E-ISSN: 2807-4998 (online)

Buletin Ekonomika Pembangunan
https://journal.trunojoyo.ac.id/bep
Vol. 7 No. 2 September 2026, hal 250 -259

Disability-Inclusive Hospital Services: Emerging Perspectives on Healthcare Management and Economic Value

Muhammad Adib Dwitamma Putra[1*], Jay A Sario[2]
[1]Department of Physical Medicine and Rehabilitation, Faculty of Medicine, Universitas Sriwijaya, Palembang, Indonesia
[1,2]Doctoral Program, AMA University, Quezon City, Philippines
Email: adibdwitamma@gmail.com
DOI: https://10.21107/bep.v7i2.36280

ABSTRACT

People with disabilities experience barriers to healthcare that extend beyond physical access and include communication, provider capability, organizational processes, rehabilitation, and financial protection. This narrative review examines disability-inclusive hospital services from healthcare management and economic value perspectives. Relevant international and Indonesian literature was narratively reviewed and synthesized across recurring management domains: physical accessibility, communication, workforce capability, rehabilitation, effective access, financial burden, and organizational value. The review contributes a management-oriented framework that links accessibility investment with effective access, patient experience, continuity of care, resource utilization, and potential organizational value. The evidence indicates that accessibility is an organizational capability rather than a single infrastructure intervention. Barriers may affect patient experience, continuity of care, healthcare utilization, and financial burden. Evidence is stronger for disability-related burden and access barriers than for direct economic returns from individual accessibility interventions. Hospitals should therefore integrate disability inclusion into strategic planning, facility management, workforce development, operations, rehabilitation pathways, patient-experience measurement, and future economic evaluation.

Keywords: *disability inclusion; hospital management; healthcare accessibility; rehabilitation; healthcare economics*

INTRODUCTION

Disability-inclusive healthcare has traditionally been discussed primarily in terms of health equity, human rights, and access to care. However, the organization of hospital services also determines whether healthcare is effectively accessible to people with disabilities. Evidence from low- and middle-income countries identifies barriers related to transportation, communication, physical environments, healthcare providers' knowledge and attitudes, organizational procedures, and financial resources (Bright & Kuper, 2018; Krahn et al., 2015). These barriers are relevant to healthcare management because service availability does not necessarily translate into effective access when patients cannot navigate facilities, communicate with providers, use clinical equipment, or complete referral and follow-up processes.

International studies further demonstrate substantial healthcare utilization and expenditure associated with disability (Khavjou et al., 2020), while recent

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E-ISSN: 2807-4998 (online)

Indonesian evidence highlights challenges in access to medical rehabilitation and financial protection (Putra & Lany, 2025; Azizatunnisa et al., 2025). At the institutional level, communication, patient participation, and the doctor–patient relationship are also central to inclusive care; Indonesian legal-health literature emphasizes a shift toward a mutual-participation model that emphasizes communication and patient decision-making (Prayuti et al., 2024).

Nevertheless, the literature remains more developed in documenting barriers than in explaining how hospitals can translate disability inclusion into organizational capability and measurable economic or operational value. This review, therefore, aims to synthesize evidence on disability-inclusive hospital services and to develop a management-oriented conceptual framework that links accessibility investment to effective access, patient experience, continuity, resource utilization, and potential organizational value.

Across the literature, the problem is documented from complementary perspectives, including healthcare access in low- and middle-income countries (Bright & Kuper, 2018), disability as a health-disparity population (Krahn et al., 2015), disparities among adults with physical disabilities (Mahmoudi & Meade, 2015), healthcare experiences and access recommendations (McClintock et al., 2016, 2018), communication accessibility (Hemsley & Balandin, 2014), healthcare-provider attitudes and perceptions (VanPuymbrouck et al., 2020; Iezzoni et al., 2021), disability-associated healthcare expenditure (Khavjou et al., 2020), specialized healthcare-facility accessibility (Tsami & Chrysikou, 2024), barriers and facilitators in different settings (Zuurmond et al., 2019), financial protection (Azizatunnisa' et al., 2024, 2025), and the broader health-equity context (World Health Organization, 2022). Indonesian work also addresses rehabilitation accessibility and doctor–patient legal relationships (Putra & Lany, 2025; Prayuti et al., 2024). Together, these studies indicate that disability inclusion has implications extending from individual access and communication to organizational processes, resource use, and financial protection.

