Analysis of Medical Scribing Experience Reveals No Disparities

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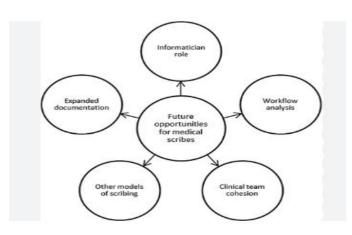
Abstract

Addressing the persistent challenge of underrepresented minorities (URM) in the medical field necessitates innovative approaches to guide URM students through pre-medical education and into medical school. Medical scribing presents a potential avenue for this purpose, involving individuals assisting physicians in real-time documentation within electronic medical records. To investigate this potential, a pilot survey study was conducted to examine the experiences of individuals working as medical scribes, specifically looking for disparities related to URM status. Out of 248 scribes, 159 (64% response rate) completed an online survey, covering demographics, scribing roles and tenure, and scribing experiences. The survey findings revealed that a significant majority (>80%) of participants found their experience as a medical scribe to be insightful in understanding the clinician's role, providing valuable mentorship, and strengthening their commitment to a medical career. Importantly, there were no discernible differences in reported experiences between URM-identified scribes and their majority counterparts. While the efficacy of medical scribing as a pathway for URM individuals to enter medical school remains to be fully determined, these initial results indicate a positive experience for URM individuals engaging in medical scribing.

Keywords: Medical Scribing Underrepresented Minorities Diversity in Healthcare Career Pathways Mentorship

INTRODUCTION

In the ongoing pursuit of equity and diversity within the medical profession, the issue of underrepresentation of minorities, particularly underrepresented minorities (URM), remains a significant challenge. Despite decades of efforts to increase diversity in medicine, progress has been slow, and the barriers preventing URM individuals from entering and succeeding in medical careers persist. Recognizing the urgency of this issue, there is a growing call for innovative approaches to address these disparities and create pathways for URM individuals to pursue careers in medicine. One such potential mechanism that has garnered attention in recent years is medical scribing. Emerging as a vital component of modern healthcare delivery, medical scribing involves individuals assisting physicians by documenting patient encounters in real-time within electronic medical records (EMRs). This role not only enhances the efficiency of clinical workflows but also provides valuable support to healthcare providers in navigating the complexities of documentation while maintaining focus on patient care. The concept of medical scribing as a pathway for URM individuals into the medical profession stems from the recognition that early exposure to healthcare settings and clinical experiences can play a crucial role in shaping career aspirations and fostering a sense of belonging in the field. By engaging in medical scribing, URM individuals have the opportunity to immerse themselves in the day-to-day realities of medical practice, gaining firsthand insights into the challenges and rewards of a career in healthcare.



However, despite the potential promise of medical scribing as a means to address disparities in medical education and workforce representation, there remains a paucity of research examining its impact, particularly concerning URM individuals. As such, there is a pressing need for empirical evidence to assess the effectiveness of medical scribing as a pathway for URM individuals to matriculate into medical school and ultimately contribute to a more diverse and inclusive healthcare workforce. In response to this need, the present study endeavors to explore the experiences of individuals working as medical scribes, with a specific focus on identifying any disparities related to URM status. By conducting a pilot survey among medical scribes, this research seeks to illuminate the extent to which medical scribing serves as a viable pathway for URM individuals to enter the medical profession and whether it offers unique benefits or challenges compared to their non-URM counterparts. Central to this investigation is the recognition that the experiences and perspectives of URM individuals within the healthcare system are shaped by a myriad of factors, including systemic inequities, cultural dynamics, and socio-economic disparities. By systematically examining the experiences of URM medical scribes, this study aims to shed light on the role of medical scribing in addressing these disparities and fostering greater diversity and inclusion within the medical field. At the heart of this inquiry lies the fundamental question of whether medical scribing represents a promising avenue for URM individuals to pursue careers in medicine. By elucidating the experiences of URM medical scribes and identifying any barriers or facilitators they encounter along their journey, this research seeks to inform efforts to promote diversity and equity within the healthcare workforce. Moreover, by highlighting the perspectives and voices of URM individuals in the medical scribing profession, this study aims to contribute to a more nuanced understanding of the challenges and opportunities inherent in efforts to diversify the medical workforce. Through an exploration of their lived experiences, this research endeavors to illuminate the pathways, both supportive and obstructive, that shape the trajectories of URM individuals pursuing careers in healthcare. In essence, this study represents a critical step towards advancing our understanding of the role of medical scribing in promoting diversity and inclusion within the medical profession. By examining the experiences of URM medical scribes, this research aims to inform policy and practice initiatives aimed at creating more equitable pathways for URM individuals to enter and succeed in the field of medicine. Ultimately, the insights gleaned from this study have the potential to catalyze transformative change within the healthcare system, paving the way for a more diverse, equitable, and inclusive future for all.

