



Baystate
Health



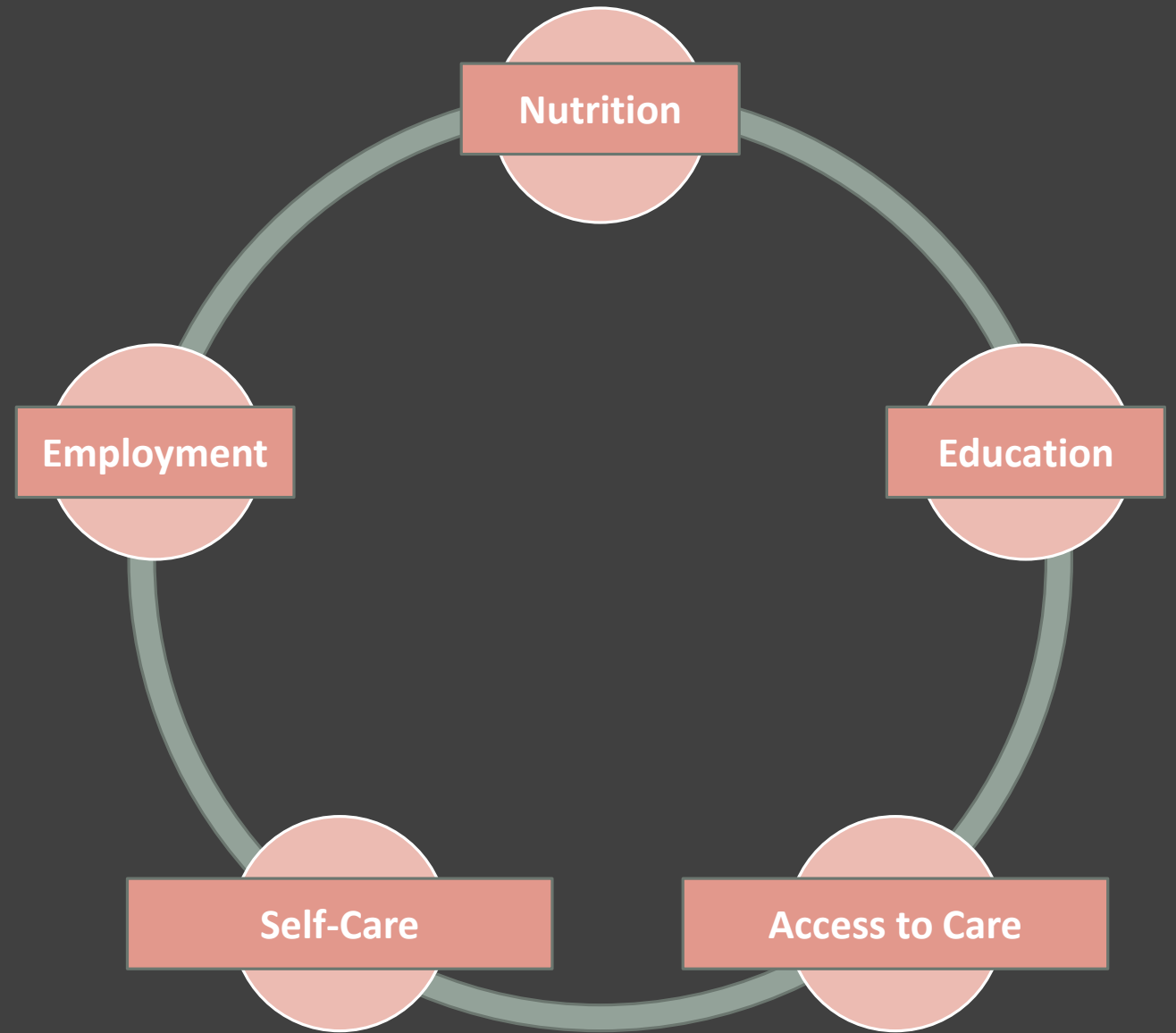
University of
Massachusetts
Medical School

Connecting the Community

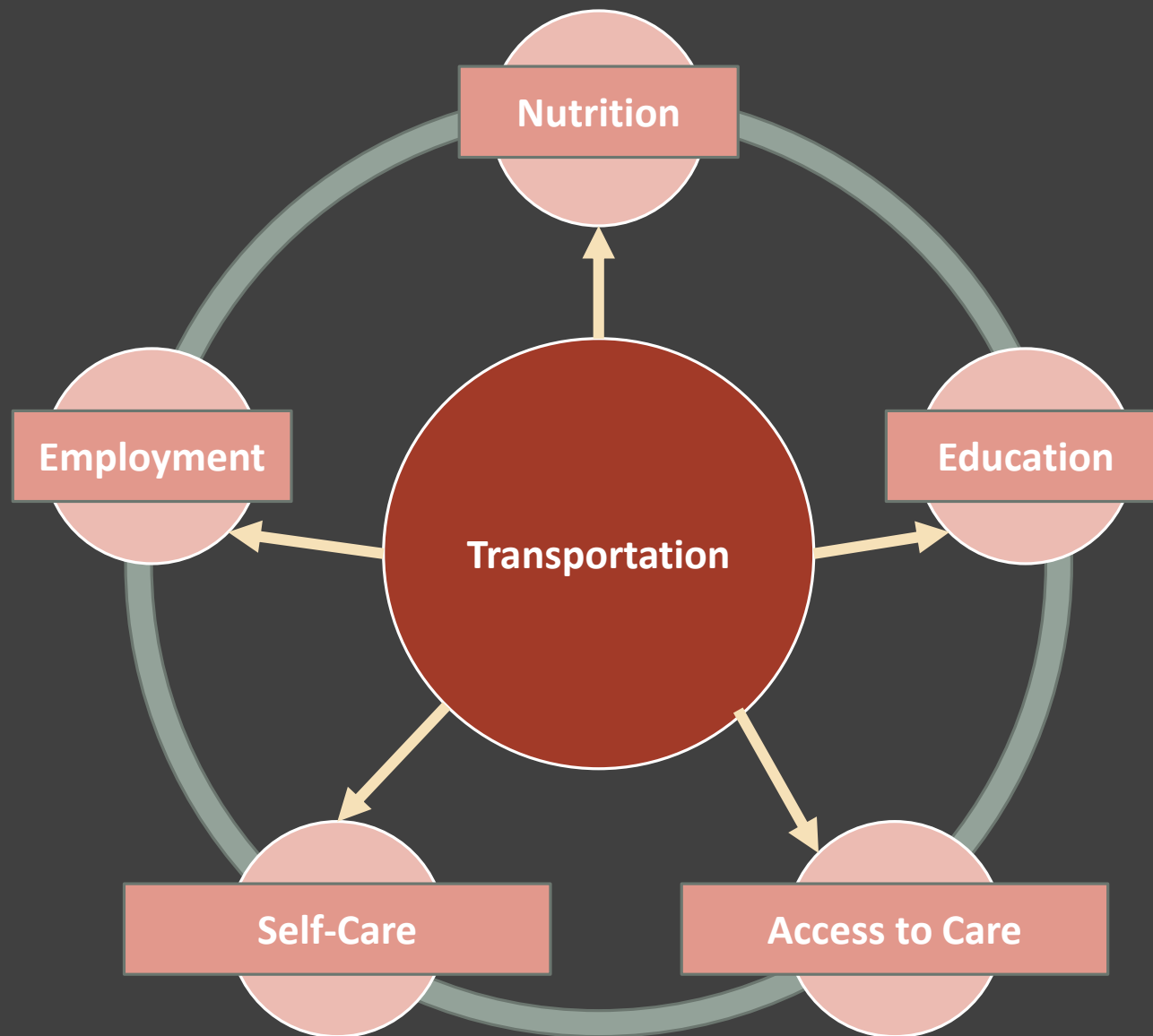
The Quaboag Connector and Sustainable Rural
Transportation


