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A framework for patient access management: consensus from a Delphi panel of US health system leaders

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Abstract

Background Patient access management in the ambulatory setting is important for health systems as waits and delays lead to reduced health outcomes, inequity, and poor patient experience. Health systems may benefit from a framework that catalogs the determinants of access management in the ambulatory setting to deliver timely care to all patients.

Methods The aim of this research is to define patient access and document the determinants of patient access management through a consensus from a two-stage Delphi panel of access leaders in US academic health systems and children's hospitals.

Results The study demonstrates a patient-centered definition of patient access management focusing on the delivery of timely, simple, connected access to care. Twelve major determinants were identified for patient access management: executive leadership support, dedicated access leadership, system strategy prioritization, data collection and analysis, contact center management, capacity management, appointment availability, appointment accuracy, measurable and defined goals, simplification of system for patients, timely offering of care, and patient-clinician connection. The determinants were applied to a framework using the Donabedian model. Frameworks may improve validity and reliability in performance improvement activities.

Conclusions Health systems may benefit from prescriptive strategies to identify, diagnose, resource, and address the determinants that constitute patient access management. Additional research is warranted to understand each determinant.

Keywords Ambulatory, Scheduling, Equity, Management, Access to care

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Background

Access to care is a fundamental determinant of quality care. In the ambulatory setting, access refers to the ability of a patient to obtain an appointment for care. Patient access management encompasses the structural, financial, and logistical factors within a health system that determine whether patients can successfully reach and utilize those services, thereby improving accessibility to care [11]. "Access [is] the opportunity to identify healthcare needs, to seek healthcare services, to reach, to obtain or use health care services, and to actually have a need for services fulfilled" [30]. Effective access to care in the ambulatory setting is critical for health systems to manage, as delays may result in poor health outcomes, inequity, and diminished patient experience. Evaluating and managing access is a complex process influenced by myriad structural and operational factors.

The importance of timely access to care has long been recognized. In *Crossing the Quality Chasm: A New Health System for the 21st Century*, the Institute of Medicine (IOM) highlights six essential aims for improving quality of care, one of which is the timeliness of service delivery [24]. The assertation builds upon the definition of access previously presented: "timely use of personal health services to achieve the best possible health outcomes" [23]. The World Health Organization adopts the definition of access to health services, which reads "the perceptions and experiences of people as to their ease in reaching health services or health facilities in terms of location, time, and ease of approach" (Starfield [49], as cited in [54]). Scholars have recognized the complexity of access and have proposed various definitions, consistently emphasizing timeliness as a key component [12, 30, 43].

Research indicates that long wait times and scheduling barriers may adversely affect access to care [51] and patient safety [38]. According to the Patient Access Collaborative [41], the median wait time for new patient appointments in the United States is 26 calendar days. There is no standard timeframe for appointment availability,however, perceived appointment delays may negatively impact patient satisfaction [13, 27, 29] and patient expectations [10, 34]. Patients' perceptions of quality are strongly linked to their experiences, underscoring the need for health systems to address this critical aspect of service delivery [45]. Timely access to care is essential for promoting cost-effective health care delivery [44], equity [32, 50], and population health [53]. Finally, the reputation and operational efficiency of the health system may be adversely influenced by lengthy waits [25].

The development of a structured approach to managing access in the ambulatory setting is a pressing priority for health systems to facilitate better outcomes on behalf of all patients.

Research aim

The implications of failing to manage patient access in the ambulatory setting are recognized. There is evidence of a gap in the literature about the elements of patient access management for health systems; identifying these factors may have broad managerial and policy implications. The aim of this study is to develop a definition and comprehensive framework for patient access management in an ambulatory setting. The primary objectives of the research are:

- To identify a definition of patient access and key determinants of patient access using a structured consensus methodology.
- To validate the proposed definition and framework by engaging health system leaders in iterative rounds of assessment.
- To provide health system leaders with a practical tool for defining, evaluating, and improving patient access management.

The framework seeks to provide health system leaders with actionable determinants of patient access in the ambulatory setting, enabling them to implement strategies that improve outcomes.

Methods

This study employed a literature search for frameworks and a two-round Delphi panel methodology to gather expert consensus on the definition and determinants of patient access. The Delphi method was selected for its ability to achieve convergence of opinion among a diverse group of experts through iterative rounds of surveys, maintaining anonymity, and enabling structured communication [19, 31]. The repetitive nature of the Delphi process enables refinement of the survey content, allowing for the assembly of insightful qualitative and quantitative data [39]. This method is particularly effective for addressing complex, multifaceted problems such as defining patient access and its determinants, where expert consensus is crucial [5, 42]. Two rounds are effective for reaching consensus while maintaining panelists' engagement and minimizing participant fatigue [21, 46].

