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## Availability and content analysis of post-stroke rehabilitation guidelines in Latin America: A systematic review

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## ABSTRACT

**Background and purpose:** Post-stroke rehabilitation is vital for functional recovery and social reintegration. However, access to evidence-based rehabilitation services across Latin America remains inconsistent. Clinical practice guidelines support standardised care and equity, yet the extent and quality of such guidelines in the Latin American region are uncertain. This study aims to identify national post-stroke rehabilitation guidelines in Latin American countries and assess their scope and methodological quality, benchmarking them against the 2023 World Stroke Organization recommendations.

**Methods:** We conducted a systematic review of international and regional databases and governmental websites from Latin American countries to identify national post-stroke rehabilitation guidelines. Content was benchmarked against World Stroke Organization 2023 recommendations, and methodological quality was assessed using the AGREE II instrument.

**Results:** Of the 888 identified records, 9 guidelines were included from Argentina, Bolivia, Brazil, Chile, Colombia, Guatemala, Mexico, Peru, and Uruguay. Core rehabilitation recommendations were generally included; however, domains such as palliative care, management of mood and cognitive disorders, and community-based rehabilitation were insufficiently covered. The median overall AGREE II score was 58% (IQR 50–71%). The lowest scores were observed in “rigour of development” (36%) and “applicability” (10%). Colombia, Mexico, and Uruguay demonstrated comparatively higher methodological robustness.

**Conclusions:** Few Latin American countries have national stroke rehabilitation guidelines, and available documents vary in completeness and methodological quality. Key content areas—including palliative care, psychosocial management, and data-collection systems—remain underdeveloped. Strengthening and expanding context-appropriate, evidence-based rehabilitation guidelines is essential to enhance equity and improve post-stroke outcomes across Latin American countries.

### Background

Over 86 million people live with disabilities after a stroke.<sup>1</sup> Globally, stroke costs represented over 721 billion dollars in 2022, with Latin America being among the most affected regions.<sup>2</sup> Beyond its clinical impact, the high prevalence of disability carries substantial social and

economic consequences, including diminished workforce participation and reduced quality of life for survivors.<sup>3</sup>

Post-stroke rehabilitation plays a key role in improving stroke survivors' quality of life while promoting their functional recovery and reintegration into society. By helping individuals regain skills, adapt to new limitations, and ultimately improve their quality of life,

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rehabilitation can reduce the broader societal and economic burden of stroke. However, in Latin America, access to these services remains highly variable, with stark inequities between the public and private healthcare sectors. The public system – serving the majority of the population – often faces limitations in service availability.<sup>4,5</sup>

Clinical guidelines are essential tools for fostering evidence-based practice, optimising the quality of care, and ensuring equitable access to rehabilitation services.<sup>6,7</sup> Unfortunately, the availability of such guidelines in low-and middle-income countries (LMICs) is limited. Recognizing this gap, both The Lancet Neurology Commission and the Stroke Collaboration Group have emphasized the need for high-quality international guidelines that can be adapted to local contexts, including resource-limited settings.<sup>8–10</sup> The World Stroke Organisation (WSO) guidelines serve as a robust reference for evaluating and contextualising post-stroke rehabilitation protocols across different regions.<sup>1</sup>

Despite efforts to assess rehabilitation guidelines in LMICs, previous reports have been limited to English-language literature or have focused broadly on stroke care rather than specifically on rehabilitation.<sup>8,9</sup> Therefore, this article aims to identify and critically evaluate post-stroke rehabilitation guidelines in Latin America, appraising them against the WSO's recent recommendations.

## Methods

The methods are described in accordance with the PRISMA guidelines.<sup>11</sup> The protocol was registered on PROSPERO (CRD420251009729).

### Eligibility criteria

Eligible studies were post-stroke rehabilitation guidelines from Latin American countries. Eligible countries included: Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, French Guinea, French West Indies, Guatemala, Guyana, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Perú, Puerto Rico, Surinam, Uruguay, Venezuela. Guidelines in Spanish and English were considered for inclusion.

### Information sources

Available guidelines were identified through searches of international (CINAHL, MEDLINE, Web of Science, and EMBASE) and regional databases (SciELO and LILACS). We also consulted the websites of the national governments of all eligible countries. Additional search strategies included tracking the reference lists of the included articles.