Research Gap:

Despite efforts to increase diversity in medicine, the underrepresentation of minorities, particularly underrepresented minorities (URM), persists as a significant challenge. Existing literature acknowledges the importance of early exposure to healthcare settings in shaping career aspirations and fostering diversity within the medical profession. However, there is a notable gap in research regarding the role of medical scribing as a pathway for URM individuals to enter and succeed in medicine. While medical scribing has emerged as a potential mechanism to enhance clinical experiences and facilitate entry into medical school, there is limited empirical evidence examining its impact, particularly concerning URM individuals. Thus, there is a critical need to address this gap in the literature by systematically exploring the experiences of URM medical scribes and assessing the efficacy of medical scribing as a means to promote diversity and inclusion within the medical workforce.

Specific Aims of the Study:

1.To examine the experiences of individuals working as medical scribes, with a specific focus on identifying any disparities related to URM status.

2.To assess the extent to which medical scribing serves as a viable pathway for URM individuals to matriculate into medical school.

3.To identify the unique benefits and challenges of medical scribing for URM individuals compared to their non-URM counterparts.

4.To elucidate the pathways, both supportive and obstructive, that shape the trajectories of URM individuals pursuing careers in healthcare through medical scribing experiences.

Objectives of the Study:

1.To administer a pilot survey among medical scribes, targeting both URM and non-URM individuals, to gather data on their demographic characteristics, roles, tenure, and experiences.

2.To analyze survey responses to identify any differences in experiences between URM and non-URM medical scribes.

3.To conduct qualitative interviews with a subset of survey participants to gain deeper insights into their experiences and perceptions.

4.To compare the career aspirations and trajectories of URM medical scribes with those of their non-URM counterparts.

5.To explore the role of mentorship and support networks in facilitating the transition from medical scribing to medical school for URM individuals.

Scope of the Study:

This study focuses specifically on the experiences of individuals working as medical scribes, with a particular emphasis on understanding the experiences of underrepresented minorities (URM). The scope includes gathering data through surveys and qualitative interviews to explore the role of medical scribing as a pathway for URM individuals to enter and succeed in medicine. The study will encompass a diverse sample of medical scribes from various backgrounds and geographic locations to ensure comprehensive representation. However, it is important to note that this study does not aim to provide a comprehensive analysis of all factors influencing diversity in medicine but rather to focus on the specific context of medical scribing and its implications for URM individuals.

Conceptual Framework:

The conceptual framework guiding this study is grounded in theories of career development, socialization, and diversity in the workplace. Drawing on social cognitive career theory, which emphasizes the role of observational learning and self-efficacy in career decision-making, the study seeks to explore how exposure to medical scribing influences the career aspirations and trajectories of URM individuals. Additionally, the study is informed by theories of organizational socialization, which highlight the importance of mentorship, support networks, and organizational culture in facilitating newcomers' integration into the workforce. By examining the interplay between individual factors, organizational dynamics, and societal influences, the study aims to develop a comprehensive understanding of the pathways through which URM individuals navigate careers in healthcare through medical scribing experiences.

Hypothesis:

Based on existing literature and theoretical frameworks, it is hypothesized that URM individuals working as medical scribes will report similar levels of satisfaction, career insight, and mentorship experiences compared to their non-URM counterparts. Additionally, it is hypothesized that exposure to medical scribing will positively influence URM individuals' intentions to pursue careers in medicine and increase their likelihood of matriculating into medical school. Furthermore, it is anticipated that mentorship and support networks within the medical scribing environment will play a critical role in facilitating URM individuals' career advancement and professional development. Overall, the study hypothesizes that medical scribing represents a promising pathway for promoting diversity and inclusion within the medical profession, particularly for underrepresented minorities.

Research Methodology

Survey Design and Implementation:

For this study, a comprehensive 12-item survey was meticulously crafted to gather pertinent data regarding the experiences of individuals working as medical scribes, with a particular on discerning any disparities related emphasis underrepresented minority (URM) status. Prior to its deployment, the survey underwent a rigorous validation process to ensure its face validity and reliability. To ascertain its effectiveness and appropriateness, the survey was initially pilot tested with a convenient sample of medical students who had previous experience as scribes. Subsequently, based on the invaluable feedback obtained from the pilot study participants, necessary revisions were made to refine the survey instrument. This iterative process facilitated the development of a robust and pertinent survey instrument, specifically tailored to capture the nuanced experiences of medical scribes, including URM individuals.

