

Synergizing Infrastructures for Health Equity: The "Dual-Engine" Administrative Model of the South Texas ADRC and RGV AD-RCMAR

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A "Dual Engine", composed of the South Texas ADRC and the RGV AD-RCMAR, works through a shared administrative model to advance Alzheimer's research and health equity in the Rio Grande Valley. Rather than operating separately, the two centers combine their strengths: the RCMAR builds community trust, supports workforce development, and engages underserved Hispanic populations, while the ADRC provides the clinical and scientific infrastructure needed for advanced ADRD research. Together, this "dual-system" approach helps connect community-based engagement with high-level research, creating a scalable model for recruiting underrepresented populations and strengthening both local research capacity and the national Alzheimer's disease data pipeline.

INTRODUCTION

The National Institute on Aging (NIA) supports Alzheimer's Disease (AD) research through P30 Center Core Grants: Alzheimer's Disease Research Centers (ADRCs), which prioritize biological longitudinal deep phenotyping, and Resource Centers for Minority Aging Research (RCMARs), which focus on behavioral science, community trust, and workforce development. While often siloed, the co-location of these centers presents a unique opportunity to address health disparities. This study evaluates the "Macro-Center" administrative model employed in the Rio Grande Valley (RGV), where the RGV AD-RCMAR and the South Texas ADRC operate under synergistic governance to serve a 90% Hispanic population facing high AD prevalence and historical healthcare exclusion.

