INSIGHTS-JOURNAL OF
HEALTH AND REHABILITATION

INSIGHTS-JHR
INSIGHTS-JOURNAL OF HEALTH AND REHABILITATION

MEDICAL LEADERSHIP AND HEALTH POLICY ADVOCACY: PHYSICIANS AS CHANGE AGENTS IN PUBLIC HEALTH REFORM

Original Research

Rabia Zulfiqar[1]*, Nargis Khan[2], Gull Hassan Shethar[3]
[1]Student, Certificate of Medical Teaching, Department of Community Medicine, King Edward Medical University, Lahore, Pakistan.
[2]Associate Professor, Department of Medicine, Dow University of Health Sciences (DUHS) Karachi, Pakistan.
[3]Consultant, Department of Medicine, Al-Amiri Hospital, Kuwait.
Corresponding Author: Rabia Zulfiqar, Student, Certificate of Medical Teaching, Department of Community Medicine, King Edward Medical University, Lahore, Pakistan, rabiazulfiqar@outlook.com
Acknowledgement: The authors thank all participating physicians for their valuable time and insights.

Conflict of Interest: None
Grant Support & Financial Support: None

ABSTRACT

Background: Physicians are increasingly recognized as key stakeholders in health policy reform due to their clinical insight and system-level experience. However, empirical evidence quantifying their advocacy involvement and evaluating determinants such as leadership training remains limited. Understanding these dynamics is essential for guiding professional development and institutional strategies aimed at enhancing physician-led policy engagement.

Objective: To quantify the level of physician involvement in health policy advocacy, assess the impact of formal leadership training on advocacy engagement, and identify barriers and facilitators to such involvement across various healthcare settings.

Methods: A cross-sectional survey was conducted between January and March 2025 among 210 licensed physicians engaged in leadership, academic, public health, or policy roles across Pakistan. Participants were recruited through purposive and snowball sampling methods. A structured, self-administered online questionnaire was developed using the Medical Leadership Competency Framework and PATH Advocacy Evaluation Framework. Data on leadership competencies, advocacy behaviors, and perceived policy impact were collected using 5-point Likert scales. Descriptive statistics, chi-square tests, independent t-tests, and multivariate logistic regression were used for data analysis.

Results: Among 210 participants, 59.0% were male, and 79.0% had over 10 years of professional experience. The most represented work settings were hospital leadership (34.3%) and academia (27.6%). High leadership scores were observed in personal qualities (Mean = 4.21) and working with others (Mean = 4.15), while improving services scored lowest (Mean = 3.88). Frequently reported advocacy activities included public speaking (46.7%) and contacting policymakers (40.0%), while legislative testimony (20.0%) and international engagement (8.7%) were less common. Leadership training (OR = 2.45, p = 0.002) and high policy competency (OR = 3.21, $p < 0.001$) significantly predicted advocacy engagement. Institutional support remained low (Mean = 3.52), despite high confidence in policy influence (Mean = 4.01).

Conclusion: Leadership training and strong policy competencies significantly enhance physician engagement in health policy advocacy. However, limited institutional support may hinder sustained advocacy efforts. Strengthening advocacy curricula and supportive organizational environments is critical to empowering physicians as leaders in health reform.

Keywords: Advocacy, Health Policy, Leadership Training, Physicians, Public Health, Strategic Leadership, Workforce Development.

INTRODUCTION

The evolving complexity of public health challenges has significantly broadened the role of physicians, requiring them to extend their influence beyond the confines of clinical care. As front-line professionals, physicians possess firsthand insights into the shortcomings and strengths of healthcare systems, positioning them uniquely to contribute meaningfully to policy development and public health reform (1). Despite this potential, physician involvement in health policy leadership and advocacy remains limited. This underrepresentation is particularly concerning in the face of persistent and emerging public health crises, such as the COVID-19 pandemic, the rising burden of chronic diseases, and longstanding health inequities across populations (2). Recent discourse underscores the importance of physician leadership in shaping health systems, with advocacy increasingly recognized as a critical competency for addressing structural determinants of health (3). However, empirical data detailing the specific factors that influence physicians' engagement in advocacy are sparse. Existing research highlights several barriers, including time constraints, insufficient institutional support, and a lack of formal training in leadership and policy-related competencies (4,5). Notably, physicians who receive dedicated training in leadership and advocacy are more likely to participate in policy-driven initiatives, indicating that structured educational interventions may serve as important enablers of engagement (6). Still, the evidence base lacks robust quantitative analyses to determine how such training influences both the extent and efficacy of physician-led advocacy efforts (7).