Literature review

The literature review identified key frameworks in health care management that demonstrate the potential to advance patient access management. Frameworks serve as conceptual tools that delineate and organize factors and their interrelations, providing stakeholders with a systematic approach to evaluation and improvement [20]. Frameworks may improve validity and reliability in performance improvement activities [40]. For health system leaders, such frameworks are instrumental in identifying

actionable determinants, prioritizing the allocation of resources, and evaluating the impact of interventions on access-related challenges [22].

The literature review revealed four frameworks used in system-level performance improvement efforts in health care. The Systems Engineering Initiative for Patient Safety (SEIPS) model emphasizes the integration of human factors and systems production to optimize health care processes and outcomes [3, 18]. Donabedian's Quality of Care model evaluates health care through structure, process, and outcome dimensions, offering a foundational approach to quality evaluation [6, 7]. The Institute of Medicine (IOM, now National Academy of Medicine framework outlines six domains of health care quality—safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity—highlighting priorities for system-wide performance improvement [16, 24]. Finally, the High Reliability Organization (HRO) framework offers principles of reliability and resilience for managing complex, high-stakes environments, characteristics that apply to the ambulatory setting [17, 36].

The Donabedian model is well-matched for patient access management because it provides a simple, yet comprehensive framework for evaluating health care quality through three dimensions: structure, process, and outcome. By integrating these dimensions, the Donabedian model systematically addresses the multifaceted, interconnected nature of access, offering a structured approach to access management that can be leveraged as a management tool. The Donabedian model is applied as the framework for patient access management in this study.

Delphi panel

The Delphi method is a structured research technique designed to achieve consensus among experts through iterative rounds of surveys, providing a systematic approach to addressing complex issues [19].

The first round of the Delphi panel involved 14 members from three committees of access leaders within the Patient Access Collaborative: the Professional Development Committee, the Best Practices Committee, and the Board of Advisors. All constituents represent senior-level access leaders within their respective health systems and volunteer their service on the committees. The 14 members include five clinician leaders and nine administrative leaders, collectively representing 14 health systems. Participants were asked two open-ended questions:

How do you define patient access?
Describe ten determinants of patient access to your health system.

These questions were designed to elicit initial ideas and establish a broad foundation for the subsequent round. Responses were analyzed qualitatively by the authors and an analyst to identify recurring themes and assimilate the factors. Four definitions and forty-one determinants were documented by first-round participants and summarized by the authors.

The second round incorporated a larger audience, including all participants from the first stage, along with other clinicians serving as access medical directors and primary administrative leaders of patient access within a health system designated as the primary contact for the Patient Access Collaborative. The survey was designed based on the results of the first round and disseminated via email using the software SurveyMonkey®. The four definitions and forty-one determinants were distributed to the participants in round two. The survey was pilot tested with a small group of five experts on October 18, 2024, to ensure clarity and feasibility. Feedback from the pilot test was used to refine the final survey.

The study population of the second round consisted of 160 participants representing 125 U.S. academic health systems and children's hospitals. Consent to participate was obtained. The finalized survey was distributed to 160 participants, consisting of 35 clinical (physician, advanced practice provider, or nurse) access leaders and 125 administrative leaders, on October 22, 2024. A total of 98 respondents completed the survey, resulting in a participant response rate of 61.3%. These respondents represented 85 academic health systems and children's hospitals, achieving a system-level response rate of 68.0%. Among the respondents, 13 health systems were represented by both a clinical leader and an administrative leader. The participants included 19 clinical leaders, 78 administrative leaders, and one other who identified as both an administrative leader and clinical leader. Clinical leaders in the field of access most commonly remain in clinical practice on a part-time basis, as their leadership roles for the health system are not full-time, thereby incorporating the perspective of practicing clinicians in the survey [52].

To optimize response rates, three follow-up reminders were sent on October 25 (clinical leaders), October 28 (administrative leaders), November 12 (both groups), and November 25 (both groups), 2024.

Participants were asked to rate the definition and determinants on a 1 to 9 scale. The scale was selected because it provides adequate granularity for Delphi panels while being intuitive for participants [26, 48].

