

Leadership, culture, and sustainability in community college-to-medical school pathways
supporting students from historically underserved populations

by

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B.S., Arizona State University, 2014
M.Ed., Arizona State University, 2020

AN ABSTRACT OF A DISSERTATION

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Abstract

Students from historically underserved populations remain underrepresented in medical education, and community college-to-medical school partnerships have emerged as a strategy for expanding access. However, limited research has examined the leadership and organizational conditions that influence whether these initiatives are sustained over time. This qualitative study explored how institutional leaders at community colleges, medical schools, and intermediary organizations develop and sustain pathway partnerships that support the matriculation of students from historically underserved populations. The study also examined how institutional culture shapes leadership decision-making related to these partnerships.

Guided by Schein's (2010) Three Levels of Organizational Culture and the 10 Dimensions of a Learning Culture, this study employed a generic qualitative design. Semi-structured interviews were conducted with 12 institutional leaders across the western and southwestern United States. Data were analyzed using inductive thematic analysis.

Seven themes emerged. Partnerships were often driven by individual champions rather than institutional systems. Institutional values frequently conflicted with operational admissions practices. Sustainability was constrained by reliance on external funding rather than embedded institutional structures. Accountability timelines were misaligned with long-term student pathways. Intermediary organizations served as key structural supports. Pre-health advising gaps limited access to pathway information. Partnership labor was often invisible and uncompensated.

Findings suggest that sustainable pathway partnerships require formal institutionalization, including alignment with organizational priorities, development of learning-oriented cultures, and integration into institutional structures and resource allocation processes.

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Table of Contents

List of Figures	xii
List of Tables	xiii
Acknowledgements	xiv
Dedication	xvi
Chapter 1 - Introduction.....	1
Statement of the Problem.....	2
Background of the Problem	3
Purpose of the Study	8
Research Questions.....	9
Theoretical Framework.....	9
Conceptual Framework.....	10
Methodology	10
Alignment Table	10
Delimitations and Assumptions	11
Significance of the Study	12
Definition of Terms	13
Chapter Summary	15
Organization of the Study	16
Chapter 2 - Literature Review.....	17
Literature Search.....	18
Theoretical Framework.....	18
Schein’s Three Levels of Organizational Culture.....	18
Conceptual Framework.....	20
Schein’s 10 Dimensions of a Learning Culture	20
Structural and Institutional Influences on Community College Pathways to Medical School.	23
Institutional Admissions Policies and Practices	25
Admissions Committees and Decision-Making Structures	26
Cognitive Metrics as Structural Filters	26

Structured Non-Cognitive Assessments in Admissions	28
Holistic Review as an Institutional Practice	29
National Best Practices for Supporting Pathways into Medical Education	34
Community College – Medical School Partnerships	38
Institutional Leadership, Policy Barriers, and Structural Resistance.....	41
Leadership and Institutional Culture in Medical Education Pathways.....	44
Chapter Summary	47
Chapter 3 - Methodology	49
Purpose of the Study	49
Research Questions.....	49
Theoretical and Conceptual Frameworks	50
Alignment Table	51
Research Design	51
Site Selection	52
Study Participants	53
Instrumentation	54
Data Collection and Data Sources	55
Data Analysis.....	56
Limitations	59
Ethical Considerations	60
Reflexivity Statement	61
Study Quality	62
Chapter Summary	65
Chapter 4 - Findings.....	66
Participant Demographics.....	66
Findings	68
Individual Champions and Institutional Sustainability.....	69
<i>Champions as the Primary Operational Unit</i>	70
<i>Relational Agreements Over Formal Structures</i>	71
<i>Personnel Transitions and Program Continuity</i>	72
<i>Competing Demands and Constrained Capacity</i>	73

Institutional Values and Structural Realities	74
<i>Tension Between Admissions Metrics and Access</i>	75
<i>Equity Commitments and Structural Capacity</i>	76
<i>Cultural Perceptions of Community College Preparation</i>	78
Structural Dependence on External Funding	79
<i>External Funding as Operational Foundation</i>	79
<i>Funding Limitations and Foreclosed Capacity</i>	81
Temporal Misalignment in Program Accountability	82
<i>Long-Horizon Outcomes in Short-Cycle Systems</i>	83
<i>Evidence and Advocacy Across Timelines</i>	84
Intermediary Organizations as Structural Supports	85
<i>Coordination and Capacity Functions</i>	85
<i>Gap-Filling and the Limits of Institutional Ownership</i>	87
Pre-Health Advising Gaps and Information Access	88
<i>Misinformation Across the Advising Chain</i>	88
<i>Institutional Responses to Advising Gaps</i>	89
Invisible and Uncompensated Labor	91
<i>Unrecognized and Uncompensated Work</i>	91
<i>Student Identity Development as Program Responsibility</i>	93
Chapter Summary	94
Chapter 5 - Conclusion and Recommendations	95
Purpose of the Study	96
Research Questions	97
Discussion Related to Research Questions	97
<i>Research Question 1</i>	98
<i>Research Question 2</i>	99
Discussion Related to Conceptual Framework	101
Discussion Related to the Literature	107
Implications	111
<i>Implications for Community Colleges</i>	112
<i>Implications for Medical Schools</i>	114

<i>Implications for Intermediary Organizations</i>	115
<i>Implications for Practice</i>	116
<i>Unexpected Results</i>	118
Recommendations for Future Research	119
Conclusion	122
References	124
Appendix A - Alignment Table	140
Appendix B - Interview Protocol	141
Appendix C - Interview Questions	147
Appendix D - IRB Approval Form	153
Appendix E - Full Inductive Coding and Theme Process	154
Appendix F - Inductive Coding Codex	156

List of Figures

Figure 1.1 <i>Racial and Ethnic Composition of Physician Supply, 2021 and 2036</i> . Reprinted from <i>The Complexities of Physician Supply and Demand: Projections From 2021 to 2036</i> , by Association of American Medical Colleges, 2024, AAMC. Copyright 2024 by the Association of American Medical Colleges. Reprinted with permission. Available from https://www.aamc.org/media/57781/download	8
Figure 2.1 Schein’s <i>Three Levels of Organizational Culture</i> . Reprinted from <i>Organizational Culture and Leadership</i> (4th ed., p. 23), by E. H. Schein, 2010, Jossey-Bass. Copyright 2010 by John Wiley & Sons.	20
Figure 2.2 <i>Schein’s 10 Dimensions of a Learning Culture</i> . Adapted from <i>Organizational Culture and Leadership</i> (4th ed., pp. 32–33), by E. H. Schein, 2010, Jossey-Bass. Copyright 2010 by John Wiley & Sons.	23
Figure 2.3 Association of American Medical Colleges’ Experiences–Attributes–Metrics (E-A-M) Model. Reprinted from <i>Holistic Review in Medical School Admissions: Assessing Applicants’ Experiences, Attributes, and Academic Metrics</i> , by Association of American Medical Colleges, 2013, AAMC. Copyright 2013 by the Association of American Medical Colleges. Reprinted with permission.	33

List of Tables

Table 1.1 Matriculation Data by Race/Ethnicity Alone, 2020–2025.....	5
Table 3.1 Tracy’s (2010) Eight Big Tent Criteria, 2010.....	64
Table 4.1 Participant Demographics.....	67
Table 4.2 Summary of Themes, Sub-themes, Codes, and Participant Contributions	68

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To my uncle Travis — I carry you with me always. I miss your presence, your guidance, and your laughter more than words can express. There are moments in this journey when I wished I could pick up the phone and tell you what was happening. I imagine you celebrating

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Chapter 1 - Introduction

Community colleges are considered the cornerstone of the American higher education system, enrolling a significant portion of undergraduate students nationwide. These institutions are designed to increase access to postsecondary education through open admission policies, affordability, and regional availability (Cohen, Brawer, & Kisker, 2014). As George R. Boggs (2010) President Emeritus of the American Association of Community Colleges, noted, “From relatively modest beginnings at the turn of the 20th century, community colleges now enroll 43 percent of all U.S. undergraduates” (p. 3). For many students from historically underserved populations, these institutions offer a starting point for transfer to four-year universities and eventual entry into professional schools. However, despite their potential to expand educational opportunity, community college transfer pathways have fallen short in supporting bachelor’s degree completion, particularly among Black and Latinx students (Wang et al., 2023).

In response to these challenges, and in recognition of the role that community colleges play in medical education pathways, various institutions have increasingly adopted partnership-based strategies linking two-year institutions, four-year universities, and intermediary organizations. These initiatives include joint advising, academic support services, and structured transfer agreements designed to align community college coursework with the expectations of medical school (Grbic et al., 2023; Melguizo et al., 2011). As institutions navigate shifts in enrollment and respond to a rapidly changing legislative landscape, these partnerships represent a viable strategy to build more intentional and sustainable pathways that support the progression of students from historically underserved populations into medicine.

Statement of the Problem

Students from historically underserved populations continue to be underrepresented in medical education. Nationally, community colleges enroll more than 12 million students annually and serve as a key entry point into higher education for students from historically underserved backgrounds, positioning them as a critical component of the physician workforce pipeline (American Association of Community Colleges [AACC], 2024). These institutions offer affordable, open access pathways for students pursuing transfer and professional careers, including medicine. However, national data indicate that only 13 percent of community college students who intend to transfer complete a bachelor's degree within six years, with completion rates significantly lower among Black and Latinx students (Wang et al., 2023). These disparities suggest that transfer pathways into medical education remain limited, particularly for students who begin their academic journey at two-year institutions.

In response, many institutions have developed partnerships with community colleges to strengthen advising, improve transfer alignment, and support preparation for medical school (Grbic et al., 2023; Melguizo et al., 2011). While these efforts represent a promising strategy for expanding access, the presence of pathway programs or partnership activities does not, by itself, ensure sustained impact. Existing research has primarily emphasized student-level barriers or program outcomes, with comparatively limited attention to the institutional conditions that shape how cross-sector partnerships are initiated, implemented, and maintained over time (Grumbach & Chen, 2006; Johnson et al., 2020). In practice, partnership efforts may vary widely in durability and depth, particularly when they depend on temporary resources, shifting priorities, or the efforts of individual champions rather than being embedded within institutional structures and routines. As a result, there remains a need to better understand how institutional leaders

develop and sustain community college to medical school partnerships and how institutional culture influences leadership decision-making, strategic planning, and the organizational supports necessary to maintain these pathways over time.

Background of the Problem

Medical education in the United States has been shaped by more than a century of reform efforts that continue to influence access and professional pathways. A defining moment was the 1910 Flexner Report, which evaluated 155 medical schools and recommended closing institutions lacking standardized curricula, qualified faculty, and adequate clinical infrastructure (Beck, 2004). Implementation of its recommendations led to the closure of more than half of all medical schools, including all but two historically Black institutions (GMR, n.d.). While these reforms enhanced scientific rigor, they also reduced the number of accessible entry points into medicine, producing structural consequences for students from historically marginalized backgrounds that remain evident today (Beck, 2024).

In the decades that followed, national organizations sought to expand opportunities for underserved students. For example, the Association of American Medical Colleges (AAMC) launched the “3,000 by 2000” campaign in 1991 to enroll 3,000 students from underserved populations by the year 2000 (AAMC, 2024). Though this initiative contributed to incremental gains, it fell short of its ultimate goal (Aysola & Ibrahim, 2023). In 2009, the Liaison Committee on Medical Education (LCME) revised accreditation standards to require schools to align admissions practices with their mission and address community needs (AAMC, 2024). These policies encouraged medical schools to adopt holistic admissions practices, considering

applicants' experiences, attributes, and academic metrics beyond GPA and MCAT scores (AAMC, 2013).

Medical schools have since implemented a range of strategies to increase the representation of students from historically underserved backgrounds, including holistic review, pathway programs, and targeted recruitment efforts. Randomized evidence indicated that patient–physician demographic concordance increases uptake of preventive care among individuals from historically underserved populations, suggesting that physician workforce representation may influence pathways to improved health outcomes (Alsan et al., 2019). Collaborations with community colleges have expanded direct entry opportunities through pathway programs, while targeted recruitment has engaged student organizations, historically Black colleges and universities (HBCUs), and Hispanic-serving institutions (HSIs). However, despite these efforts, many admissions committees continue to emphasize traditional academic metrics, reinforcing longstanding disparities in medical school access.

Admissions committees, which typically include faculty, admissions officers, and sometimes students or community representatives, play a central role in evaluating applicants and making admission decisions (Kondo & Judd, 2000). The training, structure, and composition of these committees significantly shape how applicants are assessed. Institutions that embed pathway initiatives into their core values and administrative structures, supported by visible leadership, tend to achieve more consistent matriculation outcomes for students from historically underserved populations than those that treat such efforts as temporary or externally driven. However, national enrollment data continue to reveal persistent disparities. As shown in Table 1.1, AAMC (2024) data indicate that enrollment trends by race and ethnicity have remained largely unchanged over the past five years.

Table 1.1 Matriculation Data by Race/Ethnicity Alone, 2020–2025

Percent of Matriculant Race/Ethnicity Responses		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
American Indian or Alaska Native	Alone	17.8	16.3	14.0	17.3	15.3
	In Combination	82.2	83.7	86.0	82.7	84.7
	Alone or In Combination	1.0	1.0	1.1	0.9	0.9
Asian	Alone	86.0	86.0	87.4	87.6	86.4
	In Combination	14.0	14.0	12.6	12.4	13.6
	Alone or In Combination	27.0	29.3	29.8	32.1	32.0
Black or African American	Alone	83.3	80.9	80.3	80.3	79.1
	In Combination	16.7	19.1	19.7	19.7	20.9
	Alone or In Combination	11.7	10.5	10.3	9.0	8.4
Hispanic or Latino	Alone	55.6	52.3	51.9	52.8	54.1
	In Combination	44.4	47.7	48.1	47.2	45.9
	Alone or In Combination	12.9	12.5	12.9	11.4	11.5
Middle Eastern or North African	Alone	-	-	-	-	64.0
	In Combination	-	-	-	-	36.0
	Alone or In Combination	-	-	-	-	6.5
Native Hawaiian or Pacific Islander	Alone	15.3	22.5	20.2	17.6	12.7
	In Combination	84.7	77.5	79.8	82.4	87.3
	Alone or In Combination	0.4	0.4	0.4	0.4	0.4
White	Alone	82.0	81.3	80.9	81.1	79.2
	In Combination	18.0	18.7	19.1	18.9	20.8
	Alone or In Combination	51.7	52.1	51.4	50.9	47.3
Some Other Race or Ethnicity	Alone	54.4	54.1	53.9	53.2	35.4
	In Combination	45.6	45.9	46.1	46.8	64.6
	Alone or In Combination	4.0	4.1	4.0	4.5	1.0
Unknown Race or Ethnicity		3.7	2.9	2.9	3.2	5.2
Unduplicated Total URiM Matriculants		24.9	23.3	23.6	20.7	20.3
Unduplicated Total Matriculants		100.0	100.0	100.0	100.0	100.0

Note. Data from Association of American Medical Colleges. (2025). *AAMC FACTS: Applicants and matriculants data*. <https://www.aamc.org/data-reports/students-residents/data/facts>

As medical schools explore ways to expand access, community colleges can become an increasingly vital component of the physician workforce pipeline. According to the American Association of Community Colleges (2023), more than 10 million students enroll in community colleges each year in both credit and non-credit programs. These institutions offer open admission, relatively low tuition, and geographic proximity to students' homes and communities, features that benefit students who plan to transfer into four-year institutions and pursue health-related careers (Cohen et al., 2014).

For decades, community college leaders have emphasized the importance of collaboration to improve student progression and degree completion. Roueche and Baker (1987)

argued that “community colleges cannot work in isolation if students are to achieve their long-term academic goals” (p. 112), underscoring the need for coordination between institutions. Similarly, O’Banion (1997) described transfer and access as defining features of the community college mission. These perspectives have continued to inform contemporary discussions about academic pathways and inter-institutional partnerships. Recent studies have extended these ideas, highlighting the role of comprehensive student supports and academic coaching in boosting retention, credit accumulation, and graduation rates (Alzen et al., 2021). Weiss et al. (2019) further demonstrated that New York City’s Accelerated Study in Associate Programs (ASAP) increased three-year graduation rates by 18 percentage points and six-year graduation rates by 10 points, indicating the long-term benefits of intentional support models.

At the national level, healthcare workforce shortages are widespread, with approximately 20 percent of the U.S. population residing in primary care Health Professional Shortage Areas (HPSAs) and more than 122 million Americans living in mental health professional shortage areas. These designations reflect significant gaps in access to both primary and behavioral health services across the country (Health Resources and Services Administration [HRSA], 2024). These national workforce shortfalls underscore the importance of creating clear educational pathways beginning with community colleges to support physician workforce planning and improve healthcare access. National projections from the Association of American Medical Colleges suggest that the demographic composition of the physician workforce will continue to lag behind national population trends without intentional efforts to expand access. As shown in Figure 1.1, the racial and ethnic composition of the physician workforce in 2021, along with projected estimates for 2036, highlights why examining early academic pathways, such as those originating at community colleges, is critical for longer-term workforce development. Current

initiatives to enhance transfer-level course access and completion, for example California's AB 705 legislation, show promise in addressing equity gaps and institutional barriers (Cuellar Mejia et al., 2023). These data and programs point to an urgent need for medical schools to integrate community college partnerships as a strategic priority to expand access to medical education and strengthen the physician workforce pipeline to meet both educational and healthcare workforce demands.

While community college pathway programs have gained national attention as a strategy for broadening participation in medical education, existing research has largely emphasized program design, student outcomes, or admissions reform in isolation. Far less attention has been given to the organizational and cultural conditions that influence how these initiatives are developed, institutionalized, and sustained over time. Prior studies suggest that partnership effectiveness depends not only on formal agreements or programmatic structures, but also on leadership decision-making, institutional priorities, and deeply held organizational assumptions that shape resource allocation and long-term commitment (Grumbach & Chen, 2006; Johnson et al., 2020). In complex and evolving educational environments, institutional culture influences how partnerships are interpreted, enacted, and maintained beyond initial implementation (Schein, 2010). Collectively, these historical, policy, and workforce dynamics underscore the importance of examining not only the presence of pathway initiatives, but the leadership practices and institutional cultures that determine whether such efforts are sustained over time.

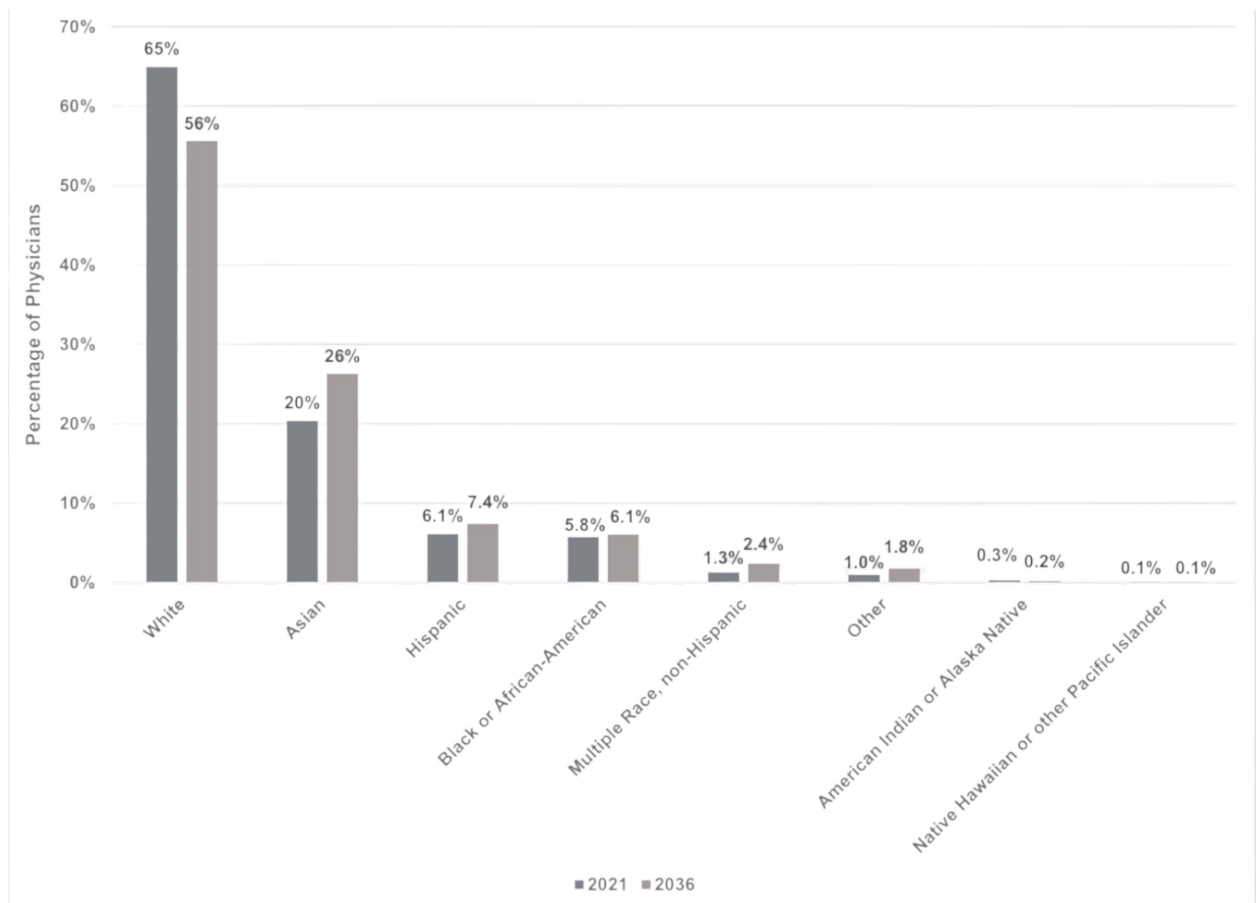


Figure 1.1 *Racial and Ethnic Composition of Physician Supply, 2021 and 2036.* Reprinted from *The Complexities of Physician Supply and Demand: Projections From 2021 to 2036*, by Association of American Medical Colleges, 2024, AAMC. Copyright 2024 by the Association of American Medical Colleges. Reprinted with permission. Available from <https://www.aamc.org/media/57781/download>

Purpose of the Study

The purpose of this study was to explore how institutional leaders at medical schools, community colleges, and intermediary organizations developed and sustained community college-to-medical school partnerships that support the matriculation of students from

historically underserved populations. The study also examined how institutional culture shaped leadership decision-making related to these pathway partnerships.

Research Questions

1. How do institutional leaders describe the development and sustainability of community college-to-medical school partnerships that support the matriculation of students from historically underserved populations?
2. How do institutional leaders describe the influence of institutional culture on leadership decision-making related to pathway partnerships?

Theoretical Framework

This study was Informed by Schein’s (2010) Three Levels of Organizational Culture model, which provided a framework for analyzing how institutional culture is embedded, communicated, and reinforced within organizations. According to Schein (2010), organizational culture operates at three interconnected levels: artifacts—the visible structures, routines, and policies; espoused values—the stated beliefs, strategies, and institutional priorities; and basic underlying assumptions—the deeply held, often unspoken beliefs that influence behavior. These cultural components shape how institutions establish goals, allocate resources, and engage in long-term strategic planning (Schein, 2010; Tierney, 2008). This model is particularly relevant in the context of educational partnerships, where long-term collaboration depends on structural coordination and the internal values and assumptions that guide institutional decision-making. Leadership plays a critical role in embedding shared values and reinforcing behaviors that support strategic goals (Kezar & Eckel, 2002; Chatman & O’Reilly, 2016).