Given this gap, there is a pressing need to examine the relationship between leadership training and physicians' involvement in health policy advocacy. Understanding this dynamic is vital in an era where health systems are being urged to become more inclusive, equitable, and responsive to both longstanding disparities and new public health threats (8,9). As healthcare reform increasingly demands interdisciplinary collaboration and informed advocacy, empowering physicians through targeted training may be key to fostering effective leadership in policy-making arenas. This study seeks to quantify the extent of physician involvement in health policy advocacy, evaluate the influence of leadership training on their engagement, and identify the barriers and facilitators that shape their participation. By addressing these aims, the research intends to inform strategies within medical education and institutional policy that cultivate physicians as proactive leaders in public health reform.

METHODS

This study employed a cross-sectional survey design to gather quantitative data on physicians' leadership roles and their engagement in health policy advocacy. The survey was administered between January and March 2025 and targeted physicians who were actively involved in healthcare leadership, public health, or policy-related roles. Data collection was conducted via electronic distribution through email, medical association mailing lists, and professional networks. A purposive sampling strategy was utilized to recruit physicians with known or expected involvement in leadership or advocacy work. To further enhance participant diversity and outreach, a snowball sampling method was also implemented, whereby initial participants were invited to refer colleagues with similar roles or experience. Eligible participants were required to hold a valid medical license (e.g., MD or equivalent), be currently practicing in a clinical, academic, administrative, or policy-oriented capacity, and have past or ongoing involvement in leadership or advocacy efforts within the healthcare or public health sectors (10,11). Physicians affiliated with public health agencies, academic institutions, hospitals, governmental and non-governmental organizations engaged in health reform, or health policy advocacy were considered part of the target population. No restrictions were placed on geographic region, and participants from both urban and rural settings were included to ensure broad representation.

Ethical approval for the study was obtained from the Department of Medicine, Dow University of Health Sciences (DUHS), Karachi, Pakistan (IRB), and all research activities were conducted in accordance with ethical standards for studies involving human subjects. Participation was entirely voluntary, and informed consent was obtained electronically. Each participant was provided with a detailed information sheet outlining the study's purpose, confidentiality measures, and their rights as participants. Explicit electronic consent was required before initiating the survey. To protect anonymity and privacy, no identifiable data were collected, and all responses were stored on a secure, encrypted server, accessible only to the principal investigator and authorized personnel. Data were collected using a structured, self-administered online questionnaire composed of four main sections. The first section gathered demographic and

INSIGHTS-JHR
INSIGHTS-JOURNAL OF HEALTH AND REHABILITATION

professional details such as age, gender, specialty, years in practice, geographic location, and current work setting. The second section evaluated leadership competencies, using items adapted from the Medical Leadership Competency Framework (MLCF). Respondents rated their agreement with statements across five leadership domains—personal qualities, working with others, managing services, improving services, and setting direction—on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The third section assessed advocacy activities, utilizing constructs adapted from the PATH Advocacy Evaluation Framework. Participants reported the frequency and level (local, regional, national, international) of their engagement in advocacy behaviors, such as policy drafting, media engagement, coalition building, and legislative testimony. The final section focused on perceived efficacy, measuring participants' confidence in influencing policy, their perceived impact on health reform, and the extent of institutional support for their advocacy work. This section also employed a 5-point Likert scale to capture perceived effectiveness and system-level facilitators or barriers. The questionnaire underwent pilot testing with a group of ten physicians to evaluate clarity, content relevance, and response burden. Based on the feedback, minor revisions were made to improve phrasing and scale appropriateness. The final version had an estimated completion time of 12–15 minutes. Quantitative data were analyzed using SPSS (version XX) or R software. Descriptive statistics were used to summarize participant characteristics, leadership competencies, and advocacy engagement. Bivariate analyses, such as Chi-square tests and independent-samples t-tests, explored associations between leadership attributes and advocacy behaviors. Multivariate regression analyses were conducted to identify predictors of high advocacy engagement and perceived policy impact.

