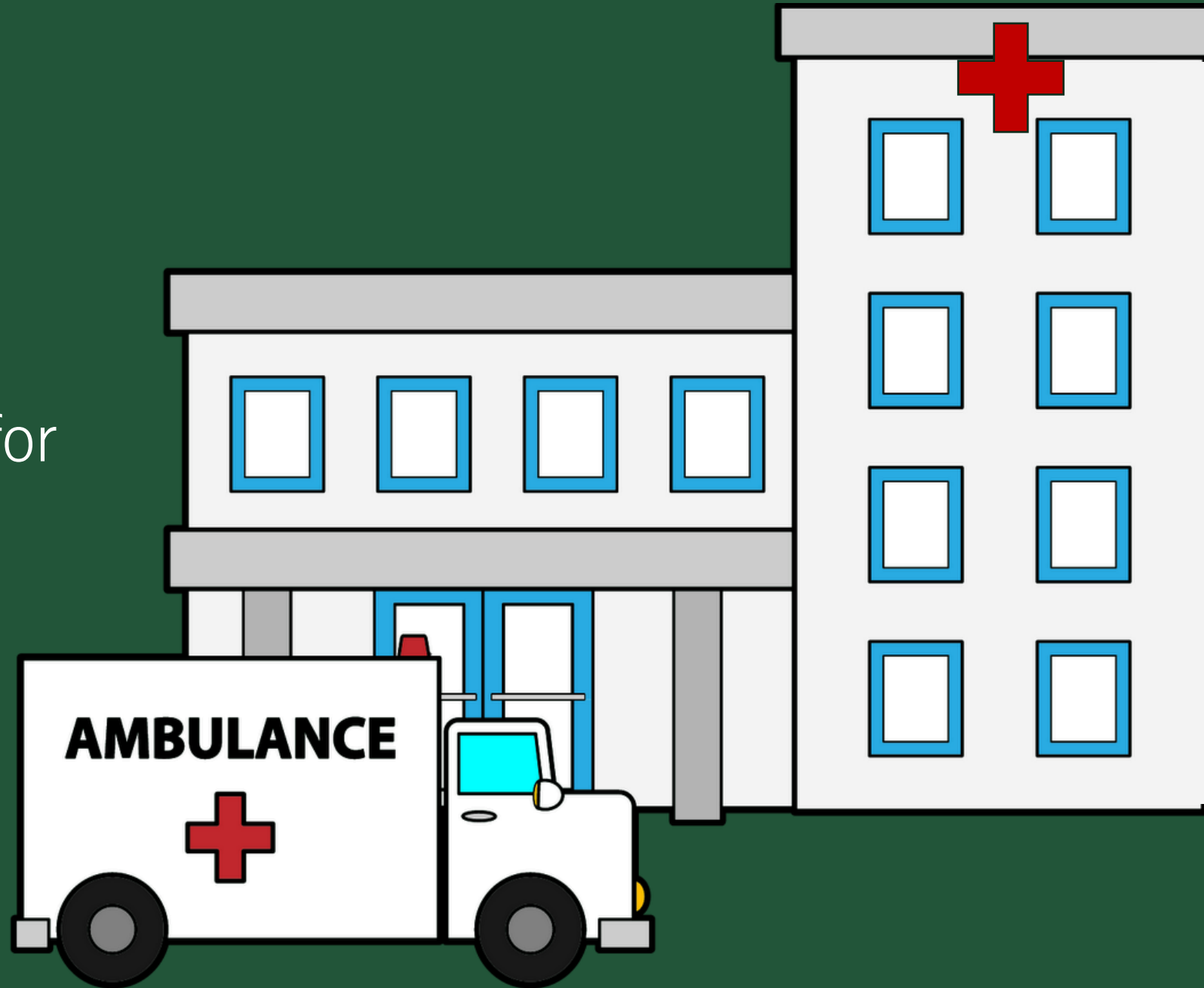


Team 79

Bridging the Gap: The Hub-and-Spoke Model for Rural Healthcare

Infrastructure Modernization

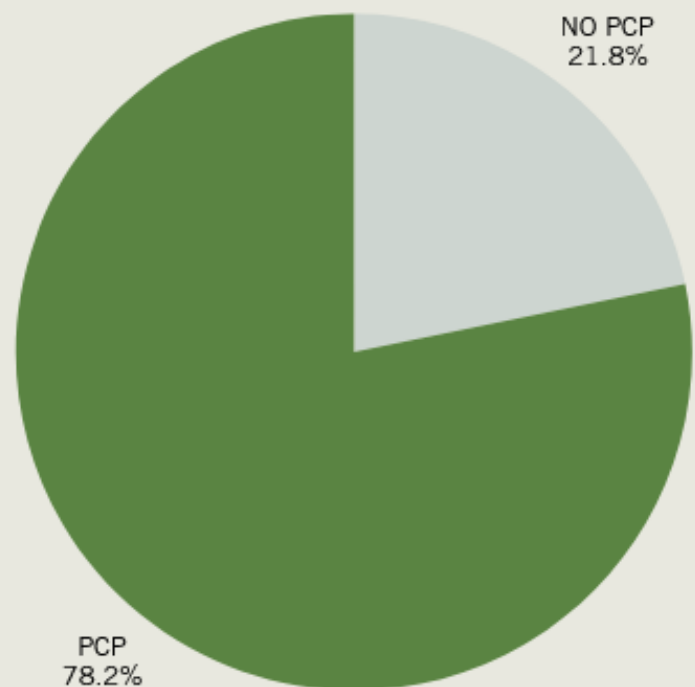


AGENDA

Status Quo Post-Legislation	3
Policy Details & Outcomes	9
Evaluation Criterion	28
Implementation & Feedback Loops	35
Risks & Mitigation	37

STATE OF LA HEALTHCARE

% Population with a PCP¹



1 in 5

RESIDENTS ON MEDICARE²

93% in Mental Health Professional Shortage Areas³

73% in Primary Care Professional Shortage Areas³

1. CDC. (2022). Behavioral Risk Factor Surveillance System. CDC.<https://www.cdc.gov/brfss/index.html>

2. State Scorecard on Medicare Beneficiary Experiences. (2025). Commonwealthfund.org.<https://doi.org/10.26099/h97b-bw16>

3. Rural Health Transformation Program | Louisiana Department of Health. (2025). La.gov.<https://ldh.la.gov/page/rural-health-transformation-program%E2%80%8B>

COMPARING RURAL AND URBAN HOSPITALS¹

1:1 Ratio of Urban and Rural Hospitals

- 98 recognized hospitals
 - Rural = 46
 - Urban = 52

Rural to Urban Hospitals – Locational Barriers

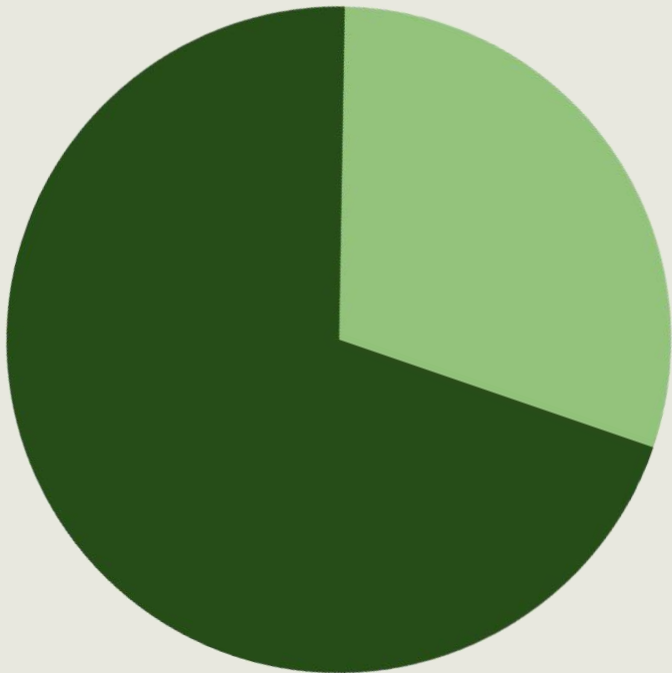
- Average distance rural → urban hospital = ~30.2 miles

