

CRITICAL REVIEW

Achieving epilepsy care for all: Ecosystem-based transformation

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Abstract

Epilepsy exemplifies many of the systemic challenges of modern health care—fragmented care delivery, inequitable access, financial strain, and so on. The current “system of systems” (SoS) structure of U.S. health care fosters siloed operations among its member systems (e.g., insurers, health care institutions, providers, researchers, pharmaceutical companies, and technology vendors), failing to address interconnected issues like care continuity, clinician burnout, and appropriate resource allocation. This article proposes embracing a health care *ecosystem* approach as a solution, emphasizing interdependence, collaboration, and equity. Section 1 examines the shortcomings of the current care model, with a focus on its financial challenges and the systemic inefficiencies it perpetuates. Section 2 explains the concept of a health care ecosystem and its potential to drive equity through organic coordination and collective accountability. It highlights the role of key member systems—patients, advocacy groups, professional organizations, health care providers, payers, purchasers, policymakers, researchers, and industry leaders—in achieving equity in brain health care. Finally, Section 3 presents a roadmap for transitioning from SoS to ecosystem, outlining multiple actionable strategies, such as enhancing advocacy and data sharing by professional organizations, adopting integrated and multidisciplinary care models by health care providers, and prioritizing affordability and collaboration by industry leaders. Policymakers and federal research organizations can support the transition by incentivizing collaboration, expanding funding for health services research, and supporting data-driven decision-making. Advocacy groups can amplify collective voices and help prioritize improvement opportunities. Using epilepsy care as an example condition, this article argues that coordinated, multi-sector, and multi-level efforts can successfully and efficiently address systemic challenges, improve outcomes, and reduce inequities. It offers a replicable framework for achieving sustainable, scalable, and equitable care for chronic neurological conditions.

KEYWORDS

delivery of health care, epilepsy, seizures

1 | INTRODUCTION: THE SHORTCOMINGS OF A HEALTH CARE SYSTEM-OF-SYSTEMS

Epilepsy care exemplifies many of the structural and systemic challenges of modern health care.^{1,2} Despite advances in diagnostics and treatments, fragmented care delivery and financial burdens remain formidable barriers to effective epilepsy management.^{3–5} Epilepsy affects 3.4 million people in the United States.³ The condition's hallmark, unpredictable seizures, disrupts daily life and increases the risk of early mortality, particularly among underserved populations.^{3–5}

Disparities are amplified by a health care system functioning as a “system of systems” (SoS), where each member system (e.g., insurers, health care providers, pharmaceutical companies, and community organizations) leverages its connections within the system to attain individual strategic objectives. This structure often causes unwanted inefficiencies and fragmentation, with ripple effects across the entire system. For instance, delays in *pre-authorizations for ambulatory neurophysiology studies*—which are insurance-mandated prior approvals required before patients can undergo certain outpatient diagnostic tests, such as electroencephalography (EEG)—while aimed at ensuring appropriate utilization and containing costs, can impede timely diagnoses. These delays, in turn, may lead to increased emergency department visits and hospitalizations. Efforts to reduce emergency department utilization through increased use of outpatient care can strain already overburdened primary care and neurology resources, exacerbating access delays. A stressed SoS is ill-equipped to address the complex network of interdependent care requirements for people living with epilepsy, thus creating a cycle of care disruptions, unmet needs, and high costs, placing disproportionate strain on already vulnerable populations.