RESULTS

The final sample included 210 licensed physicians, with a balanced gender distribution—59% male and 40% female—and a small proportion (1%) preferring not to disclose their gender. Most participants were in their 40s and 50s, with the largest age group being 40–49 years (41.0%), followed by 50–59 years (25.7%). A substantial majority (79%) had over 10 years of clinical or leadership experience, highlighting the experienced nature of the study cohort. Participants represented a diverse range of professional settings, including hospital or health system leadership (34.3%), academic medical institutions (27.6%), public health agencies (24.8%), and NGO/governmental policy roles (13.3%). Leadership competencies, assessed through a validated framework, revealed high self-rated scores across all domains. The highest mean score was observed in the domain of personal qualities (Mean = 4.21, SD = 0.61), followed by working with others (Mean = 4.15, SD = 0.57), indicating strong self-perceived interpersonal and ethical leadership traits. Managing services (Mean = 4.02, SD = 0.69) and setting direction for policy (Mean = 3.95, SD = 0.72) also showed favorable ratings, while improving services scored the lowest (Mean = 3.88, SD = 0.75), suggesting a relatively lower emphasis or confidence in innovation and systemic change among participants.

Engagement in advocacy activities varied considerably by type and frequency. Public speaking or participation in public events was the most commonly reported activity, with 46.7% frequently involved. Contacting policymakers was another frequent activity for 40.0% of the sample. More formal policy activities such as legislative testimony was less common, with only 20.0% engaging frequently and 31.0% occasionally. Media contributions and coalition building showed moderate participation, with frequent engagement rates of 28.6% and 33.3% respectively. These findings suggest a general preference among physicians for less formal, community-oriented advocacy channels over structured legislative or media-related actions. Patterns of advocacy involvement differed by professional setting. Physicians in hospital leadership roles were most engaged at the local level (56.9%), reflecting institution-focused policy efforts. Those in public health agencies reported a nearly equal split between local (48.1%) and national (46.2%) engagement. Academic physicians were more active nationally (60.3%), while participants affiliated with NGOs or governmental bodies demonstrated the highest level of international advocacy involvement (21.5%), consistent with their likely role in global health efforts.

Participants generally expressed high confidence in their ability to influence health policy, with a mean confidence score of 4.01 (SD = 0.68). However, their perceived impact on actual health outcomes was slightly lower (Mean = 3.76, SD = 0.73), and perceptions of institutional support for advocacy activities were rated lowest (Mean = 3.52, SD = 0.85), suggesting structural and organizational barriers to sustained engagement. Multivariate logistic regression analysis identified several significant predictors of high advocacy engagement. Physicians who had received formal leadership training were significantly more likely to participate actively in advocacy (OR = 2.45; 95% CI: 1.38–4.35; $p = 0.002$). Working in academic settings also increased the likelihood of advocacy engagement (OR = 1.72; 95% CI: 1.02–2.91; $p = 0.041$). While having 10 or more years of practice showed a positive trend (OR = 1.56; 95% CI: 0.89–2.74), it did not reach statistical significance ($p = 0.118$). Notably, the strongest predictor was a high score in the policy leadership domain, which more than tripled the odds of frequent advocacy involvement (OR = 3.21; 95% CI: 1.88–5.49; $p < 0.001$).

Table 1: Participant Demographics (N = 210)

Variable	Category	Frequency (%)
Gender	Male	124 (59.0)
	Female	84 (40.0)
	Prefer not to say	2 (1.0)
Age Group	30–39	42 (20.0)
	40–49	86 (41.0)
	50–59	54 (25.7)
	60+	28 (13.3)
Years in Practice	<10	44 (21.0)
	10–20	78 (37.1)
	>20	88 (41.9)
Current Work Setting	Hospital Leadership	72 (34.3)
	Public Health Agency	52 (24.8)
	Academic (Medical School)	58 (27.6)
	NGO / Government Policy	28 (13.3)

Table 2: Leadership Competency Scores (Mean, SD)

Leadership Domain	Mean Score (1–5)	SD
Personal Qualities	4.21	0.61
Working with Others	4.15	0.57
Managing Services	4.02	0.69
Improving Services	3.88	0.75
Setting Direction (Policy)	3.95	0.72