1. Data on Urban and Rural Hospitals – Saving Rural Hospitals. (n.d.). Retrieved October 12, 2025, from <https://ruralhospitals.chqp.org/Data0.html>

2. Markey, E. (2025, June 12). Letter on Rural Hospitals [Review of Letter on Rural Hospitals]. United States Senate. https://www.markey.senate.gov/imo/media/doc/letter_on_rural_hospitals.pdf

CHARACTERIZING LA RURAL HEALTH

~70% of rural Louisianans live within 15-minute drive of a health clinic¹



Physicians per 10,000 People²

Location	Rural Average	Urban Average
Louisiana	9.2	37.8
National Average	13.1	31.2

1. Centers for Disease Control and Prevention. (2024, August 7). Vulnerable Areas Along Louisiana's Mississippi Delta Lack Geographic Access to Rural Health Clinics (RHC) [Review of Vulnerable Areas Along Louisiana's Mississippi Delta Lack Geographic Access to Rural Health Clinics (RHC)]. <https://www.cdc.gov/heart-disease-and-stroke-data/data-vis/la-rhc-ndi.html>
2. Bar Chart of Physicians per 10,000 People for Metro and Nonmetro Counties, 2022 - Rural Health Information Hub. (2022). Ruralhealthinfo.org. <https://www.ruralhealthinfo.org/charts/109?state=LA>

55% of rural
LA has
100+ mbps¹.

Unmaintained rural infrastructure →
ambulance and treatment delays²

Category	Louisiana Average	National Average
Poor Rural Pavements	21%	12%
Poor Rural Bridges	14%	8%

1. Internet Access in Louisiana: Stats & Figures. (n.d.). BroadbandNow. Retrieved October 19, 2025, from <https://broadbandnow.com/Louisiana>
2. National Transportation Research Nonprofit. (2024, September). Rural Connections: Examining The Safety, Connectivity, Condition And Funding Needs Of America's Rural Roads & Bridges [Review of Rural Connections: Examining The Safety, Connectivity, Condition And Funding Needs Of America's Rural Roads & Bridges]. https://tripnet.org/wp-content/uploads/2024/09/TRIP_Rural_Connections_Report_September_2024.pdf

\$5.02 billion **decline** in rural Medicaid
spending for Louisiana¹

33 rural hospitals **at-risk**²

260,000 more **uninsured**³

EFFECTS OF THE ONE BIG BEAUTIFUL BILL (BBB) ACT

1. Saunders, H., Burns, A., & Levinson, Z. (2025, July 24). How Might Federal Medicaid Cuts in the Enacted Reconciliation Package Affect Rural Areas? [Review of How Might Federal Medicaid Cuts in the Enacted Reconciliation Package Affect Rural Areas?]. Kaiser Family Foundation. <https://www.kff.org/medicaid/how-might-federal-medicaid-cuts-in-the-enacted-reconciliation-package-affect-rural-areas/>

2. Markey, E. (2025, July 12). Letter on Rural Hospitals [Review of Letter on Rural Hospitals]. United States Senate. https://www.markey.senate.gov/imo/media/doc/letter_on_rural_hospitals.pdf

3. Burns, A., Ortaliza, J., Lo, J., Rae, M., & Cox, C. (2025, August 20). How Will the 2025 Reconciliation Law Affect the Uninsured Rate in Each State? [Review of How Will the 2025 Reconciliation Law Affect the Uninsured Rate in Each State?]. Kaiser Family Foundation. <https://www.kff.org/uninsured/how-will-the-2025-reconciliation-law-affect-the-uninsured-rate-in-each-state/>

PROBLEM

The state of Louisiana's rural healthcare is already dire – and new legislation threatens to **exacerbate existing issues** and **close underfunded rural hospitals**.

SOLUTION

To provide for a post-BBB rural Louisiana, we propose the usage of a **hub-and-spoke model** to centralize healthcare resources and increase patient volume.