Conceptual Framework

The conceptual framework for this study was grounded in Schein's (2010) 10 Dimensions of a Learning Culture, which highlighted the organizational conditions that promote continuous learning, adaptation, and change. These dimensions collectively described how leadership can shape an environment that supports reflective practice and drive institutional improvement. Applying Schein's (2010) 10 Dimensions of a Learning Culture framework helped illuminate the leadership practices embedded in the design, implementation, and evaluation of partnership initiatives. This perspective was particularly valuable for understanding how leaders foster institutional learning to sustain collaboration and alignment between medical schools, community colleges and pipeline or intermediary organizations (Schein, 2010; Kezar & Eckel, 2002).

Methodology

This study employed a generic qualitative research design. According to Percy et al. (2015), a generic qualitative approach is appropriate when a researcher seeks to understand how individuals interpret, describe, and make meaning of their experiences without anchoring the inquiry in a specific qualitative tradition such as phenomenology, grounded theory, or case study. This approach focuses on participants' perspectives and allows for flexible data collection and analysis procedures aligned with the research questions.

Alignment Table

An alignment table was created to provide a clear overview of how the various elements of the study are interconnected. This table included the problem based on literature findings,

research questions, the conceptual framework, methodology, and interview questions. The table illustrated the coherence and alignment among these components, ensuring a structured approach to the research (Booton, 2014). The alignment table is available in Appendix A for further reference.

Delimitations and Assumptions

This study was delimited to medical schools, community colleges, and intermediary organizations that support educational pathways from community college to medical school. These institutions and organizations were purposefully selected based on their active or established partnership efforts, institutional culture, and documented commitments to supporting the matriculation of students from historically underserved populations. Participants included admissions leaders, deans, directors, program administrators, and key institutional stakeholders directly involved in the development or oversight of partnership initiatives across these settings. Additional participant selection criteria and recruitment procedures are detailed in Chapter 3. Data collection occurred during the 2025–2026 academic year, with a final sample of 12 participants drawn from these institutions and organizations.

This study was based on two assumptions. First, it was assumed that participants would meet the eligibility criteria and have direct experience with partnership-related practices or leadership decision-making relevant to student matriculation into medical school. Second, it was assumed that participants would provide honest and forthcoming responses to interview questions, including detailed accounts of how institutional culture and leadership influence community college-to-medical school partnerships.

Significance of the Study

Community colleges enroll a significant share of undergraduate students in the United States; however, their role in shaping pathways to medical school remains under-examined. While existing research has documented programmatic efforts to support transfer and preparation for medical education, less attention has been given to the institutional and leadership conditions that influence whether these partnerships are developed and sustained over time. By centering institutional culture and leadership, this study examines how medical schools and their institutional partners describe the development and sustainability of community college-to-medical school partnerships in relation to institutional mission and long-term priorities. The findings from this study may offer practical insights for medical school administrators, community college leaders, and intermediary organizations seeking to strengthen or adapt partnership models while responding to the needs of students who begin their educational pathways at two-year institutions. This study highlights how leadership decision-making, organizational structures, and cultural norms may shape partnership durability beyond individual programs or initiatives. These insights may be especially relevant for institutions operating within complex legislative, political, or fiscal environments that constrain formal access efforts while increasing accountability for workforce outcomes.

Beyond workforce planning considerations, existing research suggests that physician representation may have implications for patient outcomes. For example, in a large observational study, Black patients treated by Black physicians experienced significantly lower in-hospital mortality compared with those treated by non-Black physicians, highlighting a potential link between workforce composition and health outcomes (Greenwood et al., 2020).

This research contributes to the limited body of scholarship examining cross-sector partnerships in medical education through an organizational and leadership lens. By focusing on how partnerships are developed and sustained across varied institutional contexts, this study lays the groundwork for future research on institutional collaboration, leadership practices, and partnership sustainability. Ultimately, the findings may inform institutional leaders seeking to design, refine, or strengthen community college-to-medical school partnerships as part of broader efforts to expand access to medical education and support a more representative physician workforce.

Definition of Terms

Affirmative Action refers to a set of policies and practices aimed at increasing the representation of underrepresented groups in educational institutions and the workforce (US Department of Labor, n.d.).

American Medical Association (AMA) is a national professional association of physicians that advocates for the interests of doctors and patients (AMA, 2023).

Association of American Medical Colleges (AAMC) is the nonprofit organization representing the medical schools and teaching hospitals in the United States (AAMC, n.d.)

Best Practices refers to evidence-based strategies, including pathway programs, mentorship, summer programs, targeted recruitment, outreach initiatives, and scholarships, that support the matriculation of students from historically underserved populations into medical school.

Community Colleges are public institutions that provide associate degrees and serve as an entry point for many students pursuing careers in medicine, often offering accessible and affordable pathways into higher education (Cohen et al., 2018).

Historically underserved backgrounds is used in this study to refer to individual students' educational experiences and trajectories shaped by these systemic conditions, including differential access to academic preparation, advising, financial resources, and institutional support (AAMC, 2022).

Historically underserved populations refer to groups that have experienced persistent structural barriers to access, representation, and opportunity within education and healthcare systems as a result of social, economic, geographic, and policy-driven inequities (National Institute on Minority Health and Health Disparities, 2025).

Holistic Admissions is an admissions process that evaluates applicants based on multiple factors, including experiences, attributes, and academic metrics, rather than relying solely on grades and test scores (AAMC, 2013).

Institutional Culture refers to the shared values, beliefs, and practices within an organization that shape decision-making, policies, and behaviors, influencing student support and admissions practices (Schein, 2010).

Intermediary organizations are nonprofit, government-affiliated, or system-level entities that operate between educational institutions to coordinate, support, and sustain cross-sector partnerships and pathway initiatives, providing functions such as program coordination and partnership facilitation without awarding academic degrees (Honig, 2004; Kania & Kramer, 2011).

A Learning Culture is an organizational environment in which institutions operate from positive assumptions about human nature, commit to truth through inquiry and dialogue, and engage in ongoing cultural analysis to support adaptation, learning, and long-term sustainability (Schein, 2010).

Medical School Matriculation is the process by which students are formally admitted and enrolled in a medical school program (AAMC, n.d.).

Organizational Change is a structured process through which institutions modify policies, procedures, and cultural practices to improve outcomes and adapt to evolving external conditions (Kotter, 1996)

Partnership Sustainability is the capacity of collaborative initiatives between institutions to be maintained over time through leadership support, formal structures, shared institutional commitment, and alignment with organizational priorities rather than reliance on individual actors alone (Grumbach & Chen, 2006; Johnson et al., 2020).

Pathway Programs are structured initiatives designed to support students from underrepresented populations in their transition from undergraduate education, particularly community colleges, into medical school (Grumbach & Chen, 2006).

Chapter Summary

This chapter provided an overview of the research problem and background, introduced the purpose of the study, and outlined the research questions guiding the inquiry. The chapter presented the theoretical and conceptual frameworks, along with the alignment table that connected each component of the study. The selected generic qualitative methodology was described, and the delimitations and assumptions that frame the scope of the research were discussed. Key terms were defined to ensure clarity, and the significance of the study was explained in relation to its potential contributions to research, policy, and practice. Taken together, this chapter established the need to examine not only the presence of community college pathway partnerships, but the leadership practices and institutional cultural conditions that shape how such partnerships are developed, institutionalized, and sustained over time.

Organization of the Study

Chapter 1 provided an introduction and background to the study. Chapter 2 presents a comprehensive review of the literature to establish the study's justification and theoretical grounding. Chapter 3 provides details about the methodology. Chapter 4 presents the study's findings. Finally, Chapter 5 discusses the findings in relation to the literature and conceptual framework, outlines implications for practice, and presents recommendations and conclusions.

Chapter 2 - Literature Review

This chapter presents a literature review relevant to institutional partnerships between community colleges and medical schools, with a focus on how organizational culture and leadership practices shape the development, implementation, institutionalization, and sustainability of efforts that support the matriculation of students from historically underserved populations. The review addresses the broader educational and institutional factors that influence access to medical education, including the role of community colleges, the structure of admissions processes, and policies aimed at promoting equity. Additionally, this chapter examines how leadership behaviors and decision-making practices contribute to building and sustaining a supportive culture for partnerships that advance pathways for students from historically underserved populations.

Chapter 2 begins with a description of the literature search strategy used to identify relevant scholarship. It then presents the theoretical and conceptual frameworks that guide the study. Schein's (2010) Three Levels of Organizational Culture and 10 Dimensions of a Learning Culture provide a foundation for examining how institutional structures, values, and leadership practices influence strategic planning and program development. The literature review will further expand upon the function of community colleges within the medical education pipeline, highlighting student demographics, transfer patterns, and progression barriers. Next, the review focused on pathway programs and models of inter-institutional collaboration, including their design, challenges, and structural features that may promote sustainability. This is followed by a review of literature addressing the role of organizational culture in shaping admissions policies and recruitment strategies. The chapter then adds a review of leadership's role in sustaining long-term change efforts and supporting programs that advance access to medical education. The

chapter will conclude by identifying key gaps in the literature that informed the design and direction of the present study.

Literature Search

This literature was obtained through comprehensive searches of academic databases available through the Kansas State University Library, including PubMed, JAMA, Google Scholar, and the AAMC Library. The review included peer-reviewed journal articles, dissertations, academic books, policy briefs, and institutional reports. The search included the following terms: community college transfer, pathway programs, medical school admissions, organizational culture, and institutional leadership in higher education. The review included literature published over the past twenty years, with foundational studies included where necessary to provide historical context.

Theoretical Framework

Schein's Three Levels of Organizational Culture

The theoretical framework that guided this study was Schein's (2010) model of organizational culture, which offered a nuanced approach to understanding the complexities of culture within medical schools. This model consists of three interrelated levels: artifacts, espoused beliefs and values, and underlying assumptions. Artifacts represent the most visible aspects of culture, including physical structures such as medical school facilities, curriculum design, and faculty interactions. Espoused beliefs and values reflect the organization's stated philosophies and strategies for responding to challenges and promoting cohesion. Underlying assumptions refer to deeply held, often unspoken beliefs that evolve through repeated success in problem-solving and decision-making. These assumptions typically go unchallenged and serve as the cultural foundation of an organization.

Several researchers have applied Schein's model to examine institutional culture in medical education. Chaves et al. (2021) used interviews and focus groups to explore how artifacts reflected deeper cultural assumptions about learning and student support. Although the institution espoused values of inclusivity, underlying assumptions reinforced traditional hierarchies that hindered collaboration. Ginsburg et al. (2020) employed a mixed-methods approach to assess alignment between stated values and actual practices. This author discovered that intentional alignment between artifacts and espoused values enhanced students' perceptions of institutional support and inclusivity. Nolan and Owen (2023) analyzed student feedback to better understand perceptions of equality, diversity, and inclusion. Their findings explained how students acknowledged positive aspects of institutional policy that contributed to the systemic cultural assumptions that continued to shape student experiences, suggesting the need for deeper structural change. In contrast, Tuckett et al. (2020) conducted a case study at a medical school that successfully integrated Schein's model into curriculum reform. Their findings showed that intentional engagement with cultural artifacts and alignment with institutional values fostered innovation, collaboration, and improved student learning outcomes.

In summary, Chaves et al. (2021) and Ginsburg et al. (2020) highlighted cultural misalignments between espoused values and institutional assumptions, while Nolan and Owen (2023) and Tuckett et al. (2020) illustrated the potential for cultural transformation through intentional practice. These studies reinforce the importance of addressing all levels of culture—visible, stated, and assumed to enact lasting institutional change. Figure 2.1 presents Schein's (2010) Three Levels of Organizational Culture.

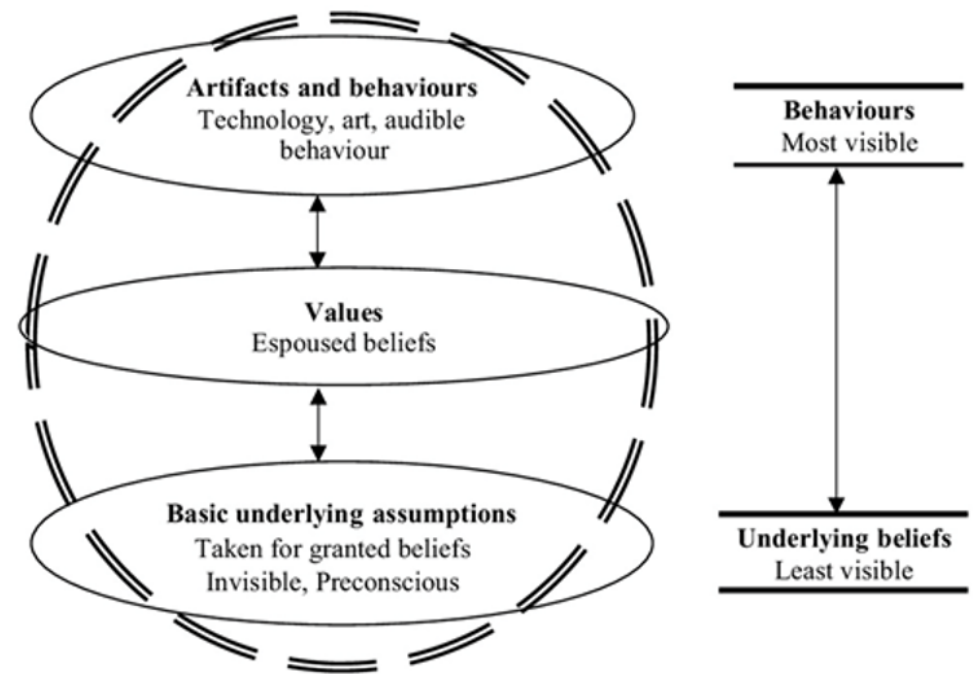


Figure 2.1 Schein's *Three Levels of Organizational Culture*. Reprinted from *Organizational Culture and Leadership* (4th ed., p. 23), by E. H. Schein, 2010, Jossey-Bass. Copyright 2010 by John Wiley & Sons.

Conceptual Framework

Schein's 10 Dimensions of a Learning Culture

This study was informed by Edgar Schein's (2010) 10 Dimensions of a Learning Culture, a framework that offers a structured lens for examining how institutions cultivate environments that support continuous learning, reflection, and cultural adaptation. These dimensions provide insight into how institutional leaders create and maintain the organizational conditions necessary to implement and sustain cross-sector partnerships and student support strategies. Schein (2010) identified 10 conditions or dimensions necessary for organizations to develop a learning culture. These conditions include proactivity, commitment to learning, positive assumptions about human

nature, belief that the environment can be managed, commitment to truth through inquiry and dialogue, positive orientation toward the future, commitment to full and open communication, commitment to cultural diversity, commitment to systemic thinking, and belief in the value of cultural analysis. Collectively, these dimensions enable institutions to examine assumptions, evaluate practices, and remain responsive to shifting internal and external demands.

Although originally developed for corporate organizations, Schein's (2010) cultural framework has been applied in higher education to examine institutional change and leadership behavior. Kezar and Eckel (2002), in a qualitative multiple case study of six colleges and universities, used Schein's concept of organizational culture to explore how leadership facilitated change initiatives. Their study found that transformation was most effective when leadership addressed both structural change and the underlying cultural beliefs and values of the institution. In a different context, Rebelo and Gomes (2011) conducted a quantitative survey-based study of higher education institutions in Portugal to assess the relationship between learning culture and organizational performance. Their results showed that participatory leadership, clear strategic goals, and strong team dynamics were associated with higher levels of organizational learning. These findings supported Schein's premise that culture can either support or hinder organizational learning and adaptability.

In academic medicine, components of Schein's learning culture have been used to assess faculty development and organizational improvement. Steinert (2010), in a qualitative review of faculty development literature, emphasized open communication and positive assumptions about human capacity as critical. Similarly, Edmondson and Lei (2014), through a systematic review of empirical studies found that a culture of open communication and belief in human capability was foundational for innovation and learning within complex organizations. Although not exclusive

to higher education, their findings reinforced the applicability of Schein’s dimensions to institutional responsiveness and team-based decision-making.

Few studies have applied the complete 10 Dimensions framework specifically to medical school admissions or cross-sector partnerships. However, related research on equity, transfer pathways, and leadership practices supports its relevance. Bensimon (2005) focused on equity reform in community colleges by using cultural inquiry to shift institutional responsibility for student outcomes. Her findings aligned with Schein’s emphasis on reflective practice and the interrogation of underlying assumptions. Crisp and Cruz (2009) examined student support systems and mentoring in community college transfer programs. Although their work did not directly apply Schein’s framework, they synthesized practices that reflect the need for institutional alignment, cultural responsiveness, and collaborative leadership which are core features of a learning culture. Figure 2.2 presents a visual representation of the framework as applied in this study.

1 Proactivity Leaders and institutions take initiative to identify barriers and create opportunities rather than responding reactively.	6 Positive Orientation Toward the Future Institutions adopt a forward-looking stance, treating challenges as solvable and planning with long-term sustainability in mind.
2 Commitment to Learning Ongoing learning is embedded as a core institutional value, reflected in leadership behavior, resource allocation, and planning.	7 Commitment to Full and Open Communication Task-relevant information is shared transparently across roles and institutional boundaries to support coordinated action.
3 Positive Assumptions About Human Nature Organizations operate from a belief that people are capable, motivated, and deserving of investment and trust.	8 Commitment to Cultural Diversity Institutions recognize and value diverse perspectives, backgrounds, and experiences as sources of organizational strength.
4 Belief That the Environment Can Be Managed Leaders assume that external constraints can be navigated through collective action, adaptation, and institutional will.	9 Commitment to Systemic Thinking Leaders conceptualize organizations as interdependent systems, recognizing how decisions in one area affect the whole.
5 Commitment to Truth Through Inquiry and Dialogue Decisions are reached through open, evidence-informed conversation rather than hierarchy or unexamined assumption.	10 Belief in the Value of Cultural Analysis Institutions engage in ongoing internal examination of assumptions, norms, and values to support adaptive and sustainable change.

Figure 2.2 *Schein's 10 Dimensions of a Learning Culture*. Adapted from *Organizational Culture and Leadership* (4th ed., pp. 32–33), by E. H. Schein, 2010, Jossey-Bass. Copyright 2010 by John Wiley & Sons.

Structural and Institutional Influences on Community College Pathways to Medical School

Community colleges have served as a critical component of the medical education pipeline by providing accessible entry points for students pursuing careers in the health professions. Through open-admission policies, lower tuition costs, and geographic accessibility, these institutions enroll a high proportion of students from historically underserved populations (Cohen et al., 2014). Community colleges also offer foundational coursework that fulfills prerequisite requirements for medical and other health professional programs (Levin, 2001, 2007, 2017).

Research examining the outcomes of students with community college experience has revealed both consistent patterns and key areas of variation. Talamantes et al. (2019) found that physicians who began their postsecondary education at community colleges were statistically more likely to practice primary care and serve in medically underserved areas compared to those without such experience. Their study highlighted how educational background influenced specialty choice and service distribution in the medical workforce. In contrast, Saguil and Kellermann (2014) focused on admissions outcomes and found that students who attended community colleges as part of their premedical preparation were admitted to medical school at lower rates than their peers from four-year universities, even after controlling for GPA and MCAT scores. These researchers noted that despite comparable academic performance,

applicants from community colleges were evaluated through a lens that prioritized traditional educational pathways, limiting recognition of nontraditional student potential.

Talamantes et al. (2019) examined postgraduate practice characteristics, while Saguil and Kellermann (2014) addressed disparities in admissions processes, with an emphasis on access and equity for students from underrepresented and nontraditional backgrounds. Additional studies have explored how institutional resources shape these outcomes. Talamantes et al. (2019) and Bazargan-Hejazi et al. (2022) separately investigated the availability of academic support resources for community college students, including premedical advising, MCAT preparation, and research opportunities. Both studies concluded that such resources were less accessible at two-year colleges compared to four-year institutions. While Talamantes et al. (2019) emphasized advising structures and programmatic supports, Bazargan-Hejazi et al. (2022) focused on broader institutional infrastructure and preparatory programming. Saguil and Kellermann (2014) underscored how persistent reliance on cognitive metrics in admissions continue to pose structural barriers for applicants from nontraditional pathways. McFarland et al. (2019) contributed to this conversation by exploring the educational trajectories of community college students. Their study documented the prevalence of non-linear academic paths among these students, who often balance coursework with employment or family obligations, affecting the pacing and sequencing of premedical preparation.

These findings stand in contrast to those of (Grbic et al., 2015), who examined how institutional origin influenced admissions committee perceptions. Their findings indicated that students acknowledged positive aspects of institutional policy while also identifying persistent systemic assumptions that continued to shape their experiences, even when controlling for GPA and MCAT scores. While McFarland et al. (2019) focused on student responsibilities and life

circumstances, Grbic et al. (2015) highlighted how evaluative processes and institutional biases impact admissions outcomes. Laird et al. (2011) added further context by examining the intersections of socioeconomic status, educational capital, and institutional type. Their findings reinforced the importance of considering multiple, overlapping factors that shape the medical school trajectory for students from underrepresented and nontraditional backgrounds.

Institutional Admissions Policies and Practices

Medical school admissions policies and practices serve as a critical gatekeeping mechanism within the physician workforce pipeline. Although admissions processes are often described as holistic and mission-aligned, the literature demonstrated that selection decisions are shaped by a complex interaction of institutional priorities, evaluative norms, and leadership-defined definitions of merit. Research in medical education has increasingly moved beyond describing admissions criteria to examining how institutional structures, decision-making processes, and cultural assumptions influence which applicants are deemed competitive and how selection tools are operationalized across stages of review.

Early scholarship on medical school admissions focused primarily on identifying predictors of academic success, emphasizing the reliability and predictive validity of cognitive metrics such as undergraduate grade point average and standardized test scores. Over time, however, researchers have documented growing concern that admissions systems relying heavily on traditional academic indicators may fail to capture the full range of competencies required for medical training and practice, particularly for applicants from nontraditional educational pathways. This shift has prompted expanded use of structured interviews, situational judgment

tests, and holistic review frameworks, yet evidence suggests that the adoption of these practices varies substantially across institutions.

Admissions Committees and Decision-Making Structures

Admissions decisions are rarely made by a single individual; instead, they emerge through committee-based deliberations shaped by institutional norms and leadership priorities. Studies examining admissions committee composition and decision-making processes indicate that committee members draw on both formal criteria and informal judgments when evaluating applicants. Research by Monroe et al. (2013) demonstrated that admissions committee members often rely on shared understandings of academic readiness and professional fit that extend beyond written policies, influencing how applicant materials are interpreted during deliberation. These findings suggest that admissions outcomes reflect not only applicant qualifications, but also institutional culture and collective sense-making processes. Methodologically, studies of admissions committees often employ qualitative designs, including interviews and observational approaches, to capture how evaluative judgments are formed. Such studies highlight the limitations of policy-based analyses alone, as formal admissions guidelines may not fully reflect how decisions are enacted in practice. This body of work reinforces the importance of examining admissions policies as lived organizational practices rather than static procedural documents.