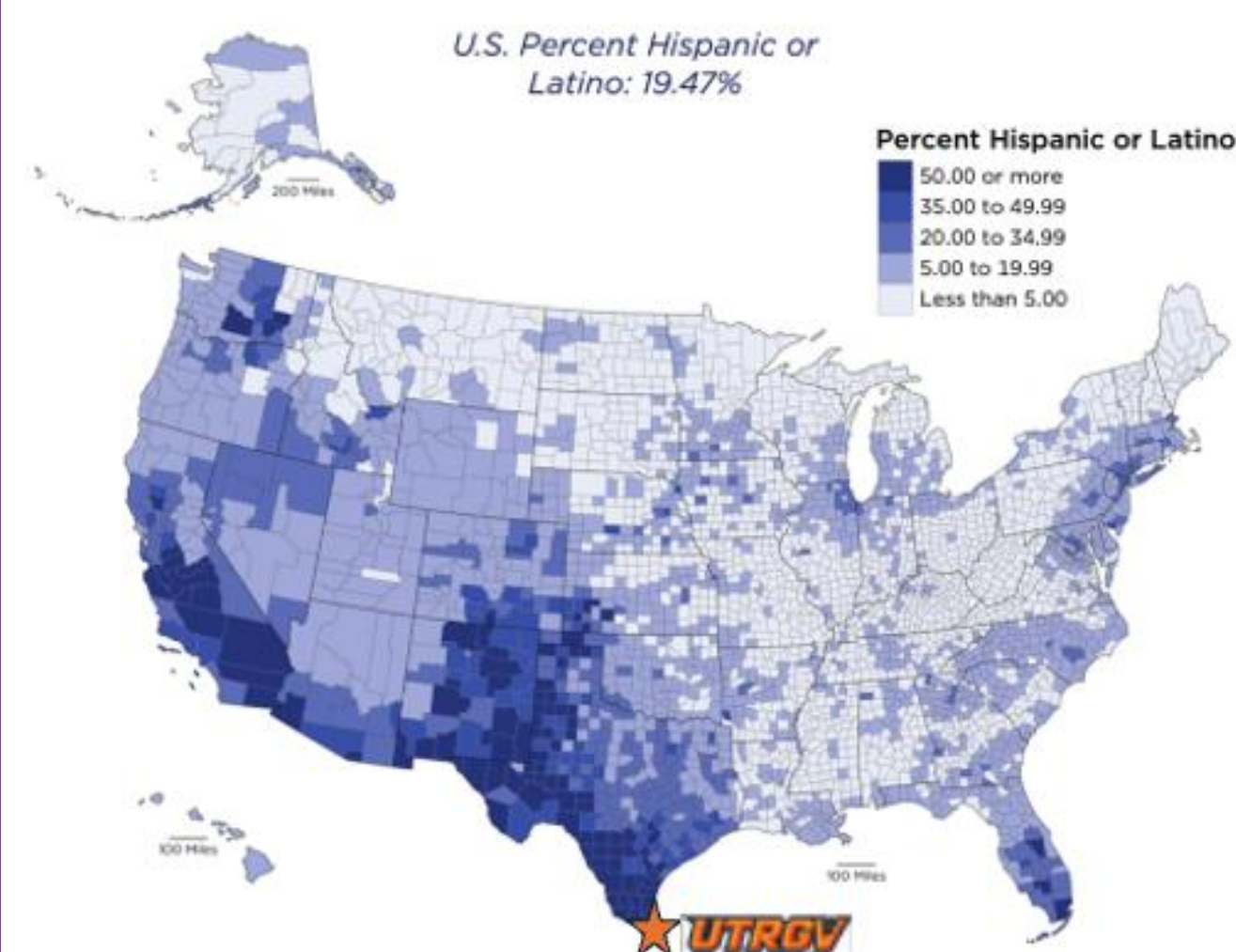


Figure 2. Hispanic or Latino population as percentage of county total population: July 1, 2023. Data source: Vintage 2023 population estimate. US Census Bureau

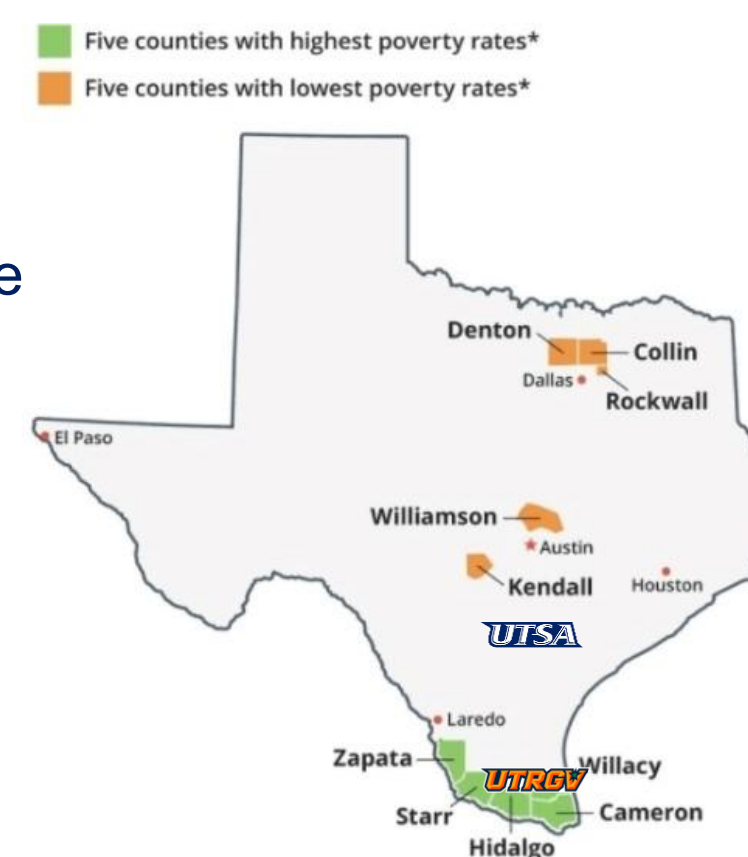


Figure 1. Texas counties with the highest and lowest poverty rates, among those with populations of 10,000 or more. January 19, 2016