OUR PROPOSAL

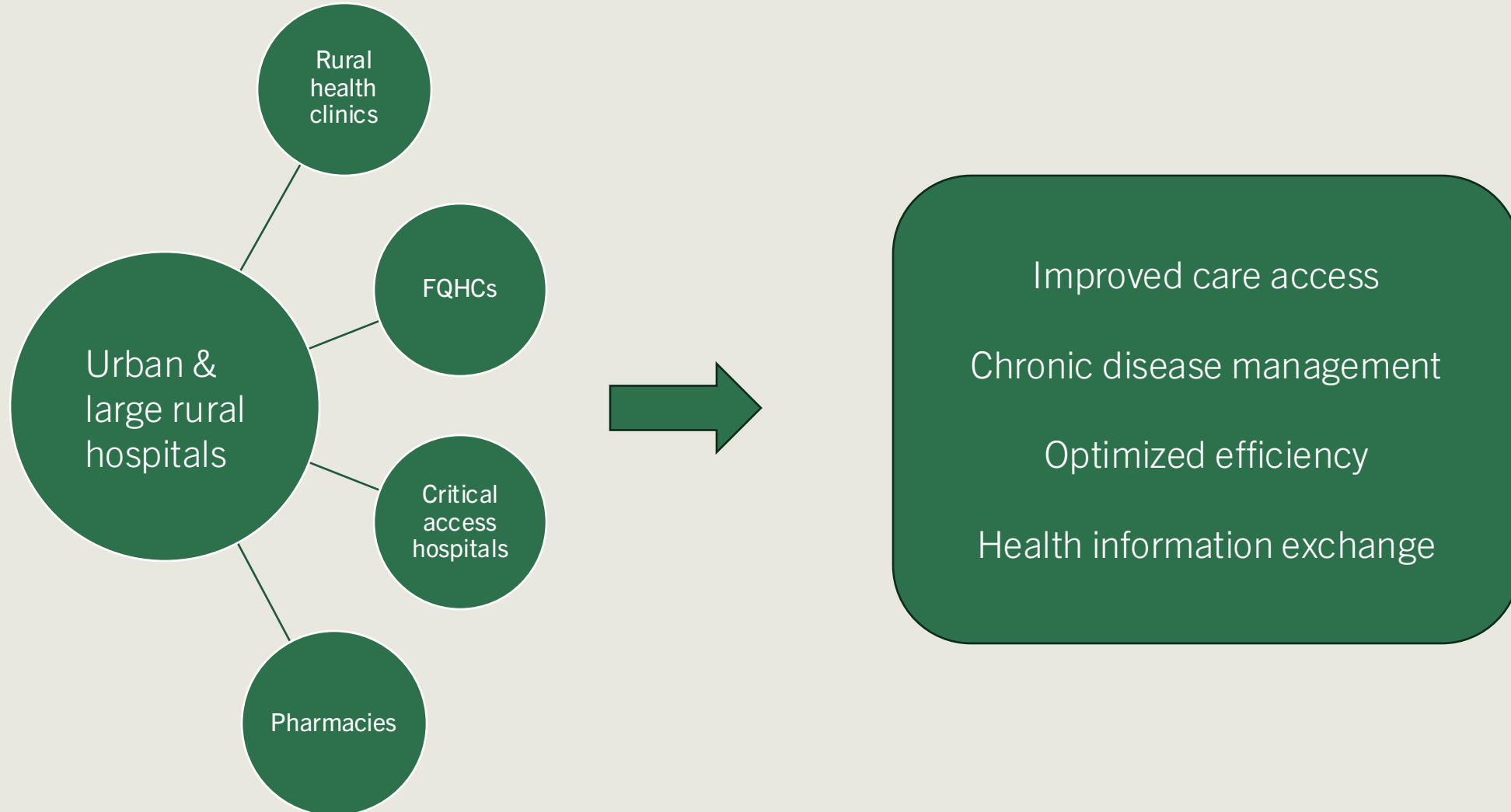


A TRANSFORMATION OF HEALTHCARE INFRASTRUCTURE

11



HUB-AND-SPOKE MODEL INTRODUCTION



Hubs

Concentrated resources, wide variety of services

Spokes

Limited services, high accessibility

Telehealth

An efficient, self-sustaining system is the end goal. Here's how we build it.

Urban hospitals

Info. Exchange

Small/critical access hospitals

Pharmacies



Hub-Spoke Designation

- By proximity¹
- By services^{2, 3}

Digital Health Exchange

- Broadening
- Incentives

Leveraging Pharmacies

- Scope of care

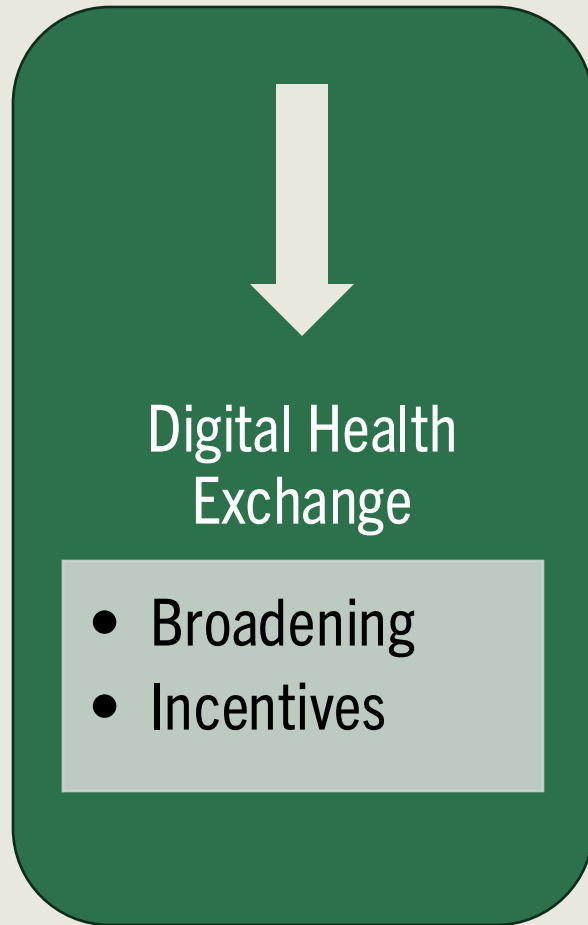
Creating Guidelines

- Efficiency
- Autonomy

¹Devarakonda, S. (2016, March). Rural and Remote HealthVolume 16, Issue 1 [Review of Rural and Remote HealthVolume 16, Issue 1]. Informit; James Cook University. <https://search.informit.org/doi/e/pdf/10.3316/informit.202987607513283>

²Eliot, J. K., & Fortenberry, J. L., Jr (2017). The hub-and-spoke organization design revisited: a lifeline for rural hospitals. BMC health services research, 17(Suppl 4), 795. <https://doi.org/10.1186/s12913-017-2755-5>

³. Eliot, J. K., & Fortenberry, J. L. (2017). The hub-and-spoke organization design: an avenue for serving patients well. BMC Health Services Research, 17(S1). <https://doi.org/10.1186/s12913-017-2341-x>



Building on Louisiana Health Information Exchange (LaHIE):

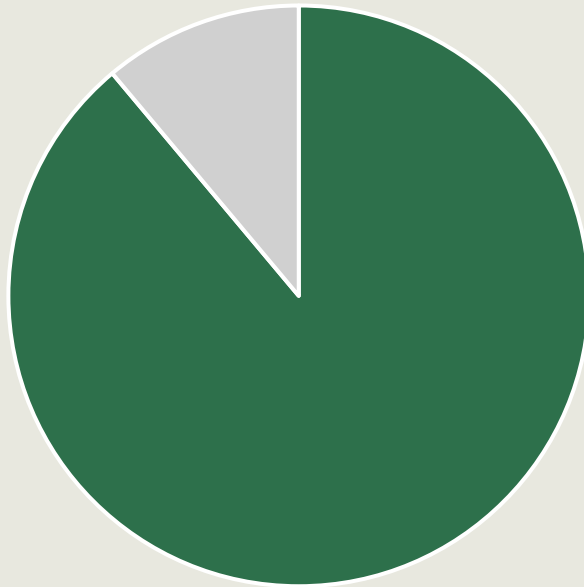
Currently: 522 providers

1. Health Information Exchange Platform – Louisiana Health Care. (2025). Lhcqf.org. <https://lhcqf.org/service/health-information-exchange-platform/>

2. LPCA. (n.d.). Health Centers - Louisiana Primary Care Association, Inc. [Review of Health Centers - Louisiana Primary Care Association, Inc.]. Retrieved October 17, 2025, from <https://lpcanet.org/health-centers/>

3. O'Donoghue, J. (2025, September 16). Louisiana seeks money for digital records, tuition incentives from \$50B rural health care fund • Louisiana Illuminator. Louisiana Illuminator. <https://lailuminator.com/2025/09/16/louisiana-seeks-money-from-50b-rural-health-care-fund-for-digital-records-tuition-incentives/>

Pharmacies are valuable resources for healthcare accessibility.



88.9%

Of Americans live within 5 miles of a pharmacy¹



Leveraging
Pharmacies

- Scope of care

Improve integration with LaHIE

Relax CDTMs requirements^{1,2}:

- Eliminate physical location requirement¹
- Allow non-physicians to collaborate, i.e. NPs and other prescribers¹
- Streamline paperwork¹



Leveraging
Pharmacies

- Scope of care

1. Hamilton, A. L., & Darr, M. (2020). Louisiana State Policies Prove Problematic for Pharmacist-Physician Collaboration. Preventing Chronic Disease, 17. <https://doi.org/10.5888/pcd17.200051>

2. CDC. (2025, August 4). Collaborative Drug Therapy Management [Review of Collaborative Drug Therapy Management]. <https://hdsb.p.cdc.gov/s/article/Pharmacists-Collaborative-Drug-Therapy-Management>

Many existing spoke-hub models of healthcare are intra-network for affiliated providers^{1,2}.