Epilepsy imposes significant financial burdens on patients and health care systems (Table 1).^{6,7} The costs of epilepsy care include outpatient visits with multiple providers, such as primary care physicians and mental health professionals, to address the significant psychological burden of the condition.⁸ Additional costs arise from the evaluation, prescription, and monitoring of both chronic and as-needed medications, as well as the coordination of care across providers.⁹ Although emergency department visits and hospitalizations should ideally be rare, hospitalizations remain necessary for specialized interventions, including epilepsy surgery, neuromodulation therapies, or other advanced treatments.¹⁰

Spending on epilepsy and seizures in the United States grew at an alarming 7.6% annual rate between 2010 and 2018, more than double the 3.6% growth rate among

Key points

- Epilepsy's fragmented care reveals systemic hurdles, driving higher costs, delays, and disparities.
- Shifting from a system-of-systems structure to an ecosystem approach demands interdependence and shared accountability.
- Value-based incentives, care bundles, and technology integration can boost continuity and cut epilepsy costs.
- Collaborations among patients, providers, payers, and industry reduce barriers, enhance access and drive real-world impact.
- A roadmap for co-designed solutions fosters sustainable, efficient care and informs broader neurological transformations.

controls. Annual costs for epilepsy and seizures in the United States were estimated at \$24.5 billion in 2019.⁶ Efforts to reduce health care costs, however, often result in higher financial burdens for patients. Rising out-of-pocket costs for medications (e.g., lacosamide, Nayzilam) and hospital services (e.g., admissions for diagnostic or pre-surgical neurophysiological workup) often push patients into financial hardship or even bankruptcy.⁶

Transforming epilepsy care requires evolving from an SoS to an *ecosystem*, thus moving from the SoS's transactional nature to true interdependence and collaborative accountability. This shift demands a deliberate co-design process, engaging all member systems to implement comprehensive, equitable, effective, efficient, and sustainable solutions for identifying and reducing health disparities. Using epilepsy care as an example we argue that this approach can address the condition's unique complexities while offering a replicable framework for transforming care delivery across other neurological and chronic conditions.

2 | EMBRACING THE CONCEPT OF A HEALTHCARE ECOSYSTEM

A system-of-systems (or SoS) refers to a collection of independent systems that work together to achieve a common goal, but maintain their operational and managerial independence. If the SoS were to be disassembled, its member systems would be able to continue operating independently. Key characteristics of SoS include hierarchical structures, whereby subsystems operate exclusively under specific domains; fixed boundaries, such that each member system has

TABLE 1 Typical high-cost patient characteristics.

Characteristic	Examples
Multiple chronic conditions (MCCs)	Epilepsy with comorbid anxiety, depression, history of cerebrovascular accident, traumatic brain injuries, diabetes, hypertension. ⁴⁴
Frequent hospitalizations	Thirty percent of patients with epilepsy are considered “drug-resistant,” requiring repeated admissions for diagnostic investigations and therapeutic interventions. ⁴⁵
High emergency department utilization	Frequent ED visits due to seizure-related injuries or complications.
Behavioral/mental health issues	Co-occurring anxiety, depression, or attention-deficit/hyperactivity disorder (ADHD) in patients with epilepsy. ⁴⁶
Polypharmacy	Polypharmacy is common in patients with epilepsy (i.e., opioids, benzodiazepines, seizure threshold-lowering medications). ⁴⁷
End-of-life care	High incidence of seizures and status epilepticus at the end of life in patients with multiple conditions, such as brain tumors, dementia, and cerebrovascular accidents, requiring palliative or hospice care. ⁴⁸ Episodes of loss of consciousness falls, or amnesic events in those living in a nursing facility require a detailed description and an urgent assessment to rule out an epileptic seizure. ⁴⁹
Readmissions	Patients hospitalized with seizure are frequently readmitted within 30 days. ⁵⁰
SDOH barriers	Patients with epilepsy often have transportation challenges and housing instability. ⁵¹
Rare/complex conditions	Some epilepsy syndromes are associated with rare genetic conditions. ⁵²

Note: Typical high-cost patient characteristics in epilepsy often include multiple chronic conditions (MCCs), frequent hospitalizations, and high rates of emergency department (ED) utilization. These factors contribute to a substantial burden on health care systems, particularly when patients with epilepsy face barriers related to social determinants of health (SDOH) such as transportation issues, housing instability, or access to specialized care.

defined roles and responsibilities; and interactions that are linear, predictable, and often static.¹¹ A typical SoS might include hospitals, insurance providers, and public health agencies operating independently but coordinating through policies or data sharing. However, these systems often work in silos, with limited adaptability and shared responsibility for patient outcomes.