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Our PURCH curriculum has taught us the importance of social determinants of health



During our
PHC, we
focused on
one factor that
impacts all the
others



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- Community Demographics**
 - Community Challenges**
 - How Quaboag Connector Meets the Needs of the Community**
 - Learning From Other Rural Transit Models**
 - What Would Success Look Like and What Does It Need?**
 - Moving Forward**

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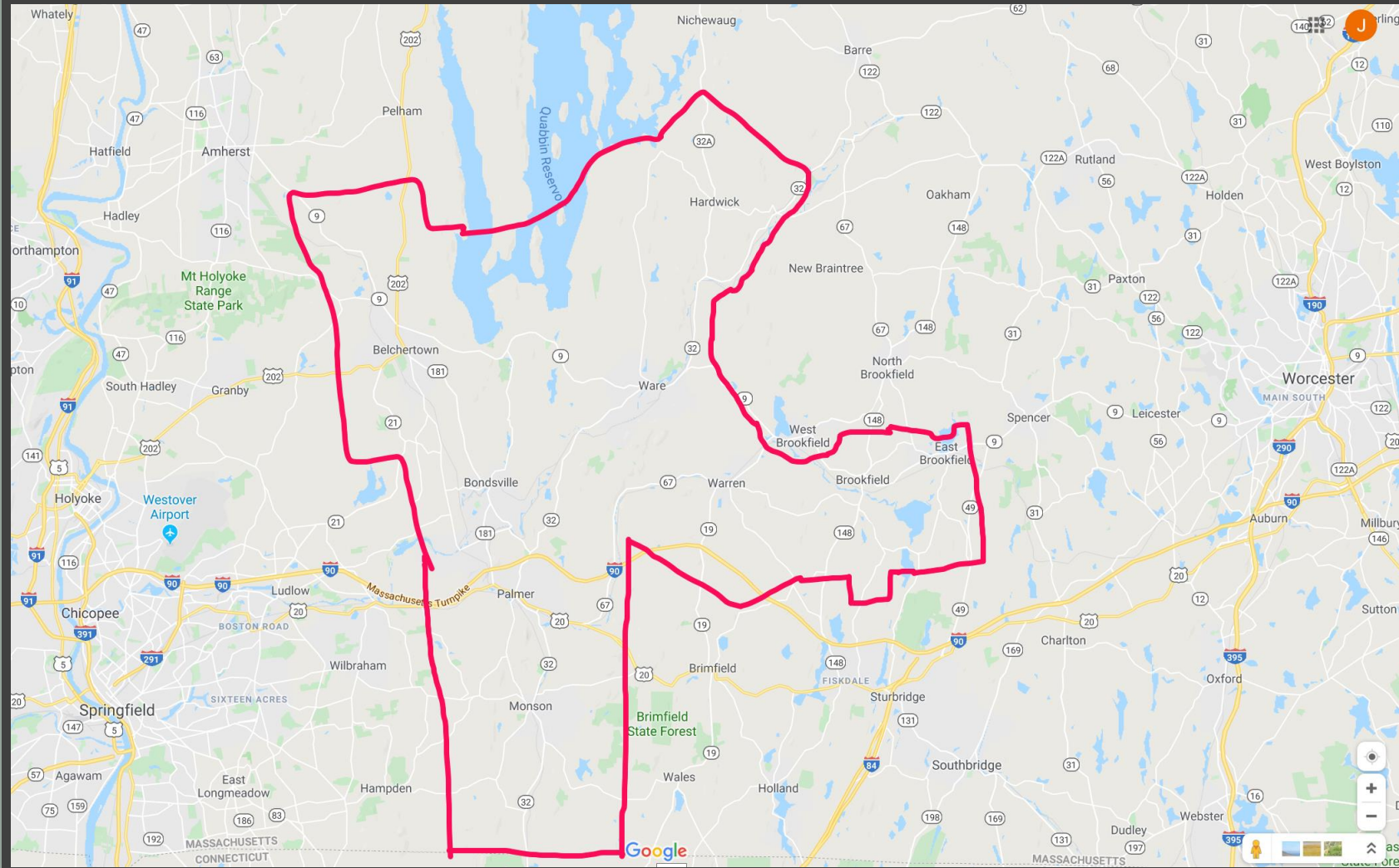
Community Demographics

Towns Served:

- Belchertown
- Brookfield
- East Brookfield
- Hardwick
- Monson
- Palmer
- Ware
- Warren
- West Brookfield