Preserving independence:

- Cost reductions³
- Increased revenue³
- Step-down care⁴



Creating
Guidelines

- Efficiency
- Autonomy

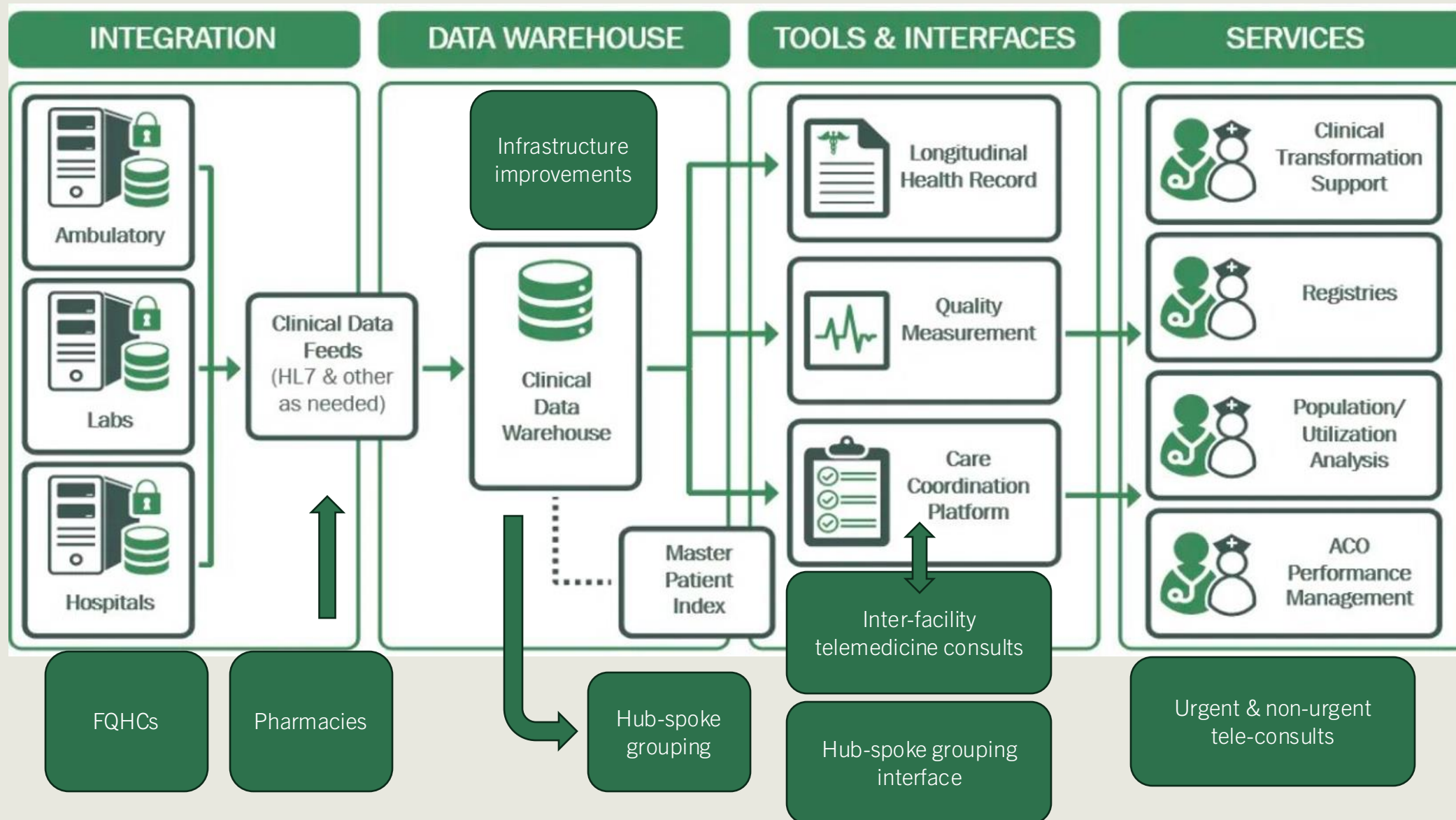
1. Elrod, J. K., & Fortenberry, J. L. (2017). The hub-and-spoke organization design: an avenue for serving patients well. BMC Health Services Research, 17(S1). <https://doi.org/10.1186/s12913-017-2341-x>

2. JARAIA, K., & WORDEN, K. (2020, September). A Rural Healthcare System Expands Cancer Care with a "Hub and Spoke" Model [Review of A Rural Healthcare System Expands Cancer Care with a "Hub and Spoke" Model]. Association of Cancer Care Centers. https://www.accc-cancer.org/docs/documents/oncology-issues/articles/2020/so20/so20-a-rural-healthcare-system-expands-cancer-care-with-a-hub-and-spoke-model.pdf?sfvrsn=7a7a60ad_10

3. Elrod, J. K., & Fortenberry, J. L. (2017). The hub-and-spoke organization design revisited: a lifeline for rural hospitals. BMC Health Services Research, 17(S4). <https://doi.org/10.1186/s12913-017-2755-5>

4. The Role of a Step-Down Unit in Improving Patient Outcomes | Columbia Business School. (2016). Columbia Business School. <https://business.columbia.edu/faculty/research/role-step-down-unit-improving-patient-outcomes>

BRIDGING HUBS AND SPOKES: LAHIE & TELEMEDICINE



The proposal includes plenty of support for hubs to expand their capacity to meet spokes' demand.