For the definition, participants were asked: "On a scale from 1–9, please indicate the extent to which you consider the following statement successfully defines the term "patient access." 1 represents a definition which fails to define 'patient access;' 9 represents a definition which successfully defines 'patient access.'" For the

Table 1 Patient access definition scores

Definition	Mean	Median
1. Patient access is the health system's ability to simplify the health system for patients, offer timely care, and connect patients to their care providers	8.44	9.00
2. Patient access is the health system's capacity to connect and communicate effectively with patients to best serve their unique needs	7.20	8.00
3. Patient access is the health system's ability to facilitate the healing process by ensuring the patient is offered the best possible opportunities for care	6.86	7.00
4. Patient access is the health system's capacity to serve its community by raising the standard of care for all community members	6.16	6.00

Table 2 Patient access management major determinant scores

Major determinant	Mean	Median
Structure		
1. Executive Leadership Support	8.48	9.00
2. Dedicated Access Leadership	8.50	9.00
3. System Strategy Prioritization	8.24	9.00
Process		
4. Contact Center Management	8.16	9.00
5. Appointment Availability	8.54	9.00
6. Appointment Accuracy	8.35	9.00
7. Capacity Management	8.27	9.00
8. Data Collection and Analysis	8.04	9.00
9. Defined, Measurable Goals	8.03	8.50

determinants, participants were prompted: "On a scale from 1–9, please indicate the extent to which you consider the following factor a determinant of patient access. 1 represents a factor that is not important to patient access at your organization; 9 represents a factor that of critical importance to patient access at your organization." "Organization" was defined as the participant's health system. Figure S1 presents the survey instrument used for the two-round Delphi panel study.

Results

The first-round Delphi panel process yielded four distinct definitions of patient access and a total of 41 determinants. Quantitative analysis was conducted to identify the most highly rated definitions and determinants based on participant responses. Each item was scored using a Likert scale, and both the mean and median scores were calculated to ensure a robust assessment of consensus, consistent with the Delphi research methodology [14, 19].

Of the four definitions generated, one achieved both a mean and a median score above 8.0 on a 10-point scale: "Patient access is the ability to simplify the health system for patients, offer timely care, and connect patients to their care providers." (See Table 1). The definition was regarded by the expert panel as the most representative and comprehensive conceptualization of patient access. Because it represents the outcomes intended by patient access management, the elements of the definition are incorporated into the framework as major outcome determinants.

Similarly, among the 41 identified determinants, nine achieved scores with both a mean and median above 8.0, indicating strong consensus regarding their importance. The factors are executive leadership support, dedicated access leadership, system strategy prioritization, contact center management, appointment availability, appointment accuracy, capacity management, data collection and analysis, and defined, measurable goals. These nine determinants (Table 2) reflect critical factors in achieving effective patient access related to structure and process and are considered foundational to system-level patient access management strategies.

In addition to the nine major determinants related to structure and process, three determinants were incorporated into the framework based on the definition selected by the panel. Representing outcomes in the Donabedian framework, the determinants of simplification of system for patients, timely offering of care, and patient-clinician connection were incorporated in the framework, for a total of 12 major determinants.

Twenty factors achieved both a mean and median score above 7.0 and at or below 8.0, representing the minor factors. The scores of the minor determinants, sorted in numerical order based on importance as defined by the expert panelists, are listed in Table 3.

The use of dual metrics—mean and median—aligns with best practices in the Delphi method, ensuring that the most significant findings reflect central tendency and group consensus [9]. Combining quantitative analysis with qualitative insights affords a rigorous approach to the derivation of actionable results [14, 19]. The results provide a framework for understanding and improving patient access management in health systems.

Discussion

Applying the Donabedian framework and the survey findings, we propose the following categorization of the factors of patient access management for health systems:

- Structure
    - Executive Leadership Support
    - Dedicated Access Leadership
    - System Strategy Prioritization

Table 3 Patient access management minor determinant scores

Minor determinant	Mean	Median
Structure		
1. Patient-Centered Culture	7.99	9.00
2. Clinician Leadership	7.78	8.00
3.Technological Infrastructure	7.78	8.00
4. Patient Self-Service	7.66	8.00
5. Organizational Policies	7.66	8.00
6. Availability of Ancillary Services	7.58	8.00
7. Geographical Proximity for Community	7.58	8.00
8. Patient Portal	7.63	8.00
9. Availability of Facilities	7.45	8.00
10. Care Team	7.37	8.00
Process		
11. Top-of-License Practice	7.92	8.00
12. Workforce Recruitment	7.67	8.00
13. Change Management	7.65	8.00
14. Benchmark Comparison	7.67	8.00
15. Referral Management	7.60	8.00
16. Enforcement of Organizational Policies	7.61	8.00
17. Training	7.45	8.00
18. Patient Co-Management	7.52	8.00
19. Patient Engagement	7.37	8.00
Outcome		
20. Patient Experience	8.03	8.00

- Process
  - Data Collection and Analysis
  - Contact Center Management
  - Capacity Management
  - Appointment Availability
  - Appointment Accuracy
  - Defined, Measurable Goals
- Outcome
  - Simplification of System for Patients
  - Timely Offering of Care
  - Patient-Clinician Connection

The framework integrates the panel's highly rated definition and determinants into a well-established model for quality care, providing a comprehensive lens through which patient access can be understood and operationalized. By using the Donabedian model as a foundation, the research underscores the relationship between organizational resources (Structure), operational processes (Process), and patient-focused outcomes (Outcome).