Cognitive Metrics as Structural Filters

A substantial body of quantitative research has examined the role of cognitive metrics, particularly undergraduate GPA and MCAT scores, in predicting medical school performance. Across studies, these measures demonstrate statistically significant associations with academic

outcomes, including medical school GPA and licensing examination scores (Saguil et al., 2015; Royal et al., 2024). These findings support the continued use of cognitive metrics as indicators of academic preparedness, particularly in early screening stages where large applicant pools necessitate efficient evaluation mechanisms. At the same time, closer examination of predictive validity studies revealed important limitations. Saguil et al. (2015), using longitudinal data from military medical trainees, found that while MCAT scores predicted certain academic outcomes, their associations with postgraduate performance were modest. Similarly, Royal et al. (2024) reported that GPA and MCAT scores explained only a portion of variance in licensing examination performance, indicating that significant dimensions of medical training success remain unaccounted for by cognitive metrics alone. These findings have led researchers to caution against over reliance on academic indicators as proxies for future clinical competence.

Methodological critiques further complicate interpretation of cognitive metrics research. Many predictive validity studies rely on standardized outcomes and large administrative datasets, which strengthen statistical inference but narrow conceptualizations of success. Such designs often overlook contextual factors such as institutional grading practices, curricular structure, and access to academic supports. Moreover, cognitive metrics are frequently treated as neutral indicators, with limited attention to how institutional origin or educational pathway may influence their interpretation. For applicants from community colleges and other nontraditional pathways, academic records may reflect part-time enrollment, employment obligations, or delayed sequencing of prerequisite coursework, factors not captured by aggregate GPA or standardized test scores.

Structured Non-Cognitive Assessments in Admissions

Coursework and GPA are critical components of the medical school admissions process; however, their relevance extends beyond numerical thresholds. The rigor and variety of courses completed contribute to the strength of an applicant's academic profile and influence how GPA is interpreted. The AAMC (2023) emphasized that admissions committees often assess both cumulative GPA and the nature of the coursework undertaken. Advanced science coursework in subjects such as biology, chemistry, and physics is frequently used as an indicator of academic readiness for the demands of medical education. Schneid et al. (2020) investigated the relationship between course load and GPA, finding that students who pursued heavier course loads demonstrated competencies such as time management, resilience, and the ability to manage academic stress—qualities that align closely with the rigor of medical school. Conversely, a higher GPA earned through a lighter course load may prompt questions about whether the applicant has been sufficiently challenged. As a result, admissions committees are placing greater emphasis on contextualizing academic performance rather than relying on GPA in isolation.

Affordability also plays a significant role in shaping academic outcomes. Salhi et al. (2022) found that students from historically underrepresented populations often face financial constraints that limit their ability to enroll in advanced coursework or participate in academic enrichment opportunities. Supporting this, the AAMC (2021) reported that students from lower socioeconomic backgrounds have fewer opportunities to access rigorous science courses, which can influence both GPA and perceived academic preparation. These structural barriers highlight the importance of admissions processes that account for inequities in educational access. A holistic review that considers academic performance within the broader context of course rigor,

institutional resources, and socioeconomic background allows admissions committees to assess applicant potential more accurately, particularly among students from historically marginalized communities. Such an approach has been described as supporting more equitable evaluation practices and aligns with broader efforts to diversify the physician workforce (AAMC, 2013).

Holistic Review as an Institutional Practice

Examining the Association of American Medical Colleges' Experiences–Attributes–Metrics (E-A-M) model, introduced in 2013, provides insight into how holistic review principles may be operationalized within medical school admissions processes. Developed in response to growing concerns about over reliance on academic metrics and persistent disparities in medical school access, the E-A-M model offers a structured framework for evaluating applicants in a manner aligned with institutional mission and workforce priorities. As illustrated in Figure 2.3, the model conceptualizes applicant evaluation as an integrated assessment of experiences, attributes, and academic metrics rather than a sequential or hierarchical screening process. The E-A-M model emerged alongside broader calls for admissions reform aimed at addressing inequities in medical education and advancing health equity through mission-aligned admissions practices. Rather than rejecting academic standards, the framework emphasizes contextualized evaluation, encouraging admissions committees to consider how applicants' lived experiences and personal attributes interact with traditional academic indicators. In this way, the model reflected a shift from deficit-based interpretations of nontraditional pathways toward a more inclusive understanding of preparedness and potential.

Within the E-A-M framework, experiences encompass the personal, educational, and professional contexts that shape applicants' perspectives and competencies. These may include

clinical exposure, community engagement, employment, leadership roles, research participation, and experiences navigating adversity. Conrad et al. (2016) emphasized that experiences provide critical insight into applicants' motivation for medicine and their capacity to engage with diverse populations and complex health systems. Studies examining experiential components of applications suggest that these elements can illuminate forms of preparation and commitment not readily captured through academic metrics alone, particularly for applicants from community college or other nontraditional educational pathways.

Attributes refer to personal qualities and dispositions considered essential for effective medical practice, such as resilience, empathy, ethical reasoning, adaptability, and cultural awareness. Witzburg and Sondheimer (2013) argued that these attributes are central to physicians' ability to deliver patient-centered care and navigate increasingly diverse clinical environments. Research examining admissions committee deliberations indicated that attributes are often discussed implicitly, shaped by institutional norms and shared assumptions about professional fit. As a result, the extent to which attributes are systematically assessed varies across institutions, highlighting the importance of structured frameworks like E-A-M for promoting transparency and consistency.

Metrics, the third component of the model, include traditional academic indicators such as undergraduate GPA and standardized test scores. Rather than eliminating metrics, the E-A-M framework situates them within a broader evaluative context. Mahon et al. (2013) noted that metrics remain useful indicators of academic readiness but cautioned that their predictive utility is limited when used in isolation. By integrating metrics with experiences and attributes, the E-

A-M model seeks to preserve academic standards while reducing undue emphasis on numerical thresholds that may disadvantage applicants from less resourced educational settings.

In practice, the E-A-M model serves as a mechanism for implementing holistic review, which is commonly defined as an admissions approach that evaluates the whole applicant in relation to institutional mission. Conrad et al. (2016) described holistic review as a process that requires intentional alignment between institutional values and admissions criteria. Empirical studies suggest that institutions adopting holistic review frameworks, including E-A-M, have reported increases in class diversity without compromising academic performance. AAMC (2013) reports indicated that schools using holistic review approaches observed gains in the enrollment of students underrepresented in medicine, although outcomes varied based on institutional context and implementation strategies. Research also underscored that adoption of the E-A-M model is not uniform across medical schools. Some institutions have embedded the framework across all stages of admissions, supported by structured training, explicit evaluation rubrics, and ongoing reflection. Nakae et al. (2022) found that sustained attention to bias mitigation, reviewer calibration, and structured evaluation strengthened the impact of holistic review practices. In contrast, institutions that adopted the language of holistic review without modifying early screening thresholds or committee norms demonstrated more limited changes in admissions outcomes. These findings suggest that the effectiveness of the E-A-M model depends not only on formal adoption, but on the extent to which it is integrated into organizational routines and decision-making processes.

Comparative studies further indicate that continued reliance on standardized test scores and GPA cutoffs may unintentionally perpetuate disparities. Saha and Shipman (2007) argued

that standardized assessments often fail to capture contextual factors influencing academic performance and may reinforce structural inequities. Similarly, the Sullivan Commission (2004) emphasized that meaningful progress in diversifying the physician workforce requires admissions reform that extends beyond technical adjustments to address institutional priorities and accountability structures. From this perspective, the E-A-M model functions as both a technical framework and a cultural signal, reflecting how institutions define merit, readiness, and mission alignment. By integrating experiences, attributes, and metrics, the E-A-M model provides admissions committees with a structured approach to identifying candidates who meet academic standards while also contributing diverse perspectives and skills aligned with institutional goals. Bouye et al. (2016) noted that applicants selected through holistic frameworks often bring experiences that enhance learning environments and patient care, reinforcing the value of inclusive admissions practices. However, the literature also cautions that holistic models require sustained leadership commitment, shared understanding among reviewers, and institutional learning to achieve intended outcomes.

Taken together, scholarship on the E-A-M model highlights its potential as a tool for advancing equitable and mission-aligned admissions practices, while also illustrating the challenges of implementation across diverse institutional contexts. The model's effectiveness ultimately depends on how admissions committees interpret and enact its components within existing organizational cultures. As medical schools continue to respond to evolving workforce needs and policy environments, the E-A-M framework remains a central reference point for examining how institutional culture and leadership shape admissions decision-making and pathway access.

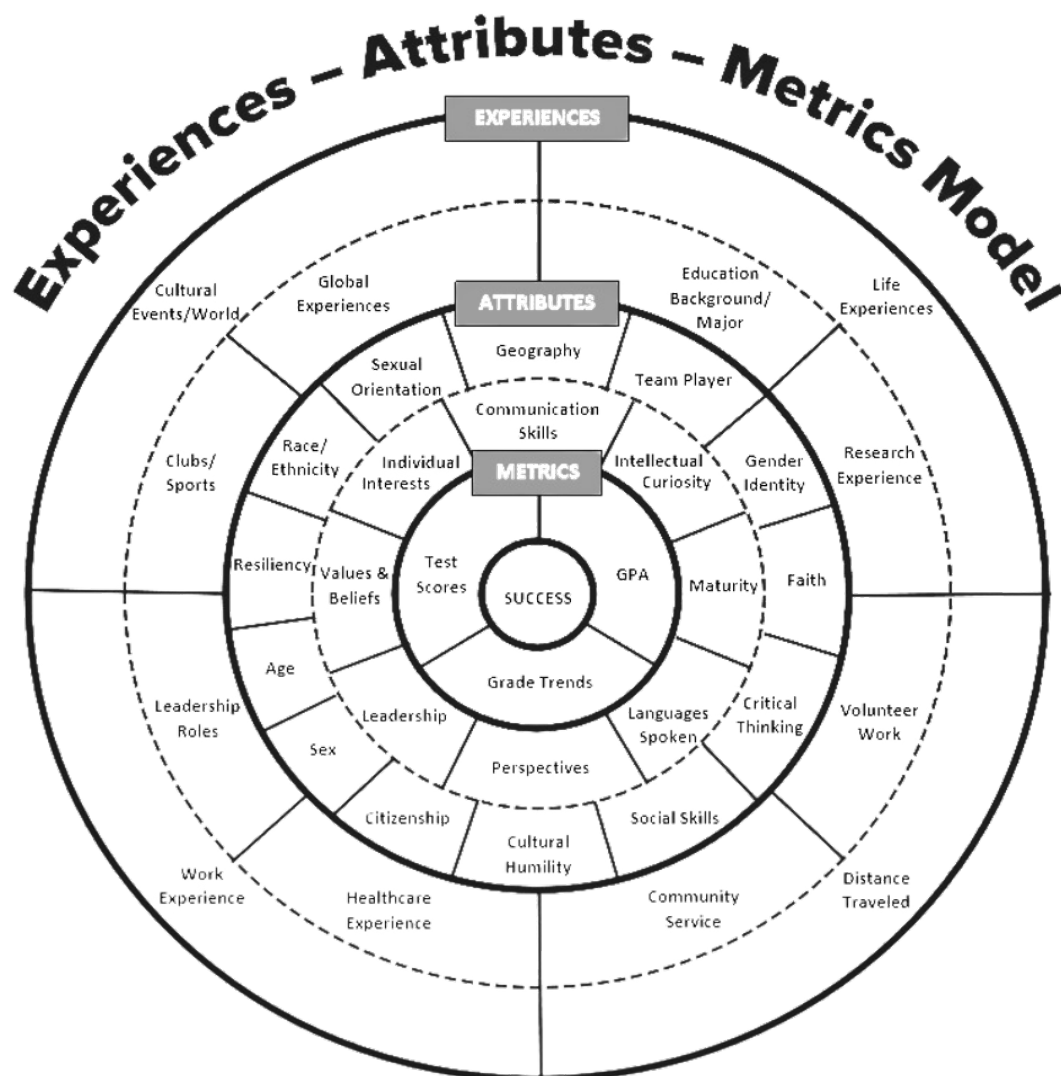


Figure 2.1 Association of American Medical Colleges’ Experiences–Attributes–Metrics (E-A-M) Model. Reprinted from *Holistic Review in Medical School Admissions: Assessing Applicants’ Experiences, Attributes, and Academic Metrics*, by Association of American Medical Colleges, 2013, [AAMC](https://www.aamc.org/). Copyright 2013 by the Association of American Medical Colleges. Reprinted with permission.

National Best Practices for Supporting Pathways into Medical Education

Medical schools across the United States have increasingly adopted evidence-informed best practices designed to support the matriculation and success of students from historically underserved populations. The literature consistently documents that these students encounter multifaceted barriers across the medical education pipeline, including limited access to academic preparation opportunities, financial constraints, reduced exposure to professional networks, and fewer mentorship relationships. In response, institutions have implemented a range of programmatic, financial, and partnership-based strategies intended to foster supportive educational environments and mitigate structural barriers to entry and persistence in medical education.

One widely documented set of practices involves the implementation of pre-matriculation and pathway programs designed to prepare students for the academic and social demands of medical education prior to enrollment. These programs typically provide academic enrichment, clinical exposure, mentorship, and professional socialization that strengthen readiness for medical training. For example, the Summer Medical and Dental Education Program offered intensive summer experiences that included coursework, clinical exposure, and skills development for students from historically underserved backgrounds, with program evaluations reporting increased confidence, academic preparedness, and understanding of medical school expectations among participants (Summer Medical and Dental Education Program, n.d.). Similar initiatives developed at institutions such as the University of California, San Diego emphasized cohort-based learning and peer support as mechanisms for bridging undergraduate education and

medical training, reinforcing the role of community and belonging in early professional identity formation (University of California, San Diego, n.d.).

Targeted financial aid and scholarship programs have also been identified as critical best practices for reducing barriers to medical school access and completion. Financial considerations influence both application behavior and specialty choice, particularly among students from historically underserved backgrounds. Medical schools including Harvard and Stanford have expanded need based financial aid offerings to reduce anticipated debt burden, with institutional reports indicating that enhanced financial support is associated with increased enrollment of students from lower income backgrounds and greater flexibility in career decision-making (Harvard Medical School, n.d.; Stanford Medicine, n.d.). National analyses further suggest that loan forgiveness and service linked scholarship programs may encourage graduates to pursue careers in primary care and public health fields that disproportionately serve underserved communities (Association of American Medical Colleges, 2015).

Mentorship is repeatedly identified in the literature as a central factor influencing persistence and success in medical education. Formal mentorship programs that connect students with faculty members or practicing physicians provide guidance related to academic navigation, professional development, and career planning. For instance, the University of Michigan Medical School implemented a structured mentorship initiative for students from historically underserved backgrounds that paired participants with faculty mentors based on shared interests and experiences. Evaluations of such programs emphasize the role of mentorship in fostering belonging, strengthening professional identity, and supporting retention in medical training (University of Michigan Medical School, n.d.).

In recent years, best practices have increasingly extended beyond individual medical schools to include structured partnerships that begin earlier in the educational pipeline, particularly at community colleges. National data indicate that community colleges enroll a substantial proportion of students from historically underserved backgrounds, yet relatively few students who begin at two-year institutions ultimately matriculate into medical school (Wang et al., 2023). Research examining community college to medical school pathways suggests that formalized cross institutional partnerships improve continuity across educational transitions and reduce informational and structural barriers faced by premedical students (Melguizo et al., 2011; Grbic et al., 2015).

The California Medicine Scholars Program provides an illustrative example of a statewide, partnership-based approach to strengthening community college pathways into medicine. Launched in 2022 and administered through the Foundation for California Community Colleges, the program operates through regional hubs that connect community colleges, universities, medical schools, and health systems. Within its first three years, the program expanded to include more than fifty participating institutions across California and served over six hundred students, with program reporting documenting improved retention, increased transfer readiness, and the program's first medical school matriculant by its third year of implementation (Foundation for California Community Colleges, 2025). These early outcomes suggest that coordinated, institutionally supported pathway models may strengthen access to medical education for students who begin their academic journeys at community colleges.

Policy oriented research further situates pathway initiatives within broader workforce development strategies. An issue brief from the Healthforce Center at the University of California, San Francisco examined accelerated health professions education programs as one approach to addressing healthcare workforce shortages. The brief reported that accelerated programs in fields such as nursing and pharmacy demonstrated academic outcomes comparable to traditional programs, though evidence related to physician education remains limited (Healthforce Center at UCSF, 2025). The analysis emphasized that accelerated medical education pathways should be implemented cautiously and in conjunction with robust academic and financial supports to avoid reinforcing existing inequities. While accelerated pathways are not a standalone solution, this policy research underscored the importance of aligning pathway design with workforce needs and institutional accountability.

Collaboration with community organizations and early outreach efforts further extend the reach of medical education pathway strategies. Programs such as the National Health Service Corps engage students as early as high school by providing exposure to medical careers, mentorship, and service oriented educational opportunities that sustain long-term interest in health professions (National Health Service Corps, n.d.). The literature indicated that these early engagement strategies contribute to increased awareness of medical career pathways and help establish longitudinal pipelines that support a more representative physician workforce. Taken together, the literature identifies a set of empirically supported best practices for advancing medical education pathways that include pre-matriculation and enrichment programs, targeted financial aid, structured mentorship, holistic admissions practices, early pipeline outreach, and formalized cross-sector partnerships beginning at community colleges. When these practices are embedded within institutional structures and supported by leadership, they demonstrate greater

potential for sustainability and impact than initiatives dependent on individual champions or short-term funding (Grumbach & Chen, 2006; Johnson et al., 2020).

Community College – Medical School Partnerships

Community college-to-medical school partnerships are described in the medical education literature as collaborative arrangements between two-year institutions and medical schools that support students pursuing medical careers. These partnerships are examined across studies using varied definitions, structures, and scopes, reflecting differences in institutional context and research focus. The literature addressing these partnerships spans research on transfer articulation, academic preparation, advising coordination, and professional exposure. Early studies situating community college-to-medical school partnerships often appear within broader examinations of transfer pathways between two-year and four-year institutions. Melguizo et al. (2011) analyzed transfer outcomes across institutional partnerships and reported differences in student progression associated with course alignment, advising practices, and institutional coordination. Although the study did not focus exclusively on medical education, it has been cited in subsequent research examining premedical pathways to contextualize structural challenges encountered by community college students.

Subsequent studies examined partnerships that extend beyond transfer articulation to include coordinated academic and experiential components. Grbic et al. (2015) analyzed partnerships in which medical schools collaborated with community colleges to provide academic advising, preparatory coursework, and exposure to medical environments. Their study documented variation in partnership design, including differences in formal agreements, duration of engagement, and institutional participation. The analysis focused on admissions-related

outcomes and program characteristics rather than organizational processes. Governance structures are addressed inconsistently across partnership studies. Some research documents partnerships governed through formal memoranda of understanding specifying roles, responsibilities, and resource commitments, while other studies describe collaborations maintained through informal arrangements. Johnson et al. (2020), examining cross-sector educational partnerships, reported variation in governance mechanisms and described differences in coordination and communication practices across partnerships. Their analysis focused on structural features rather than evaluative outcomes.

Differences in institutional roles are frequently described in the literature. Community colleges are typically characterized as providers of foundational coursework and early advising, while medical schools are described as responsible for admissions processes and professional training. Talamantes et al. (2019), using qualitative methods, documented variation in access to advising and institutional support experienced by community college students pursuing medical careers. Their findings reflected differences across institutional contexts and partnership configurations. Methodological approaches within the partnership literature vary. Quantitative studies often analyze admissions, transfer, or matriculation data to compare outcomes among students participating in partnership programs and those who do not. Qualitative studies examine stakeholder perspectives through interviews or case studies, focusing on partnership development and implementation. Mixed-methods studies are less common but combine outcome data with institutional or participant perspectives. Across methodologies, studies differ in sample size, institutional focus, and outcome measures.

Leadership involvement is described variably across studies. Some research documents partnerships initiated or overseen by senior administrators, while other studies describe partnerships coordinated by faculty members or program staff. Grbic et al. (2023) examined partnership initiatives involving intermediary organizations and reported differences in leadership participation, resource coordination, and oversight structures. Their analysis emphasized organizational roles rather than leadership effectiveness. Resource allocation is another dimension examined across partnership studies. Research documents differences in funding sources, staffing models, and material support. Some partnerships rely on external grants or philanthropic funding, while others are supported through institutional budgets. Studies describing resource structures focus on program characteristics and funding arrangements without standardizing measures of resource sufficiency.

Several studies address the involvement of intermediary organizations in facilitating partnerships. Grbic et al. (2023) analyzed intermediary roles in coordinating partnerships across institutional sectors, describing activities such as stakeholder communication, technical assistance, and program evaluation. Other studies reference intermediaries in program descriptions without examining their organizational functions in detail. Policy context is addressed unevenly across the literature. Some studies reference state-level transfer policies, accreditation requirements, or admissions regulations when describing partnership conditions, while others do not explicitly situate partnerships within policy environments. Comparative analysis of policy influences is limited, and studies vary in the extent to which regulatory context is examined. Across the literature, community college-to-medical school partnerships are described primarily through program structures, activities, and participant outcomes. Fewer studies focus on organizational processes, institutional decision-making, or cultural factors

influencing partnership development. As a result, the literature provides documentation of partnership models and reported outcomes across contexts, with variation in research focus and methodological approach.

Institutional Leadership, Policy Barriers, and Structural Resistance

Community college-to-medical school partnerships are discussed in the literature as collaborative arrangements intended to support students pursuing medical careers through educational pathways that begin at two-year institutions. Research addressing these partnerships appears across multiple strands of scholarship, including studies of community college transfer, health professions pipeline programs, and physician workforce diversity. Across these bodies of work, partnerships are described using varied terminology and conceptual framing, reflecting differences in institutional context and research focus. Much of the literature situates community college-to-medical school partnerships within broader examinations of community college transfer pathways. Melguizo et al. (2011), using statewide longitudinal data, analyzed transfer outcomes and reported differences in bachelor's degree attainment associated with institutional alignment of coursework and advising practices. Although their study did not focus specifically on medical education, it is frequently cited in health professions pathway research to contextualize structural challenges faced by community college students preparing for advanced study in science-intensive fields. Similarly, Dougherty and Kienzl (2006) examined patterns of baccalaureate attainment among community college students and documented variation in outcomes associated with institutional support structures and transfer processes.

Studies directly examining health professions pathways build on this transfer literature by focusing on structured collaborations intended to support progression into medical education.

Grumbach and Chen (2006) reviewed physician workforce diversity initiatives and described pipeline and pathway programs involving community colleges as one approach used by medical schools to broaden access. Their analysis drew on national workforce data and program descriptions to document the presence of partnerships across institutional contexts, emphasizing differences in scope and structure rather than program effectiveness. Research examining admissions outcomes among pathway participants provides additional descriptive evidence. Grbic et al., (2015) analyzed national medical school admissions data to examine applicants who participated in structured pathway programs and reported differences in interview and acceptance rates compared with applicants without pathway participation. Their study employed quantitative methods and focused on admissions outcomes, without examining organizational processes underlying pathway implementation. This work is frequently cited to document the presence of pathway-associated variation in admissions results.

Qualitative studies provide further insight into how partnerships are experienced at the institutional level. Talamantes et al. (2019) conducted interviews with community college premedical students in California and documented differences in access to advising, academic resources, and institutional support across educational contexts. Their findings described variability in how community college-to-medical school partnerships were structured and how students navigated these environments. Unlike quantitative admissions studies, this research emphasized student perspectives and institutional context. Partnership governance and coordination are addressed inconsistently across the literature. In higher education research examining cross-sector collaborations, Kezar and Lester (2009) documented variation in partnership structures, including differences in formal agreements, leadership involvement, and resource allocation. Although not specific to medical education, their work is frequently cited in

pathway scholarship to describe organizational features of institutional collaborations. Studies applying these frameworks to health professions pathways often reference governance structures descriptively rather than evaluating their effects.