RESEARCH METHOD

This study used a narrative literature review approach. The review focused on peer-reviewed literature and authoritative reports on disability-inclusive healthcare, hospital accessibility, healthcare provider capability, communication, rehabilitation, healthcare utilization, financial protection, and economic implications. Sources were identified from academic and institutional literature and selected according to their relevance to the review objective, methodological clarity, and direct contribution to one or more management domains.

The synthesis did not use a systematic review or meta-analysis design and therefore does not claim exhaustive study identification or pooled effect estimates. Evidence was organized thematically into physical accessibility, communication accessibility, workforce and organizational culture, rehabilitation and continuity, effective healthcare access, economic burden, and organizational value. The analysis compared findings across studies and distinguished documented empirical evidence from conceptual management implications.

Figure 1 illustrates the conceptual research design used to organize the narrative synthesis, linking literature identification and thematic extraction with a management-oriented framework.

E-ISSN: 2807-4998 (online)
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Vol. 7 No. 2 September 2026, hal 250 -259



Figure 1.
Conceptual research design of the narrative review

RESULTS AND DISCUSSION

Disability Inclusion as a Healthcare Management Priority

The literature indicates that healthcare accessibility for people with disabilities is multidimensional and extends beyond physical access to healthcare facilities. Barriers may involve transportation, communication, healthcare-provider knowledge and attitudes, organizational procedures, financial resources, and the physical environment (Bright & Kuper, 2018; Krahn et al., 2015). Consequently, disability inclusion should be considered not only as an equity objective but also as an organizational and service-management issue. Hospitals function through interconnected systems involving infrastructure, human resources, information, administrative procedures, clinical services, and referral pathways. A service may therefore be technically available but remain effectively inaccessible if patients cannot navigate appointment systems, communicate with healthcare professionals, use clinical equipment, or complete referrals. From a management perspective, disability inclusion can consequently be incorporated into service design, quality improvement, workforce development, facility management, and patient-experience measurement.

Table 1 summarizes the evidence across the major disability-inclusive hospital management domains and identifies the corresponding management implications.

Buletin Ekonomika Pembangunan
https://journal.trunojoyo.ac.id/bep
Vol. 7 No. 2 September 2026, hal 250 -259

E-ISSN: 2807-4998 (online)

Table 1. Evidence synthesis across disability-inclusive hospital management domains

Management domain	Key evidence	Management implication
Physical accessibility	Healthcare facilities can create barriers beyond general public-building accessibility; specialized hospital needs have been identified (Tsami & Chrysikou, 2024).	Include accessibility in facility planning, renovation, equipment selection, and patient-flow design.
Communication	Patients with severe communication disabilities benefit from supportive policies, adequate time, communication tools, accessible health information, carer collaboration, and staff competence (Hemsley & Balandin, 2014).	Treat communication support as an organizational resource and quality component.
Provider capability	Provider attitudes and confidence may limit equitable care even when explicit attitudes appear acceptable (VanPuymbrouck et al., 2020; Iezzoni et al., 2021).	Integrate disability competence into recruitment, orientation, training, and performance improvement.
Rehabilitation	Indonesian evidence identifies barriers to access to medical rehabilitation and uneven service capacity (Putra & Lany, 2025).	Manage rehabilitation as part of the continuous hospital-to-community pathway.
Effective access	Disability-related barriers affect utilization, quality, coordination, transport, information, and finances (Bright & Kuper, 2018; McClintock et al., 2016).	Measure access through patient journeys, not availability alone.
Financial protection	Disability is associated	Include affordability and

	with healthcare expenditure and financial burden; evidence from Indonesia indicates persistent challenges in financial protection (Khavjou et al., 2020; Azizatunnisa et al., 2025).	financial burden in accessibility planning.
Organizational value	Evidence is stronger for barriers and burden than for the direct ROI of individual accessibility interventions.	Evaluate investments using financial and non-financial outcomes rather than assuming automatic savings.