Regional and local stroke leaders were also consulted. Regional and local leaders were active members of regional (i.e., Iberoamerican Stroke Association) and national (i.e., AMEVASC in Mexico) stroke organisations that have been involved in advocacy, ministerial meetings promoting stroke care, and certification activities in collaboration with the WSO. Stroke leaders were consulted twice: first to obtain available guidelines and second to confirm the information found through the systematic searches.

Searches were limited to available studies from 2014 to date, as the WSO published the first Stroke Services Guidelines in 2014.<sup>12</sup>

### Search strategy

A combination of the terms stroke, rehabilitation, guidelines, and the countries' names was used. All terms were searched as free-text and controlled vocabulary. Searches were developed in English for international and Spanish for regional databases. The search strategy and number of hits per search line for all databases explored are presented in **Tables S1-S7** in the supplementary material. All searches were run on 12 May 2025.

### Selection process

The selection of included studies was conducted by at least two reviewers, who independently screened titles and abstracts before evaluating the full text of the potentially included studies against inclusion and exclusion criteria. All disagreements were resolved by consensus or a third reviewer. Exclusion reasons were recorded and reported.

### Data items and the collection process

We used the most recent WSO guidelines for benchmarking, published in 2023 (1). The WSO provides recommendations for all levels of care, ranging from acute care to recurrence prevention. We only considered recommendations related to post-stroke rehabilitation in the guidelines, which include organisation of hospital care and principles of rehabilitation; skin care; dysphagia; aerobic training; upper and lower limb impairment; vision; aphasia; shoulder subluxation; mood disorders; cognition; continence; pain; and discharge.

Data collection was conducted by at least two reviewers, who independently assessed the content of the included guidelines against the recommendations of the WSO guideline.<sup>1</sup> Reviewers then read the included national guidelines and determined whether the WSO recommendations were included (Y), not included (N), or partially included (P). After completing the independent assessment, reviewers met to reach consensus on the guidelines' content. If consensus was not reached, disagreements were resolved by a third reviewer.

### Appraisal of clinical guidelines

The Appraisal of Guidelines for Research & Evaluation (AGREE) II Instrument was used to appraise the included post-stroke rehabilitation guidelines.<sup>13</sup> The AGREE II was chosen for its purpose of assessing methodological rigour and transparency in guideline development. The AGREE II tool consists of 23 items organised into six domains: scope and purpose, stakeholder involvement, rigour of development, clarity of presentation, applicability, and editorial independence. Each item is graded from 1 (strongly agree) to 7 (strongly disagree). A global rating item is requested to provide an overall quality grade to the guideline, ranging from 1 (lowest possible quality) to 7 (highest possible quality).

Each included guideline was appraised by four reviewers using the AGREE II instrument. All reviewers were trained using the online guidance on the AGREE II website (<https://www.agreetrust.org/>). The reviewers then conducted a calibration exercise using an included guideline and met twice to discuss the items to ensure consistency in the assessment and reporting.

### Data synthesis

A narrative synthesis was conducted in accordance with the Synthesis Without Meta-analysis (SWIM) guidelines. The analysis was grouped according to the WSO guidelines' subsections: organisation of hospital care and principles of rehabilitation; skin care; dysphagia; aerobic training; upper and lower limb impairment; vision; aphasia; shoulder subluxation; mood disorders; cognition; continence; pain; and discharge.

The analysis of the present and missed recommendations is summarised narratively, while the benchmarking analysis is presented in tabular form. The AGREE II results are presented as summary measures using the median and interquartile range (IQR) for each domain and the overall assessment. The standardised domain scores were calculated in Microsoft Excel using the user's manual.<sup>13</sup>

## Results

A total of 888 studies were identified through the searched databases, and three additional studies were identified through government

websites ( $n = 2$ ) and expert consultation ( $n = 1$ ). After eliminating duplicates, independent screening, and reaching consensus, nine studies met our inclusion criteria (Fig. 1). A list of the excluded references is available in Table S8.

We found national post-stroke rehabilitation guidelines in seven countries: Argentina.<sup>14</sup> Bolivia.<sup>15</sup> Brazil,<sup>16,17</sup> Chile.<sup>18</sup> Colombia.<sup>19</sup> Mexico.<sup>20</sup> and Uruguay.<sup>21</sup> Guatemala.<sup>22</sup> and Peru.<sup>23</sup> also have guidelines; however, these are available only for the Social Security System and the National Institute of Neurology, respectively (Fig. 2). These were included because both institutions serve as references for the countries' clinical practice.