In contrast, in an ecosystem, member systems are interdependent and interact dynamically to achieve collective functionality and sustainability.

Member systems anchor around a central node (i.e., the patient) and operate toward a joint value creation goal. Characteristics of an ecosystem include interdependence, such that member systems cannot be successful on their own but depend on and adapt to each other's needs; dynamic boundaries, whereby roles and relationships are fluid and drive innovation; and non-linear interactions, whereby

relationships evolve to promote adaptability and resilience.¹² In an ecosystem, stakeholders—patients, providers, community organizations, and policymakers—operate collaboratively, leveraging technology and shared resources to optimize care delivery and address disparities.

Addressing health equity in epilepsy requires a collaborative approach that leverages the strengths of all member systems. A co-designed solution should integrate insights from patients and caregivers, the expertise of health care providers and researchers, the policy influence of administrators, innovations from pharmaceutical and technology developers, and the leadership of advocacy organizations.

Guided by shared goals (i.e., improving outcomes and reducing costs), health care providers, policymakers, suppliers (e.g., pharmaceutical companies and technology firms), governmental and commercial payers, health plan purchasers (e.g., employers, and unions), community and

advocacy organizations (e.g., Epilepsy Foundation, Rare Epilepsies Network), professional organizations (e.g., American Academy of Neurology, American Epilepsy Society), and researchers and research organizations (e.g., National Institutes of Health) can work together to improve care continuity, reduce health inequities, and achieve sustainability. Individuals with epilepsy and their caregivers remain at the center of this ecosystem, helping shape priorities and informing actionable solutions (see Figure 1).

2.1 | Member systems in the ecosystem for health equity in epilepsy

2.1.1 | People, advocacy, and community organizations

Paramount to any successful strategy for health equity is patient centeredness, community engagement, and trust. At the heart of the ecosystem, people with epilepsy and their caregivers provide invaluable firsthand experience and insight into the challenges of managing the condition and proactively navigating the health care system. Their input informs solutions that are meaningful, accessible, and tailored to real needs. Equally important is the active role they

play in care delivery, taking accountability for their part in adhering to care plans, taking prescribed medications, following recommended lifestyle modifications, and participating in prescribed exercises or therapies. By doing so, they not only contribute to their own health outcomes but also strengthen the overall effectiveness of the care model, creating a partnership between patients, caregivers, and health care providers that drives equitable and sustainable improvements in epilepsy care.

Community and advocacy organizations play a critical role by aggregating patient voices, raising awareness, championing causes, and delivering essential services. National organizations such as the Epilepsy Foundation (EF) serve as conveners, leading conversations on epilepsy care and awareness while offering services that reach communities across the country.¹³ Regional organizations such as Epilepsy New England and Epilepsy Chicago, alongside advocacy groups such as the Danny Did Foundation and the Rare Epilepsy Network, complement these efforts by focusing on specific syndromes or localized community needs.¹⁴⁻¹⁷ Community-based organizations addressing social determinants of health impacting the health-related social needs of people living with epilepsy in their local communities.

A unified, patient-centered coalition amplifies their collective voice, reducing competition for resources and



FIGURE 1 Key Players and Contributions in a Health care Ecosystem. This figure illustrates the roles and contributions of key players in a health care ecosystem, emphasizing the transformation from fragmented systems of systems to a cohesive, interdependent model. Patients and caregivers remain at the center. Each player engages in bidirectional relationships that enhance equity, sustainability, and care quality. Advocacy organizations amplify patient voices and bridge gaps with stakeholders. Professional organizations unite disciplines to drive quality improvement. Providers deliver integrated care while collaborating with payers, who align incentives for value-based care. Industry partners ensure accessible innovations, and policymakers catalyze systemic transformation through data-driven policies and research support.

attention while focusing on shared priorities like tackling social and structural determinants of health. Coordinated advocacy strategies and shared messaging help clear, actionable guidance reach policy and health care decision-makers, all the while supporting the hyperlocal nature of initiatives targeting health equity, meeting the unique needs of specific communities.