Physical Accessibility and Hospital Service Design

Hospitals contain examination rooms, diagnostic equipment, treatment areas, inpatient facilities, waiting areas, rehabilitation units, and complex circulation pathways. Tsami and Chrysikou (2024) emphasize specialized accessibility considerations in healthcare facilities because the needs of people with disabilities in hospitals can differ from those in ordinary public buildings. Accessibility should therefore be incorporated during design and renovation rather than addressed only through subsequent modifications. From an operational perspective, inaccessible environments may require additional staff assistance and complicate routine patient movement, making accessibility relevant to facility and process management.

Communication Accessibility and Patient Experience

Communication is central to accessible healthcare because patients must be able to describe concerns, understand clinical information, ask questions, participate in decisions, and receive instructions. Hemsley and Balandin (2014) identified supportive policies, adequate communication time, communication tools, accessible health information, collaboration with carers when appropriate, and staff competence as important requirements. McClintock et al. (2016) also identified problems involving coordination, transportation, facilities, information, insurance, finances, and clinical encounters. These findings indicate that patient experience reflects the cumulative performance of multiple organizational processes rather than a single clinical interaction.

Patient Autonomy, Doctor–Patient Partnership, and Inclusive Care

Patients with disabilities should not be regarded merely as recipients of accommodations; they should be able to participate in decisions concerning their healthcare. In Indonesia, Prayuti et al. (2024) discuss movement from a traditionally paternalistic doctor–patient relationship toward mutual participation, emphasizing communication, disclosure of treatment options, patient participation in decision-making, and recognition of patient and provider rights and obligations. This principle is relevant to disability-inclusive hospital services because physical

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E-ISSN: 2807-4998 (online)

access alone does not constitute meaningful inclusion if patients cannot understand information, communicate preferences, or participate in treatment decisions.

Healthcare-Provider Capability and Organizational Culture

Healthcare professionals are central to disability-inclusive service delivery. VanPuymbrouck et al. (2020) found evidence of implicit preference for nondisabled people among healthcare providers, while Iezzoni et al. (2021) identified limitations in physicians' confidence regarding their ability to provide the same quality of care to patients with disabilities. Disability competence should therefore be incorporated into staff orientation, continuing professional development, communication training, and organizational policies. Inclusive culture should extend beyond physicians and nurses to receptionists, administrative personnel, technicians, and other employees who influence the patient journey.

Medical Rehabilitation as a Continuum of Hospital Care

Medical rehabilitation is an important component of disability-inclusive healthcare because it can influence functional independence and continuity of care. Putra and Lany (2025) identified challenges affecting access to medical rehabilitation services in Indonesia, including uneven service capacity. Rehabilitation should therefore be managed as part of the broader patient pathway linking acute treatment, outpatient care, rehabilitation, and community services. Relevant management indicators may include referral completion, waiting times, appointment availability, multidisciplinary coordination, and continuity of care between hospital and community services.

Healthcare Utilization and Effective Access

People with disabilities may have greater healthcare needs while simultaneously encountering barriers that prevent timely and appropriate service use. Bright and Kuper (2018) identified disparities in healthcare utilization, coverage, adherence, expenditure, and quality in low- and middle-income countries. Mahmoudi and Meade (2015) similarly demonstrated disparities in access among adults with physical disabilities. Hospitals should therefore distinguish between formal service availability and effective access. Appointment, navigation, referral, communication, and follow-up barriers may create repeated contacts, delays, or missed services and should be considered in performance measurement.

Economic Burden and Healthcare Expenditure

The economic dimension provides an important bridge between disability-inclusive healthcare and healthcare management. Khavjou et al. (2020) estimated substantial disability-associated healthcare expenditure in the United States, demonstrating the scale of resources required to address disability. These findings should not be directly extrapolated to Indonesia because healthcare financing and service structures differ. Nevertheless, they demonstrate why disability should be considered in health-service resource planning. The stronger evidence concerns healthcare burden and expenditure rather than direct financial returns from individual accessibility interventions.