The major and minor determinants are integrated into the model displayed in Fig. 1 (Framework for Patient Access Management) as categories, which the authors present as the framework for patient access management in the ambulatory setting.

The results indicate the importance of an intentional priority on patient access management in the ambulatory setting of a health system. Dr. J. H. Knowles [28], the director of Massachusetts General Hospital wrote: "Turning to the outpatient department of the urban hospital, we find the stepchild of the institution. Traditionally, this has been the least popular area in which to work, and as a result, few advances in medical care and teaching have been harvested here for the benefit of the community."

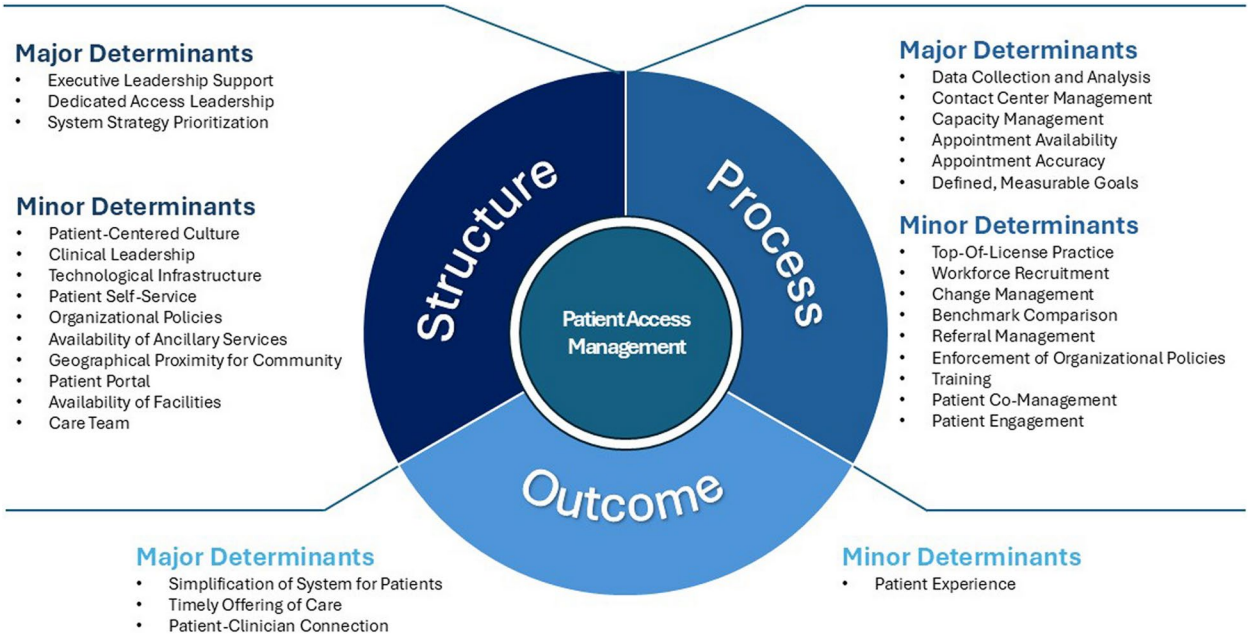

Fig. 1 Framework for patient access management. Determinants of patient access management based on expert consensus. ©The Authors

There is evidence that inpatient facilities remain the priority for health system investments [1, 37].

For health systems, the respective allocation of resources may not reflect an intention to ignore or otherwise diminish the regard for the ambulatory enterprise. The ambulatory setting is challenging to manage because the allocation of supply is largely controlled by inexperienced, untrained customers using a first-in, first-out (FIFO) model. These customers– patients– call or go online to book appointments, which are dispersed based on the availability of timeslots, typically allocated in 10- or 15-min blocks, on a scheduling template that represents the system's supply of clinicians. Patients with more resources, including time, available use of communication devices, health literacy, and language comprehension, inherently may have a higher probability of successfully accessing care in the ambulatory setting [8, 47]. The structural inequity of access may be perpetuated by this unmanaged distribution of the supply of clinicians' time, particularly as the system has grown more complex for patients to navigate. The dynamic of supply distribution in the ambulatory setting contrasts with other areas of the health system– the inpatient hospital, the skilled nursing facility, the surgery center, and so forth– where trained clinicians skillfully triage, determine acuity, and manage their time. At present and projected in the future, there are shortages of clinicians in the US [15]. It is an opportune time for health systems to apply a more rigorous, evidence-based approach to supply management in the ambulatory setting.