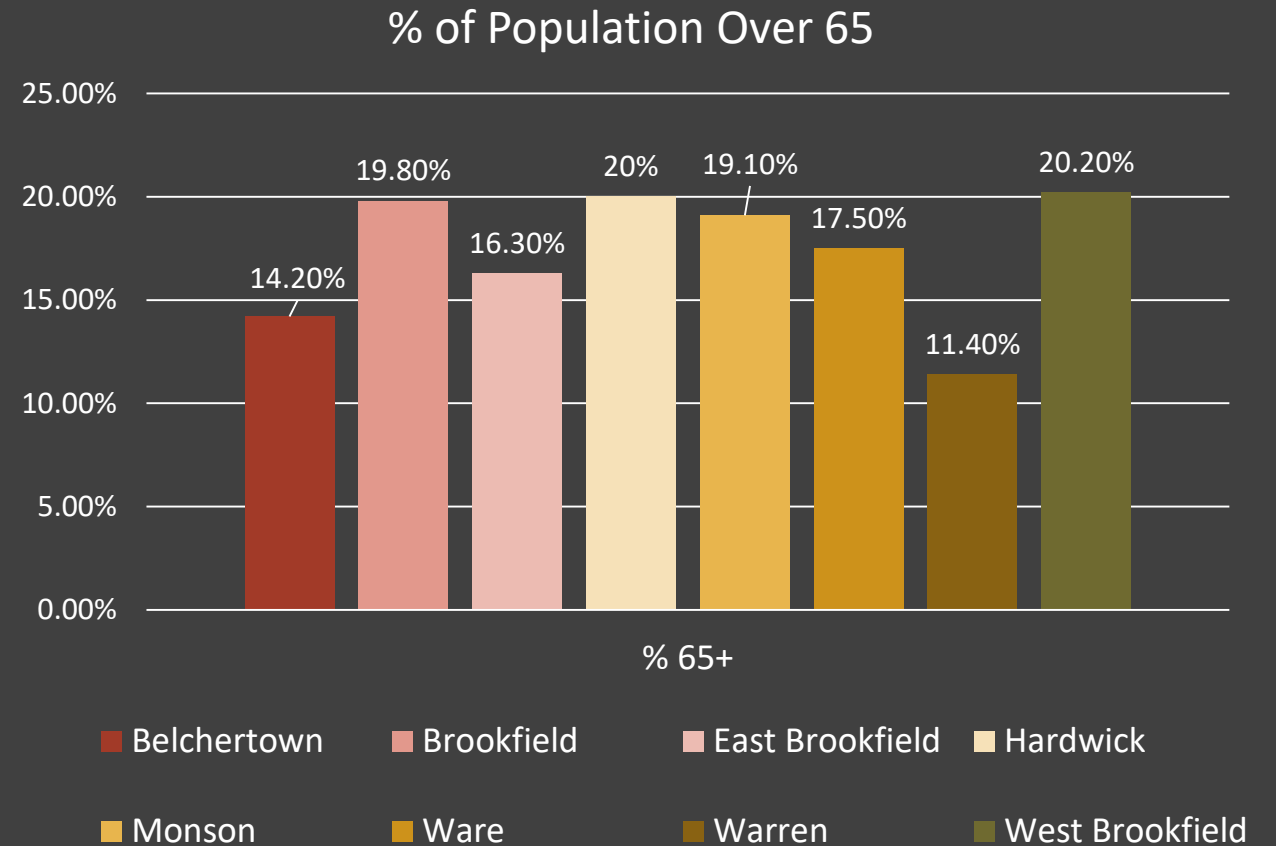
Total Population: 62,620 (2010 census)

Total Area: 288.7 sq. mi.



Aging Populations

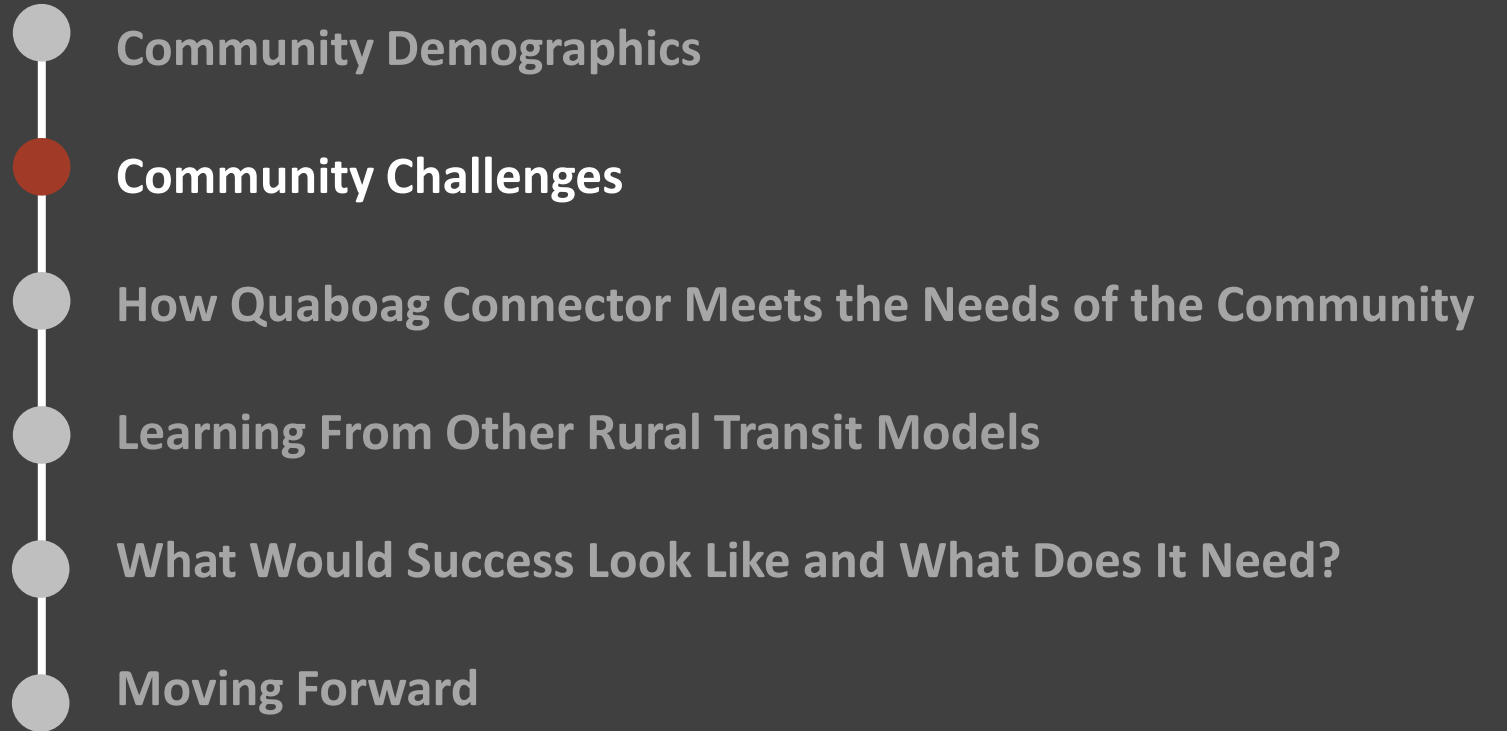
- Information provided by Lucas McDiarmid from Senator Anne Gobi's office using the 2017 American Community Survey
- Of the 28 towns served by Senator Gobi, only Warren had a lower % 65+ in 2017 compared to 2010
- Total population increased very slightly
- Fewer immigrants