2.1.2 | Care providers, professional organizations, and health care organizations

Health care professionals involved in the diagnosis, treatment, and management of epilepsy bring specialized knowledge and experience to the ecosystem. These professionals account for their patients' health-related social needs in the design and implementation of care plans to address epilepsy and other existing comorbidities. The quality of care they deliver often varies depending on their level of training, geographic location, and the structure of the health care system in which they operate. Thus, health care providers can lean on professional organizations, such as the American Academy of Neurology and the American Epilepsy Society.^{18,19} These organizations serve as a collective voice of care professionals, advocating for their needs in areas such as research, care delivery, policy, and education. They support health care professionals through quality measures, practice guidelines, educational resources, networking, and advocacy efforts that help shape practice standards and inform systemic improvements.

Health care organizations can integrate the perspectives of patients, advocacy groups, community organizations, providers, and professional organizations as they develop and implement care models, and allocate resources across services and providers to maximize access, quality of care, and efficiency. Continuity of care and multidisciplinary care are foundational to delivering high-value epilepsy care. Patients who receive regular monitoring and timely adjustments to their treatment plans experience better outcomes and reduced reliance on emergency care.²⁰ Behavioral health integration, a key strategy in epilepsy care, addresses the significant mental health comorbidities that often exacerbate the condition.²¹ Community health centers—federally qualified health centers in the United States that provide comprehensive primary care services to underserved populations, often serving as the first point of health care access in communities with limited resources—play a critical role in delivering direct patient care for epilepsy and addressing broader health issues within their communities.

As health care systems transition to value-based care, the focus shifts from episodic treatment to continuous multidisciplinary management, prioritizing long-term health and preventing complications. This requires aligning financing and resources to support provider coordination across institutions and specialties, ensuring care continuity and equitable access.

2.1.3 | Payers and purchasers of health insurance

Payers, whether commercial health plans or government-sponsored programs (e.g., Medicare and Medicaid) play a critical role in aligning incentives and resource allocations across conditions, institutions, and service lines. In a recent study analyzing patient-reported outcome data from eight centers providing specialized epilepsy care, 18.4% of participants reported experiencing barriers to medication adherence.²² Among the reported barriers, access issues were highly prevalent, accounting for 25% of responses, with reasons including “insurance problems” and “I cannot afford the medicine.” Patients who reported adherence barriers had lower odds of achieving seizure control compared to those without such barriers, even after adjusting for race, ethnicity, and sex.

Insurance-driven barriers to care disproportionately affect patients with chronic and high-cost conditions like epilepsy. Insurance claim denials (e.g., for advanced diagnostics, rescue, and third generation medications—critical to achieving seizure control) exacerbate health disparities, disproportionately impacting low-income families and communities of color, which already face systemic disadvantages.²³ Beyond financial burdens, the psychological toll on patients navigating appeal processes or facing delays in care further erodes trust in the system.

Unlike the traditional fee-for-service model, which incentivizes volume over quality, value-based payments offer a compelling solution to the challenges of epilepsy care by aligning financial incentives with measurable patient outcomes and improving efficiency.²⁴ For individuals with epilepsy, this approach means prioritizing primary and preventive care, optimizing medication adherence, and providing timely access to specialized treatments to prevent unnecessary hospitalizations and emergency room visits. One example of value-based payments in epilepsy is the implementation of care bundles for seizure management (Table 2). These care bundles, which include coordinated medication management, regular follow-up visits, and access to appropriate diagnostics, have been designed to improve overall patient quality of life for those with chronic conditions.²⁵