The framework determined by expert consensus reveals major determinants at the structural level: the health system must support patient access management at the highest levels of the organization. Leadership dedicated to access management and a deliberate system-level strategy are paramount. Structurally, the health system must also have facilities, ancillary services, technological infrastructure (including patient portal and self-service tools) and geographical proximity for its community. Investments into ambulatory care teams and clinician leaders are vital. These structural elements must be bolstered by organizational policies and a patient-centered culture. As identified by the results, a patient-centered culture is the most highly rated minor determinant, narrowly missing the quantitative cut-off as a major factor. Collectively, the three major and ten minor determinants provide the scaffolding for patient access management in a health system.

The experts agreed that myriad factors related to process were crucial. While the structural elements may exist in modern health systems, yet require calculated attention and nurture, the process elements determined by the panel of experts may be novel for health systems. Ambulatory contact center and capacity management are foundational operations for patient access management, replacing a complex, often frustrating web of largely antiquated entry points and appointment booking workflows for patients today. The burden of a historically unmanaged scheduling process may be transferred to patients, thus perpetuating inequity. As with many complex issues in health care, data collection and analysis, industry benchmark comparisons, and defined, measurable goals are vital to illuminate opportunities– and maintain momentum towards improvement. Striving to offer and manage referrals, appointment availability, and appointment accuracy are key workflows, with a deliberate focus on training, clinician and staff workforce management, and organizational policy enforcement to safeguard the future balance of supply and demand. Patient engagement and co-management are prioritized in the ambulatory setting, with care teams practicing at the top of their license to optimize care delivery. These newly introduced or significantly refined process elements are encircled with change management to encourage and support stakeholder adoption.

The final component of the framework is outcomes: a simplified, frictionless experience for patients to receive timely, connected access to care. While healing may not be guaranteed, managing the patient's emotional health in navigating entry into the health system– to feel, with confidence, that they will be cared for—is a pivotal component of patient access management.

Health systems encompass a diverse array of entities and represent only one structural model for care delivery. In the United States, ambulatory care is provided through a variety of settings, including independent medical practices, community health centers, mobile clinics, and other entities that operate outside of the traditional health system framework represented by the panel of leaders participating in this study [35]. This diversity underscores the necessity of a flexible and adaptable approach to patient access management.

The framework presented herein is designed to be applicable across all models of care delivery, regardless of organizational structure. While leaders may leverage this framework to enhance patient access, its implementation will necessarily vary across settings. For instance, a mobile clinic may lack the resources to dedicate a specific leader to access management, as represented by one of the research study's major determinants. However, in applying the framework, administrators may recognize the need to assign explicit responsibility for access oversight, akin to how patient safety efforts are typically managed by a health care organization. Similarly, while a mobile clinic may not maintain a centralized contact center, its leadership must account for the essential role of patient communication.

The adaptation of this framework across diverse care settings necessitates careful consideration of innumerable intersecting issues, including health literacy and language accessibility, social determinants of health, workforce availability and composition, facilities, technological infrastructure, geography, and other factors. By accounting for these variables, organizations can optimize patient access and ensure equitable care delivery within their respective communities. The framework for patient access management serves as a fundamental guide for enhancing access across diverse ambulatory settings. However, its effective application requires consideration of both internal and external factors that may influence its implementation to achieve the desired outcomes related to access to care.

Limitations

This study has several limitations. First, by focusing exclusively on academic health systems and children's hospitals in the US, which are large and complex health care organizations, the findings may not be generalizable to smaller or non-academic hospitals and health systems. Academic health systems often have unique structures and resources that differ from other health care organizations, potentially limiting the applicability of the results to broader contexts [2]. The limited generalizability applies also to the study of US-based health systems, thereby potentially restricting the pertinence to health systems outside of the US. Next, the study reflects the perspectives of health system leaders, without incorporating insights from health policy experts, patients, or referral sources. This omission may result in an incomplete understanding of patient access management issues, as the viewpoints of leaders may not fully capture the experiences of health policy experts, patients, or referring clinicians [33]. Finally, while frameworks provide structured approaches to complex issues, they can oversimplify the realities of health care delivery. Relying solely on such models may overlook contextual factors and the nuances inherent in patient access management, underscoring the importance of using frameworks in conjunction with other evaluative methods [4].