Financial Protection and the Indonesian Context

Recent Indonesian evidence indicates that disability remains relevant to healthcare use and financial protection despite the existence of national health insurance. Azizatunnisa et al. (2025) examined health insurance coverage, healthcare use, and financial protection among people with disabilities in Indonesia and reported persistent disparities. This suggests that insurance coverage alone does not eliminate barriers to effective access. Hospital management should therefore consider administrative processes, referral pathways, transportation-related burdens, and service availability when evaluating financial accessibility.

From Accessibility Cost to Organizational Value

A direct claim that every accessibility intervention reduces hospital costs would exceed the current evidence. A more defensible conceptual pathway is: accessibility investment → organizational capability → improved effective access → improved patient experience and continuity → potential improvement in resource utilization and organizational value. Potential organizational outcomes include responsiveness, continuity, patient experience, workforce capability, institutional reputation, and compliance with legal and ethical responsibilities. The distinction between the cost of inclusion and the potential cost of exclusion can therefore inform managerial evaluation.

Strategic Management of Disability-Inclusive Hospital Services

The evidence supports an integrated approach to disability-inclusive hospital management. Hospitals can incorporate disability inclusion into strategic planning, facility management, workforce development, operations, rehabilitation pathways, and patient-experience monitoring. Economic evaluation should assess implementation costs alongside waiting time, staff workload, referral completion, patient experience, utilization, and financial burden. Such an approach moves disability inclusion from a compliance-oriented activity toward a measurable component of service quality and organizational capability.

Research Gap and Future Directions

The principal gap is the limited evaluation of specific disability-inclusive hospital interventions with respect to organizational and economic outcomes. Existing research is stronger in documenting barriers, disparities, and experiences than in determining which interventions are most effective or resource-efficient. Future research should evaluate implementation costs, staff time, waiting time, repeat appointments, referral completion, patient-reported experiences, utilization, out-of-pocket expenditures, and cost-effectiveness. Research should also recognize heterogeneity across physical, sensory, intellectual, psychosocial, and communication disabilities.

Table 2 presents proposed indicators that hospitals can use to assess resources, processes, patient experience, utilization, financial burden, outcomes, and strategic value.

Buletin Ekonomika Pembangunan
https://journal.trunojoyo.ac.id/bep
Vol. 7 No. 2 September 2026, hal 250 -259

E-ISSN: 2807-4998 (online)

Table 2. Proposed management indicators for disability-inclusive hospital services

Level	Suggested indicator	Potential organizational relevance
Input	Accessibility infrastructure budget; communication tools; staff training hours	Measures resources committed to inclusion.
Process	Accessible appointment completion; referral completion; accommodation response time	Assesses whether organizational processes function effectively.
Patient experience	Patient-reported accessibility; communication satisfaction; perceived respect	Captures experience not visible in routine operational data.
Utilization	Missed appointments, repeat administrative contacts, waiting time, and service completion.	Identifies potential operational inefficiencies.
Financial	Out-of-pocket expenditure; implementation cost; staff time; cost per completed service	Supports future economic evaluation.
Outcome	Continuity of care; functional service completion; patient satisfaction	Assesses whether inclusion translates into meaningful service outcomes.
Strategic value	Quality-improvement performance; workforce capability; institutional accessibility maturity	Connects inclusion with organizational capability.

CONCLUSION

Disability-inclusive hospital services should be understood as both a responsibility for healthcare equity and an emerging healthcare management issue. The literature demonstrates barriers related to physical accessibility, communication, healthcare provider capability, organizational processes, rehabilitation access, and financial protection. Indonesian evidence adds

contextual perspectives on rehabilitation accessibility and doctor–patient partnership (Putra & Lany, 2025; Prayuti et al., 2024), while international evidence demonstrates substantial disability-associated healthcare utilization and expenditure. However, evidence regarding direct economic returns from individual accessibility interventions remains limited. Hospitals should therefore integrate accessibility into strategic planning, facility management, workforce development, operations, rehabilitation, patient-experience measurement, and economic evaluation. Future research should identify which interventions provide the greatest combination of patient benefit, service efficiency, organizational value, and financial sustainability, while explicitly measuring both implementation costs and patient-centered outcomes.

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