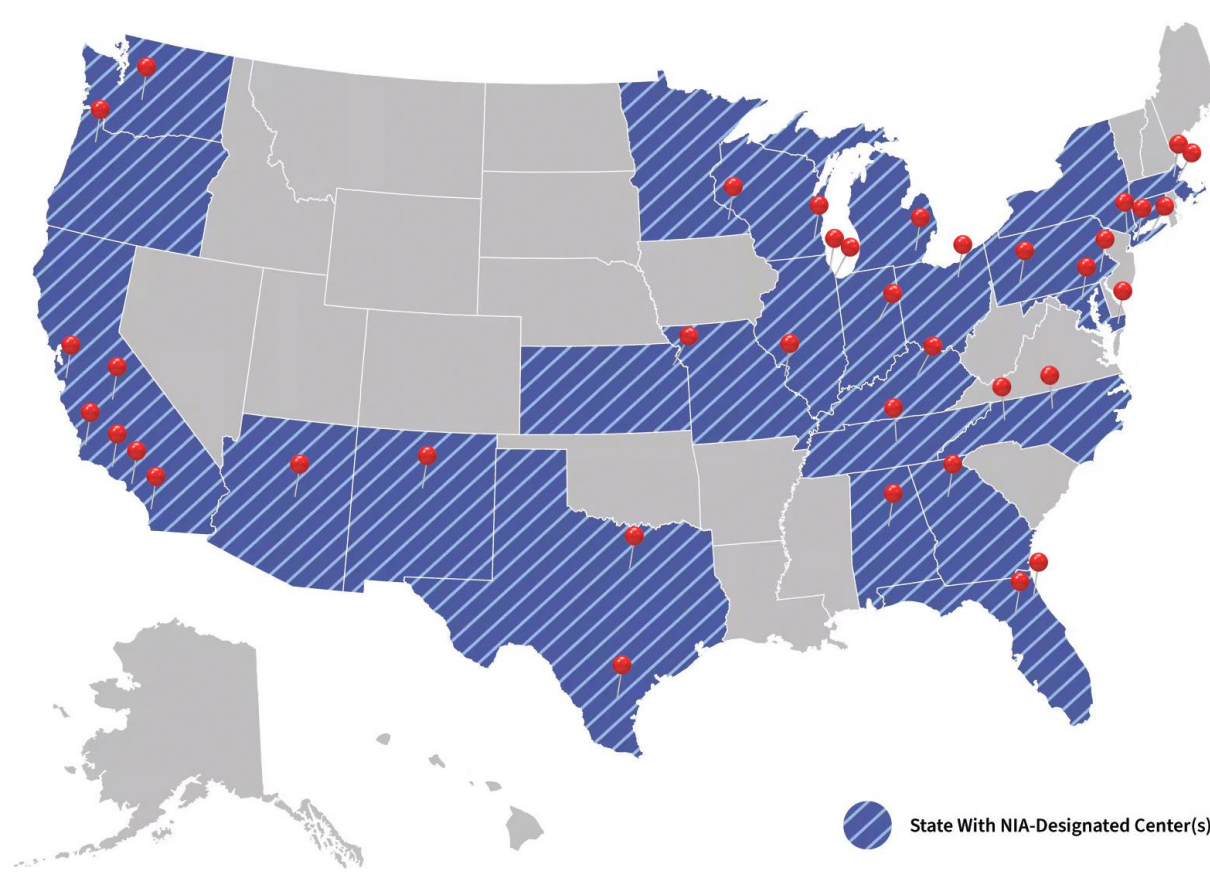


Figure 3. States with NIA-Designated Center(s). Source: NIA website. Accessed: June 22, 2026.