Conclusion

The purpose of this study was to provide consensus from a panel of experts engaged in access about the definition and determinants of patient access management in the ambulatory setting. The import of patient access management is recognized, as well as its challenges. The Delphi method was effective in identifying a definition and a consensus of determinants of patient access management. According to the panel of experts, "Patient access is the ability to simplify the health system for patients, offer timely care, and connect patients to their care providers." Applied to the Donabedian model, 12 major and 20 minor factors inherent in patient access management were recognized by 98 experts representing 85 academic health systems and children's hospitals around the US. The 12 major factors include executive leadership support, dedicated access leadership, system strategy prioritization, data collection and analysis, contact center management, capacity management, appointment availability, appointment accuracy, measurable, defined goals, simplification of system for patients, timely offering of care, and patient-clinician connection. The research may inform stakeholders about management techniques to apply, thus contributing to the adoption of evidence-based practices to promote improvement efforts in managing patient access to the ambulatory enterprise of a health system. The applicability of the findings is shaped by the composition of the Delphi panel, which primarily reflected the perspectives of internal stakeholders, specifically health system leaders. Further research is recommended to identify the elements of each determinant, as well as associated barriers and facilitators, while also integrating the perspectives of patients, health policy experts, and other external stakeholders.

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12913-025-12561-8.

Additional file 1: Figure S1. Survey Questionnaires. Questionnaires for two-round Delphi panel survey

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Authors' contributions

EW conceptualized the research study. CP analyzed the results of the initial Delphi round, synthesizing the data for the second stage, and constructed the framework and data tables. EW analyzed and interpreted the data regarding the expert consensus and wrote the manuscript. All authors read and approved the final manuscript.

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Data availability

The dataset generated and analyzed during the current study is not publicly available; however, a blinded dataset is available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate

This study involved the collection and analysis of data from an administrative survey of US health system leaders in their professional capacities. Informed consent was obtained from participants. No individual person's data is contained in the manuscript. The research did not involve experiments on humans, human tissue samples, or sensitive personal data. The need for ethics approval was deemed unnecessary according to the US Code of Federal Regulations Title 45 Public Welfare Part 46 Protection of Human Subjects Section 104 Exempt Research (45 CFR 46.104). The study was conducted in

accordance with relevant guidelines and regulations, including the principles outlined in the Declaration of Helsinki.

Consent for publication
Not applicable.

Competing interests
The authors declare no competing interests.