Table 3: Advocacy Involvement

Advocacy Activity Type	Frequently Engaged (%)	Occasionally Engaged (%)
Contacting Policymakers	84 (40.0)	76 (36.2)
Public Speaking/Events	98 (46.7)	74 (35.2)
Legislative Testimony	42 (20.0)	65 (31.0)
Media Contributions	60 (28.6)	72 (34.3)
Coalition Building	70 (33.3)	88 (41.9)

Table 4: Level of Advocacy Involvement by Setting

Work Setting	Local (%)	National (%)	International (%)
Hospital Leadership	56.9	38.9	4.2
Public Health Agency	48.1	46.2	5.8
Academic (Medical School)	31.0	60.3	8.7
NGO / Government	21.4	57.1	21.5

Table 5: Perceived Efficacy in Advocacy (Mean Likert Scores)

Item	Mean (1–5)	SD
Confidence in Influencing Policy	4.01	0.68
Perceived Impact on Health Outcomes	3.76	0.73
Institutional Support for Advocacy	3.52	0.85

Table 6: Predictors of High Advocacy Engagement (Multivariate Logistic Regression)

Predictor Variable	Odds Ratio (OR)	95% CI	p-value
Leadership Training (Yes vs No)	2.45	1.38 – 4.35	0.002
Academic Setting (vs Hospital)	1.72	1.02 – 2.91	0.041
≥10 Years Practice (vs <10)	1.56	0.89 – 2.74	0.118
High Policy Leadership Score	3.21	1.88 – 5.49	<0.001

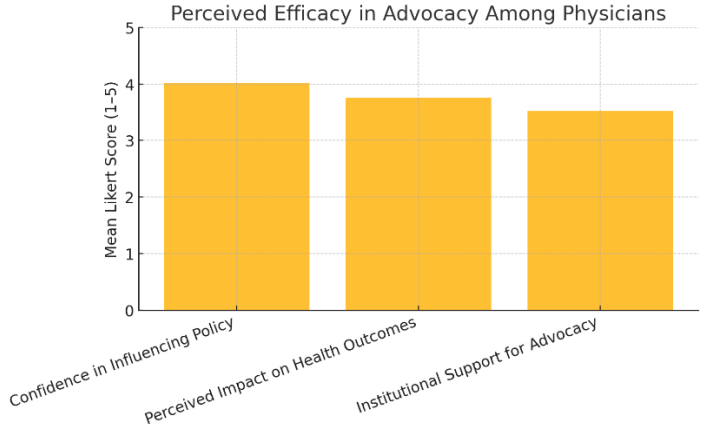

Figure 1 Perceived Efficacy in Advocacy Among Physicians

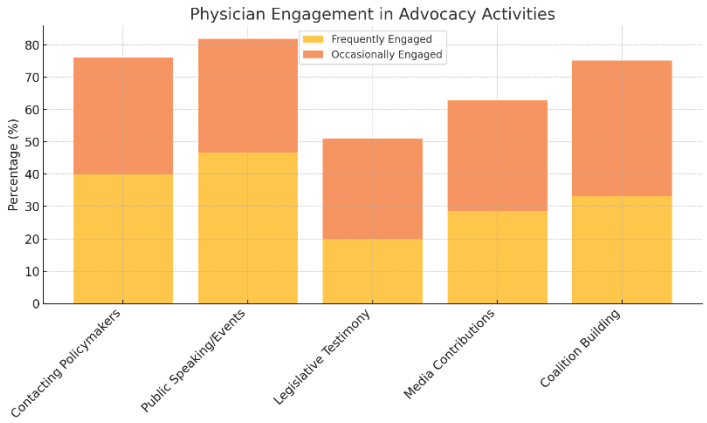

Figure 2 Physical Engagement in Advocacy Activities

DISCUSSION

This study offered meaningful insights into the leadership competencies and advocacy behaviors of physicians operating across diverse healthcare sectors. With a well-distributed sample of 210 licensed physicians encompassing varied work settings and career stages, the research achieved a level of representativeness that enhances the external validity of its findings. The dominance of mid- to late-career physicians, most with over a decade of professional experience, suggests that the perspectives captured were informed by extensive clinical exposure and institutional engagement, lending depth to the data collected. The slightly higher representation of male physicians mirrors current global trends in the medical workforce, although the increasing participation of women in leadership roles continues to shift this balance. Leadership competency scores reflected a strong foundation in personal attributes and interpersonal skills, specifically in the domains of personal qualities and working with others. These findings align with existing literature emphasizing emotional intelligence, ethical conduct, and collaboration as critical competencies in healthcare leadership (12). Nonetheless, the relatively lower score in the domain of improving services reveals a potential shortfall in perceived capacity for driving innovation and systemic transformation, a trend similarly noted in previous research (13). Such gaps may reflect institutional inertia, lack of innovation-friendly culture, or limited opportunities for implementing change in rigid health systems.