Long-term financial solvency is provided by the increase in patient volume.¹



CASE STUDY: THE WILLIS-KNIGHTON HEALTH SYSTEM¹

Hub

Willis-Knighton Medical Center

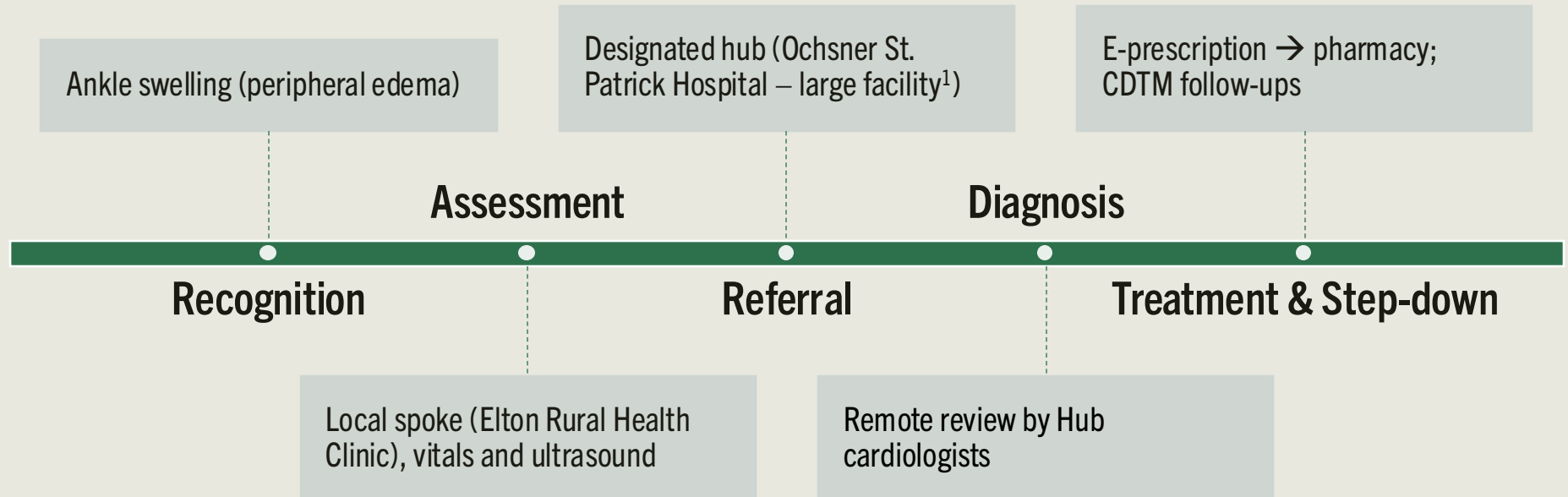
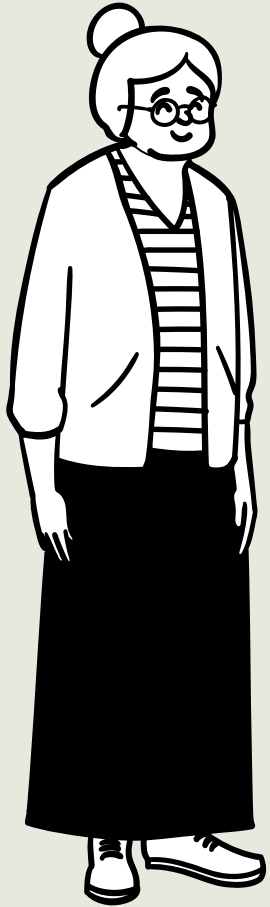
Spokes

Extended to more suburban settings

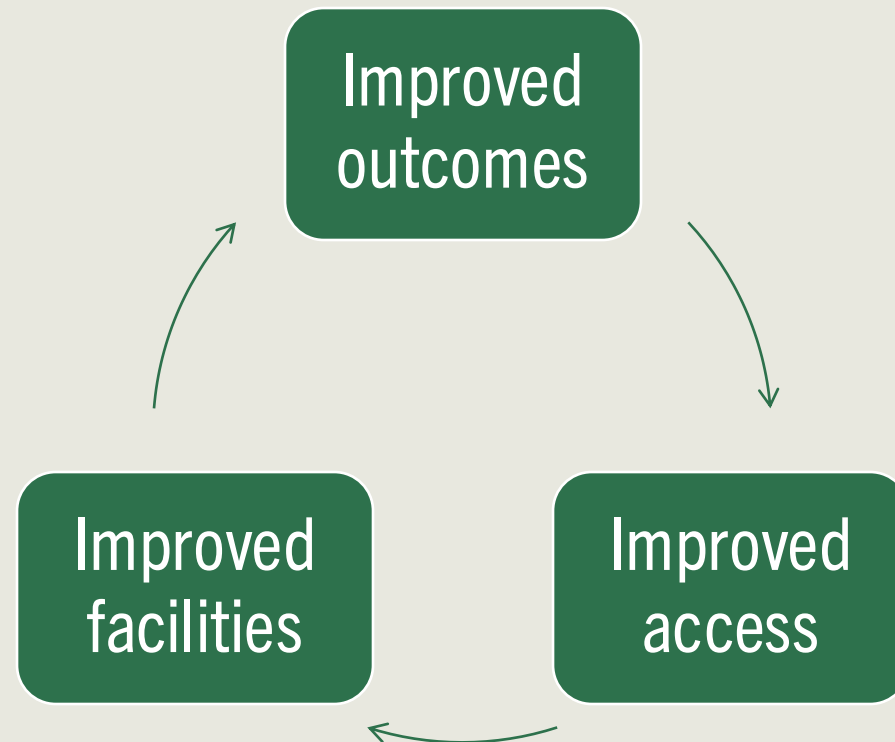
Rural partner spoke

Training, equipment sharing, best practices¹





PROJECTED OUTCOMES



Improved access

+30%

Proportion of pharmacists in a CDTM¹, reaching **>200,000** rural patients.^{2,3}

-50%

Reduction in specialist consult time.¹

1. Appendix C

2. Explore Rural Population in Louisiana | AHR. (n.d.). America's Health Rankings. https://www.americashealthrankings.org/explore/measures/pct_rural_b/LA

3. Louisiana Population 2024 (Demographics, Maps, Graphs). (2024). World population review.com. <https://worldpopulationreview.com/states/louisiana>

Improved
facilities

Faster LaHIE platform promoting interoperability.

+41 Community Health Centers joining LaHIE.

Improved
outcomes

-21%

Reduction in cardiovascular events with
CDTM agreements.¹

>174 million

Saved in rural healthcare costs.²

1. Tsuyuki, R. T., Al Hamarneh, Y. N., Jones, C. A., & Hemmelgarn, B. R. (2016). The Effectiveness of Pharmacist Interventions on Cardiovascular Risk: The Multicenter Randomized Controlled Rx EACH Trial. Journal of the American College of Cardiology, 67(24), 2846–2854. <https://doi.org/10.1016/j.jacc.2016.03.528>

2. Appendix C

CRITERIA FOR EVALUATION



MAJOR CRITERIA

Effectiveness

Efficiency

Equity

Feasibility

Sustainability

Acceptability

Effectiveness

- Rural healthcare accessibility
- Improved outcomes
- Financial stability

Efficiency

- Leverages existing networks
- Reduces overall healthcare expenditure
- Optimize available workforce

Equity

- Health disparities
- Virtual tools

Feasibility

- Subsidies for fixed costs
- Step-wise implementation

Sustainability

- Low variable costs
- Scalability

Acceptability

- Economic independence
- Shareholder input¹

1. O'Donoghue, J. (2025, September 16). Louisiana seeks money for digital records, tuition incentives from \$50B rural health care fund • Louisiana Illuminator. Louisiana Illuminator. <https://lailluminator.com/2025/09/16/louisiana-seeks-money-from-50b-rural-health-care-fund-for-digital-records-tuition-incentives/>