Institutional roles within partnerships are also described across studies. Community colleges are commonly characterized as providers of foundational coursework and early advising, while medical schools are described as responsible for admissions decision-making and professional training. Talamantes et al. (2019) reported differences in how institutions coordinated advising and academic preparation across partnership contexts, illustrating variation in institutional roles without attributing outcomes to specific partnership models. Resource allocation appears as a recurring descriptive theme in partnership research. Studies document differences in funding sources, staffing capacity, and institutional investment across pathway initiatives. Grumbach and Chen (2006) noted that some partnerships relied on external funding or grant support, while others were embedded within institutional budgets. Higher education partnership research similarly documents variation in financial and administrative support across collaborative initiatives (Kezar & Lester, 2009).

Policy context is addressed selectively in the literature. Calcagno et al. (2008), analyzing statewide transfer policy reforms, documented changes in transfer behavior following policy alignment. Although not focused on medical education, their findings are referenced in pathway research to describe how regulatory environments shape institutional coordination between community colleges and four-year institutions. However, many studies of community college–to–medical school partnerships do not explicitly situate partnerships within broader policy frameworks. Across studies, methodological approaches vary substantially. Quantitative analyses

focus on admissions, transfer, or matriculation outcomes using institutional or national datasets. Qualitative studies emphasize institutional processes and participant experiences through interviews and case studies. Mixed methods design appears less frequently but combine outcome data with descriptive accounts of partnership implementation. Together, these studies document a range of partnership structures and research approaches, reflecting diversity in how community college–medical school collaborations are examined within the literature.

Leadership and Institutional Culture in Medical Education Pathways

Leadership and institutional culture are examined in the medical education literature as contextual factors shaping how policies, programs, and partnerships are enacted within academic organizations. Research in this area draws from organizational theory, higher education leadership studies, and medical education scholarship to describe how institutional norms, decision-making structures, and leadership practices influence organizational behavior. Rather than focusing on individual leaders alone, much of the literature conceptualizes leadership as embedded within organizational systems and cultural frameworks that shape collective action. Organizational culture is frequently defined in the literature as the shared values, assumptions, and norms that guide behavior within institutions. Schein (2010) conceptualized organizational culture as operating across three interrelated levels: artifacts, espoused beliefs and values, and underlying assumptions. This framework has been applied across higher education contexts to examine how institutional practices reflect deeper cultural patterns. Studies utilizing Schein’s framework emphasize that formal policies and programs may not fully represent institutional culture, as decision-making is often influenced by implicit norms and taken-for-granted assumptions.

Within medical education, researchers have examined institutional culture as it relates to admissions practices, curriculum design, and workforce development initiatives. Ginsburg et al. (2015), using qualitative methods, examined how cultural norms within medical schools influenced professionalism and evaluation practices. Their findings documented variation in how institutional values were enacted across settings, highlighting differences between formal expectations and informal practices. Although not focused on pathway programs specifically, this work illustrates how cultural context shapes decision-making processes within medical education institutions. Leadership is often discussed in the literature as a mechanism through which institutional culture is reinforced or modified. Kezar and Eckel (2002), examining organizational change in higher education, documented that leadership approaches varied in how they engaged institutional members, allocated resources, and structured decision-making. Their comparative analysis emphasized that leadership practices operate within existing cultural contexts rather than independently of them. Subsequent studies have built on this work to examine leadership as a distributed process involving administrators, faculty, and staff rather than a singular authority.

In medical education settings, leadership research frequently focuses on formal administrative roles, including deans, department chairs, and program directors. Souba (2011) examined leadership development in academic medicine and described leadership as a collective organizational capacity rather than an individual trait. His work emphasized that leadership practices are shaped by institutional expectations, governance structures, and professional norms. Other studies have similarly documented that leadership roles in medical education are embedded within complex organizational hierarchies that influence how initiatives are prioritized and implemented. Studies examining leadership in the context of educational pathways often

draw on broader higher education research to describe how leadership engagement varies across institutional initiatives. Kezar (2014), reviewing change initiatives across postsecondary institutions, reported variation in leadership involvement, noting differences in how leaders communicated priorities, supported collaboration, and institutionalized initiatives. These findings are frequently referenced in pathway-related scholarship to describe variation in leadership structures across institutions, though not to evaluate effectiveness.

Institutional culture has also been examined as it relates to collaboration and partnership development. Tierney (2008) analyzed organizational culture in higher education and documented how institutional histories, values, and governance structures shaped collaboration across units and institutions. His work emphasized that partnerships are enacted within cultural contexts that influence communication, trust, and decision-making. Studies referencing Tierney's framework often describe differences in partnership processes across institutions without attributing outcomes to specific cultural characteristics. In medical education, studies examining institutional culture frequently focus on how values related to professionalism, equity, and mission are articulated and operationalized. Gruppen et al. (2018) examined learning environments in medical schools and documented variation in how institutional culture influenced educational practices and learner experiences. Their mixed-methods study emphasized the role of organizational context in shaping formal and informal learning processes. Although their work centered on learning environments, it is often cited in discussions of institutional culture more broadly. Leadership and culture are also discussed in relation to organizational change and sustainability. Kotter (1996), in his widely cited work on organizational change, described stages through which organizations enact and sustain change, emphasizing the role of leadership in shaping organizational norms. While not specific to higher

education or medical education, Kotter's framework is frequently referenced in studies examining institutional change processes. Higher education researchers have applied these concepts descriptively to document variation in how institutions approach change initiatives.

Across the literature, methodological approaches to studying leadership and institutional culture include qualitative interviews, case studies, surveys, and document analysis. Qualitative studies provide insight into how institutional members perceive leadership and culture, while survey-based studies offer broader descriptive patterns. Mixed methods design integrates these approaches, though such studies remain less common. Research varies in whether leadership and culture are treated as central analytic constructs or as contextual variables within broader institutional analyses. Collectively, the literature documents that leadership and institutional culture are examined as interconnected elements influencing organizational practices in higher education and medical education. Studies describe variation in how leadership is structured, how cultural norms are articulated, and how institutional priorities are enacted across contexts. This body of work provides descriptive accounts of leadership and culture without prescribing specific approaches, reflecting the complexity of organizational dynamics within medical education institutions.

Chapter Summary

This chapter reviewed literature related to medical school admissions practices, pathway programs, community college to medical school partnerships, and institutional leadership and culture. It outlined Schein's (2010) Three Levels of Organizational Culture as the theoretical framework and Schein's (2010) 10 Dimensions of a Learning Culture as the conceptual framework guiding this study. The literature documented variation in how partnership practices

are developed, implemented, institutionalized, and sustained across medical education contexts. Research examined partnerships involving medical schools, community colleges, universities, and intermediary or pipeline organizations, describing differences in program models, governance structures, leadership roles, resource allocation, and organizational processes that support the progression of students from historically underserved populations into medical education. Studies also illustrated how admissions practices and pathway initiatives are embedded within broader institutional systems, drawing on quantitative analyses, qualitative case studies, and mixed methods designs. While a substantial body of literature has described admissions reforms and pathway programs, fewer studies have examined how institutional leaders make decisions and enact organizational processes across Schein's cultural dimensions in ways that influence the institutionalization and long-term sustainability of partnerships supporting medical school matriculation for students from historically underserved populations. The next chapter will outline the methodological approach used to examine how institutional leaders interpreted and enacted partnership practices within these cultural conditions used in this study, including the research design, participant selection, data collection procedures, and analytic approach.

Chapter 3 - Methodology

Chapter 3 provides a detailed overview of the methodology used in this dissertation. It incorporates the clarification of the study's purpose and research questions, followed by an exploration of how the theoretical and conceptual frameworks will be used to inform the research process. This chapter includes the research design, study setting, the number of participants, and the instrumentation used for data collection. This chapter concludes with a discussion of the data collection methods, sources of data, analytical procedures, measures taken to ensure the quality of the study, ethical considerations, and limitations encountered throughout the research.

Purpose of the Study

The purpose of this study was to explore how institutional leaders at medical schools, community colleges, and intermediary organizations developed and sustained community college-to-medical school partnerships that support the matriculation of students from historically underserved populations. The study also examined how institutional culture shaped leadership decision-making related to these pathway partnerships.

Research Questions

1. How do institutional leaders describe the development and sustainability of community college-to-medical school partnerships that support the matriculation of students from historically underserved populations?
2. How do institutional leaders describe the influence of institutional culture on leadership decision-making related to pathway partnerships?

Theoretical and Conceptual Frameworks

This study was informed by Schein's (2010) Three Levels of Organizational Culture as its theoretical framework, providing the foundational lens for understanding how institutional culture shaped leadership decision-making related to community college-to-medical school partnerships. The model identifies three levels of culture: artifacts, including visible policies, communications, and practices; espoused values, reflecting institutional goals and stated beliefs; and basic underlying assumptions, representing deeply held and often unspoken norms that shape behavior (Schein, 2010). Grounding the study in this framework allowed for an examination of how visible structures, stated commitments, and underlying cultural assumptions influenced the development and sustainability of partnership efforts.

Schein's (2010) 10 Dimensions of a Learning Culture served as the conceptual framework for the study. These dimensions include proactivity, commitment to learning, positive assumptions about human nature, belief that the environment can be managed, commitment to truth through inquiry and dialogue, positive orientation toward the future, commitment to full and open communication, commitment to cultural diversity, commitment to systemic thinking, and belief in the value of cultural analysis. The framework informed the development of the semi-structured interview protocol by informing the design of interview questions.

Alignment Table

An alignment table was created to provide an overview of how the various components of the study were conceptually and methodologically aligned. This table included the problem based on literature findings, research questions, the conceptual framework, methodology, and interview questions. It served to illustrate the coherence and alignment among these components, ensuring a structured and methodologically sound approach to the research (Booton, 2014). The alignment table is provided in Appendix A for further reference.

Research Design

A qualitative approach was well suited for this study because it allowed for an in-depth exploration of institutional culture, leadership practices, and contextual factors influencing decision-making within community college-to-medical school pathway partnerships. Qualitative research was particularly appropriate for examining complex organizational dynamics as they occurred in real-world higher education settings and for capturing how institutional leaders made meaning of partnership development and sustainability (Lochmiller & Lester, 2017). This study employed a generic qualitative methodology to explore a shared phenomenon across multiple institutional and organizational contexts without anchoring the inquiry in a single qualitative tradition. As described by Percy et al. (2015), a generic qualitative approach was appropriate when the primary goal was to understand how participants interpreted and experienced a phenomenon rather than to generate theory or focus exclusively on individual lived experiences.

Phenomenology and case study methodological approaches were considered for this study. Phenomenology was not selected because the focus of this inquiry was not on the essence

of individual lived experience, but rather on how institutional leaders describe the development and sustainability of community college–to–medical school partnerships. A case study design was also not selected because the study was not bounded to a single site, program, or institutional setting; instead, it examined leadership perspectives across multiple medical schools, community colleges, and intermediary organizations to identify shared cultural patterns and leadership practices. A generic qualitative approach was selected because the study sought to explore how participants interpreted and made meaning of partnership development and institutional culture without anchoring the inquiry in a specific qualitative tradition (Percy et al., 2015). This approach was appropriate for examining cross-institutional perspectives and identifying patterns related to leadership decision-making and partnership sustainability.

Site Selection

This study focused on medical schools, community colleges, and intermediary organizations located within the western and southwestern regions of the United States that supported educational pathways from community college to medical school. Institutions and organizations were purposefully selected based on their active involvement in partnerships connecting community colleges and medical schools and their demonstrated commitment to supporting the matriculation of students from historically underserved populations. Participants were drawn from multiple institutional and organizational contexts to capture a range of leadership perspectives on partnership development and sustainability across community college–to–medical school pathways. Site and participant selection were informed by the need to examine how institutional culture and leadership practices shaped partnership strategies within varied educational and organizational environments.

The institutions and organizations represented varying institutional missions, governance structures, and partnership configurations. Variation across sites reflected differences in organizational roles, leadership structures, and levels of formalization within partnership efforts rather than intentional comparison of state or regional policy environments. By drawing participants from multiple institutions across the western and southwestern regions, this study supported a cross-contextual analysis of leadership practices and institutional decision-making related to the development and sustainability of community college-to-medical school partnerships.

Study Participants

Participants in this study consisted of institutional leaders representing medical schools, community colleges, and intermediary organizations involved in community college-to-medical school pathway partnerships designed to support the matriculation of students from historically underserved populations. Participants were drawn from institutions located in the western and southwestern regions of the United States. Medical school participants held leadership roles related to admissions, undergraduate medical education, pathway programming, or outreach initiatives. Community college participants served in faculty leadership or administrative roles with direct responsibility for academic programs, student advising, or partnership coordination. Participants from intermediary organizations held leadership roles focused on coordinating cross-sector partnerships, facilitating institutional collaboration, or administering pathway-related initiatives between community colleges and medical schools. Collectively, participants brought extensive professional experience in higher education, medical education, and cross-sector collaboration. Institutional contexts varied in mission and organizational structure, allowing for cross-contextual analysis of leadership practices and partnership sustainability.

Purposeful sampling was used to identify participants who met the study's inclusion criteria and had direct experience with community college-to-medical school partnership initiatives. Purposeful sampling involves intentionally selecting individuals based on their knowledge, expertise, or role related to the phenomenon under investigation (Patton, 2015). Initial participants were identified based on their leadership positions and documented involvement in partnerships connecting community colleges and medical schools. Snowball sampling was subsequently employed to identify additional participants who met the study's inclusion criteria. Snowball sampling involves asking participants to recommend other individuals with relevant expertise who may not be readily identifiable through public sources (Creswell & Poth, 2018). Interviewees were invited to suggest additional institutional leaders directly involved in partnership development or sustainability efforts, which facilitated access to knowledgeable participants across institutional and organizational contexts.

The study included semi-structured interviews with 12 participants drawn from multiple medical schools, community colleges, and intermediary organizations. Guest et al. (2006) suggest that thematic saturation is often achieved within the first 12 interviews when participants are selected for their expertise. During analysis, recurring patterns and themes began to stabilize, and no substantially new concepts emerged in the final interviews. These indicators suggested that thematic saturation had been reached, and the final sample of 12 participants provided sufficient depth and breadth of perspectives to support meaningful qualitative analysis.

Instrumentation

In this study, the researcher served as the primary instrument for data collection through the use of semi-structured interviews designed to capture participants' perspectives and

institutional insights (Creswell, 2014). A semi-structured interview protocol (see Appendix B) allowed for the consistent exploration of core topics while providing flexibility for participants to elaborate on their experiences and leadership practices (Peoples, 2021). One-on-one interviews were conducted using this protocol to examine how institutional leaders described the development and sustainability of community college-to-medical school partnerships. The interview questions were informed by Schein's (2010) 10 Dimensions of a Learning Culture, which served as the study's conceptual framework. Alignment between the interview questions and Schein's 10 learning culture dimensions is presented in the Alignment Table (Appendix A) and the interview protocol (Appendix C). This alignment was developed to demonstrate how the interview questions were informed by the 10 Dimensions and aligned with the study's research questions, supporting the collection of data relevant to the conceptual framework.

Data Collection and Data Sources

Prior to initiating data collection, Institutional Review Board (IRB) approval was obtained from Kansas State University (Appendix D). When participating institutions or organizations required additional research approval, the researcher complied with their institutional research policies. Before formal data collection began, a pilot interview was conducted with a leader involved in community college-to-medical school pathway partnerships. Feedback from the pilot interview was used to refine question clarity, sequencing, and overall alignment with the research questions. Following IRB approval and pilot testing of the interview protocol, the researcher initiated recruitment by contacting institutional leaders at medical schools, community colleges, and intermediary organizations located in the western and southwestern regions of the United States. Recruitment was conducted through distribution of an

introductory letter included within the interview protocol (Appendix B). The letter described the purpose of the study and requested permission to interview key institutional stakeholders. Once institutional permission was granted, the researcher verified that potential participants met the established eligibility criteria. Eligible participants were then contacted directly to schedule individual interviews.

The interview protocol (Appendix B) included recruitment language, informed consent procedures, and a debriefing statement. Prior to each interview, participants were provided with an informed consent form and asked to review and sign the document indicating their voluntary agreement to participate in the study (see Appendix B). Participants were informed of the voluntary nature of the study, their right to withdraw at any time without penalty, and the intended use of the data. Verbal consent for audio recording was obtained before each interview session. Pseudonyms were assigned to protect participant confidentiality. Semi-structured interviews were conducted via the Zoom video conferencing platform, with each session lasting approximately 45 to 60 minutes. To enhance privacy and participant comfort, cameras were turned off during interviews. The complete set of interview questions is provided in Appendix C.

Data Analysis

Data analysis followed an inductive thematic analysis approach informed by Braun and Clarke (2006), with coding procedures informed by Saldaña (2021) and the constant comparative method described by Glaser and Strauss (1967). The analysis was conducted using a multi-phase process designed to systematically identify patterns across participant findings. The analysis was inductive, meaning that no predetermined theoretical categories or coding frameworks were

applied during the coding process. Instead, codes, subthemes, and themes were derived directly from participant narratives.

The analysis began with a period of familiarization with the dataset. All 12 interview transcripts were read in their entirety before coding began. During this phase, the researcher wrote analytic memos and field notes to capture initial observations and reflections about emerging patterns. This step allowed the researcher to develop familiarity with the dataset while documenting reflexive considerations prior to formal coding. Following this familiarization stage, transcripts were coded line by line using an open coding process. Coding was conducted in Atlas.ti to support systematic organization and comparison of coded segments. Codes were applied to meaningful segments of text that reflected participants' descriptions of partnership development, leadership practices, institutional culture, or partnership sustainability. Consistent with an inductive approach, no a priori codebook was used. Instead, codes were generated from the data itself, often using participants' own language when appropriate. After the first cycle of coding, the full set of initial codes was reviewed and refined. Duplicate codes were merged, conceptually overlapping codes were consolidated, and codes containing multiple ideas were separated into distinct analytic categories. Codes that appeared only once were reviewed against the full dataset to determine whether they represented unique but meaningful patterns or isolated instances. This refinement process resulted in a final codebook consisting of 62 distinct codes. The codebook used during analysis is provided in Appendix F.

During the second cycle of coding, pattern coding was used to group related codes into broader analytic categories. Through constant comparison across transcripts and institutional contexts, codes were compared to identify shared mechanisms, processes, and conditions

described by participants. These analytic categories were then further refined into sub-themes representing distinct patterns across participant accounts. Subsequently, sub-themes were examined collectively to develop higher-order themes that captured broader patterns across the dataset. The initial analytic structure included five themes representing recurring patterns in how institutional leaders described partnership development and collaboration. Following this stage, the researcher returned to the full dataset to conduct a comprehensive review of all transcripts and codes. This review identified two additional patterns that were analytically distinct and sufficiently supported across participants to warrant elevation to independent themes. One additional sub-theme was also identified during this process. The final thematic structure included seven themes, 17 sub-themes, and 62 codes across the 12 interviews. The complete coding pathway from codes to sub-themes and themes is documented in the Inductive Coding Codex provided in Appendix F. This matrix illustrates the analytic progression from raw data to the final thematic structure used to organize the findings presented in Chapter 4.

To strengthen analytic rigor, several validation strategies were employed throughout the analysis process. An audit trail documenting analytic decisions, code definitions, memos, and dataset reviews was maintained throughout the study. In addition, member checking was conducted by sharing summaries of emerging themes with selected participants to confirm the accuracy of interpretation. Thematic saturation was assessed during the final stages of analysis and was considered reached when the final interviews did not produce new codes or require modification of the existing thematic structure.

Limitations

This study had several limitations that may have influenced the interpretation of its findings. First, although participants were drawn from multiple medical schools, community colleges, and pipeline or intermediary organizations, the qualitative design and purposeful sampling approach focused on a relatively small group of institutional leaders. While qualitative research emphasizes depth of understanding rather than statistical representation, it is hoped that the insights generated through participants' experiences may offer transferable knowledge for leaders and institutions engaged in similar community college-to-medical school partnership efforts. The applicability of the findings to other contexts may depend on the degree of similarity between institutional environments, leadership structures, and partnership models.

Second, the reliance on self-reported data introduced the possibility that personal, professional, or institutional perspectives influenced participants' responses. Participants may have emphasized successful practices or minimized challenges due to reputational considerations, institutional policies, or their leadership roles. While steps were taken to encourage candid reflection, such influences could not be entirely eliminated. Third, the study was conducted within a specific temporal context. Changes in legislation, accreditation standards, healthcare workforce demands, or institutional policies may affect how community college-to-medical school partnerships evolve over time. As a result, the findings should be interpreted within the context in which the data were collected.

Ethical Considerations

Evidence of compliance with ethical guidelines was established through approval from the Institutional Review Board (IRB) at Kansas State University, as well as from any participating institutions that required a formal IRB approval process (see Appendix D). Throughout the research process, ethical principles governing qualitative studies were upheld, with attention to participant privacy, informed consent, risk minimization, and equitable treatment (Creswell & Poth, 2018). Participants were informed of the study's objectives, and informed consent was obtained prior to data collection (see Appendix B). Consent documents outlined participants' rights, including their ability to withdraw at any time, the confidentiality of their responses, and the potential risks and benefits of participation (Creswell & Poth, 2018).

To protect participant identities, pseudonyms were assigned, and all personally identifiable information was removed from transcripts and reports (Creswell, 2014). Prior to conducting interviews, participants provided explicit permission for audio and video recording via Zoom. Member checking was used to provide participants with the opportunity to review and validate key points derived from their interviews, supporting accurate representation of their perspectives. All collected data, including transcripts and institutional documents, were securely stored on an external hard drive in a locked environment for a period of five years. The researcher adhered to IRB-approved protocols and established ethical research standards to protect the rights and welfare of all participants involved in the study.

Reflexivity Statement

A reflexivity statement is “the process of intentionally accounting for your assumptions, biases, experiences, and identities that may impact any aspect of your research study” (Lochmiller & Lester, 2017, p. 95). This statement reflected how my cultural background, lived experiences, and professional identity inform my perspective and positionality as a researcher (Creswell & Creswell, 2018).

My initial aspiration to become a physician was rooted in a deep desire to serve and uplift my community through healthcare. However, as an African American student raised in a single-parent household by a teenage mother, my journey into higher education was shaped by both structural and personal challenges. During college, I balanced multiple jobs while managing academic demands and limited financial resources. These conditions directly impacted my academic performance and ultimately led me to shift from a pre-medical biological sciences track to a degree in health sciences. This decision proved to be a pivotal moment in my educational journey, allowing me to achieve a healthier balance between work and school responsibilities and pursue a more sustainable academic path. Had I remained on the original track, I would have been identified as a student underrepresented in medicine. That recognition continues to influence my awareness of the barriers faced by students with similar backgrounds. Most recently, I served in a leadership role in medical education administration in Texas, where I regularly supported and mentored students who encountered many of the same challenges I once experienced. This work reinforces my understanding of the importance of representation, access, and institutional structures that create pathways into medicine.