The benchmarking of the identified and the WSO's guidelines is presented in Table 1. For the organisation of hospital care and principles of rehabilitation subsection, all guidelines recommend an initial assessment by rehabilitation personnel upon admission to the hospital, and most (except Mexico) also state that patient care should be delivered in a specialised, geographically defined stroke rehabilitation unit. This subsection also includes recommendations on palliative care, which were covered only in the guidelines from Uruguay and Brazil. Of the included guidelines, only Uruguay covered all the WSO's recommendations for the organisation of care.

The evaluated guidelines included only partial recommendations on aerobic training. Individually tailored aerobic exercise was included in all guidelines, except those from Guatemala, Peru, and Uruguay. On the other hand, only Mexico's guidelines included recommendations on addressing barriers to physical activity after stroke. Group circuit therapy was explicitly recommended only in Brazil and Uruguay.

Most guidelines partially or completely cover recommendations for physical therapy, particularly for motor sequelae. For example, all guidelines recommend progressive resistance training to some extent in patients with reduced upper and lower limb strength. However, the depth and specificity vary; the Peruvian guideline focuses on standardising physical therapy procedures but does not mention other professionals involved in the rehabilitation process. Recommendations for the use of rhythmic auditory stimulation, platform biofeedback, and virtual reality were largely absent. Botulinum toxin was recommended by all guidelines except for Chile and Peru.

Although support for patients with aphasia was included in most guidelines, none of them recommended the adaptation of all written material for people with aphasia. Family education for protecting the affected arm was mentioned in guidelines from Argentina, Bolivia, Brazil, Chile, and Uruguay. The evaluation and treatment of mood disorders were poorly covered in the evaluated guidelines. Only Argentina, Chile, Mexico, and Uruguay mentioned screening and treating depression.

Only the guidelines from Chile and Uruguay provided recommendations on urinary and faecal incontinence, as well as the development and implementation of a bowel management programme. Neuropathic pain was scarcely covered, as only Brazil and Uruguay included recommendations on the treatment of neuropathic pain.

None of the guidelines directly recommend follow-up by a specialised team during inpatient rehabilitation after the first 72 hours post-stroke. Additionally, most guidelines focused on in-hospital rehabilitation, leaving community-based activities in the background; only the Uruguayan guideline recommends participating in evidence-based community exercise programs. Data collection was widely absent in the evaluated guidelines.

#### AGREE II domains assessment

The scope and purpose of the guidelines were assessed as high (median 92%; IQR 86-96%) across most guidelines, except Bolivia's (22%). The clarity of presentation domain was the second highest (median 89%; IQR 71-94%). The remaining domains had a median less than 60%; with the rigour of development (median 36%; IQR 17-55%) and applicability (median 10%; IQR 7-49%) being the lowest. The median overall score was 58% (IQR 50-71%).

Colombia's guidelines had the highest score across all domains (median 85%; IQR 79-91%), followed by Mexico (median 71%; IQR 61-85%) and Uruguay (median 75%; IQR 42-82%). Overall and countries' individual scores are available in Tables S8-17.