Regional Spending

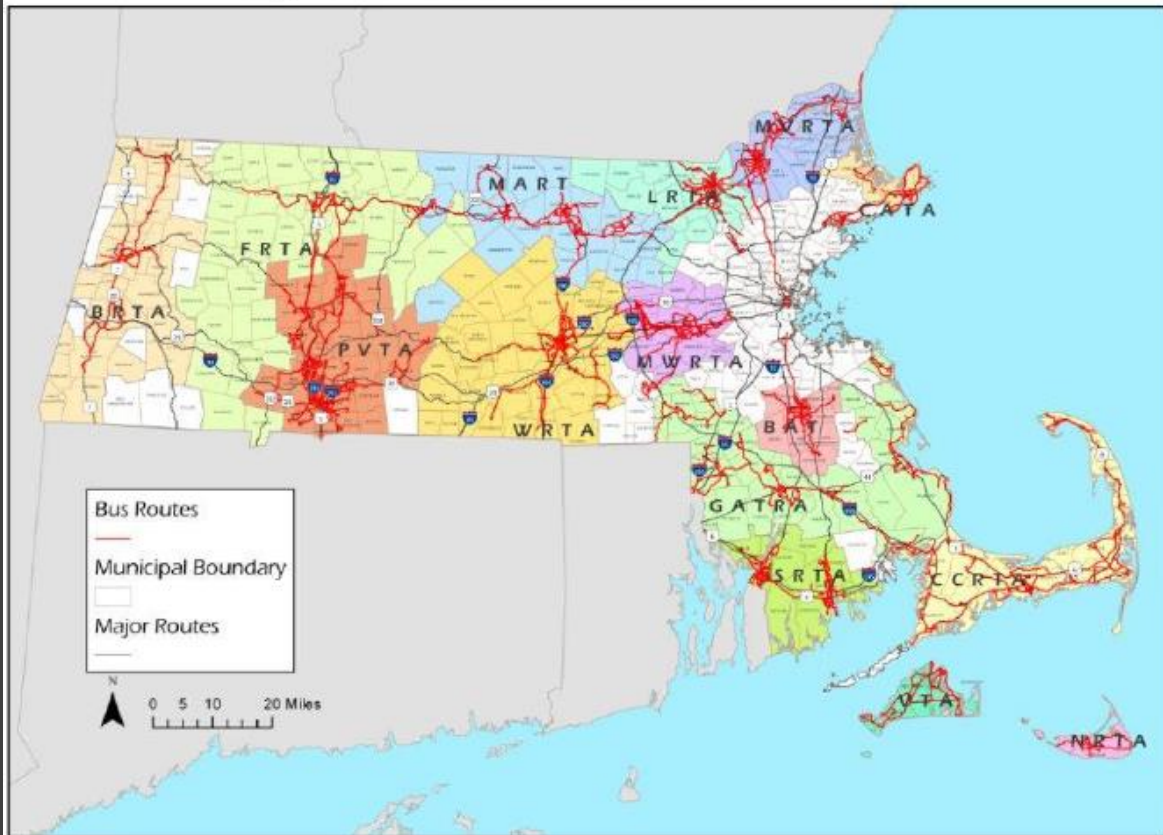
Hampshire County (and other rural counties in MA)

- Lower median income
- Lower cost of living
- BUT, higher transportation costs offset these savings
 - Ex: Berkshire county – 54% of income spent on housing & transportation vs 38% in Suffolk
- PVTA, Quaboag Connector have low but necessary ridership