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References

1. American Hospital Association. America's hospitals and health systems continue to face escalating operational costs and economic pressures as they care for patients and communities. 2024. https://www.aha.org/costsofcaring.
2. Bach PB, Schwab RE, Resar RK. Characteristics of academic medical centers in the United States. JAMA. 2021;325(6):532–43. https://doi.org/10.1001/jama.2021.0592.
3. Carayon P, Hundt AS, Karsh B-T, Gurses AP, Alvarado CJ, Smith M, Flatley Brennan P. Work system design for patient safety: The SEIPS model. Qual Saf Health Care. 2006;15(Suppl 1):i50–8. https://doi.org/10.1136/qshc.2005.015842.
4. Carayon P, Wood KE. Patient safety: the role of human factors and systems engineering. Stud Health Technol Inform. 2014;194:115–23. https://doi.org/10.3233/978-1-61499-464-0-115.
5. Dalkey NC, Helmer O. An experimental application of the Delphi method to the use of experts. Manage Sci. 1963;9(3):458–67. https://doi.org/10.1287/mnsc.9.3.458.
6. Donabedian A. The quality of care: how can it be assessed? JAMA. 1988;260(12):1743–8. https://doi.org/10.1001/jama.1988.03410120089033.
7. Donabedian A. Evaluating the quality of medical care. Milbank Q. 2005;83(4):691–729. https://doi.org/10.1111/j.1468-0009.2005.00397.x.
8. Espinoza J, Derrington S. How should clinicians respond to language barriers that exacerbate health inequity? AMA J Ethics. 2021;23(2):109–16. https://doi.org/10.1001/amajethics.2021.109.
9. Giannarou L, Zervas E. Using Delphi technique to build consensus in practice. Int J Bus Sci Appl Manage. 2014;9(2):65–82.
10. Glogovac G, Kennedy ME, Weisgerber MR, Kakazu R, Grawe BM. Wait times in musculoskeletal patients: what contributes to patient satisfaction. J Patient Exp. 2020;7(4):549–53. https://doi.org/10.1177/2374373519864828.
11. Gulliford M, Figueroa-Munoz J, Morgan M, Hughes D, Gibson B, Beech R, Hudson M. What does "access to health care" mean? J Health Serv Res Policy. 2002;7(3):186–8. https://doi.org/10.1258/135581902760082517. PMID: 12171751.
12. Gulzar L. Access to health care. J Nurs Scholarsh. 1999;31(1):13–9. https://doi.org/10.1111/j.1547-5069.1999.tb00414.x.
13. Habibi MRM, Abadi FM, Tabesh H, Vakili-Arki H, Abu-Hanna A, Eslami S. Evaluation of patient satisfaction of the status of appointment scheduling systems in outpatient clinics: Identifying patients' needs. J Adv Pharm Technol Res. 2018;9(2):51–5. https://doi.org/10.4103/japtr.JAPTR_134_18.
14. Hasson F, Keeney S, McKenna H. Research guidelines for the Delphi survey technique. J Adv Nurs. 2000;32(4):1008–15. https://doi.org/10.1046/j.1365-2648.2000.t01-1-01567.x.
15. Health Resources and Services Administration (HRSA) (2024). State of the U.S. Health Care Workforce. 2024. https://bhw.hrsa.gov/sites/default/files/bureau-health-workforce/state-of-the-health-workforce-report-2024.pdf.
16. Hibbard J, Pawlson LG. Why not give consumers a framework for understanding quality? Jt Comm J Qual Saf. 2004;30(6):347–51. https://doi.org/10.1016/S1549-3741(04)30041-1.
17. Hines S, Luna K, Lofthus J, Marquardt M, Stelmokas D. Becoming a high reliability organization: operational advice for hospital leaders. Rockville: Agency for Healthcare Research and Quality; 2008. p. 08–0022.
18. Holden RJ, Carayon P, Gurses AP, Hoonakker P, Hundt AS, Ozok AA, Rivera-Rodriguez AJ. SEIPS 2.0: a human factors framework for studying and improving the work of health care professionals and patients. Ergonomics. 2013;56(11):1669–86. https://doi.org/10.1080/00140139.2013.838643.
19. Hsu CC, Sandford BA. The Delphi technique: making sense of consensus. Pract Assess Res Eval. 2007;12(1):10. https://doi.org/10.7275/pdz9-th90.
20. Huang X, Lin J, Demner-Fushman D. Evaluation of PICO as a knowledge representation for clinical questions. BMC Med Inform Decis Mak. 2015;15:63. https://doi.org/10.1186/s12911-015-0192-9.
21. Hyndman RJ, Athanasopoulos G. Forecasting: Principles and Practice. 2nd ed. OTexts: Melbourne; 2018. https://www.OTexts.com/fpp2. Accessed 14 Dec 2024.
22. Institute for Healthcare Improvement (IHI). Improving health equity: A guide for health systems. 2022. https://www.ihi.org/resources/publications/improving-health-equity-guidance-health-care-organizations.
23. Institute of Medicine (U.S.). Committee on Monitoring Access to Personal Health Care Services. Access to health care in America. In: Millman M, editor. Washington (DC): National Academies Press; 1993.
24. Institute of Medicine (US) Committee on Quality of Health Care in America. Committee on quality of health care in america. crossing the quality chasm: a new health system for the 21st century. Washington (DC): National Academies Press (US); 2001. PMID: 25057539.
25. Institute of Medicine. Transforming health care scheduling and access: getting to now. Washington, DC: The National Academies Press; 2015. https://doi.org/10.17226/20220.
26. Keeney S, Hasson F, McKenna HP. A critical review of the Delphi technique as a research methodology for nursing. Int J Nurs Stud. 2001;38(2):195–200. https://doi.org/10.1016/S0020-7489(00)00044-4.
27. Kerwin KE, Madison J. The role of the internet in improving healthcare quality. J Healthc Manag. 2002;47(4):225–36.
28. Knowles JH. Hospitals and the Present Health Care Crisis. N Engl J Med. 1965;273(6):311–5. https://doi.org/10.1056/NEJM196508052730606.
29. Leddy KM, Kaldenberg DO, Becker BW. Timeliness in ambulatory care treatment: an examination of patient satisfaction and wait times in medical practices and outpatient test and treatment facilities. J Ambul Care Manage. 2003;26(2):138–49.
30. Levesque JF, Harris MF, Russell G. Patient-centred access to health care: conceptualising access at the interface of health systems and populations. Int J Equity Health. 2013;12:18. https://doi.org/10.1186/1475-9276-12-18.
31. Linstone HA, Turoff M. Introduction. In: Linstone HA, Turoff M, editors. The Delphi method: techniques and applications. 2002. https://www.foresight.pl/assets/downloads/publications/Turoff_Linstone.pdf.
32. Lu T, Myerson R. Disparities in health insurance coverage and access to care by English language proficiency in the USA, 2006–2016. J Gen Intern Med. 2020;35(5):1490–7. https://doi.org/10.1007/s11606-019-05609-z.
33. Luxford K, Safran DG, Delbanco T. Promoting patient-centered care: a qualitative study of facilitators and barriers in healthcare organizations with a reputation for improving the patient experience. Int J Qual Health Care. 2011;23(5):510–5. https://doi.org/10.1093/intqhc/mzr024.
34. Marco CA, Bryant M, Landrum B, Drerup B, Weeman M. Refusal of emergency medical care: an analysis of patients who left without being seen, eloped, and left against medical advice. Am J Emerg Med. 2021;40:115–9. https://doi.org/10.1016/j.ajem.2019.158490.
35. Medicare Payment Advisory Commission. Ambulatory Care Settings. Washington, DC: MedPAC; n.d. https://www.medpac.gov/research_area/ambulatory-care-settings/. Accessed 25 Feb 2025.
36. McKeon LM, Oswaks JD, Cunningham PD. Safeguarding patients: complexity science, high reliability organizations, and implications for team training in healthcare. Clin Nurse Spec. 2006;20(6):298–304.
37. Mitton C, Dionne F. Priority setting and resource allocation in the US health system: Is there a place for hard caps? J Health Organ Manag. 2020;34(4):379–84. https://doi.org/10.1108/JHOM-01-2020-0016.
38. Murray M, Berwick DM. Advanced access: reducing waiting and delays in primary care. JAMA. 2003;289(8):1035–40. https://doi.org/10.1001/jama.289.8.1035.
39. Okoli C, Pawlowski SD. The Delphi method as a research tool: an example, design considerations, and applications. Inform Manage. 2004;42(1):15–29. https://doi.org/10.1016/j.im.2003.11.002.
40. Partelow S. What is a framework? Understanding their purpose, value, development and use. J Environ Stud Sci. 2023;13:510–9. https://doi.org/10.1007/s13412-023-00833-w.
41. Patient Access Collaborative. Annual Benchmark Report. Permission to use granted. 2024.
42. Powell C. The Delphi technique: Myths and realities. J Adv Nurs. 2003;41(4):376–82. https://doi.org/10.1046/j.1365-2648.2003.02537.x.
43. Ramirez N, Shi K, Yabroff KR, Han X, Fedewa SA, Nogueira LM. Access to care among adults with limited english proficiency. J Gen Intern Med. 2023;38(3):592–9. https://doi.org/10.1007/s11606-022-07690-3.