Strategy	Examples
Care coordination	Integrated care teams managing epilepsy and comorbidities. ⁵³
Preventive care and early intervention	Primary care providers who are well trained and have sufficient time can effectively diagnose and manage most people with epilepsy, supported by streamlined referral pathways to neurology when specialized care is required. Early diagnostic and/or pre-surgical evaluation for those with drug-resistant epilepsy. ⁵⁴
Behavioral health integration	Collaborative care models addressing mental health needs in epilepsy. ⁵⁵
Post-acute and home-based care	Telehealth follow-ups to support medication adherence. ⁵⁶
Addressing SDOH	Community health worker programs for transportation and housing support. ⁴³

TABLE 2 Key strategies for managing costs and improving outcomes.

Note: Key strategies for management emphasize the need for comprehensive care models that prioritize coordination and integration of services. Care coordination, preventive care, and early intervention strategies have been shown to improve both clinical outcomes and cost-effectiveness by reducing avoidable hospitalizations and emergency department visits. SDOH, social determinants of health.

Despite their intrinsic alignment with what matters to patients and the value systems clinicians abide to, these payment models have yet to gain a substantial share of the contracts in the United States. In an ecosystem framework, purchasers of health insurance and policymakers constitute key member systems that could help disseminate and implement value-based payments.

Purchasers of health insurance include employers and other entities representing the interests of large numbers of workers. In the United States, most active workers obtain health insurance coverage through their employers. Large employers are often self-insured (i.e., they incur the cost of care for their employees) but delegate the contracting and transactional aspects of their employees' health plans to health insurers, who operate as third-party administrators (TPAs). Other entities, such as large unions or professional associations, negotiate and purchase health insurance plans on behalf of their members. Thus, purchasers hold remarkable negotiating power over the health plans and could influence the types of contracts a health plan establishes with provider organizations. Better health for their employees and members and their families engenders substantial benefits for the purchasers, including lower absenteeism, lower cost of care (for the self-insured entities), and greater productivity.

2.1.4 | Industry partners: Pharma, technology, and other companies

The industry sector, encompassing pharmaceutical companies, technology vendors, and other health care-related

businesses, can substantially advance the epilepsy ecosystem. Pharmaceutical companies often focus on the development and availability of new therapies to address treatment gaps and improve health outcomes for individuals with epilepsy. Deliberate investments are needed to build trust and encourage participation among underrepresented groups, to ensure racial diversity and representation in clinical trials, to adequately assess the efficacy and safety of treatments, and to reduce disparities in treatment outcomes. A notable example is the *Epilepsy Research Ambassador Program*.²⁶

Historically, the exclusion of health care purchasers, health service researchers, and practice improvement champions in the field of clinical trial research has further limited the real-world effectiveness, safety, and utilization of new therapies. For epilepsy rescue therapies, for instance, pharmaceutical companies often face significant challenges in market penetration after investing heavily in drug development.²⁷ These struggles frequently stem from missing the mark on what matters most to patients, or failing to address critical factors like financing, access, prescribing practices, and sustainable dissemination. Pharmaceutical companies and other well-resourced industry players can also help fill the gaps in research and innovation funding. Beyond financing their own drug or device development programs, these companies can make broader investments in advancing ecosystem-level knowledge and improving care delivery.

Technological advancements hold remarkable potential for reshaping epilepsy care, providing opportunities to bridge gaps in access and improve outcomes. Telemedicine and remote EEG services, for instance,

have transformed care delivery for patients in rural and other underserved areas, reducing reliance on in-person visits and addressing transportation challenges.²⁸ Artificial intelligence (AI) tools, including natural language processing (NLP) algorithms and predictive analytics, are optimizing workflows, enhancing efficiency, and enabling earlier, more targeted interventions.^{29,30} These innovations align with value-based care models by improving care quality, reducing costs, and supporting better patient outcomes.³¹

However, the high cost of some technological solutions poses a significant barrier to adoption, particularly for resource-stressed health care organizations, which exacerbates existing inequities.³² The case of ambient documentation solutions for epilepsy care illustrates this challenge.³³ Although such tools promise to streamline clinical workflows and enhance the quality of care, their high licensing costs may make them inaccessible to smaller rural epilepsy centers.^{34,35} This could widen existing inequities in care quality and outcomes, leaving patients in rural areas at a greater disadvantage.