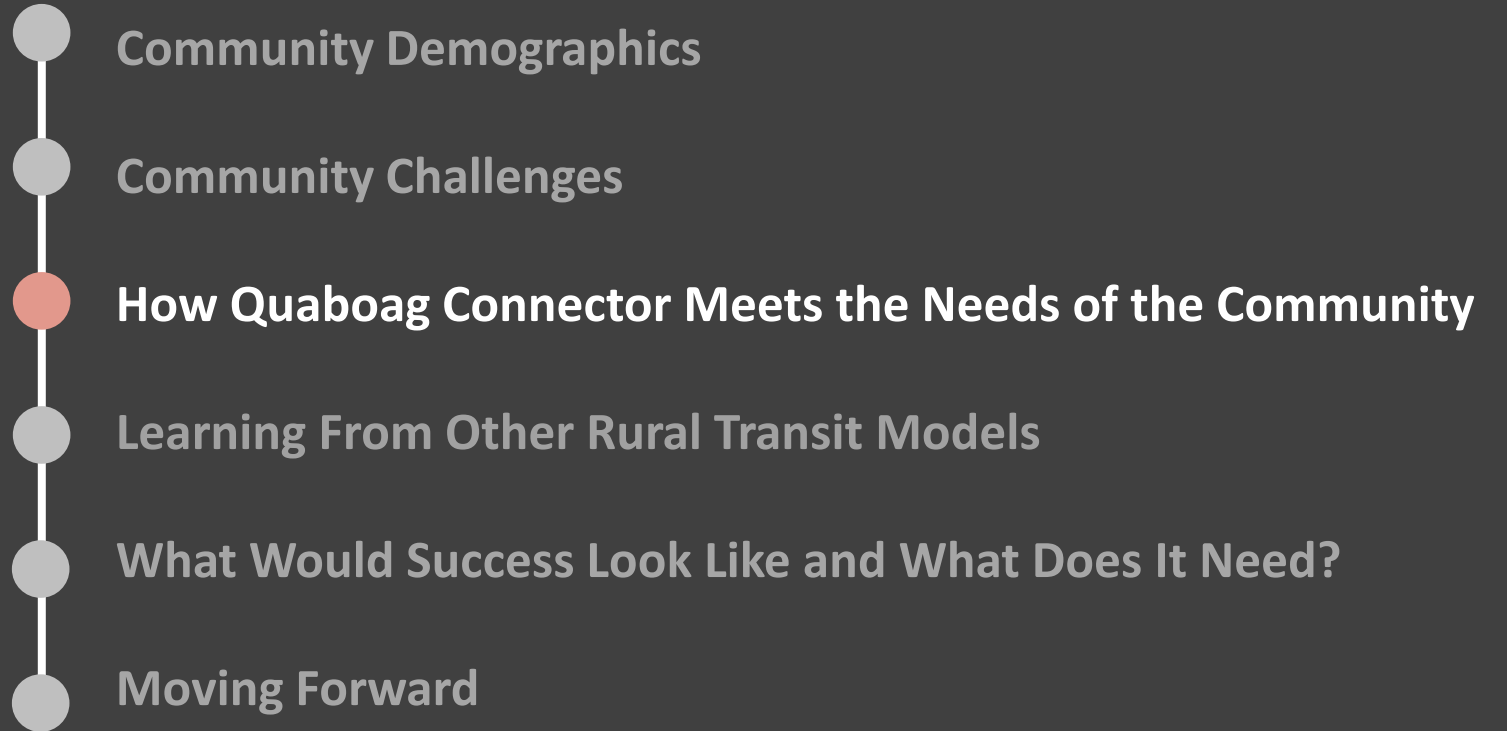
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Community Challenges

Regional Transit Authorities with Bus Routes



- Connector serves the Quabog Valley, a geographically large and rural area in MA
- Density of towns range from 380 people/mi² – 73 people/mi² making traditional public transportation fiscally impossible
- 54% of income is spent on housing and transportation in comparison to 38% in urban areas
- Increasing elderly population: fewer people able to drive
- Little to no public transportation: PVTA and WRTA do not cover more rural areas in the Valley
- Few Ubers, taxis, or other demand transportation

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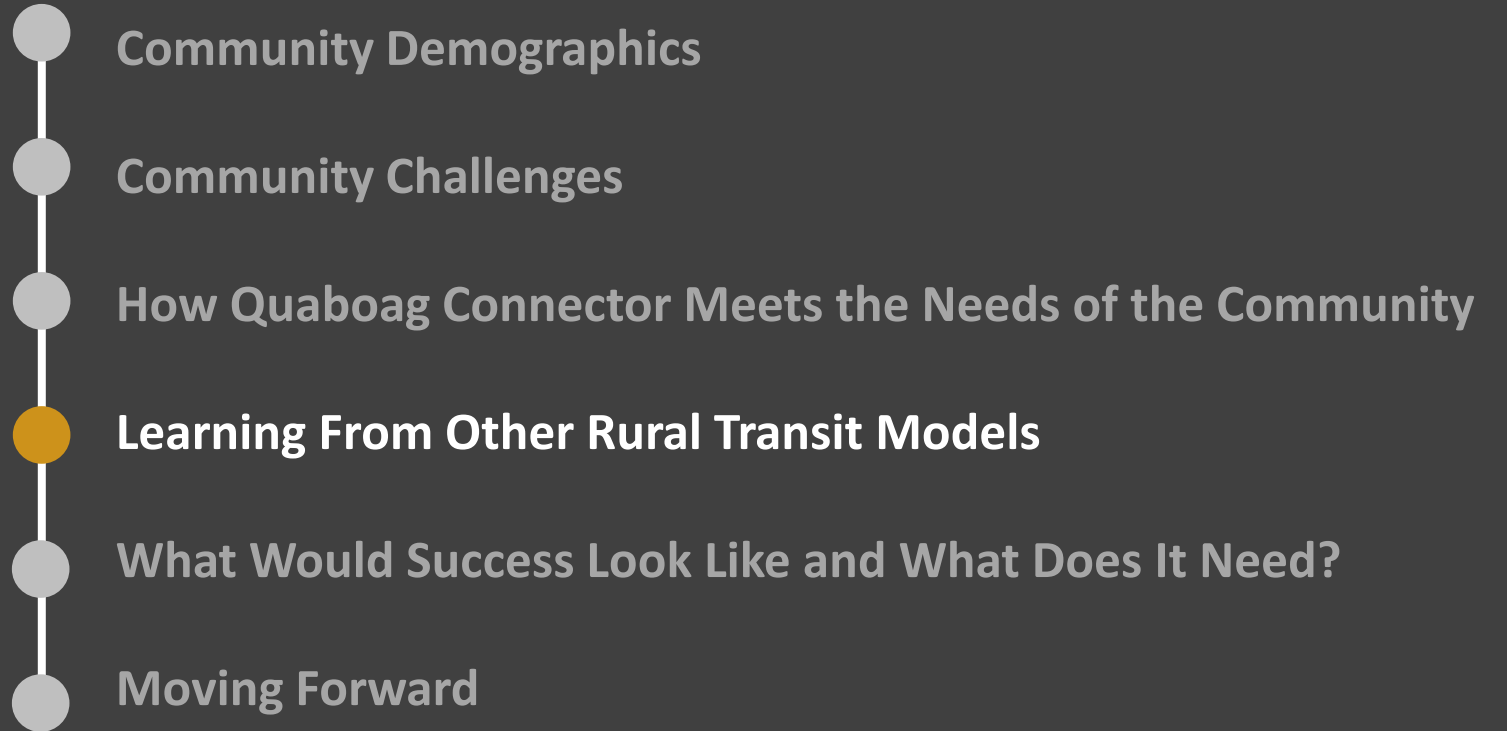
Current State of Connector