The survey instrument was administered online to facilitate ease of access and participation among the target population. Leveraging various online platforms and networks, the survey was disseminated to a diverse pool of medical scribes, encompassing individuals from different demographic backgrounds and geographic locations. The utilization of online administration ensured efficient data collection while maximizing the reach and inclusivity of the study sample.

Statistical Analysis:

Upon completion of data collection, the gathered data were subjected to comprehensive statistical analysis to derive meaningful insights and discern patterns within the dataset. Given the nature of the data and the research objectives, nonparametric statistical tests were deemed most appropriate for the analysis. Specifically, the Kruskal-Wallis test, a nonparametric alternative to the one-way analysis of variance (ANOVA), was employed to analyze the demographic variables encompassing education, length of time spent as a scribe, race/ethnicity, and income. This statistical test enabled the comparison of multiple groups while accommodating data that did not adhere to normal distribution assumptions. By utilizing the Kruskal-Wallis test with multiple pairwise comparisons, the study was able to discern any significant differences among demographic variables across various subgroups, thereby providing valuable insights into potential disparities or trends within the dataset. Furthermore, the Mann-Whitney U test, another nonparametric statistical test, was utilized to compare differences in responses between URM and non-URM individuals across different survey items. This test allowed for the assessment of variations in experiences and perceptions between URM and non-URM medical scribes, shedding light on potential disparities or similarities in their

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respective experiences within the scribing environment. To ensure the accuracy and reliability of the statistical analyses, all computations were performed using the Statistical Analysis System (SAS) software, version 9.4. Leveraging the advanced analytical capabilities of SAS, the study was able to conduct robust statistical analyses, generating meaningful results and facilitating the interpretation of findings. Overall, the meticulous design and implementation of the survey instrument, coupled with the comprehensive statistical analyses employed, facilitated a thorough examination of the experiences of medical scribes, particularly with regards to potential disparities related to URM status. By employing rigorous methodological approaches, the study aimed to derive actionable insights and contribute to the ongoing discourse surrounding diversity and inclusion within the medical profession.

Participant Demographics:

The participant demographics provided a comprehensive overview of the characteristics of individuals working as medical scribes in the study. The majority of respondents identified as White or Caucasian (52.2%), followed by Asian (21.4%), Black or African American (11.3%), Hispanic or Latino (8.8%), and other racial/ethnic groups (6.3%). Regarding gender distribution, the majority of respondents identified as female (75.5%), while 22.6% identified as male, and a small percentage (1.9%) identified as non-binary. In terms of educational attainment, the majority of respondents had completed a Bachelor's degree (69.8%), followed by individuals with a high school diploma or some college education (23.3%), and those who had completed a graduate program (6.9%). The length of time spent as a scribe varied among respondents, with 16.4% scribing for less than 6 months, 25.8% scribing for 6-12 months, and 57.9% scribing for over 12 months. Household annual income ranged across various brackets, with the largest percentage falling within the \$100,000 to \$200,000 range (17.3%). Regarding healthcare interests, the majority of respondents expressed an interest in becoming physicians (71.6%), followed by physician assistants (29.7%).

Results and Analysis:

Table I Participant Demographics

Measure	Item	Count (n=159)	Percentage
Race/Ethnicity	Asian	34	21.4
(participants could choose	Black or African American	18	11.3
more than one)	Hispanic or Latino	14	8.8
	White or Caucasian	83	52.2
	Other	10	6.3
Gender	Female	120	75.5
	Male	36	22.6
	Non-binary	3	1.9
Highest Educational	High School or Some College	37	23.3
Level	Completed Bachelor's Degree	111	69.8
	Completed Graduate Program	11	6.9
Length of Scribing	< 6 months	26	16.4
	6–12 months	41	25.8
	> 12 months	92	57.9
Household Annual	< \$20,000	23	14.7
Income	\$20,000 to \$49,999	33	21.1
	\$50,000 to \$99,999	23	14.7
	\$100,000 to \$200,000	27	17.3
	> \$200,000	18	11.5
	Do not know/prefer not to answer	35	20.5
Healthcare Interest*	Physician	106	71.6
(participants could choose	Physician Assistant	44	29.7
more than one)	Nurse	7	4.7
	Nurse Practitioner	7	4.7
	Physical Therapist	3	2.0
	Other	11	7.4