As a researcher, I recognize that my personal background and ongoing engagement with students from historically underserved populations may influence how I interpret findings, interact with participants, and approach meaning-making during analysis. I approached this positionality with critical self-awareness and a commitment to methodological integrity. To minimize the impact of bias, I engaged in continuous self-reflection, documented decision-making throughout the research process, and employed strategies such as triangulation and member checking. These measures supported the credibility of the findings and ensured that participant voices were presented authentically and accurately. By acknowledging my positionality, I aimed to contribute to a more inclusive research process that honors the diverse experiences of students and promotes equitable pathways into medical education.

Study Quality

To ensure the overall quality and rigor of the study, Tracy's (2010) eight "big tent" criteria for qualitative research were used as a framework for evaluating study quality. These criteria include worthy topic, rich rigor, sincerity, credibility, resonance, significant contribution, ethics, and meaningful coherence. Each element was considered in assessing the alignment, transparency, and trustworthiness of the research design and analytic process. The study addressed a worthy topic by examining how institutional leaders across four-year universities, community colleges, and pipeline or intermediary organizations developed, institutionalized, and sustained partnerships that support the matriculation of students from historically underserved populations into medical school.

This focus aligned with existing literature identifying persistent disparities in access to medical education pathways and ongoing challenges related to healthcare workforce preparation.

Rich rigor was demonstrated through the use of Schein's (2010) 10 Dimensions of a Learning Culture as the conceptual framework guiding data collection and analysis, along with Schein's Three Levels of Organizational Culture as the theoretical framework informing interpretation. Semi-structured interviews served as the primary data collection method, generating detailed, context-rich data from leadership-level participants. Analytic rigor was further supported through systematic thematic analysis (Braun & Clarke, 2006), the constant comparative method (Glaser & Strauss, 1967), and the use of Atlas.ti software to organize and document coding decisions. Sincerity was supported through the inclusion of a reflexivity statement in Chapter Three that outlined the researcher's background, motivations, and positionality, promoting transparency throughout the research process. Credibility was strengthened through piloting the interview protocol, incorporating thick description, and using member checking to confirm the accuracy of key points derived from participant interviews. These strategies supported interpretations grounded in participant perspectives and institutional contexts.

Resonance was addressed through the inclusion of direct quotations and analytic summaries that reflected the language, values, and priorities described by participants, supporting the transferability of findings to similar institutional and organizational settings. The study contributed to the literature by examining leadership decision-making and organizational processes related to community college-to-medical school partnerships, an area that has received limited empirical attention. Ethical standards were upheld at all stages of the study. Approval was obtained from Kansas State University's Institutional Review Board, as well as from participating institutions or organizations that required additional review. Informed consent was obtained from all participants, and confidentiality was protected through the use of pseudonyms and secure data storage protocols. Meaningful coherence was established through

alignment among the study’s purpose, research questions, theoretical and conceptual frameworks, data collection methods, and analysis strategies. An alignment matrix was provided in Appendix A, and a summary of how each of Tracy’s (2010) eight “big tent” criteria was addressed is included in Table 3.1.

Table 3.1 Tracy’s (2010) Eight Big Tent Criteria, 2010

Criterion	Definition	Application
Worthy topic	Relevant, timely, and significant research.	Examined organizational culture related to underserved student matriculation
Rich rigor	Appropriate theories, data collection, and analysis.	Used qualitative methods with rigorous data collection and analysis.
Sincerity	Transparency and reflexivity.	Included a reflexivity statement on biases.
Credibility	Trustworthiness and plausibility.	Ensured trustworthiness through thick descriptions, member checking, and triangulation.
Resonance	Evokes intellectual or emotional responses.	Used verbatim quotes and summaries for transferability.
Significant contribution	Adds valuable knowledge or impact.	Provided insights on best practices and institutional culture supporting underserved students.
Ethics	Adherence to ethical standards.	Secured IRB approval, informed consent, confidentiality and safe data storage.
Meaningful coherence	Alignment of purpose, methods, and outcomes.	Used an alignment table (Appendix A) to connect key study elements.

Note. Adapted from Tracy, S. J. (2010). Qualitative quality: Eight “big-tent” criteria for excellent qualitative research. *Qualitative Inquiry*, 16(10), 837–851.

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Chapter Summary

This chapter outlined the methodological framework for exploring how institutional leaders at medical schools, community colleges, and pipeline or intermediary organizations developed, implemented, institutionalized, and sustained partnerships that supported the matriculation of students from historically underserved populations into medical school, as well as how institutional culture shaped leadership decision-making related to these efforts. The chapter detailed the alignment of Schein's Three Levels of Organizational Culture as the theoretical framework and Schein's 10 Dimensions of a Learning Culture as the conceptual framework with the study's generic qualitative research design. It also described the criteria and processes used to select participants, along with the recruitment strategies employed. Finally, the chapter explained the approaches to data collection and analysis and outlined the strategies used to uphold ethical standards and ensure the study's quality, trustworthiness, and rigor.

Chapter 4 - Findings

As outlined in Chapter 1, this chapter presents the analysis of data generated from interviews with institutional leaders at medical schools, community colleges, and intermediary organizations. The chapter begins with an overview of participant demographics. Findings are then organized thematically to reflect patterns across institutional contexts and leadership roles. The chapter concludes with a summary of key findings.

Participant Demographics

Table 4.1 summarizes the demographic characteristics of the study participants. Because the study was not bounded to a single institution, participant demographics are organized by institutional or organizational type, leadership role or functional area, years of professional experience, and primary area of responsibility related to community college to medical school pathway partnerships. Participants represented medical schools, community colleges, and pipeline or intermediary organizations located in the western and southwestern regions of the United States and held leadership or senior administrative roles connected to admissions strategy, pathway development, transfer partnerships, institutional planning, or student access initiatives. Professional experience ranged from mid-level to senior leadership, offering cross-sector perspectives aligned with the study's focus.

Table 4.1 Participant Demographics

<i>Participant</i>	<i>Institutional / Organizational Type</i>	<i>Region</i>	<i>Leadership Role</i>	<i>Years of Professional Experience</i>	<i>Primary Area of Responsibility</i>
<i>Participant 1</i>	Medical School	Western	Admissions and Pathway Administrator	10+ years	Admissions outreach, pathway programs, recruitment
<i>Participant 2</i>	Medical School	Western	Faculty Director, Office of Healthcare Pathways	20+ years	Pathway development, program evaluation, outreach
<i>Participant 3</i>	Community College	Southwestern	Faculty Leader, STEM or Pre-Health Programs	15+ years	Academic leadership, student advising, transfer pathways
<i>Participant 4</i>	Community College	Southwestern	Senior Academic Administrator (Dean level)	20+ years	Student success initiatives, partnerships, advising structures
<i>Participant 5</i>	Medical School	Western	Senior Administrator, Medical Education or Admissions	15+ years	Admissions oversight, pathway coordination
<i>Participant 6</i>	Intermediary Organization	Western	Program Administrator or Director	10+ years	Statewide coordination, sustainability, reporting
<i>Participant 7</i>	Medical School	Southwestern	Program Manager, Undergraduate and Community Initiatives	10+ years	Community college partnerships, curriculum and programming
<i>Participant 8</i>	Intermediary Organization	Western	Associate Director or Program Lead	10+ years	Funding strategy, policy engagement, evaluation
<i>Participant 9</i>	Intermediary Organization	Western	Research and Data Manager	5+ years	Data tracking, evaluation, reporting
<i>Participant 10</i>	Medical School	Western	Senior Leader, Admissions Outreach and Pathways	15+ years	Pathway leadership, partnerships, institutional strategy
<i>Participant 11</i>	Medical School	Western	Director of Pathways	20+ years	Grant administration, community college partnerships, pathway oversight, staff supervision
<i>Participant 12</i>	Intermediary Organization	Western	Founder and Executive Lead	5+ years	Community college outreach, workshops, speaker coordination, resource infrastructure development

Findings

Findings are organized thematically to reflect patterns identified across participants and institutional contexts. Each theme is introduced with a narrative description and supported by participant quotations that illustrate how institutional leaders described the development and sustainability of community college–to–medical school partnerships. The analysis resulted in seven themes that capture recurring patterns in how participants described leadership practices, institutional structures, and partnership dynamics shaping pathway initiatives. These themes are presented in the order in which they emerged through the analytic process. The themes include individual champions and institutional sustainability, institutional values and structural realities, structural dependence on external funding, temporal misalignment in program accountability, intermediary organizations as structural supports, pre-health advising gaps and information access, and invisible and uncompensated labor. Each theme reflects patterns observed across participants and institutional contexts and is supported by representative quotations drawn from the interview data.

Table 4.2 Summary of Themes, Sub-themes, Codes, and Participant Contributions

Theme	Sub-themes	Codes	Participants Contributing
T1: Individual Champions and Institutional Sustainability	4	13	P1, P3, P4, P5, P6, P7, P9, P10, P11, P12
T2: Institutional Values and Structural Realities	3	10	P1, P2, P5, P8, P10, P11, P12
T3: Structural Dependence on External Funding	2	8	P2, P5, P6, P7, P8, P9, P10, P11, P12
T4: Temporal Misalignment in Program Accountability	2	8	P1, P2, P5, P6, P7, P8, P9, P10, P11, P12

T5: Intermediary Organizations as Structural Supports	2	7	P2, P6, P8, P9, P10, P12
T6: Pre-Health Advising Gaps and Information Access	2	8	P1, P2, P3, P4, P7, P11, P12
T7: Invisible and Uncompensated Labor	2	8	P1, P2, P3, P4, P7, P9, P10, P11, P12
Totals	17	62	P1–P12

Note. T = theme. P = participant. Codes and sub-themes were derived inductively from interview transcripts.

Individual Champions and Institutional Sustainability

Across interviews, participants consistently described community college-to-medical school pathway partnerships as heavily dependent on individual institutional leaders who initiated, coordinated, and maintained collaboration across institutions. Although pathway initiatives were often referenced within institutional missions, program descriptions, or outreach efforts, participants described the day-to-day work of sustaining partnerships as resting with a small number of individuals responsible for advising students, coordinating programming, and maintaining relationships between institutions. Across interviews, leaders described these individuals as the primary point of contact between partner organizations.

Participants representing community colleges, medical schools, and intermediary organizations described similar patterns in which partnership activity was sustained through individual leadership rather than through fully institutionalized structures. In several cases, participants explained that pathway programs began through the initiative of a single individual who recognized a need for stronger connections between community colleges and medical schools and then worked to build relationships that could support those efforts. Participants described these leaders as responsible for coordinating advising, facilitating communication

between institutions, organizing programming for students, and maintaining ongoing collaboration between partner organizations.

Champions as the Primary Operational Unit

Participants from both community colleges and medical schools described serving as the central operational contact for partnership activities. These responsibilities included advising students pursuing medical careers, maintaining communication with partner institutions, coordinating program activities, and identifying opportunities for collaboration across institutions.

Participant 3 described advising responsibilities related to medical pathways as falling largely within their role, explaining that although the institution maintained a health sciences division, advising for students interested in medical careers largely depended on individual faculty leadership. Participant 3 explained that “it really falls on me,” noting that the health sciences division primarily focused on nursing and allied health programs rather than advising students pursuing medical school pathways.

Participant 4 described a similar structure at their institution, explaining that although advisors were involved in supporting students through program maps and course planning, the coordination of medical pathway initiatives ultimately rested with a single individual. According to Participant 4, “as far as the medical side goes, everything runs through me,” describing how students pursuing medical pathways were frequently referred directly to them for guidance and coordination with medical school partners. Participants representing medical schools also

described the establishment of pathway leadership roles as requiring advocacy within their institutions.

Participant 1 explained that the creation of a position dedicated to partnership work required sustained support from institutional leadership. According to Participant 1, their supervisor “fought very hard for that position to exist,” explaining that some individuals within the institution initially questioned whether a dedicated role focused on community college pathway partnerships was necessary.

Relational Agreements Over Formal Structures

Participants also described how partnership coordination frequently developed through personal relationships between institutional leaders rather than through formalized institutional agreements. Course transfer alignment, advising coordination, and collaborative programming were often described as emerging through direct communication between individuals representing partner institutions.

Participant 3 explained that some course transfer arrangements between institutions developed through ongoing conversations between community college and medical school leaders. Participant 3 noted that these arrangements functioned effectively while both individuals remained in their roles but explained that the agreements had not been formally institutionalized. According to Participant 3, “some of the course transfer agreements are based on conversations between me and [Participant 7],” noting that while the arrangement worked in practice, formal agreements would provide greater continuity if personnel changes occurred.

Participant 4 similarly described the partnership as developing through direct communication between individuals rather than through formal agreements between institutions. Participant 4 explained that collaboration between institutions involved meetings, classroom visits, and ongoing communication between institutional leaders, noting that “it’s basically just me and him communicating,” describing how the partnership had developed through conversations and in-person engagement with students.

Medical school participants also described relationship-based approaches to partnership development. Participant 7 explained that building partnerships often involved listening to institutional needs and developing programming that responded to those needs. According to Participant 7, partnership development involved “showing up, listening, and trying to make sure people feel heard,” describing how relationship-building supported collaboration between institutions.

Personnel Transitions and Program Continuity

Participants across institutional contexts described personnel transitions as a significant factor influencing partnership continuity. Several participants explained that pathway programs frequently depended on the presence of individuals who maintained relationships across institutions and coordinated program activities.

Participant 10 described previous experiences within higher education in which programs depended heavily on a single individual responsible for maintaining the initiative, explaining that many programs operate as “a one-person show,” noting that when that individual leaves, “the whole program dies.”

Participant 11 similarly described the importance of consistent institutional representation, explaining that individuals who remain involved over time develop familiarity with students and institutional partners. According to Participant 11, “the consistent person knows the students,” emphasizing that credibility and continuity often depend on long-term participation.

Community college participants also described uncertainty about program continuity if partnership leaders transitioned to other roles. Participant 3 explained that while the partnership program currently operated effectively, the future of the program would depend on whether the individual coordinating the initiative remained in their role, noting that “as long as he’s offering it, I’m happy to host it, but if he moves on, I’m not sure what happens to it.”

Competing Demands and Constrained Capacity

Participants also described pathway work as occurring alongside competing professional responsibilities, including teaching, clinical work, advising, and administrative duties. Leaders explained that partnership activities were frequently conducted in addition to existing responsibilities rather than within dedicated roles.

Participant 10 described challenges associated with securing clinical engagement opportunities for students, explaining that physicians and healthcare professionals often faced heavy clinical workloads. According to Participant 10, “bringing in physicians to teach sessions, workshops, or hands-on skills has become more difficult because people are inundated with clinical responsibilities.”

Participant 11 described similar challenges related to time constraints, explaining that “you start to learn the business of doing the work — time competition,” noting that turnover and shifting responsibilities required leaders to continually revisit communication strategies.

Participants also described how program size and operational demands limited opportunities for strategic reflection. Participant 10 explained that large program volumes required significant attention to operational coordination, noting that “we are so focused on the student and programmatic pieces that the higher-level strategic thinking becomes secondary.”

Institutional Values and Structural Realities

Participants described community college-to-medical school pathway partnerships as shaped by how institutions interpreted their missions, priorities, and operational structures. Across interviews, leaders discussed the ways institutional values related to access, workforce development, and community engagement influenced the development of pathway programs designed to support students from historically underserved populations. At the same time, participants described how these commitments often operated within existing structural conditions, including admissions processes, institutional capacity, and longstanding perceptions regarding academic preparation. Leaders representing medical schools, community colleges, and intermediary organizations explained that pathway initiatives were frequently developed in response to institutional priorities related to healthcare workforce development and community engagement. Participants noted that community colleges often served as entry points for students exploring health professions, particularly for students who began their academic journeys outside of traditional four-year university pathways. Within this context, institutional leaders described partnerships as mechanisms through which institutions attempted to expand awareness of

medical careers while supporting students navigating complex academic and professional pathways. While participants described strong institutional commitments to expanding opportunity, they also discussed how structural realities within higher education systems shaped the ways these initiatives were developed and sustained.

Tension Between Admissions Metrics and Access

Participants described the relationship between admissions metrics and pathway program goals as an ongoing consideration in partnership development. Leaders explained that medical school admissions processes typically relied on academic indicators such as grade point averages and standardized test scores, while pathway initiatives frequently focused on supporting students earlier in their academic preparation, including many students from historically underserved populations who began their academic journeys at community colleges.

Participant 10 described how admissions metrics remained central to institutional decision-making processes even within programs designed to expand access to medical education. According to Participant 10, admissions committees “still rely heavily on GPA and MCAT scores,” noting that these indicators continue to serve as primary benchmarks used to evaluate applicants.

Community college participants described advising students within this context by emphasizing both encouragement and transparency regarding academic preparation expectations. Participant 3 explained that advising students interested in medicine often involved helping them understand the academic requirements associated with medical school admission. As Participant

3 noted, “a lot of the conversations are about making sure they understand what medical schools are looking for.”

Medical school leaders also described pathway programs as mechanisms for introducing students to medical careers while providing early academic preparation opportunities. Participant 7 explained that pathway initiatives often focused on working with students earlier in their academic trajectories, noting that these programs allowed institutions to “start working with students earlier in their academic journey.”

Participants described these programs as opportunities for institutions to introduce students to the profession, provide academic preparation guidance, and establish connections between community colleges and medical schools.

Equity Commitments and Structural Capacity

Participants also described institutional commitments related to expanding opportunity as important motivations for developing pathway partnerships. Leaders across medical schools, community colleges, and intermediary organizations discussed how pathway initiatives were often framed within institutional missions related to community engagement, healthcare workforce development, and expanding access to medical careers for students from historically underserved populations.

Medical school participants described pathway programs as one mechanism through which institutions attempted to engage more intentionally with surrounding communities. Participant 11 explained that many institutions viewed pathway initiatives as opportunities to expand awareness of medical careers among students who may not otherwise see themselves

reflected in the profession, noting that programs often focus on “connecting with communities and creating opportunities for students who may not otherwise see themselves in medicine.”

Other medical school leaders similarly described these initiatives as connected to institutional outreach priorities. Participant 10 explained that many pathway programs were designed to introduce students to the profession earlier in their academic trajectories, noting that the goal was to “start working with students earlier in their academic journey” and provide information about the preparation required to pursue medical careers.

Community college leaders also described pathway partnerships as closely aligned with their institutional missions related to student opportunity and upward mobility. Participant 4 explained that community colleges frequently served as an important entry point for students exploring health professions, noting that many students began their academic pathways at community colleges before transferring to four-year institutions. As Participant 4 described, community colleges often play a central role in helping students “figure out what the path looks like and how to move forward.”

Participants also discussed how institutional capacity influenced the scale and structure of pathway initiatives. Leaders explained that although institutions frequently expressed strong support for expanding pathways into medicine, staffing levels, program resources, and competing institutional priorities often shaped how these initiatives were implemented. Participant 5 described these considerations as part of broader institutional decision-making processes, noting that pathway programs often developed alongside “other institutional responsibilities and priorities”.

Intermediary organization participants described their work as supporting institutions that were attempting to expand access to medical education through collaborative partnerships. Participant 8 explained that intermediary organizations often “worked with both medical schools and community colleges to coordinate programming, workshops, and informational sessions designed to help students understand the academic and professional pathways leading to medical school”.

Participants across institutional contexts described these efforts as part of broader institutional commitments to expanding educational opportunities while navigating the operational realities of higher education systems.

Cultural Perceptions of Community College Preparation

Participants also discussed how perceptions of community college preparation influenced the development of partnerships between institutions. Leaders described how community colleges frequently served as important entry points for students pursuing health professions while also noting that perceptions of community college coursework sometimes shaped partnership discussions.

Community college leaders described working to communicate the academic preparation of their students when engaging with medical school partners. Participant 3 explained that conversations with medical schools often involved “discussing the rigor of community college coursework and the academic preparation students received prior to transfer”.

Medical school leaders similarly described the importance of developing familiarity with community college partners and their academic programs. Participant 7 explained that “building

partnerships often involved learning more about community college curricula, advising structures, and transfer pathways”.

Intermediary organization participants described their roles as “facilitating communication between institutions and supporting collaboration across educational sectors”. Participant 8 explained that intermediary organizations frequently helped institutions “share information about student preparation pathways and partnership opportunities”.

Participants described these interactions as part of ongoing efforts to build understanding between institutions and support the development of collaborative pathway initiatives.

Structural Dependence on External Funding

Participants across institutional contexts described external funding as a central factor supporting the development and continuation of community college–to–medical school pathway partnerships. Leaders explained that grant funding frequently supported advising programs, outreach initiatives, and student preparation activities designed to introduce students from historically underserved populations to medical careers. Participants described many pathway initiatives as initially developed through externally funded programs or foundation-supported initiatives. These resources often provided staffing support, program coordination, and opportunities for students to engage with medical school faculty or clinical professionals.

External Funding as Operational Foundation

Medical school participants described external funding as enabling institutions to establish programs that might not otherwise exist within standard institutional budgets.

Participant 10 explained that several pathway initiatives were developed through grant-supported programs designed to expand opportunities for students exploring health professions. As Participant 10 described, “a lot of the work we do with pathway students started through grant funding. That funding allowed us to build programming and bring students into the medical school environment.”

Community college leaders described similar experiences when discussing how pathway partnerships were established. Participant 3 explained that grant-supported initiatives often created opportunities for collaboration between institutions, noting that external funding sometimes provided the resources needed to coordinate advising and outreach activities. According to Participant 3, these programs often began when “someone secured funding to create a program that connected students with medical school partners.”

Intermediary organization participants also described external funding as an important mechanism supporting partnership coordination. Participant 8 explained that intermediary organizations frequently relied on foundation grants or philanthropic support to organize programming designed to introduce students to medical careers. As Participant 8 noted, “a lot of our programming exists because we have grant support that allows us to bring institutions together and provide resources to students.”

Participants also described how external funding supported activities intended to increase awareness of medical careers among students who might not otherwise have access to these opportunities. Participant 12 explained that many outreach programs depended on grant funding to organize workshops, speaker series, and informational sessions designed to introduce students

to the profession. According to Participant 12, these activities often focused on helping students “understand what the pathway looks like and how they can begin preparing.”

Funding Limitations and Foreclosed Capacity

While participants described external funding as enabling the development of pathway programs, they also discussed how reliance on these funding sources influenced program stability and scope. Medical school participants described how the availability of funding often shaped the scale of pathway initiatives. Participant 5 explained that programs frequently expanded or contracted depending on available resources, noting that staffing and program capacity were closely tied to external support. According to Participant 5, many initiatives “depend on whether the funding is there to support the staff and programming needed to run them.”

Participants also described how grant cycles influenced program planning and long-term program development. Participant 11 explained that many pathway initiatives operated within limited funding timelines, noting that “when the grant ends, institutions have to decide whether they can continue the program using internal resources.”

Community college participants described similar considerations when discussing partnership programming. Participant 4 explained that although institutions often valued pathway initiatives, program continuation frequently depended on whether external funding remained available. As Participant 4 noted, programs sometimes continue “as long as the funding is there to support them.”

Intermediary organization leaders also described the role of funding in shaping program capacity. Participant 9 explained that many intermediary initiatives were designed around available grant funding, noting that “funding cycles often determined how many institutions could participate in programming activities”.

Across interviews, participants consistently described external funding as both enabling the creation of pathway initiatives and shaping the ways these programs were structured and sustained.