Successes:

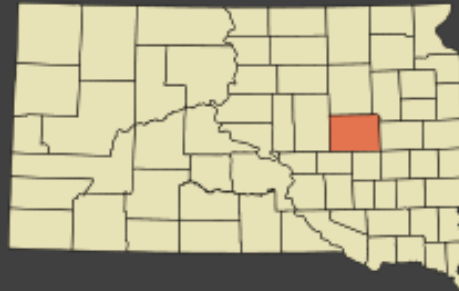
- Provides demand-response transportation for those needing to go to work, medical appointments, shopping, etc for those without a car or the ability to drive
- ADA accessible for clientele
- Relatively inexpensive allowing access no matter socioeconomic status
- Connects to transportation for Springfield and Worcester

Challenges:

- Currently excludes towns in the area that could benefit/people need to access
- Communication over changes and no-shows before or after office hours
- Scheduling can be tight/does not fully account for differing abilities
- Hours still restrict some clients especially during the weekends
- Needing 48hrs to schedule rides

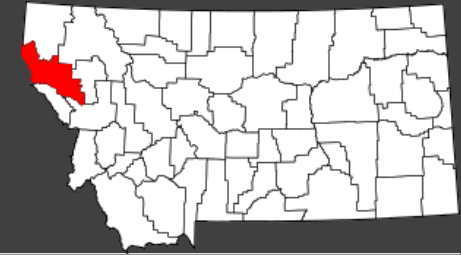
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Rural Transportation Model Comparison



Name	Sanders County Council on Aging (MT)	People's Transit (SD)	Prairie Hill Transit (SD)
Coverage	Connects 3 main towns to up to 100mi away destinations (Missoula)	3-mile radius outside of Huron, SD	Black Hills area (16,000 sq mi)
Fare	<ul style="list-style-type: none"> Seniors: \$4-\$16 Adults: \$5-\$17 	<ul style="list-style-type: none"> Youth fare (& senior donation): \$2.50 General public: \$3.50 Outside (within 3mi) city: \$4.50 Same-day: double fare (\$7) 	<ul style="list-style-type: none"> Intra-community one-way: \$2 Inter-community one-way: \$5 \$10 for farther rides
Vehicles	<ul style="list-style-type: none"> 9 total (3 buses, 6 vans) 	<ul style="list-style-type: none"> 20 total (3 passenger vans, 3 ADA vans, 14 buses) 	<ul style="list-style-type: none"> 50 total (8 ADA minivans, 14 mid-sized buses with lifts, 1 trolley)

Deep Dive: Sanders County (MT)



	Details
Coverage	<ul style="list-style-type: none"> • Connects 3 main towns (20-25 miles apart) • Access to major destinations (Missoula), within 50-mile radius
Fare	<ul style="list-style-type: none"> • Seniors (60+): ranges from \$4-\$16 for round-trip • Adults (<60): ranges from \$5-\$17 for round-trip • Medicaid is billed for medical transportation
Scheduling	<ul style="list-style-type: none"> • Different general routes offered on different days due to low demand • No computerized scheduling • Driver is texted if there are last-minute cancellations
Origin	<ul style="list-style-type: none"> • Started 15 years ago with the Council of Aging
Resources	<ul style="list-style-type: none"> • 9 vehicles (3 buses, 6 vans) • 7 drivers; usually 2-3 drivers operating at any moment
Funding	<ul style="list-style-type: none"> • Federal funding with county matching it • Interested in pursuing advertising as revenue

What Exists in the Community?

- Transportation for veterans, but no other alternatives for other people

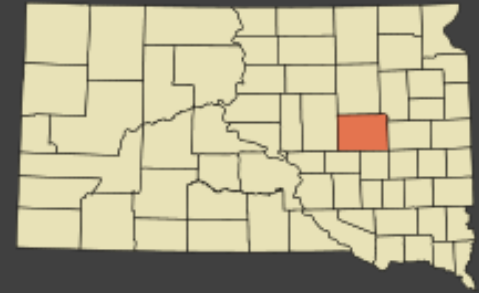
Rules for Riding

- Must call 48 hours in advance if need to bill to Medicaid
- Free transport to senior center meals
- Fare is doubled if reservation made within 24 hours
- Out of county stops limited to 4 / trip

Initial Challenges

- Getting vehicles and drivers

Deep Dive: People's Transit (SD)



	Details
Coverage	<ul style="list-style-type: none"> Intra-city and 3-mile radius outside city of Huron, SD
Fare	<ul style="list-style-type: none"> Youth fare: \$2.50 (and suggested senior donation) General public fare: \$3.50 Outside city (within 3mi): \$4.50
Scheduling	<ul style="list-style-type: none"> Computerized scheduling service (Shah Software) Dispatch still needs to assign routes to drivers
Origin	<ul style="list-style-type: none"> Started 40 years ago when there weren't other alternatives
Resources	<ul style="list-style-type: none"> 20 vehicles total, including 6 minivans (3 passenger vans, 3 ADA vans) Rest of vehicles are 8-17 person buses
Funding	<ul style="list-style-type: none"> Vehicles purchased 80% with federal and 20% with local dollars (e.g. United Way grants) Contracting with local entities (auto body shops, local business) Selling advertising on buses contributes to 20% local match 5311 funds (grants for rural areas)

What Exists in the Community?

- Taxi service in town that runs 24/7
- Fixed-route public school bus system

Rules for Riding

- 3 no-shows / no-fare for schoolchildren necessitates a call to parents for fare
- Same-day scheduled trip: double fare
- No-shows charged fare
- Call in on previous day to schedule

Initial Challenges

- With only a population of 12,500 people, there is not enough ridership to support fixed routes

“You really need to know your population. What does the system you’re working with need? If you can come to a consensus, pool the money, then you can provide much more transportation.”