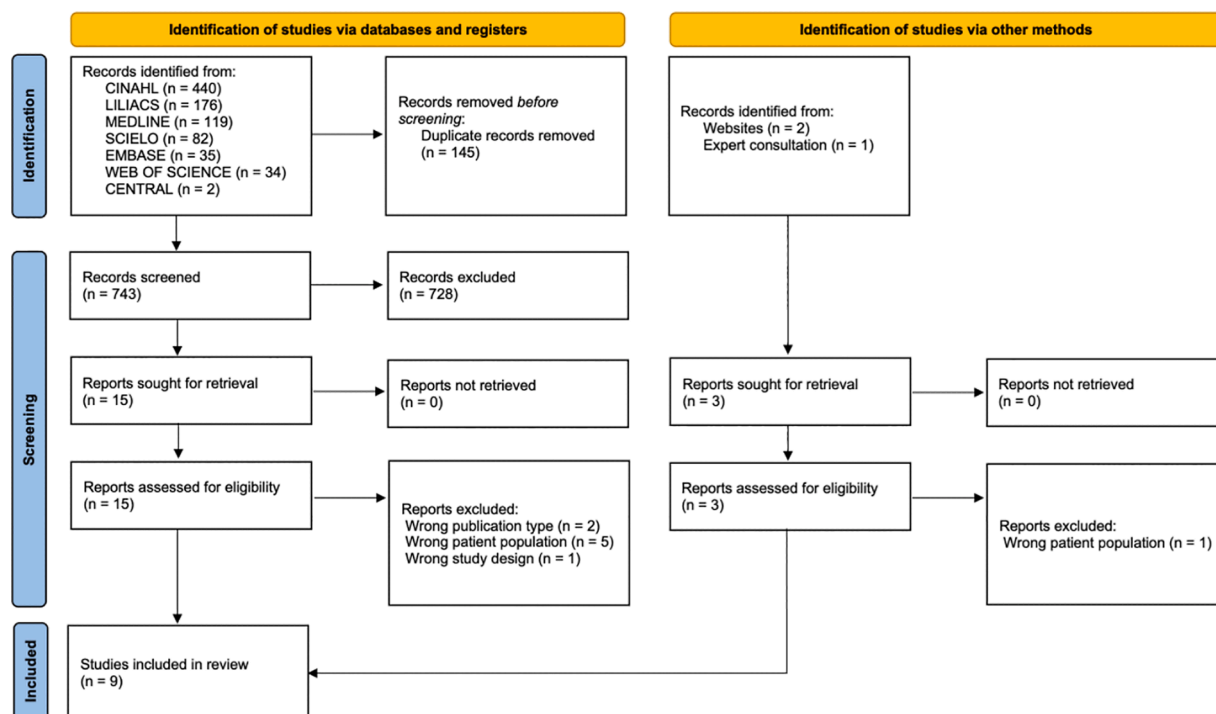


Fig. 1. PRISMA flow diagram of the included studies.



Fig. 2. Countries with available post-stroke rehabilitation guidelines. Map created using mapchart.net.

## Discussion

This systematic review evaluated the availability and content of national clinical practice guidelines from Latin American countries against the World Stroke Organization's recommendations for post-stroke rehabilitation and the AGREE II. While most guidelines cover general aspects of physical rehabilitation, there are gaps in specific areas recommended by the WSO, such as palliative care, mood disorder management, and community-based rehabilitation. Additionally, there is a big opportunity to improve data collection post-stroke.

Palliative care remains a taboo in most Latin American countries. The influence of religious, spiritual, political, and legal factors intersects, making it a difficult decision for those in need of palliative care.<sup>24</sup> Not surprisingly, less than 10 percent of patients in Latin America who need this care actually receive it.<sup>25</sup> We found that only Brazil and Uruguay included palliative care in their guidelines, which can be linked to recent policy changes.<sup>26,27</sup> For example, in October 2025, Uruguay became the first Latin American country to decriminalise euthanasia.<sup>28</sup> Other countries have also made progress in palliative care.<sup>29</sup> but these

advances have not yet been reflected in post-stroke guidelines.

The scarce coverage of mood disorders management reflects existing barriers in access to these services in the region. A recent study exploring barriers to accessing post-stroke rehabilitation services in Latin America reported that less than half of the respondents' hospitals provide outpatient neuropsychological services.<sup>5</sup> There is also a need to include recommendations on how to address dysphagia and the provision of foods, particularly as around 55% of post-stroke patients develop dysphagia.<sup>30</sup>

We also found a limited use of devices such as virtual reality and platform biofeedback. However, emerging research in Latin America might generate local evidence to inform future guidelines.<sup>31,32</sup> Another important aspect is the absence of recommendations regarding community-based activities as part of rehabilitation. Most guidelines are limited to in-hospital care, reinforcing the need to expand care beyond the hospital. This has been highlighted by Jaime-Miranda et al., who emphasised that post-stroke rehabilitation should be tailored to local needs, including for people living in rural areas.<sup>33</sup> Future efforts should focus on conducting implementation research and a health system