Temporal Misalignment in Program Accountability

Participants described differences in institutional timelines as an important factor influencing how pathway partnerships were evaluated and sustained. Leaders explained that preparing students for medical careers often required long periods of academic development, while institutional evaluation systems and funding structures frequently operated on shorter timelines. Participants described these differing expectations as shaping how pathway initiatives were measured, supported, and communicated within institutions. Across interviews, leaders from medical schools, community colleges, and intermediary organizations discussed how pathway programs often required sustained engagement with students beginning early in their academic careers. At the same time, participants described institutional reporting structures, funding cycles, and administrative expectations that often emphasized shorter-term program outcomes.

Long-Horizon Outcomes in Short-Cycle Systems

Participants described pathway development as a long-term process that often extended across multiple stages of a student's academic journey. Participant 10 explained that students pursuing medical careers frequently began exploring the profession early in their undergraduate experience, noting that preparing students for medical school required sustained engagement over several years. As Participant 10 described, "students may first connect with a pathway program while they are still completing prerequisite coursework, and it can take years before they reach the point of applying to medical school."

Community college leaders similarly described how students often required extended academic preparation before transferring to four-year institutions. Participant 3 explained that many students began their premedical preparation while completing foundational science coursework, noting that "for many students, the pathway into medicine starts here, but it takes time for them to complete the courses and transfer."

Medical school leaders also described how pathway programs often introduced students to the profession well before they reached the medical school application stage. Participant 7 explained that institutions frequently focused on early exposure to medical careers so that students could begin preparing academically. As Participant 7 noted, these programs are often designed to "introduce students to the field early and help them understand what preparation will be required." Participants explained that these extended timelines were often necessary for students balancing coursework, employment, and other responsibilities while preparing for transfer and eventual medical school applications.

Evidence and Advocacy Across Timelines

Participants also described how institutional leaders frequently needed to demonstrate program impact within shorter reporting or funding timelines. Leaders explained that many pathway programs were evaluated through annual reporting cycles or grant timelines that emphasized near-term program outcomes.

Participant 11 described how institutions often needed to demonstrate measurable program outcomes within limited timeframes, explaining that administrative leaders and funders frequently requested updates regarding participation numbers, program activities, and student engagement. According to Participant 11, “there is often pressure to show what the program is accomplishing even when students are still early in their preparation.”

Intermediary organization participants also described how program evaluation frequently required reporting within fixed grant timelines. Participant 8 explained that “funding organizations often expected regular reporting regarding program progress, noting that these timelines sometimes differed from the longer academic trajectories associated with preparing students for medical school.”

Medical school leaders similarly described the importance of communicating program progress within institutional structures. Participant 5 explained that leaders responsible for pathway initiatives often needed to explain how early-stage programs contributed to longer-term institutional goals. As Participant 5 noted, program leaders frequently work to “demonstrate the value of the work even when outcomes like medical school matriculation may be several years away.”

Participants described these reporting expectations as part of the broader institutional environment in which pathway partnerships operated.

Intermediary Organizations as Structural Supports

Participants described intermediary organizations as playing an important role in facilitating collaboration between community colleges and medical schools involved in pathway initiatives. Leaders explained that intermediary organizations often supported partnership coordination by organizing programming, facilitating communication between institutions, and providing resources that helped sustain collaborative efforts across institutional sectors. Participants from both educational institutions and intermediary organizations described these entities as operating between partner institutions to coordinate activities that supported pathway development. Leaders noted that intermediary organizations frequently helped institutions connect with one another, share information about pathway programming, and coordinate opportunities for students exploring medical careers. Across interviews, participants described intermediary organizations as contributing structural support that enabled institutions to maintain collaboration across multiple partners.

Coordination and Capacity Functions

Participants described intermediary organizations as coordinating programming and communication across institutions participating in pathway partnerships. Intermediary organization leaders explained that their roles frequently involved organizing events, workshops, and informational sessions designed to introduce students to medical careers and connect institutions working toward similar goals.

Participant 12 described coordinating outreach activities across multiple institutions, explaining that these programs often involved bringing together community colleges, universities, and medical schools to share information about medical education pathways. As Participant 12 noted, these efforts focused on helping students “understand the steps involved in preparing for medical school and what resources are available to them.”

Participant 8 described intermediary organizations as helping institutions build connections that might not otherwise occur through standard institutional channels. According to Participant 8, intermediary organizations often serve as connectors between institutions, noting that their role frequently involves “bringing partners together and helping them coordinate programming for students.”

Participants representing community colleges also described intermediary organizations as providing important coordination support. Participant 3 explained that intermediary organizations often helped connect community colleges with medical schools interested in developing outreach partnerships. As Participant 3 described, intermediary organizations sometimes “introduce institutions to one another and help create opportunities for collaboration.”

Medical school leaders similarly described intermediary organizations as helping coordinate outreach initiatives and pathway programming. Participant 10 explained that intermediary organizations often assisted with organizing events and facilitating communication across institutions participating in partnership initiatives. According to Participant 10, these organizations frequently supported “bringing students and institutions together around programming related to medical careers.”

Gap-Filling and the Limits of Institutional Ownership

Participants also described intermediary organizations as filling coordination and advising gaps that emerged when participating institutions lacked the staffing, capacity, or formal structures to sustain partnership responsibilities independently. Leaders explained that intermediary organizations frequently assumed responsibilities that institutions had not yet embedded within their own operational systems.

Participant 9 described the challenge of institutional capacity directly, explaining that pathway programs frequently lacked the resources needed to document and demonstrate their impact over time. As Participant 9 noted, "they do not have the funding or the capacity to do long-term student tracking. That long-term tracking is needed to show people that dollars are making an impact and that the dollars should continue, so the impact can be sustained." This dynamic positioned intermediary organizations as essential bridges between program activity and the evidence of effectiveness that institutions needed to justify continued investment.

Participant 5 identified the structural implication of this dynamic directly, noting that intermediary and medical school support could not substitute for investment within community colleges themselves. As Participant 5 explained, "true partnership would mean funding positions within community colleges, not just running programs at them." This observation suggested that while intermediary organizations provided important coordination functions, sustainable pathways required institutions to develop internal capacity rather than continuing to rely on external partners to fill structural gaps.

Pre-Health Advising Gaps and Information Access

Participants described access to accurate advising information as an important factor shaping how students navigated pathways into medical education. Leaders across community colleges, medical schools, and intermediary organizations explained that students interested in medical careers often relied on multiple sources of information while preparing for transfer and eventual medical school application. Participants described variation in advising structures across institutions and noted that students sometimes encountered inconsistent or incomplete information while attempting to understand the preparation required for medical school. Leaders described advising support as particularly important for students who began their academic journeys at community colleges, including many students from historically underserved populations who were exploring medical careers while completing foundational coursework.

Misinformation Across the Advising Chain

Participants described situations in which students received inconsistent or inaccurate information about medical school preparation from multiple points along the advising chain. Leaders across institutional contexts explained that advising gaps were not limited to a single source but reflected broader inconsistencies across high school counselors, community college advisors, undergraduate advisors, and even practicing physicians.

Participant 1 described identifying "widespread misinformation and hearsay regarding medical school pathways" among the advisors who worked most closely with community college students. As Participant 1 explained, high school counselors, community college advisors, and undergraduate advisors were "often providing inconsistent or outdated guidance to students,"

including practicing physicians who offered advice based on experiences from decades ago that no longer reflected current pathways. This layered misinformation, spanning multiple advisor types and institutional contexts, created conditions in which students received contradictory guidance depending on whom they consulted.

Participant 2 described a related pattern in which community college students were not being directed toward medical school pathways at all. As Participant 2 noted, many community college students "have the scholastic aptitude and desire to become doctors, but they often are not told that path is possible. They might be redirected toward allied health programs like nursing or radiology." This redirection, while not always intentional, reflected a structural advising gap in which the possibility of medical school was not consistently presented as a viable option for students beginning at community colleges.

Participant 12 described how inaccurate information circulated beyond individual advising relationships, noting that "misinformation spreads quickly" and that having credible voices address common misconceptions directly was critical to helping students navigate the pathway accurately. Participants described these advising inconsistencies as shaping not only students' understanding of preparation requirements but also their beliefs about whether medical school was within reach.

Institutional Responses to Advising Gaps

Participants described efforts by institutions to address advising gaps by developing targeted programming, training initiatives, and cross-institutional information-sharing designed to improve the consistency and accuracy of guidance available to community college students.

Participant 1 described developing an advisor-focused workshop specifically in response to the misinformation identified across advising chains. The goal, as Participant 1 explained, was to begin "bringing all of these groups together in one room to ensure consistent and accurate information was being shared" across high school counselors, community college advisors, and undergraduate faculty simultaneously. This approach reflected an institutional recognition that advising gaps required cross-sector coordination rather than isolated institutional effort.

Participant 11 described a similar initiative, an advisor summit held at the medical school, designed to introduce community college and pathway advisors to the institution's programs, expectations, and application processes. As Participant 11 noted, "one project that was important was an advisor training at the medical school, officially an advisor summit, but it was training and an introduction to the medical school." The framing of the initiative as both a summit and a training reflected the dual purpose of relationship building and information alignment that characterized many institutional responses to advising gaps.

Participant 12 described the need for more structurally embedded advising support, proposing a tiered model that would include "peer advisors as the first point of contact, trained professionals for one-on-one advising, and cultural competency embedded throughout." Participant 12 also identified how advising disparities compounded inequity across student populations, noting that "students at elite institutions often receive extensive writing and advising support" and that "that advantage compounds," underscoring the need for mechanisms that could extend access to high-quality advising to students navigating pathways from community colleges. Participants described these responses as important efforts to address structural

advising limitations and embedded advising infrastructures aligned with the needs of students pursuing medical careers.

Invisible and Uncompensated Labor

Participants described the work required to develop and sustain community college-to-medical school pathway partnerships as extending beyond formal institutional responsibilities. Leaders across medical schools, community colleges, and intermediary organizations explained that coordinating partnerships, advising students, and maintaining communication across institutions often required significant time and effort that was not always formally recognized within institutional role descriptions. Participants described this work as involving advising conversations, outreach programming, partnership coordination, and relationship building with institutional partners. Leaders noted that many of these activities occurred alongside existing professional responsibilities related to teaching, administration, or program management. Across interviews, participants described partnership work as requiring sustained commitment from individuals responsible for maintaining collaboration across institutions.

Unrecognized and Uncompensated Work

Participants described pathway coordination as involving responsibilities that extended beyond formally assigned duties. Leaders explained that supporting students preparing for medical careers often required additional advising conversations, program planning, and communication with institutional partners.

Community college participants described frequently serving as the primary contact for students interested in medical careers. Participant 3 explained that advising responsibilities

related to medical pathways were often rolled into their existing teaching or administrative roles, noting that “students come with a lot of questions, and a lot of that advising happens outside of formal structures.”

Participant 4 similarly described working with students who were exploring medical careers while completing community college coursework. As Participant 4 explained, conversations with students about medical school preparation frequently occurred during informal advising interactions, noting that “students will come by to talk about their plans and ask questions about what they need to do.”

Medical school leaders also described pathway coordination as requiring time beyond standard administrative responsibilities. Participant 10 explained that outreach and partnership activities frequently required additional planning and coordination with partner institutions. According to Participant 10, this work often involves “spending time building relationships with institutions and helping students understand the pathway.”

Intermediary organization participants described similar experiences coordinating programs designed to support students pursuing health professions. Participant 12 explained that outreach programming frequently involved organizing workshops, coordinating speakers, and communicating with institutional partners to support student engagement.

Participants described these activities as necessary components of maintaining pathway partnerships and supporting students navigating the preparation required for medical careers.

Student Identity Development as Program Responsibility

Participants also described supporting students' understanding of medical careers as an important component of pathway programming. Leaders explained that many students exploring medical careers were "encountering the profession for the first time and often required guidance related to professional expectations and academic preparation."

Medical school participants described outreach programs designed to introduce students to the profession and provide opportunities to learn about medical training. Participant 7 explained that outreach initiatives often focused on helping students understand the educational pathway into medicine, noting that these programs allow students to "see themselves in the profession and understand what preparation is required."

Community college leaders described working with students who were considering careers in medicine while navigating academic preparation and transfer planning. Participant 3 explained that conversations with students frequently involved helping them "understand the steps required to pursue medical school, noting that students often asked questions about coursework, transfer options, and application preparation."

Intermediary organization participants also described supporting students' understanding of medical careers through informational programming and mentorship opportunities. Participant 8 explained that intermediary organizations frequently "organized workshops and speaker events designed to introduce students to healthcare professions and provide guidance related to academic preparation."

Participants described these efforts as part of broader initiatives intended to support students exploring pathways into medicine.

Chapter Summary

This chapter presented the findings of the study based on semi-structured interviews with 12 institutional leaders representing medical schools, community colleges, and intermediary organizations involved in community college-to-medical school pathway partnerships. The purpose of this study was to explore how institutional leaders described the development and sustainability of partnerships that support the matriculation of students from historically underserved populations and how institutional culture influenced leadership decision-making related to these initiatives. Analysis of the interview data resulted in seven themes reflecting patterns across participants and institutional contexts: Individual Champions and Institutional Sustainability; Institutional Values and Structural Realities; Structural Dependence on External Funding; Temporal Misalignment in Program Accountability; Intermediary Organizations as Structural Supports; Pre-Health Advising Gaps and Information Access; and Invisible and Uncompensated Labor. Together, these themes described how leaders characterized the development, coordination, and sustainability of community college-to-medical school pathway partnerships across institutions. Chapter 5 interprets these findings in relation to the study's research questions, Schein's (2010) 10 Dimensions of a Learning Culture, and the literature on pathway partnerships, leadership, and institutional culture. The chapter also discusses considerations for institutional practice, study limitations, and directions for future research related to community college-to-medical school partnerships.

Chapter 5 - Conclusion and Recommendations

This chapter revisits the problem that guided the study and situates the findings presented in Chapter 4 within the broader context of medical education pathways and institutional leadership. The chapter begins by restating the purpose of the study and the research questions that guided the investigation. Despite sustained national attention to strengthening the physician workforce, students from historically underserved populations remain underrepresented in medical education, particularly those who begin their academic pathways at community colleges (Association of American Medical Colleges [AAMC], 2020; Grbic et al., 2015). Community colleges serve as a major access point to higher education for many students from historically underserved backgrounds; however, transfer pathways into medical school remain uneven and inconsistently supported across institutional contexts (American Association of Community Colleges [AACC], 2024; Wang et al., 2023).

Prior research has documented structural barriers related to advising, academic preparation, and alignment with medical school admissions expectations that affect students who begin their academic careers at two-year institutions (Melguizo et al., 2011; Saguil & Kellermann, 2014). While existing scholarship has largely focused on student-level outcomes and programmatic initiatives, less attention has been given to the institutional and organizational conditions that shape how community college-to-medical school partnerships are developed, implemented, institutionalized, and sustained over time (Grumbach & Chen, 2006; Johnson et al., 2020). In particular, research suggests that pathway efforts in some institutional contexts rely heavily on individual champions or short-term funding rather than being embedded within

institutional structures, which may leave them vulnerable to leadership turnover and shifting institutional priorities (Kezar & Lester, 2009; Grbic et al., 2023).

Informed by Schein's (2010) 10 Dimensions of a Learning Culture, this chapter interprets the study's findings through a leadership and organizational lens. The discussion begins by examining the findings in relation to the study's two research questions and the themes presented in Chapter 4. The chapter then considers how the findings relate to the study's conceptual framework and to existing literature on pathway programs, institutional partnerships, and leadership in higher education. Implications for community colleges, medical schools, intermediary organizations, and institutional practice are discussed. The chapter also highlights unexpected results identified through the analysis and offers recommendations for future research. The chapter concludes with a summary of the study's contributions and key insights regarding leadership, institutional culture, and the sustainability of community college-to-medical school pathway partnerships.

Purpose of the Study

The purpose of this study was to explore how institutional leaders at medical schools, community colleges, and intermediary organizations developed and sustained community college-to-medical school partnerships that support the matriculation of students from historically underserved populations. The study also examined how institutional culture shaped leadership decision-making related to these pathway partnerships.

Research Questions

1. How do institutional leaders describe the development and sustainability of community college-to-medical school partnerships that support the matriculation of students from historically underserved populations?
2. How do institutional leaders describe the influence of institutional culture on leadership decision-making related to pathway partnerships?

Discussion Related to Research Questions

The findings of this study clarified how institutional leaders described the development and sustainability of community college-to-medical school pathways supporting students from historically underserved populations. Across institutional contexts, leaders described pathway initiatives as important mechanisms for expanding access to medical education and strengthening the physician workforce pipeline. At the same time, the findings revealed that the continuity of these partnerships was shaped by institutional conditions that extended beyond the initial creation of pathway programs.

Themes identified in Chapter 4 demonstrated that pathway partnerships frequently emerged through leadership initiative, cross-sector collaboration, and iterative experimentation across institutions. However, the sustainability of these initiatives was influenced by whether partnership responsibilities were embedded within institutional systems capable of sustaining coordination over time. Patterns associated with themes such as individual champions and institutional sustainability, institutional values and structural realities, structural dependence on external funding, and intermediary organizations as structural supports illustrated how leadership

practices and institutional structures influenced the development and durability of pathway partnerships. The sections that follow interpret the findings in relation to each research question and clarify how institutional leadership and culture shaped the development and sustainability of community college-to-medical school pathways.

Research Question 1

The findings indicated that institutional leaders described the development of community college-to-medical school pathways as collaborative and evolving processes that unfolded through relationship building across institutional boundaries. Participants frequently described pathway initiatives emerging through pilot programs, advising collaborations, and ongoing coordination between community colleges, medical schools, and intermediary organizations. In many cases, pathway development began through the efforts of individual leaders who recognized gaps in advising, transfer alignment, or access to information for students pursuing medical education.

As reflected in the theme individual champions and institutional sustainability, participants frequently described pathway partnerships initially developing through the advocacy and initiative of specific leaders who built relationships across institutions and coordinated partnership activities. While these individuals often served as catalysts for collaboration, the findings indicated that partnerships remained vulnerable when coordination depended primarily on individual effort rather than institutional infrastructure. The findings further revealed that the sustainability of community college-to-medical school pathways depended on whether partnership initiatives became integrated into institutional systems. Participants described stronger continuity when pathway responsibilities were incorporated into advising structures,

supported through defined leadership roles, and reinforced through institutional planning processes. In these contexts, partnership coordination extended beyond individual advocacy and became embedded within institutional operations.

Additional themes such as structural dependence on external funding and intermediary organizations as structural supports further illustrated how organizational conditions influenced partnership sustainability. Participants described how grant funding frequently enabled the initial development of pathway initiatives, while intermediary organizations often facilitated communication and coordination between institutional partners. However, the findings also suggested that long-term sustainability depended on whether participating institutions internalized these responsibilities within their own systems rather than relying solely on external coordination.

Collectively, these findings indicate that institutional leaders described the development of community college-to-medical school pathways as adaptive and relationship-driven, while sustainability depended on whether partnership efforts became embedded within institutional advising systems, governance structures, and leadership responsibilities. Leaders did not conceptualize sustainability as the continuation of programs alone. Rather, sustainability emerged when pathway initiatives became integrated into institutional structures capable of supporting collaboration between community colleges and medical schools over time.

Research Question 2

The findings revealed that institutional culture played a significant role in shaping how leaders interpreted and enacted decisions related to community college-to-medical school

pathways. Participants described differences in institutional mission, authority structures, and organizational priorities between community colleges and medical schools that influenced how partnership collaboration unfolded. These differences reflected underlying assumptions regarding academic preparation, institutional prestige, and student readiness that shaped leadership decision-making related to pathway initiatives.

As reflected in the theme institutional values and structural realities, participants frequently described institutional commitments to expanding access for students from historically underserved populations while also acknowledging that pathway initiatives were not always integrated into the institutional structures responsible for operational decision-making. In several contexts, pathway initiatives were administered through program units that did not hold direct authority over admissions processes or institutional planning decisions. These structural conditions influenced the extent to which partnership initiatives were able to shape institutional priorities.

Participants also described how institutional norms influenced the conditions under which collaborative decision-making occurred. In environments where leaders reported greater openness to dialogue and collaboration across institutional boundaries, participants described greater willingness to reconsider partnership structures and refine advising coordination. In contrast, where hierarchical norms or competing institutional priorities constrained collaboration, leaders described partnership adaptation occurring more cautiously. The findings further suggested that institutional culture influenced how leaders interpreted responsibility for supporting students from historically underserved populations within pathway partnerships. Participants described contexts in which institutional leaders viewed pathway initiatives as

central to workforce development and educational access, while others framed pathway collaboration as complementary to, but not fully integrated within, institutional priorities.

Taken together, these findings indicate that institutional culture shaped leadership decision-making by influencing how pathway partnerships were interpreted, prioritized, and operationalized within institutions. Leadership practices related to community college-to-medical school pathways were embedded within broader institutional norms governing authority, collaboration, and resource allocation. As a result, the sustainability of pathway partnerships was influenced not only by structural coordination but also by whether institutional cultures supported collaborative leadership, shared responsibility, and ongoing engagement with pathway initiatives intended to support students from historically underserved populations.

Discussion Related to Conceptual Framework

This study used Schein's (2010) 10 Dimensions of a Learning Culture as the conceptual framework to interpret how leadership practices and institutional learning conditions influence the sustainability of community college-to-medical school pathway partnerships supporting students from historically underserved populations. Schein (2010) identifies 10 cultural dimensions that enable organizational learning: proactivity, commitment to learning, positive assumptions about human nature, belief that the environment can be managed, commitment to truth through inquiry and dialogue, positive orientation toward the future, commitment to full and open communication, commitment to cultural diversity, commitment to systemic thinking, and belief in the value of cultural analysis. Together, these dimensions describe the cultural conditions through which institutions interpret experience, adapt practices, and embed learning into institutional routines. Within cross-sector collaborations such as community college-to-

medical school pathway partnerships, the presence or absence of these conditions shapes whether partnership initiatives evolve into durable institutional commitments or remain dependent on informal leadership effort. The findings presented in Chapter 4 provide insight into how these dimensions operated within the institutional contexts represented in this study. Rather than reflecting uniform enactment of all 10 dimensions, the findings revealed uneven learning culture conditions across organizations. Some dimensions were clearly evident in how leaders described partnership work, while others appeared inconsistently or were largely absent. This uneven distribution of learning culture practices helps explain why pathway initiatives designed to support students from historically underserved populations were often initiated successfully but remained structurally vulnerable over time.

Among the 10 dimensions, commitment to systemic thinking emerged as one of the most visible elements in participants' descriptions of leadership practice. Leaders frequently described the need to coordinate across multiple institutional actors, including community colleges, medical schools, and intermediary organizations. Participants framed pathway partnerships not as isolated programs but as components of a broader physician workforce pipeline. As reflected in the theme intermediary organizations as structural supports, leaders described navigating policy constraints, admissions expectations, and institutional responsibilities across organizational boundaries in order to sustain pathways for students beginning their academic journeys at community colleges. This orientation reflects commitment to systemic thinking, as leaders recognized the interdependence of advising structures, admissions preparation, and institutional collaboration in supporting access for students from historically underserved populations.