- Barbara Cline, Executive Director



Deep Dive: Prairie Hill (SD)

	Details
Coverage	<ul style="list-style-type: none"> Black Hills area in SD (8 counties); 16,000 sq mi coverage
Fare	<ul style="list-style-type: none"> Within community: \$2 Between communities: \$5 (close) - \$10 (farther) <p><i>*for seniors, fares are suggested donations</i></p>
Scheduling	<ul style="list-style-type: none"> Computerized scheduling (HBSS software) Can range from 4-500 calls per day
Origin	<ul style="list-style-type: none"> Started 30 years ago, with a grant for senior transportation
Resources	<ul style="list-style-type: none"> 7 transit facilities and 50 vehicles: 8 ADA minivans, 14 mid-sized (14-18 passengers) buses with lifts, 1 trolley
Funding	<ul style="list-style-type: none"> Receives federal funding, with required matching (e.g. foundation) Contractual agreements with majority of hospitals (some even pay for vehicles), nursing homes, National Guard Cities / counties can purchase a share of a vehicle (\$65-\$70k); county can match city’s 10% to come to 20% local match

What Exists in the Community?

- Taxis are available, but expensive
- School buses, charter buses

Rules for Riding

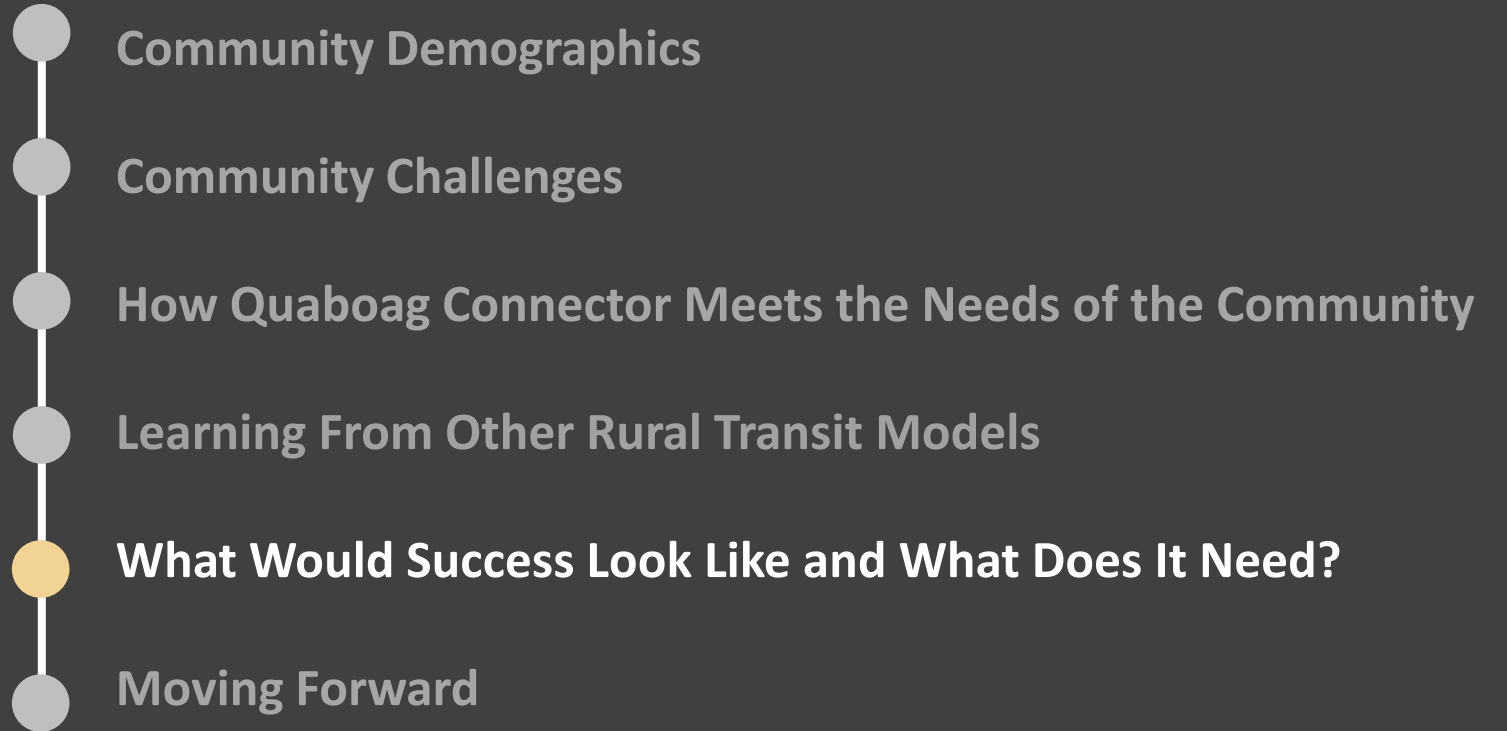
- Offers fixed route urban system with medical demand-response transit
- 3 strikes: if a rider has 3 no-shows / cancel on arrival incidents, service will be suspended for 1 week; restitution of service will be billed

Initial Challenges

- Public perception that buses were for people with disabilities and the elderly
- Fundraising and obtaining money from the city funds

Comparison Summary

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Scheduling	<ul style="list-style-type: none"> Different routes on different days Not computerized 	<ul style="list-style-type: none"> Computerized scheduling Dispatch assigns routes 	<ul style="list-style-type: none"> Computerized scheduling Dispatcher takes 4-500 calls / day
Origin	<ul style="list-style-type: none"> 15 years ago with Council of Aging 	<ul style="list-style-type: none"> 40 years ago 	<ul style="list-style-type: none"> 30 years ago with a grant for senior transportation
Funding	<ul style="list-style-type: none"> Federal funding with county matching 	<ul style="list-style-type: none"> 80% federal and 20% local Sells advertising on buses 	<ul style="list-style-type: none"> Federal funding / matching Contracts with hospitals, nursing homes, National Guard Cities / counties can buy a share Foundation grants
Vehicles	<ul style="list-style-type: none"> 9 total (3 buses, 6 vans) 	<ul style="list-style-type: none"> 20 total (3 passenger vans, 3 ADA vans, 14 buses) 	<ul style="list-style-type: none"> 50 total (8 ADA minivans, 14 mid-sized buses with lifts, 1 trolley)