44. Rust G, Ye J, Baltrus P, Daniels E, Adesunloye B, Fryer GE. Practical barriers to timely primary care access: impact on adult use of emergency department services. Arch Intern Med. 2008;168(15):1705–10. https://doi.org/10.1001/archinte.168.15.1705.
45. Schneider EC, Zaslavsky AM, Landon BE, Lied TR, Sheingold S, Cleary PD. National quality monitoring of medicare health plans: the relationship between enrollees' reports and the quality of clinical care. Med Care. 2001;39(12):1313–25.
46. Schoonenboom J, Johnson RB. Lessons learned from a two-round Delphi-based scenario study. MethodsX. 2017;4:328–34. https://doi.org/10.1016/j.mex.2017.10.005.
47. Shahid R, Shoker M, Chu LM, Frehlick R, Ward H, Pahwa P. Impact of low health literacy on patients' health outcomes: a multicenter cohort study. BMC Health Serv Res. 2022;22(1):1148. https://doi.org/10.1186/s12913-022-08527-9.
48. Skulmoski GJ, Hartman FT, Krahn J. The Delphi method for graduate research. J Inf Technol Educ. 2007;6(1):1–21. https://doi.org/10.28945/199.
49. Starfield B. Basic concepts in population health and health care. J Epidemiol Community Health. 2001;55:452–4. https://doi.org/10.1136/jech.55.7.452.
50. Sung B, O'Driscoll F, Gregory A, Grailey K, Franklin H, Poon S, Lawrence-Jones A, Shepherd L, McCrudden C, Klaber B, Pavlakis C, Darzi A, Huf S. Identifying barriers to outpatient appointment attendance in patient groups at risk of inequity: a mixed methods study in a London NHS trust. BMC Health Serv Res. 2024;24(1):554. https://doi.org/10.1186/s12913-024-10947-8.PMID:38693519;PMCID:PMC11061980.
51. Waller J, Jackowska M, Marlow L, Wardle J. Exploring age differences in reasons for nonattendance for cervical screening: a qualitative study. BJOG. 2012;119(1):26–32. https://doi.org/10.1111/j.1471-0528.2011.03030.x.
52. Woodcock E, Profeta C. A mixed-methods evaluation of the emerging role of access medical director in U.S. health systems. Physician Leadersh J. 2024;11(2):13–20. https://doi.org/10.55834/plj.7643819928.
53. World Health Organization. The World Health Report 2008: primary health care now more than ever. 2008. https://iris.who.int/handle/10665/43949.
54. World Health Organization. World Health Organization Health Systems Strengthening Glossary. Geneva: United Nations; n.d. https://www.who.int/docs/default-source/documents/health-systems-strengthening-glossary.pdf. Accessed 20 Feb 2025.

Publisher's Note

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