emergency services
- Community response

## Results

### New Models of Care Delivery

- **Short-Term**
  - Enhanced existing outpatient services, (e.g., urgent care, laboratory, radiology, pharmacy)
  - Creation or improved alternative ways to deliver emergency care
  - Conversion of inpatient beds to outpatient observation units
  - Creation or bolstering of outpatient behavioral health services or 24-hour counseling line
  - Enriched approach to community health

- **Long-Term**
  - Improved specialty services (e.g., surgery, pediatrics, psychiatric, oncology, cardiovascular)
  - Growth in sports and physical therapy services
  - Use of telemedicine to reach services and providers not offered locally
  - Creation of free standing emergency department, when allowed by policy
  - Impact on long-term care or skilled nursing facilities

### Access to Emergency Services

- **Short-Term**
  - Purchase or contractual arrangement for ambulance services available locally
  - Creation or bolstering of hours of service availability
  - Improved partnerships with neighboring communities for transportation services
  - Inpatient services, and emergency medical services personnel
  - Potential changes in demand for emergency services

- **Long-Term**
  - Establish new minimum staff and equipment levels based on type of emergency services provided and local demand
  - Hire appropriate permanent personnel
  - Change in fiscal resources and budget due to new personnel recruitment and services expansion/addition
  - Creation of community lay volunteer program for non-emergent transportation needs

### Community Response

- **Short-Term**
  - Construction of new or enhanced programs available locally (e.g., wellness, behavioral health)
  - Emergence of local community member leadership
  - Growth in volunteer services provided by community members (e.g., ambulance, fire, EMT services)
  - Positive or negative community member responses (e.g., protests, town hall meetings, letter to the editor in newspaper)

- **Long-Term**
  - Determine best approach for contract negotiations
  - Examine options for mergers and acquisitions of remaining services
  - Explore regulatory and licensure requirements with state policymakers
  - Involvement of elected officials to support grant applications
  - Use of local elections to make decisions (e.g., city council, tax increase)
  - Determine whether to safe, rent, or maintain district assets

## Discussion

- Local community response has been multifaceted.
  - In case of abrupt closure, communities responded through protests and/or town hall meetings.
  - Communities well-aware of the situation were actively engaged with hospitals to prepare for closure of inpatient services.
  - Health care services were provided by either restructuring or replacing previously offered services with some modification of existing facilities or construction of infrastructure.
  - Emergency services were offered through different mechanisms, depending upon the policy space of the state.
  - Free-standing facilities with a defined referral pathway and expansion of emergency medical services, typically for emergency medical technicians and transportation.
  - Enhanced partnerships with neighboring communities were used by many communities.
  - Involvement of fire departments and local authorities was vital for the continuation of EMS.

## Conclusion & Policy Implications

- With low utilization of inpatient services resulting in decreasing revenue, rural communities often face a difficult choice between losing inpatient care in a community or adopting a new model of care delivery.
- In several communities this choice led to innovative models of care delivery and use of existing facilities customized for the new health care delivery system in the local rural community.
- These models, along with the process by which the communities adopted them, can be used as a guidelines for policymakers and community members to understand how rural communities have adapted to hospital closure.

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