The dimension of proactivity was also strongly evident in how leaders described initiating partnership work and responding to institutional gaps. As illustrated in the theme individual champions and institutional sustainability, participants frequently referenced the efforts of individual leaders who recognized barriers affecting community college students and took initiative to build partnerships, develop advising structures, and advocate for pathway opportunities. These actions reflect proactive leadership behavior, particularly when leaders anticipated structural challenges and mobilized resources to address them before formal institutional authorization existed. However, the findings suggest that proactive leadership was concentrated in specific individuals rather than embedded within institutional systems, leaving partnerships vulnerable to leadership transitions and shifting organizational priorities. Commitment to learning was reflected across multiple themes in how participants described their investment in pathway work over time. Leaders described piloting new initiatives, refining programming, and sustaining partnerships through periods of institutional change. The theme structural dependence on external funding illustrated how this commitment often operated within constrained conditions, with institutions relying on grant cycles and philanthropic support to fund learning-oriented activities rather than embedding them within core institutional budgets. While commitment to learning was present as an individual value among many participants, it was less consistently enacted as an organizational principle supported by protected resources and formal structures.

The dimension of belief that the environment can be managed was evident in how leaders described responding to structural constraints through adaptive strategies rather than withdrawal. Participants described adjusting program models in response to funding limitations, redesigning advising structures when formal pathways were unclear, and negotiating with institutional

partners to maintain collaboration across competing priorities. These responses reflect an underlying assumption that external constraints can be navigated through deliberate institutional action. However, the theme temporal misalignment in program accountability illustrated how this belief was tested when short-term funding cycles and accountability demands conflicted with the longer timelines required to prepare students for medical school, limiting institutions' capacity to act on longer-horizon commitments. The dimension of commitment to truth through inquiry and dialogue was frequently described as informal rather than institutionalized across partnership contexts. Leaders emphasized the importance of communication across institutions when coordinating advising practices and aligning expectations for student preparation. As reflected in the theme pre-health advising gaps and information access, dialogue helped leaders identify and respond to inconsistencies in the information students received across advising chains. However, these exchanges were often dependent on personal relationships between individuals rather than supported by formal structures capable of sustaining inquiry beyond individual leadership roles.

The dimension of commitment to full and open communication operated unevenly across the institutional contexts represented in this study. In contexts where leaders described stronger coordination between community colleges and medical schools, open communication about program goals, student preparation expectations, and institutional responsibilities supported more durable partnership structures. However, the theme individual champions and institutional sustainability illustrated that communication about pathway work was frequently concentrated within a small number of individuals, meaning that when those individuals transitioned out of their roles, the organizational knowledge and relational networks they had built were not reliably transferred to institutional systems. The dimension of commitment to cultural diversity was

relevant to how leaders described the purpose and framing of partnership work. Participants across institutional contexts described pathway initiatives as mechanisms for expanding access to medical education for students from historically underserved populations, reflecting an institutional orientation toward valuing diverse student backgrounds and experiences. However, as reflected in the theme institutional values and structural realities, this commitment was not always aligned with operational admissions practices or institutional structures. Participants described longstanding perceptions of community college preparation that influenced how medical school partners approached collaboration and how students from community college pathways were evaluated within admissions processes. These patterns suggest that while commitment to cultural diversity was expressed at the level of institutional mission and program intent, underlying cultural assumptions about academic preparation and institutional prestige sometimes constrained how that commitment was enacted in practice.

The dimension of positive assumptions about human nature, which reflects an organizational belief that people are capable, motivated, and deserving of institutional investment, was unevenly present across the contexts examined in this study. Participants described strong individual commitments to supporting students from historically underserved populations and investing in their preparation for medical careers. However, as reflected in the theme invisible and uncompensated labor, the institutional systems and structures that would formalize this belief through recognized roles, protected time, and compensated responsibilities were frequently absent. The prevalence of unrecognized and uncompensated partnership work suggests that in many institutional contexts, investment in people and in pathway-sustaining labor was treated as a matter of individual dedication rather than organizational responsibility.

Two dimensions were notably limited across the institutional contexts represented in this study. The dimension of positive orientation toward the future, which involves institutional planning with long-term sustainability in mind, was consistently described as constrained by short-term funding cycles and accountability structures. As illustrated in the theme temporal misalignment in program accountability, leaders described operating within planning horizons shaped by grant timelines and annual reporting requirements rather than the decade-long trajectories required to see pathway students reach medical school matriculation. This structural condition limited institutions' capacity to make forward-looking commitments and reinforced provisional rather than durable partnership arrangements. Most notably, the dimension of belief in the value of cultural analysis, which involves ongoing institutional examination of assumptions, norms, and values to support adaptive change, was largely absent from the organizational environments described by participants. Leaders rarely described structured processes for collectively examining the cultural assumptions shaping partnership work, revisiting admissions norms, or systematically evaluating whether institutional practices aligned with stated equity commitments. Without this kind of internal cultural examination, the gap between espoused values and enacted structures described across multiple themes remained largely unaddressed. This absence helps explain why pathway initiatives that were meaningful and well-intentioned at the individual level nonetheless remained structurally fragile at the institutional level.

Taken together, the findings suggest that while elements of a learning culture were present across institutions engaged in pathway partnerships, these dimensions were enacted unevenly. Commitment to systemic thinking, proactivity, commitment to learning, and belief that the environment can be managed were commonly described practices among participants.

Commitment to truth through inquiry and dialogue, commitment to full and open communication, and commitment to cultural diversity appeared inconsistently enacted, present in some relational and programmatic contexts but not embedded within formal institutional systems. Most notably, positive orientation toward the future and belief in the value of cultural analysis were largely absent from the organizational environments described by participants, contributing to the structural vulnerability that characterized many of the pathway partnerships examined in this study. From a leadership perspective, these findings highlight the importance of moving beyond episodic and individually-driven learning toward sustained organizational learning. Individual champions and pilot initiatives can initiate collaboration and generate innovative strategies for expanding access to medical education for students from historically underserved populations. However, long-term sustainability depends on whether institutions develop the full range of cultural conditions Schein (2010) describes, particularly those that support forward-looking planning, honest self-examination, and shared institutional responsibility for pathway work. When institutions cultivate these conditions, pathway partnerships are more likely to evolve into enduring commitments that strengthen educational opportunity and contribute to a more representative physician workforce.

Discussion Related to the Literature

This study contributes to and extends the literature on community college-to-medical school pathways by shifting the analytic focus from program design and student-level outcomes to the institutional and leadership conditions that shape long-term sustainability. Prior scholarship has consistently emphasized the effectiveness of pathway programs, holistic admissions practices, and targeted support initiatives in improving preparation, access, and

matriculation outcomes for students from historically underserved populations (Grbic et al., 2015; Saguil & Kellermann, 2014; Talamantes et al., 2019). Consistent with this scholarship, participants in the present study described pathway partnerships as important mechanisms for expanding opportunity for students who begin their academic journeys at community colleges. However, whereas much of the existing literature evaluates the effectiveness of specific interventions or program models, the findings of this study indicate that the durability of pathway initiatives depends less on program design and more on the institutional conditions that support their continuation. In this way, the study extends existing scholarship by reframing sustainability as a function of organizational structures, leadership practices, and institutional culture rather than program presence alone.

The findings also reinforce longstanding scholarship documenting structural barriers within the medical education pipeline. Prior research identifies advising limitations, uneven access to preparation resources, financial constraints, and admissions expectations that privilege traditional educational trajectories as persistent obstacles for students from historically underserved populations (Saguil & Kellermann, 2014; Wang et al., 2023). Participants in this study described many of these same challenges, particularly in relation to inconsistent access to pre-health advising and uncertainty regarding admissions expectations. The theme pre-health advising gaps and information access aligns with this literature by highlighting how advising capacity varies widely across institutions. However, the findings extend prior research by illustrating that advising gaps are not solely student-facing challenges but also reflect institutional resource allocation and organizational capacity. Rather than attributing disparities to individual student preparation alone, participants emphasized that advising limitations frequently emerged from structural conditions within institutions themselves.

The findings also both support and complicate existing scholarship on partnership sustainability and cross-sector collaboration. Research on educational partnerships has emphasized that initiatives designed to address inequities require shared governance, coordinated institutional strategies, and sustained leadership commitment (Grumbach & Chen, 2006; Johnson et al., 2020). Participants in this study similarly recognized the importance of collaboration across institutional boundaries and described partnerships as requiring communication, trust, and shared goals. In this respect, the findings align with prior literature emphasizing the value of cross-sector collaboration. However, the findings diverge from the institutionalized partnership models frequently described in the literature. Many participants reported that partnerships relied heavily on informal relationships, temporary funding, and individual initiative rather than formalized institutional structures. The theme individual champions and institutional sustainability illustrates how partnerships were often sustained through the efforts of specific leaders rather than embedded organizational roles. While earlier research highlights examples of stable collaborative frameworks, the findings of this study suggest that many partnerships operate under more fragile and informal conditions than existing literature often assumes.

Financial sustainability also emerged as an important point of comparison with prior research. Previous scholarship frequently identifies external funding as a catalyst for innovation in pathway development and equity-focused educational initiatives (Talamantes et al., 2019). Consistent with this literature, participants in the present study reported that grant funding played an essential role in launching pathway programs and expanding student support services. However, the findings complicate the assumption that grant-funded initiatives naturally evolve into sustainable institutional practices. The theme structural dependence on external funding highlights how reliance on temporary grants often limited long-term program stability.

Participants described situations in which programs were successfully implemented during grant cycles but struggled to continue once funding ended because institutional budgets and governance structures had not incorporated the initiative. In contrast to scholarship that often portrays grant-supported initiatives as scalable innovations, the present findings suggest that external funding can simultaneously enable experimentation while reinforcing structural fragility when institutions do not assume long-term ownership of partnership programs.

The findings also extend literature examining the role of intermediary organizations in partnership ecosystems. Existing scholarship frequently highlights intermediaries as coordinating entities that facilitate communication, align stakeholders, and support collective impact strategies across institutions (Grbic et al., 2023; Hrabowski et al., 2021; Kania & Kramer, 2011).

Participants in this study similarly described intermediary organizations as essential connectors across institutional boundaries. The theme intermediary organizations as structural supports illustrates how these organizations often provided coordination, advising infrastructure, and communication systems that individual institutions lacked independently. However, the findings extend the literature by demonstrating that intermediary involvement does not necessarily translate into institutional ownership of partnership initiatives. While intermediaries can stabilize collaboration and provide operational continuity, long-term sustainability ultimately depends on whether participating institutions embed pathway responsibilities within leadership roles, governance structures, and resource allocation systems.

Finally, the findings contribute to scholarship on leadership and organizational culture in higher education. Prior research has documented tensions between institutional commitments to equity and the structural practices that shape decision-making, prestige hierarchies, and resource

allocation (Bensimon, 2005; Tierney, 2008). The findings of this study are consistent with this perspective. Participants frequently articulated strong commitments to supporting students from historically underserved populations and recognized the importance of community college pathways in addressing workforce disparities. However, the theme institutional values and structural realities illustrates how these commitments were not always reflected in institutional decision-making processes or formal governance structures. In several cases, pathway initiatives remained peripheral to core administrative priorities despite alignment with institutional mission statements. These findings reinforce Schein's (2010) argument that underlying cultural assumptions often shape organizational behavior more strongly than espoused values.

Taken together, the findings both affirm and extend existing scholarship on pathway partnerships and educational equity. Consistent with prior research, the study confirms that pathway initiatives can expand access to medical education for students from historically underserved populations. At the same time, the findings suggest that the long-term viability of these initiatives depends not only on program design but also on institutional leadership practices, cultural alignment, and structural integration. By foregrounding organizational conditions and leadership decision-making, the present study contributes a critical institutional perspective to a body of literature that has historically emphasized student outcomes and program effectiveness.

Implications

The findings of this study highlight several implications for institutional leaders responsible for developing and sustaining community college-to-medical school pathways that support students from historically underserved populations. Across institutional contexts,

participants described pathway partnerships as meaningful mechanisms for expanding access to medical education and strengthening the physician workforce pipeline. At the same time, the findings demonstrate that partnership development and sustainability were shaped by institutional conditions that extended beyond the presence of pathway initiatives themselves.

Themes identified in Chapter 4 illustrate that many partnerships initially developed through the initiative of individual leaders who built relationships across institutional boundaries, coordinated advising structures, and advocated for students seeking entry into medical education. However, participants also described how partnership continuity was influenced by structural conditions such as advising capacity, institutional authority, external funding stability, and the distribution of partnership responsibilities across organizations. These findings suggest that sustaining community college-to-medical school pathway partnerships require leaders to move beyond initiating collaborative programs and toward designing institutional systems that support long-term coordination across sectors. Taken together, the findings indicate that pathway partnerships supporting students from historically underserved populations are sustained when leadership commitment is reinforced through institutional structures that distribute responsibility, align organizational priorities, and support continued collaboration between community colleges and medical schools.

Implications for Community Colleges

The findings reinforce the central role community colleges play in the development of community college-to-medical school pathways. Participants consistently described community colleges as the entry point where many students from historically underserved populations begin their educational trajectories toward health professions careers. Advising systems, transfer

structures, and institutional partnerships established within community colleges therefore strongly influence whether students can successfully navigate pathways into medical education. At the same time, the findings reveal structural challenges that can affect the sustainability of these pathways within community college settings. As reflected in the themes individual champions and institutional sustainability and pre-health advising gaps and information access, participants frequently described pathway coordination being concentrated among a limited number of advisors, faculty members, or administrators responsible for maintaining relationships with medical school partners and supporting students through complex transfer processes. While these individuals often served as catalysts for the development of community college-to-medical school pathways, reliance on a small number of leaders created instability when personnel changed or institutional priorities shifted.

For community college leaders, these findings highlight the importance of embedding pathway responsibilities within institutional advising systems, transfer processes, and leadership roles. When the work of sustaining community college-to-medical school pathways depends primarily on individual initiative, the continuity of these partnerships remains vulnerable to leadership turnover and competing institutional demands. By contrast, when advising capacity, partnership coordination, and transfer alignment are integrated into institutional systems, community colleges are better positioned to sustain collaboration with medical schools and support students from historically underserved populations across leadership transitions. Participants also described challenges related to tracking long-term student progression beyond transfer. Limited institutional data on whether students ultimately matriculate into medical school can make it difficult for community colleges to demonstrate the broader impact of community college-to-medical school pathways. Strengthening institutional systems for tracking

student progression across the educational pipeline may therefore support more informed leadership decision-making and reinforce the institutional value of these partnerships.

Implications for Medical Schools

For medical school leaders, the findings underscore the importance of aligning institutional commitments to access with the governance structures responsible for operational decision-making. Participants consistently described medical schools articulating strong commitments to expanding opportunity for students from historically underserved populations and recognizing community college-to-medical school pathways as an important strategy for strengthening the physician workforce pipeline. However, the findings associated with the theme institutional values and structural realities indicate that pathway initiatives were sometimes positioned outside the institutional structures that govern admissions policy, advising coordination, and resource allocation. In several contexts, community college-to-medical school pathways were administered through outreach programs or partnership units that did not hold direct authority over admissions processes or institutional planning decisions.

This structural positioning has important implications for the sustainability of these pathways. When community college-to-medical school pathways operate outside the institutional systems that shape admissions practices, financial planning, and strategic priorities, their influence on long-term institutional decision-making may remain limited. Participants described stronger partnership continuity when pathway initiatives were integrated into senior leadership portfolios, incorporated into institutional planning processes, or reflected within admissions committee training and review procedures. In addition, findings from this study indicate that reliance on external or grant-based funding structures further constrains sustainability. Pathway

initiatives that are not supported through dedicated institutional funding streams remain vulnerable to disruption, particularly during leadership transitions or shifts in external funding priorities. Embedding pathway programs within institutional budgets, including the allocation of recurring funding lines and personnel support, is essential to positioning these initiatives as core institutional functions rather than supplemental efforts.

The findings also highlight the importance of examining how admissions practices interact with pathway commitments. While many institutions described adopting holistic admissions approaches intended to broaden evaluation criteria, participants noted that traditional academic benchmarks and early screening practices continued to shape applicant evaluation in some contexts. For students from historically underserved populations who begin their educational journeys at community colleges, these dynamics can influence whether community college-to-medical school pathways ultimately translate into expanded opportunities for entry into medical education. From a leadership perspective, sustaining community college-to-medical school pathways requires intentional coordination between partnership initiatives, admissions leadership structures, and institutional resource allocation. When institutional leaders align admissions practices, partnership goals, workforce development priorities, and financial commitments, pathway initiatives are more likely to influence institutional decision-making and contribute to expanded access to medical education.

Implications for Intermediary Organizations

The findings also offer important implications for intermediary organizations involved in community college-to-medical school pathways. Participants described intermediary organizations serving as important connectors across institutional boundaries by coordinating

communication, facilitating advising resources, and supporting collaboration between community colleges and medical schools. As reflected in the theme intermediary organizations as structural supports, these organizations frequently played a stabilizing role within pathway ecosystems by maintaining continuity across institutions and supporting collaborative initiatives. Intermediary organizations often helped institutions share information, coordinate partnership activities, and sustain momentum when leadership transitions occurred within participating institutions.

At the same time, the findings indicate that intermediary involvement alone does not guarantee the long-term sustainability of community college-to-medical school pathways. In several cases, intermediary organizations assumed responsibilities for coordination, advising support, or program management that participating institutions had not fully integrated into their own operational systems. While this support enabled partnerships to function effectively in the short term, sustainability ultimately depended on whether participating institutions internalized these responsibilities over time. For leaders within intermediary organizations, these findings highlight the importance of balancing coordination with institutional capacity building. Intermediaries can strengthen partnership ecosystems by facilitating collaboration and sharing resources, but durable community college-to-medical school pathways require participating institutions to develop internal leadership structures capable of sustaining collaboration across institutional boundaries.

Implications for Practice

Across institutional contexts, the findings reinforce that sustainable community college-to-medical school pathways require deliberate organizational design rather than reliance on

isolated initiatives. Participants described leaders engaging in experimentation, relationship building, and adaptive problem solving as they developed pathways that supported students from historically underserved populations. However, the findings also indicate that pathway sustainability was influenced by whether these efforts were reinforced through institutional systems capable of supporting long-term collaboration. Partnerships that relied heavily on informal coordination, individual advocacy, or temporary funding arrangements were more susceptible to disruption. By contrast, pathways that were embedded within institutional planning processes, leadership portfolios, and resource allocation structures demonstrated greater continuity.

For institutional leaders working to expand access to medical education, these findings suggest that sustaining community college-to-medical school pathways requires aligning leadership practices with institutional systems that support ongoing collaboration between community colleges and medical schools. Development of pathway initiatives may begin with experimentation and relationship building, but long-term sustainability appears to depend on whether institutions translate these efforts into stable organizational arrangements that support collaboration across sectors. In this way, the development and sustainability of community college-to-medical school pathways represent not only a strategy for expanding educational opportunity but also a leadership responsibility that requires institutions to align mission, governance structures, and operational practices in support of long-term collaboration benefiting students from historically underserved populations.

Unexpected Results

While the findings of this study largely aligned with existing literature on pathway partnerships and educational access, several patterns emerged that were not fully anticipated based on prior scholarship. These findings provide additional insight into the organizational dynamics that influence the development and sustainability of community college-to-medical school pathways supporting students from historically underserved populations.

One unexpected finding was the degree to which institutional leaders described partnership development as adaptive and evolving rather than structured according to predetermined program models. Much of the literature on pathway initiatives emphasizes the design of formal programs, structured pipelines, or coordinated institutional frameworks intended to guide students from entry into higher education through medical school admission. In contrast, participants in this study frequently described community college-to-medical school pathways developing incrementally through relationship building, experimentation, and iterative adjustment across institutions. Leaders often described partnerships emerging through collaborative problem solving rather than through the implementation of predetermined institutional models. This finding suggests that pathway development may occur through a more organic and adaptive process than is commonly represented in the literature.

A second unexpected finding involved the variation in how institutional leaders interpreted the role of partnership work within their institutional missions. While participants broadly agreed that community college-to-medical school pathways were important for expanding opportunity for students from historically underserved populations, leaders described differing assumptions regarding institutional responsibility for sustaining these partnerships.

Some participants framed pathway initiatives as central to institutional workforce development goals, while others described them as collaborative efforts that complemented but did not necessarily reshape core institutional priorities. This variation suggests that institutional culture influences how leaders interpret the significance of pathway partnerships and the degree to which those initiatives become embedded within long-term institutional planning.

Together, these unexpected findings highlight the diversity of institutional approaches to developing and sustaining community college-to-medical school pathways. While the literature often presents pathway initiatives as structured programs designed to address educational inequities, the findings of this study suggest that institutional leadership interpretations, organizational flexibility, and cross-sector collaboration also play significant roles in shaping how these pathways evolve over time.

Recommendations for Future Research

The findings of this study highlight several opportunities for future research examining the development and sustainability of community college-to-medical school pathways supporting students from historically underserved populations. While this study provides insight into how institutional leaders describe partnership development and the influence of institutional culture on leadership decision-making, additional research is needed to further examine the organizational conditions that shape pathway sustainability across institutional contexts.

First, future research could explore the long-term outcomes associated with community college-to-medical school pathways. While participants in this study described partnership initiatives intended to support students from historically underserved populations, limited

institutional data were available regarding the long-term progression of students through the full educational pipeline into medical school and eventually into the physician workforce.

Longitudinal research examining student progression across community colleges, four-year institutions, and medical schools would provide valuable insight into the extent to which pathway partnerships contribute to expanded access to medical education and improved workforce representation.

Second, additional research could examine how advising infrastructure influences the effectiveness of community college-to-medical school pathways. Participants frequently described variation in pre-health advising capacity across community colleges, which influenced how effectively students were able to navigate transfer processes, prerequisite requirements, and medical school admissions expectations. Future studies could investigate how advising models, institutional resources, and cross-institutional advising collaboration affect the development and sustainability of pathway partnerships and the success of students pursuing medical education.

Third, future research could further investigate the role of intermediary organizations within community college-to-medical school pathway ecosystems. While participants in this study described intermediary organizations serving as connectors that facilitated communication and partnership coordination, the extent to which these organizations influence long-term sustainability remains unclear. Additional research could explore how intermediary structures support institutional collaboration, how responsibilities are distributed among participating organizations, and how intermediary involvement affects institutional ownership of pathway initiatives.

Fourth, future research could explore how institutional culture influences leadership decision-making related to pathway partnerships across different types of higher education institutions. This study examined leadership perspectives across community colleges, medical schools, and intermediary organizations; however, future research could investigate how institutional culture varies across geographic regions, institutional missions, and governance structures. Comparative studies examining different institutional contexts may provide deeper insight into how cultural conditions influence the development and sustainability of pathway partnerships.

Finally, future research could expand the scope of inquiry by examining the perspectives of additional stakeholders involved in community college-to-medical school pathways. This study focused on institutional leaders responsible for partnership development and coordination. Future studies could include the perspectives of advisors, faculty members, program administrators, and students participating in pathway initiatives. Including multiple stakeholder perspectives may provide a more comprehensive understanding of how pathway partnerships function across institutional levels and how these collaborations influence access to medical education for students from historically underserved populations.

Together, these directions for future research may contribute to a more comprehensive understanding of how institutional leadership, organizational culture, and cross-sector collaboration shape the development and sustainability of community college-to-medical school pathways. Expanding research in these areas may also support institutional leaders seeking to design sustainable partnerships that strengthen the physician workforce pipeline and expand opportunities for students from historically underserved populations.

Conclusion

The purpose of this generic qualitative study was to explore how institutional leaders at medical schools, community colleges, and pipeline or intermediary organizations developed, implemented, institutionalized, and sustained partnership practices that support the matriculation of students from historically underserved populations into medical school. Additionally, this study examined how institutional culture shaped leadership decision-making related to these partnerships. The findings indicated that the presence of pathway programs alone did not ensure sustainability. Instead, durability was associated with the extent to which institutional leaders embedded partnership commitments within governance structures, aligned operational systems with institutional values, and established mechanisms for accountability and coordination across institutions. Partnerships demonstrated greater stability when leadership responsibility was clearly defined and supported through cross-functional collaboration, and greater vulnerability when initiatives relied primarily on individual champions or short-term external funding.