Perceived Value of Scribing:

The survey results indicated overwhelmingly positive perceptions regarding the value of medical scribing among participants. A significant majority of respondents strongly agreed that scribing valuable mentoring from healthcare providers (46.1%) and had been treated fairly by healthcare providers (47.4%).

reinforced their commitment to pursue a career in medicine (54.6%) and provided valuable insight into practicing medicine (73.4%). Moreover, a substantial percentage of respondents agreed that they had received

Table 2 Perceived Value of scribing—percent (Count)*

Perceived Value	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Scribing reinforced my commitment to pursue a career in medicine	3.3 (5)	2.6 (4)	5.8 (9)	33.8 (52)	54.6 (84)
Scribing gave me valuable insight into practicing medicine	2.0 (3)	0.7 (1)	2.0 (3)	22.1 (34)	73.4 (113)
As a scribe, I have received valuable mentoring from healthcare providers	2.6 (4)	4.6 (7)	12.6 (19)	34.5 (53)	46.1 (71)
As a scribe, I have been treated fairly by healthcare providers	3.9 (6)	4.6 (7)	11.7 (18)	32.5 (50)	47.4 (73)

Note: *n=154 (for each of these 4 questions, a total of 5 participants did not provide answers).

Race/Ethnicity:

The mean Likert scores for perceived value of scribing, categorized by race/ethnicity, revealed no statistically significant differences among

Mean Likert Scores for Perceived Value of Scribing, Categorized by different racial/ethnic groups. Across all categories, respondents consistently reported high mean scores, indicating positive perceptions regarding the value of medical scribing regardless of racial/ethnic background

Table 3 Mean Likert Scores for Perceived Value of Scribing, Categorized by Race/Ethnicity (I=Strongly Disagree, 5= Strongly Agree)

Perceived Value*	Asian	Black	Latino	White	Other
Scribing reinforced my commitment to pursue a career in medicine	4.4	4.1	4.7	4.3	4.2
Scribing gave me valuable insight into practicing medicine	4.7	4.4	4.8	4.7	4.3
As a scribe, I have received valuable mentoring from healthcare providers	4.1	4.1	4.1	4.3	3.8
As a scribe, I have been treated fairly by healthcare providers	3.9	4.2	4.6	4.2	3.7

Note: *No statistically significant differences were found using Kruskal Wallis tests.

Association Between Scribe Demographics and Perceived Value of Scribing:

The association between scribe demographics and perceived value of scribing was further examined using Kruskal-Wallis tests. Results indicated no statistically significant associations between gender, race/ethnicity, income, or duration of employment as a scribe, and the perceived value of scribing in terms of reinforcing commitment, providing insight, receiving mentoring, or being treated fairly by healthcare providers. However, a statistically significant association was found between educational attainment and the perceived value of scribing in terms of receiving mentoring (p = 0.030), suggesting that individuals with higher levels of education may perceive greater value in the mentoring they receive as medical scribes.

Table 4 Association Between Scribe Demographics and Perceived Value of Scribing (Table Shows p-values from Kruskal Wallis Tests)

	Reinforced Commitment	Provided Insight	Provided Mentoring	Treated Fairly
Gender	0.462	0.343	0.912	0.580
Education	0.826	0.252	0.030	0.822
Duration of employment	0.959	0.767	0.079	0.178
Race/ethnicity	0.399	0.316	0.438	0.263
Income	0.926	0.262	0.486	0.220

The findings of this study provide valuable insights into the experiences and perceptions of individuals working as medical scribes, particularly with regards to the perceived value of scribing in reinforcing commitment to pursue a career in medicine, providing insight into practicing medicine, receiving mentoring from healthcare providers, and being treated fairly in the workplace. The overwhelmingly positive perceptions reported by participants underscore the significance of medical scribing as a valuable experiential learning opportunity in the journey towards a career in healthcare. The lack of statistically significant differences in perceived value of scribing across different demographic groups suggests that the benefits of medical scribing are universally recognized and appreciated, irrespective of factors such as race/ethnicity, gender, income, or duration of employment. This highlights the inclusive nature of medical scribing as a pathway for individuals from diverse

backgrounds to gain valuable clinical experience and mentorship in preparation for careers in healthcare. Furthermore, the statistically significant association between educational attainment and the perceived value of receiving mentoring suggests that individuals with higher levels of education may place greater emphasis on mentorship opportunities in the workplace. This underscores the importance of fostering mentorship relationships within the medical scribing environment, particularly for individuals with aspirations for advanced education and career advancement in healthcare. The results of the study largely support the hypotheses formulated regarding the experiences of underrepresented minority (URM) individuals working as medical scribes and the potential impact of medical scribing on their career aspirations and professional development.