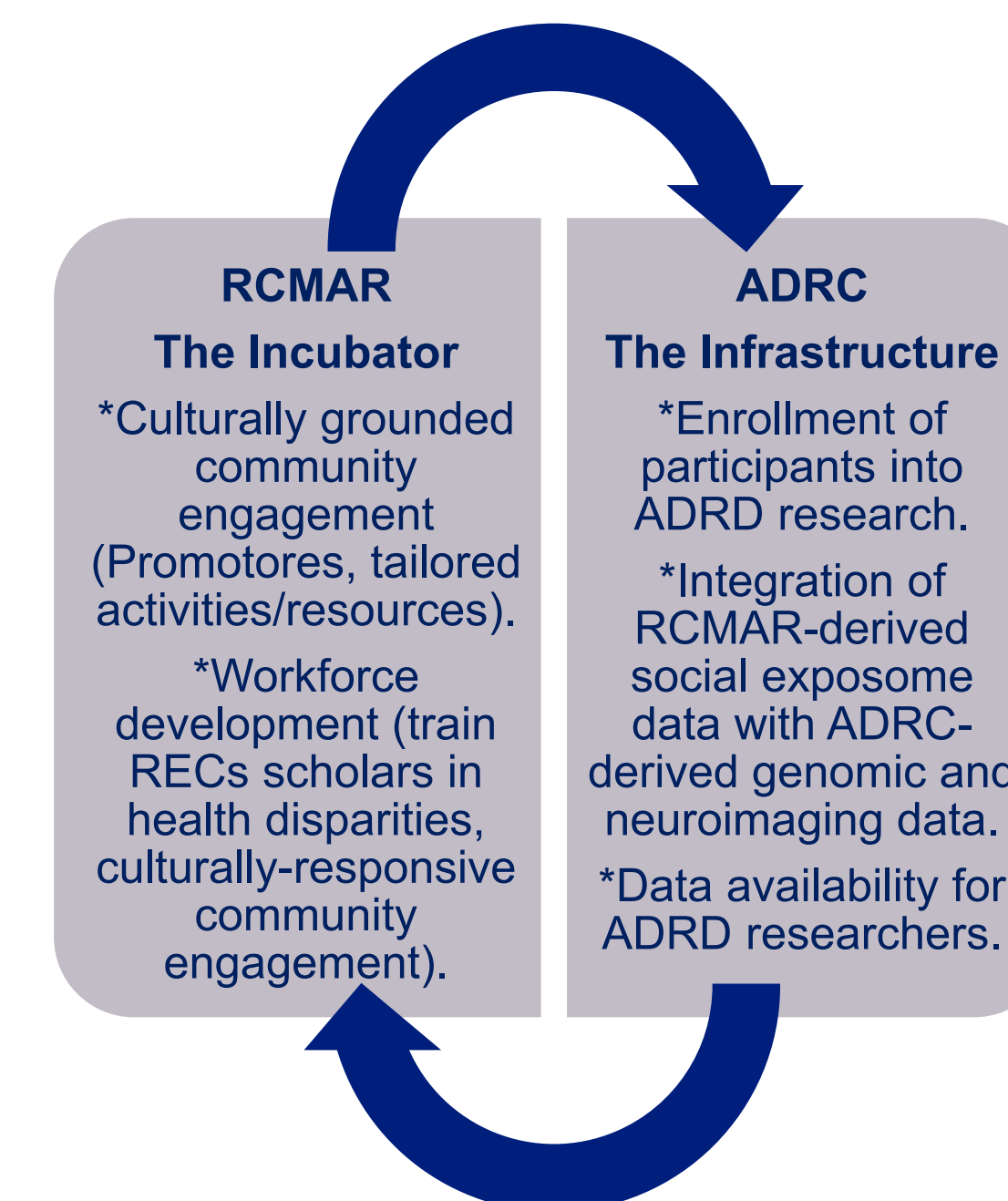
METHODS

We conducted an operational analysis of the administrative architecture of two concurrent P30 awards: South Texas ADRC and RGV AD-RCMAR. The analysis focused on the administrative strategies used to integrate three key domains:

- **Workforce Pipeline:** Harmonizing the Research Education Components (RECs) of both centers to create a tiered mentorship ladder;
- **Community Engagement:** Deploying unified "Promotora" (Community Health Worker) network to manage social trust and clinical extraction; and
- **Data Governance:** Integrating RCMAR-derived "social exposome" data with ADRC-derived genomic and neuroimaging data.

RESULTS

The Dual Engine System



Shared governance structure (Composite budgeting in key Cores & Cross-core pilot grants)

Figure 4. The Dual Engine System to advance ADRD research.

Strategic alliances strengthen organizational capacity by enabling partners to share complementary resources, knowledge, and data through coordinated collaboration. By integrating governance and leveraging data-driven capabilities, these partnerships reduce uncertainty, enhance efficiency, and support more dynamic and aligned operations, ultimately increasing collective impact.

CONCLUSION

By utilizing the RCMAR to stabilize the "community root system" and the ADRC to build the "scientific canopy", this model solves the persistent challenge of recruiting understudied populations into high-tech research. It offers a scalable administrative blueprint for institutions seeking to enhance the AD data pipeline while building sustainable local capacity while integrating strategic alliances to enhance impact across complex organizational systems

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