**Table 1**  
 Benchmarking of identified guidelines against the WSO recommendations for post-stroke rehabilitation.

WSO Recommendation	AR	BO	BR	CH	CO	GU	ME	PE	UR
<b>Organisation of hospital care and principles of rehabilitation</b>									
Acute stroke patients admitted to hospital should have an initial assessment by rehabilitation professionals as soon as possible after admission	Y	Y	Y	Y	Y	P	Y	Y	Y
Stroke patients should be treated on a specialized, geographically defined stroke rehabilitation unit, with coordinated care, staffed by an interdisciplinary rehabilitation team (physicians, nurses, physiotherapists, occupational therapists, speech-language therapists, and social workers and dieticians) with expertise/training in stroke rehabilitation, recovery, and return to work	Y	P	Y	Y	Y	Y	N	P	Y
Patient, family, and caregiver education should be provided formally and informally	Y	Y	Y	Y	N	P	Y	P	Y
Person-centered, collaborative, goal setting with patients and their families is recommended, clearly communicated and documented, regularly reviewed, including around transitions of care	N	N	P	Y	N	P	Y	P	Y
Rehabilitation should include as much scheduled task-specific therapy as possible, to meet optimal recovery and tolerability	P	P	Y	Y	N	N	P	Y	Y
Commence mobilization within 48 h of stroke onset unless otherwise contraindicated but do not start intensive out-of-bed activities within 24 h of stroke onset	Y	N	P	P	P	P	N	N	Y
Stroke patients and their families/carers should have access to specialist palliative care teams and care consistent with the principles and philosophies of palliative care	N	N	Y	N	N	N	N	N	Y
<b>Skin care</b>									
Regular skin assessments are recommended with objective scales of risk, e.g. Braden scale	Y	N	Y	Y	N	N	N	N	Y
Minimize skin friction and skin pressure, provide appropriate support surfaces, avoid excessive moisture, maintain adequate nutrition and hydration to prevent skin breakdown	Y	P	Y	Y	P	P	N	N	Y
Regular turning, good skin hygiene, and use of specialized mattresses, wheelchair cushions, and seating are recommended until mobility returns	Y	P	Y	Y	N	P	N	N	Y
<b>Management of dysphagia and provision of foods and fluids</b>									

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Table 1 (continued)

Health care professionals should regularly monitor and reassess patients with dysphagia who need modified food and liquid	Y	N	Y	Y	N	N	N	N	Y
Ensure good oral and dental (including dentures) hygiene, particularly for those with dysphagia, through assistance and/or education	Y	N	N	Y	Y	N	N	N	Y
For stroke survivors with swallowing difficulties, behavioral approaches such as swallowing exercises (e.g. shaker exercises, or chin tuck against resistance), environmental modifications, safe swallowing advice, and appropriate dietary modifications should be used early	Y	P	Y	Y	P	N	P	N	Y
Offer swallowing therapy, e.g. compensatory strategies, exercises and postural advice, at least 3 times a week to people with dysphagia after stroke who are able to participate, for as long as they make functional gains.	P	N	P	P	P	N	P	N	Y
For patients whose nutrition status is poor or deteriorating, nutrition supplementation should be offered.	Y	N	Y	Y	Y	N	N	N	Y
Enteral diet should be started if required within 7 days of admission (preferably within 24–48 h)	Y	N	Y	Y	Y	N	N	N	Y
Patients who require tube feeding should receive percutaneous endoscopic gastrostomy rather than nasogastric tube in the post-acute phase	Y	N	Y	Y	Y	N	N	N	Y
<b>Aerobic training</b>									
Individually tailored aerobic training involving large muscle groups (with monitoring of heart rate and blood pressure) should be incorporated into a comprehensive stroke rehabilitation program to enhance cardiovascular endurance and cognitive function	P	P	Y	N	N	N	Y	N	N
Exercise is needed at least 3 times weekly for a minimum of 8 weeks, progressing as tolerated to 20min or more per session, exclusive of warm-up and cool-down	N	P	Y	P	N	N	Y	N	P
Use strategies to address specific barriers to physical activity related to patients, health care providers, family, and/or the environment	N	N	Y	P	N	N	Y	N	P
Group circuit class therapy should be used to increase scheduled therapy time	Y	N	P	N	N	N	N	N	Y
Offer early supported discharge services for those with mild to moderate disability	Y	N	P	P	P	N	N	N	P
Provide advice on prescribed medications for people after stroke	P	N	Y	N	N	N	N	N	N

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Table 1 (continued)