Pharmacy Loop

Pharmacists → CDTMs, serve more patients

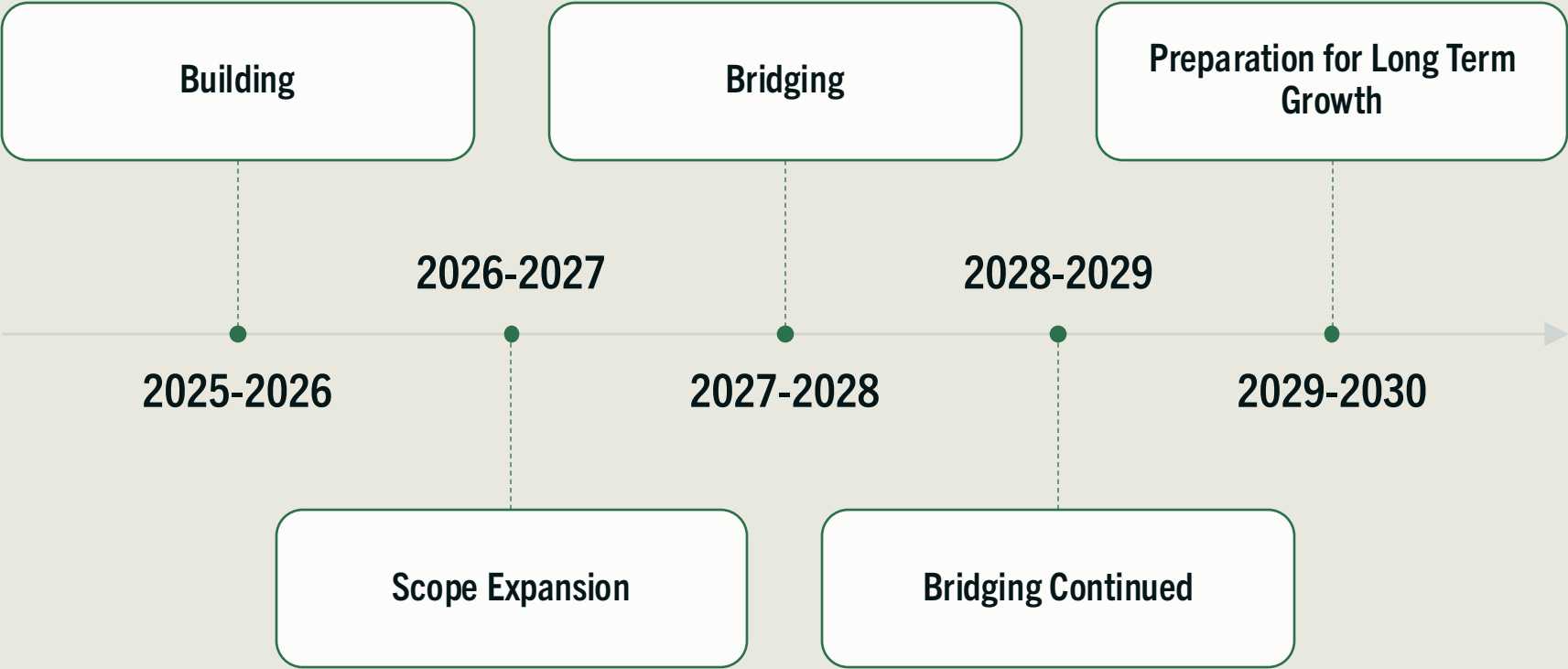
Hub-&-Spoke Loop

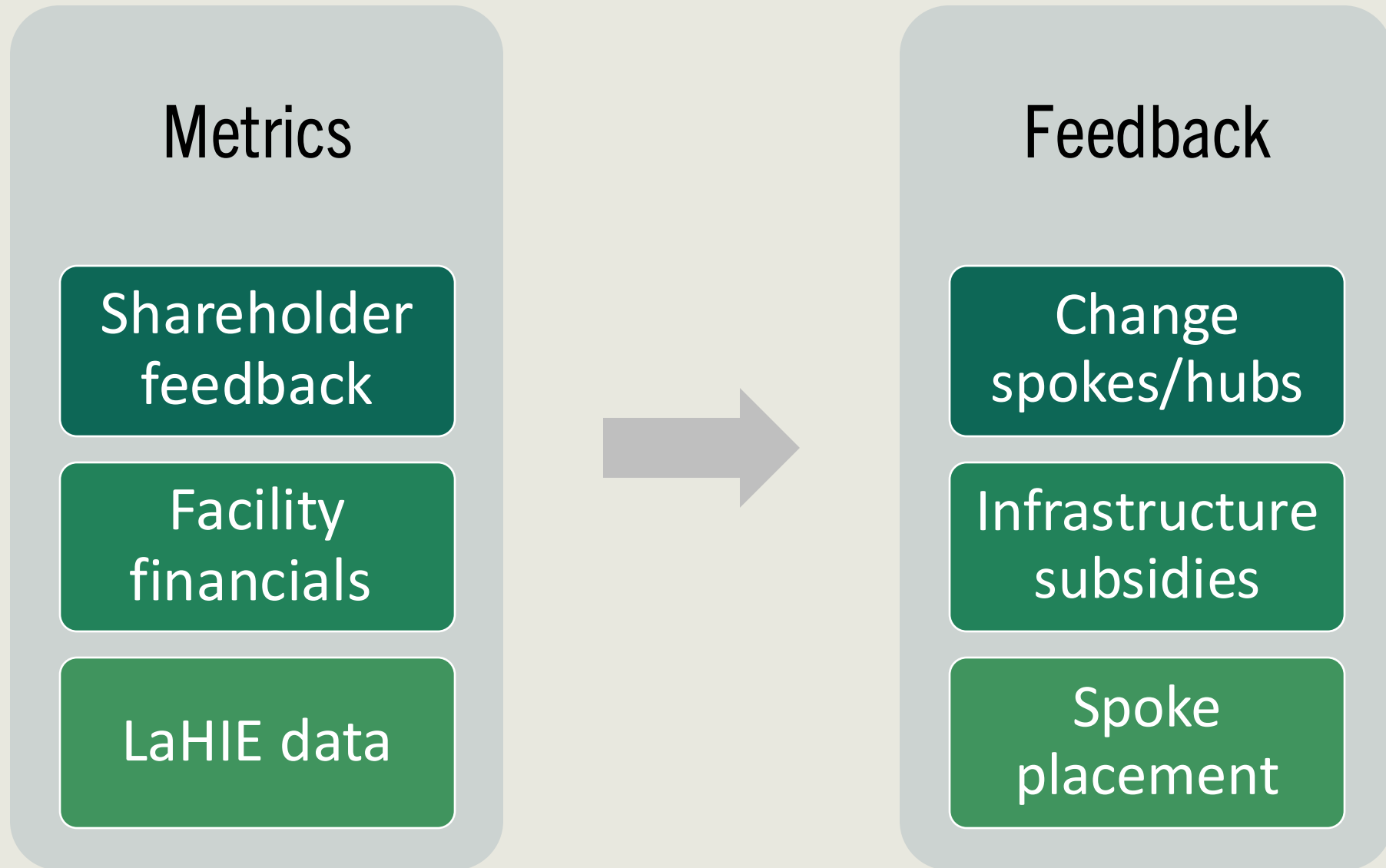
Increased patient volume
cause financial gain for spokes

Telehealth Loop

Improved telehealth leads to
comprehensive patient registries

IMPLEMENTATION TIMELINE





POTENTIAL RISKS

35

- Initial costs LaHIE¹
- Clinic incentives + budget plan

- Cybersecurity flaws
- Protocols + batch integration

- Service disruptions²
- Referral system + future expansion

1. Louisiana Health Care Quality Forum. (2025). Health Information Exchange Platform [Review of Health Information Exchange Platform]. Three Six Zero Industries. <https://hccqf.org/service/health-information-exchange-platform>

2. Kozhimannil, K. B., Casey, M. M., Hung, P., Han, X., Prasad, S., & Moscove, I. S. (2015). The Rural Obstetric Workforce in US Hospitals: Challenges and Opportunities. The Journal of rural health : official journal of the American Rural Health Association and the National Rural Health Care Association, 31(4), 365–372. <https://doi.org/10.1111/jrh.12112>