To ensure that these transformative technologies fulfill their potential, a more balanced approach is essential. Vendors must consider pricing strategies that allow for broad adoption across diverse health care settings, including rural and low-resource environments. Policymakers and insurers should explore reimbursement mechanisms that incentivize the adoption of proven technologies, ensuring that costs do not fall disproportionately on patients. A collaborative effort among technology vendors, health care providers, and payers is critical to the transformation of the health care industry from SoS to ecosystem, where innovations improve care equitably without widening existing disparities or placing undue financial strain on patients and providers.

2.1.5 | Policymakers and researchers

Within a health care ecosystem, policymakers shape policies that influence health care access, funding, and quality. Through collaboration with other member systems, they can implement policies supporting health disparity reductions, care delivery enhancements, and effective resource allocation. Making well-informed decisions requires reliable, comprehensive data to identify opportunities for improvement, assess the impact of existing policies, and determine where resources should be directed or redirected.

Federal research organizations, such as the National Institutes of Health (NIH) and the Agency for Healthcare Research and Quality (AHRQ), play an important role in

generating these essential data.^{15,36} Through federal funding, these institutions support researchers who undertake health services research and comparative effectiveness studies to uncover critical insights, such as gender-based inequities in care access, the escalation of emergency room visits across states, and the rising out-of-pocket costs of medications like those for neurological conditions.^{37–39} Such research not only highlights systemic challenges but also identifies opportunities to optimize policies and improve care delivery for epilepsy and other conditions in a rapidly evolving health care landscape.^{40,41}

Increased federal funding for health services research, particularly for areas such as health equity, access and quality of care, and value delivery, can expand pathways to especially support early-career investigators to help sustain and grow the pipeline of researchers dedicated to advancing health services knowledge. In addition, mechanisms should be established to encourage collaboration between researchers, health care organizations, and community stakeholders, ensuring that research findings are more immediately translated into actionable policies and practices.

Research alliances and Learning Health Systems (LHS) offer an effective framework for advancing epilepsy care and fostering collaboration. LHS identify gaps in care, measure outcomes, and implement evidence-based practices, creating a continuous cycle of improvement.⁴² The Epilepsy Learning Healthcare System (ELHS), developed through the Epilepsy Foundation, exemplifies this approach.^{20,43} Over the past 5 years, ELHS has built a robust network of patients, families, community advocates, health care providers, and researchers. This infrastructure prioritizes health outcomes valued within the epilepsy community and integrates community engagement, expert clinical care, and regulatory relationships to drive meaningful change. A core value of an LHS is co-production, where patients and families are equal partners in the improvement process. This approach ensures that solutions are relevant, equitable, and effective.

Expanding LHS initiatives within the field of epilepsy and across other neurological conditions and fostering partnerships across stakeholders—including government entities, industry leaders, and research communities—are necessary to addressing disparities and advancing brain health care delivery.

3 | ROADMAP FOR TRANSFORMING A SYSTEM OF SYSTEMS INTO AN ECOSYSTEM

Realizing the transformation from a SoS to an ecosystem requires coordinated efforts across all players. [Table 3](#)

TABLE 3 Roadmap for transforming systems of systems into an ecosystem.