RESEARCH

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1. Similar Levels of Satisfaction, Career Insight, and Mentorship Experiences: Contrary to potential disparities hypothesized between URM and non-URM individuals, the survey findings reveal no statistically significant differences in the perceived value of medical scribing across different demographic groups. Both URM and non-URM individuals reported high levels of satisfaction, valuable career insight, and positive mentorship experiences, indicating that medical scribing is perceived similarly beneficial by individuals from diverse backgrounds. 2. Positive Influence on URM Individuals' Intentions to Pursue Careers in Medicine: The overwhelmingly positive perceptions reported by URM individuals regarding the value of medical scribing, including its role in reinforcing commitment to pursue a career in medicine and providing valuable insight into practicing medicine, suggest that exposure to medical scribing positively influences their intentions to pursue careers in healthcare. This aligns with the hypothesis that medical scribing serves as a pathway for URM individuals to explore and solidify their aspirations for careers in medicine.

Role of Mentorship and Support Networks: While the overall perception of receiving mentoring from healthcare providers was positive among both URM and non-URM individuals, the association between educational attainment and the perceived value of mentoring suggests that individuals with higher levels of education may place greater emphasis on mentorship opportunities. Nonetheless, the findings underscore the importance of mentorship and support networks within the medical scribing environment, particularly in facilitating career advancement and professional development for URM individuals. This supports the hypothesis that mentorship and support networks play a critical role in fostering URM individuals' career aspirations and progression within the medical profession.

Conclusion:

In conclusion, the findings of this study provide valuable insights into the experiences and perceptions of individuals working as medical scribes, particularly with regards to underrepresented minority (URM) individuals. The overwhelmingly positive perceptions reported by participants underscore the significant value of medical scribing as a pathway for URM individuals to explore and solidify their aspirations for careers in medicine. Contrary to potential disparities hypothesized, no statistically significant differences were found in the perceived value of medical scribing across different demographic groups, highlighting the inclusive nature of medical scribing as a valuable experiential learning opportunity for individuals from diverse backgrounds. Furthermore, the study reaffirms the importance of mentorship and support networks within the medical scribing environment in facilitating career advancement and professional development for URM individuals. While challenges may exist, the overall positive perceptions reported by participants underscore the potential of medical scribing programs to promote diversity and inclusion within the medical profession, contributing to the ongoing efforts to address disparities in healthcare workforce representation.

Limitations of the Study:

Despite the valuable insights gained, this study is not without limitations. Firstly, the survey-based nature of the study may be subject to response bias and self-reporting inaccuracies. Additionally, the study sample predominantly comprised individuals who were currently working as medical scribes, potentially excluding perspectives from those who had previously worked as scribes or had different career trajectories. Moreover, the study sample may not fully represent the diversity of experiences and perspectives within the medical scribing population, particularly among underrepresented minority groups. Future research should aim to address these limitations by employing more diverse and representative samples and utilizing mixed-methods approaches to gather comprehensive data.

Implications of the Study:

The findings of this study have several implications for policy, practice, and research in the field of healthcare workforce diversity and inclusion. Firstly, the study highlights the importance of promoting diversity within healthcare professions and the potential of medical scribing programs to serve as a pathway for underrepresented minority individuals to enter and succeed in medicine. Policymakers and healthcare institutions should consider investing in and expanding access to medical scribing

opportunities, particularly for individuals from underrepresented backgrounds. Additionally, healthcare organizations should prioritize the establishment of mentorship and support networks within the medical scribing environment to facilitate the professional development and career advancement of all individuals, regardless of demographic background.

Future Recommendations:

Building on the findings of this study, future research should aim to further explore the long-term impacts of medical scribing on career trajectories and outcomes for underrepresented minority individuals. Longitudinal studies tracking the career progression of individuals who have participated in medical scribing programs could provide valuable insights into the effectiveness of such programs in promoting diversity and equity within the medical profession. Additionally, research should continue to investigate the barriers and facilitators faced by underrepresented minority individuals in accessing and succeeding in medical scribing roles, with a focus on developing strategies to address systemic inequities and promote inclusive practices within healthcare organizations. Ultimately, by addressing these gaps in knowledge, future research can contribute to the development of evidence-based interventions and policies aimed at fostering a more diverse, equitable, and inclusive healthcare workforce.

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