THANK YOU



APPENDICES



APPENDIX A: BUDGET ESTIMATE

LaHIE infrastructure development	\$56 million
LaHIE incentive payments, infrastructure startup/maintenance subsidies	\$124.8 million
Data collection (hub-spoke designation), feedback implementation, reiteration	\$17.5 million
Start-up onboarding support for facilities	\$15.5 million
Training for care coordinators	\$13.18 million
Subsidies to rural hospital digital & transport infrastructure	\$47 million
Other subsidies to hub hospitals	\$47 million
Short-term equipment recycling	\$6.25 million
Staffing, contracting to oversee implementation	\$4 million
Contingency funds	\$17.5 million

APPENDIX A: BUDGET

- Previous Louisianan health initiatives have given AIU (adoption, implementation and upgrade) and MU (meaningful use) incentive payments to eligible professionals and hospitals to incentivize electronic health record usage. The state gave \$73,621,344 total in AIU payments and \$32,586,181 in MU payments (\$106,207,525 total) to 3,603 eligible professionals (EP), averaging \$29,477.53 per professional.¹
- \$29,477.53 x 3 to each of the 470 FQHC facilities (managed by the 41 community health centers)² equates to \$41,563,317.30 in total incentive payments to FQHCs to adopt LaHIE, assuming that each FQHC employs 3 healthcare providers. This is likely an overestimate given that some FQHCs are already part of the network.
- 9087 pharmacists practice in Louisiana,³ of which an estimated 30% would participate in a CDTM,⁴ would also be incentivized to join LaHIE. We would only go through with MU payments as pharmacists likely already have their own electronic health system, and integration with LaHIE would be the only requirement. This equates to a total of \$24,655,339.50 pharmacist payments.
- Given that some providers opted not to join after Louisiana's previous incentives program, these subsidies will be increased by 20%, which also accounts for costs due to added burden after hub-spoke model implementation.
- We estimate around \$7 million needed a year for these 5 years to fully build the LaHIE infrastructure required to sustain this new supply of providers, modelled after Maryland operations improvements.⁵ We also estimate around three times that amount for initial start-up costs in the first year.
- Maintenance costs aren't likely to drastically exceed what they are now, as funded by LDH and the Bureau of Health Informatics, making this solution highly sustainable.

1. (2018). Louisiana Health Information Technology Roadmap [Review of Louisiana Health Information Technology Roadmap]. Myers and Stauffer. https://dh.la.gov/assets/medicaid/EHR/Louisiana_Health_IT_Roadmap.pdf

2. LPCA. (n.d.). Health Centers - Louisiana Primary Care Association, Inc [Review of Health Centers - Louisiana Primary Care Association, Inc]. Retrieved October 17, 2025, from <https://lpcanet.org/health-centers/>

3. Hamilton, A. L., & Darr, M. (2020). Louisiana State Policies Prove Problematic for Pharmacist-Physician Collaboration. Preventing Chronic Disease, 17. <https://doi.org/10.5888/pcd17.200051>

4. Appendix C

5. (2022, June 8). Maryland's Statewide Health Information Exchange, the Chesapeake Regional Information System for our Patients: FY 2023 Funding to Support HIE Operations and CRISP Reporting Services [Review of Maryland's Statewide Health Information Exchange, the Chesapeake Regional Information System for our Patients: FY 2023 Funding to Support HIE Operations and CRISP Reporting Services]. Maryland Health Services Cost Review Commission. <https://hsrc.maryland.gov/Documents/Final%20Recommendation%20CRISP%20FY2023%20Funding%20F.docx.pdf>



Start-up on **boarding support**: \$750 per provider. $\$750 \times \text{approximately } 4136 \text{ new spoke-level practitioners (FQHCs and pharmacist entered CDTMs)} = \text{\$3,102,000}$. As part of the incentives program, this would be used per year for the 5 years, ensuring short-term support that enables long-term familiarity with the system, **totaling a cost of \$15,510,000**.



The maintenance fees would also be subsidized for these facilities and existing ones as they undergo upgrades over these 5 years (equating 522 existing members of the LaHIE network + 3196 new spokes), totaling another **fixed cost of \$37,180,000** (calculated from 3718 LaHIE facilities at \$10,000 annual maintenance costs). This is **likely an overestimate** as some providers will not require as extensive LaHIE-centered infrastructure.



The process of mapping sites, data collection, and designation of spokes and hubs would be intensive at the beginning of the project. Louisiana currently lacks comprehensive geographical data about rural health clinics and their relation to larger health centers, based on our research process. A **committee of analysts would need to be assembled**, temporarily, as these facilities are sorted and mapped. We **estimate this fixed cost to be around \$5 million over two years**, which includes **contracting/hiring 10 staff (analysts, inspectors) and equipment/work expenses**.



We expect the system to receive feedback from hubs and spokes that will demand restructuring and reiterating over the early stages of the spoke-hub development (these 5 years of funding), meaning that there will also be yearly expenses to process those recommendations, **amounting to \$12.5 million** (\$2.5 million per year in staffing and system improvements).

APPENDIX A: BUDGET

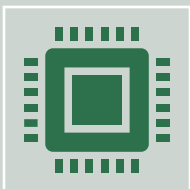
41



Additionally, the state would need to invest more resources into processing all of the new CDTMs due to relaxation of CDTM requirements. **2726 new pharmacists entering CDTM agreements** would demand a **cost of \$81780 to process**, assuming that each new registrant costs \$30 each (staffing costs).



Regarding the recycling program, **the state would subsidize various services to incentivize equipment reuse**. These include pick-up of decommissioned equipment from facilities; transport to refurbishment sites, such as universities, colleges, and commercial entities; contracts with refurbishment firms; transport to needed facilities; small grants to promote integration of this equipment; and a lightweight, temporary digital network to route equipment to where it needs to go.



We estimate about **2200 pieces of equipment to be processed per year** (given Louisiana's 470 FQHCs & 262 hospitals¹, and assuming each recycles about 3 pieces). They may range in complexity and thus calculations are inaccurate; we provide extra contingency funds as an overestimate of needed budget. **The recycling program will cost \$6.25 million**, based on transport costs of \$1 million (\$450 of transport costs per equipment), grants totaling \$2.5 million (\$5000 grants for 500 facilities adopting the equipment), \$1.65 million (\$750 of refurbishing contracts per equipment²), digital portal costs of \$100,000, and \$1 million in contingency costs (in case estimates were off, contractors demand higher prices, or lots of equipment can only be disposed and not refurbished).

1. (2025). Louisiana Hospitals [Review of Louisiana Hospitals]. OfficialUSA. <https://www.officialusa.com/stateguides/health/hospitals/louisiana.html#:~:text=In%20Louisiana%20state%20total%20262%20hospitals.%20Out%20of,are%20Government%20hospitals%20and%20118%20are%20private%20hospitals.>
2. HIGHL, S. T. I. 166, Bloomfield, P. D., & E-Mail, C. 06002 1 800 get soma T. 860 218 2575 F. 860 218 2565. (n.d.). New, Demo, and Refurbished Capital Medical Equipment Sales and Service. <https://www.somatechnology.com/>

APPENDIX A: BUDGET



- Regarding **care coordinator training**, there are difficulties in estimating this; our proposal allocates **\$13,176,000 for total training costs**, assuming 732 care coordinators/staff (given 252 hospitals and 470 clinics, with one dedicated care coordinator each) multiplied by \$18,000 in professional development costs, modelled after the education industry.¹
- **Hospital subsidies** were calculated from remaining funds accounting for a 5% contingency fund, divided evenly among a fund specifically for rural hub hospitals and a fund to be split among all hub hospitals.
- The entire plan will require staffing to oversee data collection, process concerns/question, and monitor transformation. We plan to allocate funds for this special team of analysts and required business expenses: **\$2 million** (based on the average public health analyst salary² for a team of 5 members over 5 years). An **additional \$2 million** is laid out for contracting work, such as for LaHIE and cybersecurity.