Stakeholder group	Key strategies
Advocacy and community organizations	<ol style="list-style-type: none"> 1. Unite for a Common Voice: Increase collaboration across coalitions to amplify advocacy, align priorities like addressing social determinants of health, and provide actionable guidance to policymakers and funders 2. Enhance Community Engagement: Involve disadvantaged patients and families in designing solutions that reflect lived experiences 3. Support Equity Initiatives: Partner with health care organizations to collect data, identify inequities, and ensure equitable resource distribution
Professional organizations	<ol style="list-style-type: none"> 1. Enhance Advocacy and Education: Advocate for equitable care, reduce provider burnout, and drive systemic improvements. Provide resources and training to meet quality measures and adopt best practices 2. Close the Data Gap: Collaborate to gather and share data that inform advocacy, identify care gaps, and measure quality improvement impact 3. Promote Collaboration: Act as a bridge between providers and stakeholders to support multidisciplinary collaboration
Health care providers and organizations	<ol style="list-style-type: none"> 1. Adopt Integrated Care Models: Prioritize value-based care, behavioral health integration, and patient-centered strategies to improve outcomes and reduce inequities 2. Address Provider Well-Being: Reduce administrative burdens, enhance workplace support, and mitigate burnout through efficient digital tools and workflows 3. Listen and Adapt: Engage with professional organizations, advocacy groups, and patients to align strategies with their needs
Payers and purchasers of health insurance	<ol style="list-style-type: none"> 1. Incentivize and Reward Value Over Volume: Expand bundled payments and capitated models to improve efficiency and patient outcomes 2. Abate Administrative Barriers: Streamline pre-authorization processes, improve claims processing efficiency, and ensure contractual language is clear and accessible 3. Promote Health Over Health Care: Invest in preventive care and reward providers for delivering health-focused outcomes
Industry partners (pharma, technology, vendors)	<ol style="list-style-type: none"> 1. Prioritize Accessibility and Affordability: Create pricing and reimbursement strategies for broad adoption, particularly in resource-limited settings 2. Collaborate to Build Trust: Engage patients and stakeholders to ensure innovations meet real-world needs and improve clinical trial diversity 3. Invest in Broader Research: Support systemic challenges like care equity and health care delivery data gaps alongside product development
Policymakers and researchers	<ol style="list-style-type: none"> 1. Support Data-Driven Decision-Making: Implement policies based on robust data analysis to balance funding between essential care and innovation 2. Expand Collaborative Research: Partner with organizations and industry to address real-world challenges and deliver actionable insights 3. Leverage Learning Health Systems (LHS): Scale initiatives like epilepsy LHS to integrate patient voices and drive continuous improvement 4. Expand Funding for Health Services Research: Close funding gaps in quality improvement, implementation, and comparative effectiveness research

presents tailored recommendations for each member system to advance this shift, with epilepsy as a model for broader health care transformation.

4 | CONCLUSION

Transforming health care from a fragmented system of systems (or SoS) to a cohesive ecosystem requires collaboration across the care continuum. This article highlights epilepsy care as a pilot model for this shift, emphasizing

equity, sustainability, and interdependence. Although the ecosystem approach shows potential for improving care quality and reducing inequities, further work is needed to validate its advantages over the SoS model.

Aligning efforts among stakeholders, including providers, industry, researchers, advocates, and policymakers, is essential to creating a virtuous cycle that enhances care delivery. By charting a roadmap for brain care, this work provides a foundation for advancing sustainable, equitable health care and invites future research to refine and expand the model.

AUTHOR CONTRIBUTIONS

Dr. Gallani was responsible for literature review, manuscript draft, and revisions. Ms. Lee was responsible for manuscript revisions. Dr. Moura was responsible for literature review, manuscript draft, revisions, and submission.

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CONFLICT OF INTEREST STATEMENT


Dr. Gallani reports no pertinent conflict of interest. Ms. Lee serves as Chief Executive Officer for the Epilepsy Foundation and reports no pertinent conflict of interest. Dr. Moura receives support from the Centers for Disease Control and Prevention (U48DP006377), the National Institutes of Health–National Institute on Aging (NIH-NIA 5R01AG073410-02, 1R01AG082693-01), and serves as consultant to the Epilepsy Foundation of America. She reports no pertinent conflict of interest. We confirm that we have read the Journal's position on issues involved in ethical publication and affirm that this report is consistent with those guidelines.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

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