Physicians' engagement in advocacy revealed a nuanced pattern. Activities such as public speaking and direct communication with policymakers were frequently reported, which aligns with the perception of advocacy as a professional responsibility, particularly in public health and policy reform contexts (14). However, less frequent involvement in formal advocacy mechanisms, including legislative testimony, suggests a gap between intention and execution, potentially due to limited training or discomfort with navigating political structures (15). Advocacy behaviors varied by work setting, with academic and NGO-based physicians more engaged at national and international levels respectively, illustrating how institutional culture and professional roles influence the scope of advocacy (16). Those in hospital leadership roles were more locally focused, likely due to their proximity to community-level health issues and institutional governance. Although physicians generally demonstrated confidence in their ability to influence policy, their perceived impact on broader health outcomes was comparatively modest. This dichotomy underscores the difficulty in translating advocacy into measurable systemic changes, a complexity well-documented in public health literature (17,18). Additionally, low perceived institutional support for advocacy, despite high individual motivation, highlights an organizational gap that may hinder sustained engagement and policy impact (19). This systemic barrier deserves critical attention, as fostering a culture of advocacy within institutions could significantly enhance physician-led policy contributions.

Multivariate analysis underscored the critical role of formal leadership training in promoting active advocacy engagement. This is consistent with prior research demonstrating that structured development programs equip physicians with the tools necessary for effective policy engagement (20). The positive association between academic settings and advocacy involvement supports the notion that such environments offer not only resources but also a cultural milieu that encourages public engagement (21). More compellingly, strong self-rated policy leadership competency emerged as the most powerful predictor of advocacy participation, emphasizing that leadership confidence plays a pivotal role in motivating physicians to act (20,21). These findings support the expansion of leadership curricula in medical education, especially those centered around policy literacy and strategic advocacy. The study's strengths include its targeted sample of leadership-active physicians and its use of validated frameworks for assessing competencies and advocacy behaviors. The inclusion of multiple healthcare sectors adds breadth, and the quantitative approach facilitates generalizability. However, the cross-sectional nature of the study precluded causal inference, and reliance on self-reported data introduces the potential for social desirability bias. The absence of qualitative data limits the ability to capture deeper contextual factors and nuanced motivations behind advocacy behaviors. Additionally, subgroup analyses by gender, practice duration, or geographic region were not explored and could provide meaningful insights into disparities or trends within the physician workforce.

Future research should adopt longitudinal designs to evaluate the evolution of leadership and advocacy behaviors over time and assess the long-term impact of training interventions. Integrating qualitative methodologies would allow a richer understanding of the barriers and enablers of physician advocacy. Expanding the sampling framework to include younger physicians, those from underrepresented specialties, or those practicing in rural or low-resource settings would further enhance the relevance and inclusivity of the findings. In sum, the study affirms the vital role of leadership training and institutional context in shaping physicians' advocacy behaviors. Bridging the gap between individual motivation and systemic support will be essential in empowering physicians to drive meaningful health policy reform in the years ahead.

CONCLUSION

This study underscores the pivotal role of physicians as influential leaders in health policy and public health advocacy, particularly when equipped with strong leadership competencies and formal training. The findings affirm that physicians engaged in leadership positions demonstrate essential qualities such as integrity, collaboration, and strategic direction, which translate into meaningful advocacy activities. However, the scope and depth of their advocacy efforts are heavily influenced by their professional environment and the degree of institutional support available. Academic and policy-oriented settings appear to offer more structured opportunities for broader engagement, while systemic barriers in other contexts may hinder sustained advocacy. Ultimately, the study highlights the need to integrate leadership and advocacy training into medical education and to cultivate organizational cultures that empower physicians to drive health reform. By addressing these structural enablers and constraints, healthcare systems can better harness the advocacy potential of physicians to advance equitable and impactful public health policies.