¹What's the Average Cost of Professional Development for K-12 Teachers? (n.d.). Blog.alludolearning.com. <https://blog.alludolearning.com/average-cost-of-professional-development-for-teachers>

²(2025). Public Health Analyst Salary [Review of Public Health Analyst Salary]. GovSalaries. <https://govsalaries.com/salaries/public-health-analyst-salary>

APPENDIX B: BARRIERS TO AT-HOME TELEHEALTH FOR RURAL COMMUNITIES

Our solution focuses primarily on **delivering telehealth at the inter-facility level**, given the severe barriers to at-home telehealth that rural Louisianians face.

The augmentation of LaHIE sets the stage for the widespread adoption of rural telehealth in the future; currently, however, rural communities do not have the infrastructure to support it.

- Less than 65% of the rural population can access at least one broadband provider.¹
 - This doesn't represent the people who can afford it nor those with speeds fast enough to facilitate telehealth.
- Rural communities are less receptive to telehealth, as demonstrated by rural Medicare beneficiaries, of which only 19% have used a telehealth service (from 2023 data) with a declining trend.²
 - Thus, widespread internet, digital literacy, and outreach programs would need to be implemented over a long period to change attitudes and overcome these barriers, impacting **feasibility and sustainability**.



1. Pelican Institute For Public Policy. (2021, June 22). REPORT: The State of Broadband in Louisiana and Mississippi [Review of REPORT: The State of Broadband in Louisiana and Mississippi]. <https://pelicanpolicy.org/reports/the-state-of-broadband-in-louisiana-and-mississippi/>

2. Cottrill, A., Cubanski, J., & Neuman, T. (2025, October 2). What to Know About Medicare Coverage of Telehealth [Review of What to Know About Medicare Coverage of Telehealth]. Kaiser Family Foundation. <https://www.kff.org/medicare/what-to-know-about-medicare-coverage-of-telehealth/>

APPENDIX C: HEALTH OUTCOMES

44



General prevalence of various chronic conditions in Louisiana found from this source.¹

21% reduction in risk of cardiovascular events due to community pharmacist intervention.²

Pharmacist interventions are associated with **significant reductions in systolic blood pressure** (~11.15 mmHg)³, **LDL cholesterol** (-6.3 mg/dL),⁴ **hemoglobin A1c** (-1.8%).⁴

A1c reductions in particular are important; linked to a **reduction in hospital admission by ~10% for those with Type 2 Diabetes**⁵ alongside around a **3.6% reduction in total healthcare costs**.⁶ Associated reduction in cardiovascular events due to lowered systolic blood pressure is also important: **20%**.⁷

Average cost of a cardiovascular event: \$23,040.639,⁸ combined with prevalence of cardiovascular disease in La at 11.7,⁹ leading to an estimated 119880 cardiovascular events in the lifetimes of current rural Louisiana residents.¹⁰ Altogether this amounts to an estimated total expenditure of \$2,762,111,800 for the rural population alone. With a 30% CDTM uptake and a 21% reduction², **total savings approximate \$174,013,043**.

Conservative CDTM uptake projection was based off case study of Washington state, where a new Informal Opinion by Washington State Office of the Attorney General in 2015 facilitated an increase in pharmacists participating in a CDTM (sometimes called CDTA in the state)¹¹. Most recent data polling shows that 59% of pharmacists participate in a CDTM in Washington¹².

1. Canoy, D., Nazarzadeh, M., Copland, E., Bidel, Z., Rao, S., Li, Y., & Rahimi, K. (2022). How Much Lowering of Blood Pressure Is Required to Prevent Cardiovascular Disease in Patients With and Without Previous Cardiovascular Disease? Current Cardiology Reports, 24(7), 851–860. <https://doi.org/10.1007/s11886-022-01706-4>

2. Chisholm-Burns, M. A., Kim Lee, J., Spivey, C. A., Slack, M., Herrier, R. N., Hall-Lipsy, E., Graff Zivin, J., Abraham, J., Palmer, J., Martin, J. R., Kramer, S. S., & Wunz, T. (2010). US Pharmacists' Effect as Team Members on Patient Care: Systematic Review and Meta-Analyses. Medical Care, 48(10), 923. <https://doi.org/10.1097/MLR.0b013e3181e57962>

3. Explore Cardiovascular Diseases in Louisiana | AHR. (n.d.). Retrieved October 19, 2025, from https://www.americashealthrankings.org/explore/measure/pct_rural_b/LA

4. Explore Rural Population in Louisiana | AHR. (n.d.). Retrieved October 19, 2025, from https://www.americashealthrankings.org/explore/measure/pct_rural_b/LA

5. Haidar, A., Gajjar, A., Parikh, R. V., Benharash, P., Fonarow, G. C., Watson, K., Needleman, J., & Ziaeian, B. (2025). National Costs for Cardiovascular-Related Hospitalizations and Inpatient Procedures in the United States, 2016 to 2021. American Journal of Cardiology, 234, 63–70. <https://doi.org/10.1016/j.amjcard.2024.10.003>

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Rural patients with congestive heart failure saw a 68% reduction in all-cause readmission due to remote monitoring.¹ Combined with 30% uptake of CDTM, we estimate a **20.4% reduction in all-cause readmission among those with chronic diseases**, which is a conservative estimate – this figure does not consider improved outcomes due to step-down care at local health clinics.



Implementation of **telemedicine is directly linked to a reduction in consult schedule and completion time**, improving access to specialists, which is especially pertinent for rural communities.²



Previous case studies with neurological care for Veterans Affairs in "some of the most rural areas of the country" demonstrated a 47% reduction in neurological consult completion time (non-emergency),³ and other specialty care telemedicine programs also found improvements in access and timeliness for rural communities in particular **(teledermatology, broadly⁴ and emergency teleneurology in Louisiana⁵)**.

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APPENDIX D: SHORT-TERM MEDICAL EQUIPMENT RECYCLING

46



Improved
access

+30%

Proportion of pharmacists in a CDTM¹,
reaching >200,000 rural patients.^{2,3}

79%

Patients remain at local facility.⁴

+15.9%

Rural residents gain access to facility.^{5,6}

-50%

Reduction in specialist consult time.¹

1. Appendix C

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Improved
facilities

Faster

LaHIE platform promoting interoperability.

+41

Community Health Centers joining LaHIE.

Financially secure

Rural healthcare facilities.¹

Long-term growth

In facility reinvestment and sustainability.^{2,3}

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Improved
outcomes**-21%**Reduction in cardiovascular events with CDTM agreements.¹**-10%**Reduction in diabetes-type 2 related hospital admissions for CDTMs.²**>174 million**Saved in healthcare costs for rural residents.²**-20.4%**Reduction in chronic condition readmissions.²

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2. Appendix C