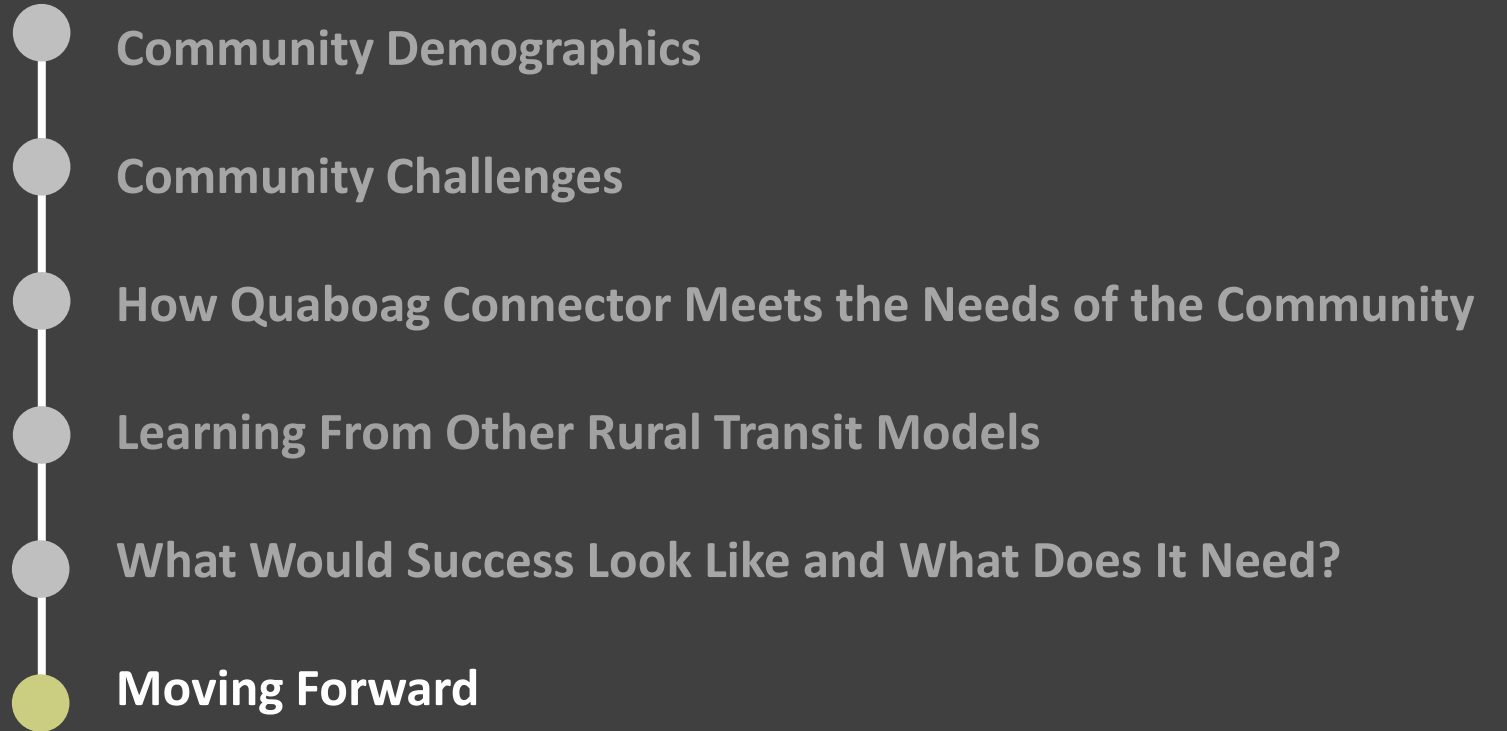
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What's working

- Affordability
- Reliability
- Relationship between drivers and riders
- Communication & coordination between drivers

What's NOT working

- Communication of cancellations & no-shows
- Scheduling flexibility
- Economic sustainability
- Vehicle condition
- Advertising: outreach & revenue

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Suggestions Moving Forward

Area of Improvement
Communication of cancellations and no-shows
Scheduling flexibility / capacity
Economic sustainability
Vehicle condition
Advertising



Recommended Improvement Strategy
Remote voicemail access for drivers
Additional vehicles on the road
Contracts with local & regional partners
Examine current maintenance and repair schedules
Promotion beyond word of mouth (outreach to employers) and talk with local businesses for advertising

Thank You!

References

1. A Framework for Public Health Action: The Health Impact Pyramid, American Journal of Public Health, April 2010. <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2836340/>>
2. “What Works? Strategies to Improve Rural Health – Report by County Health Ranking and the University of Wisconsin Population Health Institute.” 2016. <<https://www.countyhealthrankings.org/what-works-strategies-improve-rural-health>>
3. Special Commission of Rural Access & Improving State-Sponsored Services in MA Rural Communities – Report to the General Court & Governor – EOHHS. August 2013. <https://www.mass.gov/files/documents/2016/07/tu/rural-services-commission-report.pdf>
4. Rural Policy Plan for Commonwealth of MA by Rural Policy Advisory Commission. October 2019. <https://frcog.org/wp-content/uploads/2019/10/Rural_Policy_Plan_10.01.19.pdf>
5. Community Health Needs Assessment (CHNA) by Baystate Health System. 2016. <https://www.baystatehealth.org/about-us/community-programs/community-benefits/community-health-needs-assessment>
6. Evolving Mobility. National Center of Mobility Management. <<https://nationalcenterformobilitymanagement.org/evolving-mobility/>>
7. American Community Survey. United States Census Bureau. 2017. <<https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/>>
8. Mulley, C. Nelson, J. “Flexible transport services: A new market opportunity for public transport.” Research in Transportation Economics. 2009. <https://www.academia.edu/12500201/Flexible_transport_services_A_new_market_opportunity_for_public_transport>
9. Prairie Hill Transit System Policies. West River Transit Authority, Inc. <http://www.prairiehillstransit.com/rider_information/PHT%20PASSENGER%20HANDBOOK.pdf>
10. Sanders County Transportation. Sanders County Council on Aging. <<http://www.sanderscountycouncilonaging.org/sanders-county-transportation.html>>
11. People’s Transit. <<https://www.peoplestransithuron.com/description-of-services/>>