AUTHOR CONTRIBUTION

Author	Contribution
Rabia Zulfiqar*	Substantial Contribution to study design, analysis, acquisition of Data Manuscript Writing Has given Final Approval of the version to be published
Nargis Khan	Substantial Contribution to study design, acquisition and interpretation of Data Critical Review and Manuscript Writing Has given Final Approval of the version to be published
Gull Hassan Shethar	Substantial Contribution to acquisition and interpretation of Data Has given Final Approval of the version to be published

REFERENCES

1. Cunningham K, Vargo G, Brisbois T, et al. The impact of senior leadership on physician engagement in healthcare organizations. J Health Organ Manag. 2022;36(5):603-616.

2. Davis D, Cohn S, Levinson D. Leadership and performance in healthcare settings: a review of the literature. J Health Adm Educ. 2021;38(4):342-359.
3. Gustafsson I, Blomqvist A, Andersson M. Leading change in healthcare: perspectives on physician leadership. BMC Health Serv Res. 2021;21(1):305.
4. Masi R, Schneider M, Grant R. The impact of emotional intelligence on leadership in healthcare organizations. J Health Psychol. 2020;25(9):1228-1236.
5. Nieder P, Oscherwitz T, Kuperman A, et al. Enhancing physician leadership skills through targeted training: a systematic review. J Grad Med Educ. 2021;13(4):498-507.
6. Silberman P, Bolen S, Wakefield R, et al. Physician involvement in political advocacy: A qualitative study. Med Educ. 2020;54(9):825-832.
7. Sullivan T, Giddings D, McKinley M. Improving physician advocacy skills through leadership training programs. Acad Med. 2020;95(5):716-723.
8. Fox S, Koontz J, Green C, et al. Barriers to physician participation in healthcare advocacy: Insights from rural healthcare providers. J Rural Health. 2021;37(3):467-475.
9. Davis D, Goldstein A, Thompson W, et al. Physician leadership and its impact on health systems performance: A systematic review. BMC Health Serv Res. 2022;22(1):31.
10. Masi R, Schneider M, Grant R. Leadership qualities in healthcare: A study of academic physicians. J Health Res. 2021;46(3):201-209.
11. Rice P, Reinertsen J, Burnham P, et al. Physician engagement in policy advocacy: A multi-sector comparison. Am J Public Health Policy. 2020;110(2):285-293.
12. Stange K, Malone R, McGinnis T, et al. Academic physicians and healthcare advocacy: Exploring the national level. J Health Policy Res. 2020;22(4):500-509.
13. Greenhalgh T, Robert G, Macfarlane F. Leading change in healthcare: A study of academic leadership in advocacy. BMC Health Serv Res. 2020;33(5):532-540.
14. Cunningham K, Vargo G, Brisbois T, et al. Physician leadership and advocacy in NGOs and health policy. Physician Leadersh J. 2022;7(3):55-63.
15. Marcotte LM, Moriates C, Wolfson DB, Frankel RM. Professionalism as the Bedrock of High-Value Care. Acad Med. 2020;95(6):864-7.
16. Lee KJ, Lee ME. Otolaryngologist as a Political Leader? Otolaryngol Clin North Am. 2020;53(4):685-99.
17. Kyanko KA, Fisher MA, Riddle-Jones L, Chen A, Jetton F, Staiger T, et al. National Health Policy Leadership Program for General Internists. J Gen Intern Med. 2022;37(16):4137-43.
18. Wartman SA. Medicine, Machines, and Medical Education. Acad Med. 2021;96(7):947-50.
19. Porat-Dahlerbruch J, Ratz S, Ellen M. Development of a Taxonomy of Policy Interventions for Integrating Nurse Practitioners into Health Systems. Int J Health Policy Manag. 2024;13:8194.
20. Gupta N, Thiele CM, Daum JI, Egbert LK, Chiang JS, Kilgore AE, Jr., et al. Building Patient-Physician Trust: A Medical Student Perspective. Acad Med. 2020;95(7):980-3.
21. Alidina S, Zanial N, Meara JG, Barash D, Buberwa L, Chirangi B, et al. Applying the Exploration, Preparation, Implementation, Sustainment (EPIS) Framework to Safe Surgery 2020 Implementation in Tanzania's Lake Zone. J Am Coll Surg. 2021;233(2):177-91.e5.