Beyond documenting partnership practices, this study contributes to a broader understanding of how institutional systems shape the long-term viability of access initiatives within medical education. The findings suggest that pathway sustainability is not determined solely by program design or admissions reform, but by the organizational environments in which these initiatives operate. Institutional culture, leadership authority, and structural alignment influence whether partnerships remain peripheral initiatives or become embedded components of institutional strategy. Community college-to-medical school partnerships represent an important opportunity to expand pathways into the physician workforce for students from historically underserved populations. However, the findings of this study suggest that the effectiveness of

these partnerships ultimately depends on institutional leadership willing to move beyond symbolic commitment and toward structural integration. Durable change requires institutional systems that translate stated commitments into operational practice and sustain collaboration across organizational boundaries.

As medical schools confront workforce shortages and increasing expectations to align institutional missions with public need, community college partnerships offer a viable pathway for strengthening the physician workforce pipeline. Yet sustainability cannot be assumed. Partnerships endure when institutional leaders intentionally construct the cultural, structural, and organizational conditions necessary to support them over time. In this way, sustainable pathways are not simply the product of innovative programs but of leadership decisions that embed access-oriented commitments within the enduring systems of the institution.

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Appendix A - Alignment Table

Literature Anchor	Research Question	Interview Questions by Participant Group	Conceptual Framework	Aligned Dimensions
Prior literature documented that partnership development and sustainability are shaped by leadership roles, institutional priorities, and organizational coordination rather than uniform program models (Kezar & Lester, 2009).	RQ1: How do institutional leaders describe the development and sustainability of community college–to–medical school partnerships supporting the matriculation of students from historically underserved populations?	Medical Schools: Q1, Q2, Q4, Q7, Q9 Community Colleges: Q1, Q3, Q5, Q7, Q9 Intermediary Organizations: Q1, Q2, Q4, Q6, Q9	Schein’s 10 Dimensions of a Learning Culture (2010)	1. Proactivity 2. Commitment to Learning 4. Belief That the Environment Can Be Managed 6. Positive Orientation Toward the Future 9. Commitment to Systemic Thinking
Research indicated that institutional culture influences how leaders interpret mission, make decisions, and respond to change within partnership contexts (Schein, 2010).	RQ2: How do institutional leaders describe the influence of institutional culture on leadership decision-making related to pathway partnerships?	Medical Schools: Q3, Q5, Q6, Q8 Community Colleges: Q2, Q4, Q6, Q8 Intermediary Organizations: Q3, Q5, Q7, Q8	Schein’s 10 Dimensions of a Learning Culture (2010)	3. Positive Assumptions About Human Nature 5. Commitment to Truth Through Inquiry and Dialogue 7. Commitment to Full and Open Communication 8. Commitment to Cultural Diversity
Literature on organizational learning emphasized feedback, reflection, and adaptation as mechanisms for sustaining cross-sector partnerships over time (Argyris & Schön, 1996).	RQ1 & RQ2	Medical Schools: Q7, Q9 Community Colleges: Q7, Q9 Intermediary Organizations: Q6, Q9	Schein’s 10 Dimensions of a Learning Culture (2010)	10. Belief in the Value of Cultural Analysis

Appendix B - Interview Protocol

Subject: Invitation to Participate in Doctoral Research Study on Medical School–Community College Partnerships

Dear [Name],

My name is Tashae Freeman Savage, and I am a doctoral candidate in the John E. Roueche Center for Community College Leadership at Kansas State University. I am conducting a research study titled *Leadership, Culture, and Sustainability in Community College–to–Medical School Pathways Supporting Students from Historically Underserved Populations*. The Kansas State University Institutional Review Board has approved this study.

The purpose of this study was to explore how institutional leaders at medical schools, community colleges, and intermediary organizations developed and sustained community college–to–medical school partnerships that support the matriculation of students from historically underserved populations. The study also examined how institutional culture shaped leadership decision-making related to these pathway partnerships. You are being invited to participate because of your leadership role and your experience with partnership or pathway initiatives that connect medical schools and community colleges. Participation will involve one virtual interview lasting approximately 45 to 60 minutes. The interview will be conducted through a secure videoconferencing platform using audio recording only. No video will be used.

Participation in this study is completely voluntary, and all responses will remain confidential. Pseudonyms will be used in place of names, titles, and institutions to ensure anonymity in all transcripts and publications.

If you are willing to participate, please reply to this email, and I will send the informed consent form and a link to schedule your interview at a time that is convenient for you.

Thank you for considering this invitation. Your expertise and perspective would make a valuable contribution to understanding how partnerships between medical schools, community colleges and pipeline or intermediary organizations can strengthen pathways into medical education.

Kind regards,

Tashae Freeman Savage, M.Ed.

Doctoral Candidate, John E. Roueche Center for Community College Leadership

Kansas State University, College of Education

Email: tashaef@ksu.edu | Phone: 480-619-1312

Dr. Sandy Robinson

Principal Investigator, Kansas State University

Email: slrobin@ksu.edu | Phone: 216-509-6421

Institutional Review Board (IRB) Informed Consent Template Form

comply@k-state.edu | 785-532-3224

PROJECT TITLE:

Leadership, Culture, and Sustainability in Community College-to-Medical School Pathways Supporting Students from Historically Underserved Populations

**PROJECT APPROVAL
DATE:**

**PROJECT EXPIRATION
DATE:**

10/27/2028

**LENGTH OF
STUDY:**

TBD

PRINCIPAL INVESTIGATOR:

Tashae Freeman Savage

CO-INVESTIGATOR(S):

Dr. Sandy Robinson

CONTACT DETAILS FOR PROBLEMS/QUESTIONS:

Contact Dr. Sandy Robinson at slobins@ksu.edu

IRB CHAIR CONTACT INFORMATION:

Lisa Rubin, Chair, Committee on Research Involving Human Subjects, 203 Fairchild Hall, Kansas State University, Manhattan, KS 66506, (785) 532-3224; Brad Woods, Associate Vice President for Research Compliance, 203 Fairchild Hall, Kansas State University, Manhattan, KS 66506, (785) 532-3224 or rubin@ksu.edu

PURPOSE OF THE RESEARCH:

The purpose of this study was to explore how institutional leaders at medical schools, community colleges, and intermediary organizations developed and sustained community college-to-medical school partnerships that support the matriculation of students from historically underserved populations. The study also examined how institutional culture shaped leadership decision-making related to these pathway partnerships.

PROCEDURES OR METHODS TO BE USED:

This study uses a generic qualitative research design. If you agree to participate, you will be included as an institutional leader or administrator involved in admissions strategy, outreach, pathway development, partnership oversight, or institutional planning related to medical education pathways. You will take part in one individual, semi-structured virtual interview conducted by the researcher. The interview will include open-ended questions about leadership practices, institutional culture, partnership development, and sustainability. The interview is expected to last approximately 45 to 60 minutes. Interviews will be audio recorded with your consent to ensure accurate transcription. No video recordings will be collected. No institutional documents, internal records, or organizational materials will be collected or analyzed as part of this study.

RISKS OR DISCOMFORTS ANTICIPATED:

There are no known risks or discomforts anticipated. Your interview will be audio-recorded, and you will not use your camera during the virtual meeting. Only the researcher and the faculty advisor, if requested, will have access to the recordings. You may skip any question or stop the interview at any time without penalty.

BENEFITS ANTICIPATED:

The insights you share may help institutional leaders and decision-makers strengthen or replicate partnership models that expand access to medical education for students from historically underserved populations. Your participation will contribute to a broader understanding of how leadership, organizational culture, and strategic partnerships shape pathway development and sustainability. This study may also inform policy discussions and institutional planning by illustrating how leadership practices and cultural alignment influence long-term collaboration between medical schools, community colleges, and intermediary organizations.

EXTENT OF CONFIDENTIALITY:

All recordings and information that you provide during this study will be securely stored on an external hard drive maintained by the researcher. This device will be kept in a locked and secure location at all times to protect your confidentiality and the integrity of the research data. In accordance with ethical guidelines and institutional policies, your interview data will be retained for a period of five years after the study is completed. During this time, access will be limited to the principal investigator and authorized personnel who are directly involved in the study. After the five-year period, all recordings, transcripts, and related materials will be permanently deleted to ensure your privacy and the complete removal of any identifiable information. To maintain your confidentiality, you and your institution will be assigned pseudonyms that will replace your real name, title, and institutional affiliation in every transcript, note, analysis, and written report associated with this study. A separate master list linking pseudonyms to participant names will be stored in an encrypted, password-protected file that only the researcher can access. This list will also be permanently deleted after the five-year data retention period. The information you share, even if identifiers are removed, will not be used, shared, or distributed for any future research beyond this project.

Terms of participation: I understand this project is research, and that my participation is voluntary. I also understand that if I decide to participate in this study, I may withdraw my consent at any time, and stop participating at any time without explanation, penalty, or loss of benefits, or academic standing to which I may otherwise be entitled.

I verify that my signature below indicates that I have read and understand this consent form and willingly agree to participate in this study under the terms described, and that my signature acknowledges that I have received a signed and dated copy of this consent form.

(Remember that it is a requirement for the P.I. to maintain a signed and dated copy of the same consent form signed and kept by the participant).

PARTICIPANT NAME:

PARTICIPANT SIGNATURE:

**WITNESS TO SIGNATURE:
(PROJECT STAFF)**

DATE:

DATE:

Any grievance against this protocol or investigator may be filed with the Kansas State University IRB Office at comply@k-state.edu.

Debriefing Statement

This study, titled *Leadership, Culture, and Sustainability in Community College-to-Medical School Pathways Supporting Students from Historically Underserved Populations*, is being conducted by Tashae Freeman Savage, a doctoral candidate in the College of Education at Kansas State University, under the direction of Dr. Sandy Robinson. The purpose of this study was to explore how institutional leaders at medical schools, community colleges, and intermediary organizations developed and sustained community college-to-medical school partnerships that support the matriculation of students from historically underserved populations. The study also examined how institutional culture shaped leadership decision-making related to these pathway partnerships. No deception is used in this research. All procedures, expectations, and purposes are fully described prior to participation. Participation in this study is entirely voluntary, and participants may withdraw at any time without penalty. Should a participant wish to withdraw, they may contact the principal investigator to request that their data be removed and excluded from the final analysis. Because this study is ongoing, results are not yet available. Upon completion, participants who wish to receive a summary of the findings may contact the researcher to request an electronic copy of the final report. All interviews are conducted virtually and audio recorded only; no video is used. Participant names, titles, and institutional affiliations will remain confidential, and pseudonyms will be used in all transcripts and reports. Data will be stored securely and accessed only by the researcher.

Questions about this study may be directed to Tashae Freeman Savage at tashaef@ksu.edu or by phone at 4806191312. For questions about research participant rights, you may contact Lisa Rubin, Chair of the Committee on Research Involving Human Subjects, or

Brad Woods, Associate Vice President for Research Compliance, at Kansas State University, 203 Fairchild Hall, Manhattan, Kansas 66506, or by phone at 785-532-3224. Thank you for your time, insights, and valuable contributions to this study. Your participation provides an essential perspective that will help inform how educational partnerships between medical schools, community colleges and pipeline or intermediary organizations can be strengthened to improve access and support pathways into medical education.

Appendix C - Interview Questions

Medical School Leaders

Background / Context Questions

Please describe your current role at your institution.

How long have you served in this role?

What is your involvement with admissions, outreach, or student recruitment efforts?

(Context — not aligned to a specific dimension)

Interview Questions

1. How would you describe your medical school's current priorities for expanding access to medical education, particularly in relation to community college students?

(Proactivity; Commitment to Systemic Thinking)

2. What role does leadership play in shaping or supporting initiatives that strengthen educational access or partnerships with community colleges?

(Proactivity; Commitment to Learning)

3. How did your medical school's partnership with community colleges originate, and what steps were taken to formalize or expand it?

(Commitment to Systemic Thinking; Belief in the Value of Cultural Analysis)

4. How does your institution communicate the goals, expectations, and benefits of its community college partnerships to internal and external stakeholders?

(Commitment to Full and Open Communication; Belief in the Value of Cultural Analysis)

5. How are decisions made when implementing or revising partnership programs, and who is typically involved in those discussions?

(Commitment to Truth Through Inquiry and Dialogue)

6. How is feedback from faculty, students, or community college partners collected and used to assess and improve partnership outcomes?

(Belief in the Value of Cultural Analysis; Commitment to Full and Open Communication)

7. What challenges has your institution encountered in sustaining or expanding community college partnerships, and how have those challenges been addressed?

(Belief That the Environment Can Be Managed; Commitment to Systemic Thinking)

8. Looking ahead, what do you believe is needed structurally or culturally to sustain and strengthen these partnerships in the future?

(Belief in the Value of Cultural Analysis; Positive Orientation Toward the Future)

Community College Leaders

Background / Context Questions

1. Please describe your current role at your institution.
2. How long have you served in this role?
3. What is your involvement with student success initiatives, transfer pathways, or premedical programs?

(Context — not aligned to a specific dimension)

Interview Questions

1. How did your partnership with the medical school begin, and what goals or needs originally motivated your college's participation?

(Proactivity; Commitment to Systemic Thinking)

2. How does this partnership align with your college's mission and goals for expanding academic pathways in health or science fields?

(Commitment to Learning; Belief in the Value of Cultural Analysis)

3. What forms of leadership involvement or advocacy have been most critical in establishing or maintaining your partnership with the medical school?

(Proactivity; Commitment to Learning)

4. How do leaders, faculty, and staff from both institutions coordinate and communicate to align partnership goals or activities?

(Commitment to Truth Through Inquiry and Dialogue; Commitment to Full and Open Communication)

5. What have you observed about how this partnership influences students' preparation, confidence, or readiness to pursue medical education?

(Commitment to Cultural Diversity; Positive Assumptions About Human Nature)

6. How does your institution collect and use feedback from students, faculty, or program staff to evaluate and improve partnership outcomes?

(Belief in the Value of Cultural Analysis; Commitment to Full and Open Communication)

7. What barriers has your institution encountered in maintaining or expanding this partnership, and how have they been addressed?

(Belief That the Environment Can Be Managed; Commitment to Systemic Thinking)

8. What do you believe is necessary to sustain this partnership long term and ensure continued alignment with your college's mission and student needs?

(Belief in the Value of Cultural Analysis; Positive Orientation Toward the Future)

Intermediary Organization Leaders

Background / Context Questions

1. Please describe your current role within your organization.
2. How long have you served in this role?
3. What is your organization's primary mission in relation to supporting students pursuing medical school or health professions pathways?

(Context — not aligned to a specific dimension)

Interview Questions

1. How did your organization become involved in supporting community college-to-medical school pathways, and what needs originally motivated this work?

(Proactivity; Commitment to Systemic Thinking)

2. How would you describe your organization's role in connecting community colleges, four-year institutions, and medical schools within the pipeline?

(Commitment to Systemic Thinking; Commitment to Truth Through Inquiry and Dialogue)

3. What types of partnerships or formal agreements does your organization maintain with colleges or medical schools, and how are those relationships structured?

(Commitment to Learning; Belief in the Value of Cultural Analysis)

4. How are leadership decisions made within your organization regarding the design, expansion, or modification of pathway programs?

(Proactivity; Commitment to Truth Through Inquiry and Dialogue)

5. How does your organization communicate its goals, expectations, and values related to student preparation and access to partner institutions?

(Commitment to Full and Open Communication; Commitment to Cultural Diversity)

6. What have you observed about how your organization's involvement influences students' preparation, confidence, or readiness to pursue medical education?

(Commitment to Cultural Diversity; Positive Assumptions About Human Nature)

7. How does your organization collect and use feedback from students, institutional partners, or staff to evaluate and improve pathway outcomes?

(Belief in the Value of Cultural Analysis; Commitment to Full and Open Communication)

8. What challenges has your organization encountered in sustaining or scaling partnerships with colleges or medical schools, and how have those challenges been addressed?

(Belief That the Environment Can Be Managed; Commitment to Systemic Thinking)

9. Looking ahead, what do you believe is needed structurally or culturally to strengthen the role of intermediary organizations in supporting long-term medical education pathways?

(Belief in the Value of Cultural Analysis; Positive Orientation Toward the Future)

Appendix D - IRB Approval Form



Office of Research Integrity,
Compliance and Security

TO: Sandy Robinson
Educational Leadership

FROM: Lisa Rubin, Chair
Committee on Research Involving Human Subjects

DATE: 03/03/2026

RE: Proposal #IRB-13331, entitled "Leadership, Culture, and Sustainability in Community College-to-Medical School Pathways Supporting Students from Historically Underserved Populations."

MODIFICATION OF IRB PROTOCOL #IRB-13331, ENTITLED, "Leadership, Culture, and Sustainability in Community College-to-Medical School Pathways Supporting Students from Historically Underserved Populations"

EXPIRATION DATE: 10/27/2028

The Committee on Research Involving Human Subjects (IRB) has reviewed and approved the request identified above as a modification of a previously approved protocol. **Please note that the original expiration remains the same.**

All approved IRB protocols are subject to continuing review at least annually, which may include the examination of records connected with the project. Announced in-progress reviews may also be performed during the course of this approval period by a member of the Office of Research Integrity, Compliance and Security (ORICS) staff. Unanticipated adverse events involving risk to subjects or to others must be reported immediately to the Chair of the IRB, and / or the ORICS.

It is important that your human subjects activity is consistent with submissions to funding / contract entities. It is your responsibility to initiate notification procedures to any funding / contract entity of any changes in your activity that affects the use of human subjects.

Electronically signed by Lisa Rubin on 03/03/2026 6:34 PM ET

Appendix E - Full Inductive Coding and Theme Process

<i>Phase</i>	<i>Step</i>	<i>What Was Done</i>	<i>Decision Rule</i>	<i>Output</i>
1	<i>Pre-Coding Preparation</i>	All 12 transcripts were read in full before coding. Analytic memos and reflexive notes documented early impressions and researcher positioning.	Coding began only after the entire dataset was reviewed to prevent early transcripts from anchoring the code structure.	Pre-coding memos; reflexivity documentation
2	<i>Open Coding (First Cycle)</i>	Line-by-line inductive coding conducted in Atlas.ti. Codes were written using participant language where possible and applied to meaningful segments.	Segments were coded when they contained relevant meaning related to the research questions. Multiple codes could be applied to a single segment.	Initial code list (90+ codes)
3	<i>Code Refinement</i>	Initial codes were reviewed and consolidated. Duplicate or overlapping codes were merged and multi-concept codes were separated.	Codes were retained when conceptually distinct and supported across multiple transcripts.	Refined working codebook
4	<i>Pattern Coding (Second Cycle)</i>	Codes were compared using constant comparison across participants and institutions to identify shared patterns.	Categories formed when multiple codes reflected a common mechanism or process.	18 analytic categories
5	<i>Sub-theme Development</i>	Categories were evaluated for coherence and analytic distinctiveness and developed into named sub-themes.	Sub-themes retained when they represented distinct patterns relevant to the research questions.	17 sub-themes
6	<i>Initial Theme Development</i>	Sub-themes were grouped into broader	Themes retained when strongly evidenced	Initial thematic structure

		thematic patterns reflecting recurring findings across interviews.	across participants and clearly distinct from one another.	
7	<i>Dataset Review & Theme Elevation</i>	The full dataset was reexamined to ensure patterns were fully represented. Additional patterns were elevated to independent themes.	Patterns elevated when they appeared across multiple participants and were not captured by existing themes.	7 themes identified
8	<i>Final Structure Confirmation</i>	Themes and sub-themes were reviewed for coherence and alignment with the research questions. The inductive coding matrix was constructed.	Structure finalized when each code had a clear analytic placement within the thematic framework.	Final structure: 62 codes, 17 sub-themes, 7 themes
9	<i>Validation</i>	Member checking and an audit trail were used to confirm analytic decisions. Saturation assessed during final transcript review.	Saturation confirmed when final transcripts produced no new codes or structural changes.	Member check confirmations; analytic audit trail

Appendix F - Inductive Coding Codex

Theme	Sub-Theme	Key Codes	Primary Participants
<i>T1: Individual Champions and Institutional Sustainability</i>	1a: Champions As the Primary Operational Unit	Single-Person Responsibility, Absent Infrastructure, Position Advocacy Required	P3, P4, P1, P7, P10
	1b: Relational Agreements Over Formal Structures	Personal Relationships, Substituting for Institutional Agreements, Informal Transfer Agreements	P3, P4, P7, P10
	1c: Personnel Transitions and Program Continuity	Personnel Departure as Primary Threat, Knowledge Loss, Rare Systemic Handoffs	P3, P10, P11, P6
	1d: Competing Demands and Constrained Capacity	Clinical Overload, Time Competition, Programmatic Volume Crowding Out Learning	P10, P11, P3, P4, P5
<i>T2: Institutional Values and Structural Realities</i>	2a: Tension Between Admissions Metrics and Access	Gpa Thresholds Vs. Equity Mission, Holistic Review Without Threshold Change	P5, P10, P11
	2b: Equity Commitments and Structural Capacity	Values Without Infrastructure, Pathway Offices Outside Governance	P1, P5, P10, P11, P12
	2c: Cultural Perceptions of Cc Preparation	Historical Stigma, Rigor Underestimated Prerequisites Questioned	P2, P4, P5, P11, P12
<i>T3: Structural Dependence on External Funding</i>	3a: External Funding as Operational Foundation	90% External Funding, Institutional Investment as Exception, Philanthropy-To-Legislation	P5, P7, P10, P12
	3b: Funding Limitations and Foreclosed Capacity	Tracking Capacity Lost, Stipend Un-Sustainability,	P2, P9, P11

		Short Planning Horizons	
<i>T4: Temporal Misalignment in Program Accountability</i>	4a: Long-Horizon Outcomes in Short-Cycle Systems	10–15-Year Timelines, Early Exposure, Complexity Extending Timelines	P1, P2, P5, P12
	4b: Evidence And Advocacy Across Timelines	Short-Term Funder Demands, Tracking Gaps, Data as Legitimization Tool	P2, P9, P10
<i>T5: Intermediary Organizations as Structural Supports</i>	5a: Coordination And Capacity Functions	Cross-Institutional Coordination, Statewide Tracking, Policy Translation, Visibility	P6, P8, P9, P12
	5b: Gap-Filling and Limits of Institutional Ownership	Effective Gap-Filling Reducing Institutional Pressure, Reliance on Central Office	P6, P8, P10
<i>T6: Pre-Health Advising Gaps and Information Access</i>	6a: Misinformation Across the Advising Chain	Outdated Advisor Guidance, Physician Misinformation, Conflicting Information	P1, P2, P4, P12
	6b: Institutional Responses to Advising Gaps	Advisor Summits, Faculty Stepping into Advising, Outreach Filling Information Vacuums	P1, P4, P11, P12
<i>T7: Invisible And Uncompensated Labor</i>	7a: Unrecognized And Uncompensated Work	Work Beyond Role, Passion Sustaining Unfunded Work, Volunteer Labor Structural	P3, P7, P12
	7b: Student Identity Development as Program Responsibility	Identity Development as Explicit Goal, Representation Strategy, Peer Belonging	P7, P9, P10, P12