Support and educate people after stroke and their families and carers in relation to emotional adjustment to stroke, recognizing that psychological needs may change over time and in different settings	N	P	N	Y	N	Y	Y	N	P
<b>Specific impairments: upper and lower limb</b>									
Stroke survivors with difficulty walking should undertake tailored repetitive practice of walking (or components of walking) using circuit class therapy (with a focus on overground walking practice and/or Treadmill training with or without body weight support)	Y	P	Y	Y	N	P	Y	P	Y
Rhythmic auditory stimulation (RAS) could be considered for improving gait parameters, including gait velocity, cadence, stride length, and gait symmetry	N	N	Y	N	N	N	Y	N	N
For reduced strength in arms or legs, provide progressive resistance training which is meaningful, engaging, repetitive, progressively adapted, task-specific, and goal-oriented	P	N	N	P	N	P	Y	P	Y
Non-invasive brain stimulation, including repetitive transcranial magnetic stimulation (rTMS) could be considered as an adjunct to upper extremity therapy	N	N	Y	P	N	N	Y	N	Y
For stroke survivors with some active wrist and finger extension, traditional or modified intensive constraint-induced movement therapy should be provided	Y	N	N	Y	P	N	N	P	Y
For stroke survivors who have difficulty sitting, practising reaching beyond arm's length while sitting with supervision/ assistance should be undertaken	N	N	N	Y	N	N	P	P	N
For stroke survivors who have difficulty in standing up from a chair, practice of standing up should be undertaken	Y	N	N	Y	N	N	N	P	Y
For stroke survivors who have difficulty with standing, activities that challenge balance should be provided	Y	P	Y	Y	N	N	N	P	Y
Force platform biofeedback should be used for people with difficulty standing	N	N	N	Y	N	N	N	N	Y
Consider mirror therapy for patients with very severe paresis	Y	N	Y	P	N	N	Y	N	Y
Functional Electrical Stimulation (FES) of the wrist and forearm muscles should be considered to reduce motor impairment and improve function and for people with gait disturbance	Y	N	P	Y	N	N	Y	N	Y
Virtual reality, including both immersive technologies such as head mounted or robotic interfaces and non-immersive technologies such as gaming devices can be used as adjunct tools to other rehabilitation therapies, to provide additional opportunities for engagement, feedback, repetition, intensity, and task-oriented training	Y	N	Y	Y	N	N	Y	N	Y

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Table 1 (continued)

Chemo-denervation using botulinum toxin can be used to increase range of motion and decrease pain for patients with focal symptomatically distressing spasticity (upper and lower limbs)	Y	Y	Y	Y	N	Y	Y	N	Y
Ankle-foot orthoses should be used on selected patients with foot drop following proper assessment and with follow-up to verify effectiveness	Y	P	Y	Y	N	P	Y	N	Y
Mental Practice should be considered for upper and low limb motor re-training	Y	P	N	P	N	N	N	N	N
<b>Vision impairment</b>									
For visual neglect, use interventions focused on functional tasks	Y	N	P	Y	N	N	Y	N	Y
Refer people with double vision for formal orthoptic assessment	N	N	N	P	P	N	N	N	P
Provide speech and language therapy, within 4 weeks post-stroke, to improve functional communication, communication aids, reading comprehension, general expressive language, written language and supported conversation techniques for potential communication partners	P	P	P	P	P	P	P	N	P
<b>Aphasia</b>									
Adapt all written material for people with aphasia	N	N	N	N	N	P	N	N	N
Help and enable people with communication problems to communicate everyday needs and wishes and to support decision making	Y	N	P	Y	Y	Y	N	N	Y
<b>Prevention and treatment of shoulder subluxation</b>									
Health care staff, patients, and family should be educated to correctly protect, position, and handle the involved arm	Y	P	N	Y	N	N	N	N	Y
Taping of the affected shoulder can reduce pain	N	Y	N	P	N	Y	Y	N	N
<b>Mood disorders</b>									
Patients with acute stroke should be screened for depression using a structured depression assessment tool	Y	N	N	Y	N	N	Y	N	Y
Treatment for post-stroke depression may include psychotherapy and/or antidepressants	Y	N	Y	Y	N	N	Y	N	Y
For severe, persistent, or troublesome tearfulness, emotional incontinence or lability, consider a trial of antidepressants	P	N	N	P	N	N	N	N	N
<b>Assessment and management of cognitive functions</b>									
Treat hypertension to reduce the risk of cognitive decline	N	N	Y	N	P	N	N	N	P
Use interventions for visual neglect after stroke that focus on the relevant functional tasks	Y	N	P	Y	N	N	Y	N	Y

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Table 1 (continued)

Continenence									
For urinary incontinence, identify and manage its cause (e.g. infection, constipation, urinary retention, overactive bladder)	N	N	N	Y	N	N	N	N	Y
For fecal incontinence, identify and manage its cause (e.g. infection, fecal impaction, and overflow)	N	N	N	Y	N	N	N	N	Y
Prolonged use of indwelling bladder catheters should be avoided as much as possible to reduce risk of urinary tract infection	N	N	N	P	N	N	N	N	Y
A bowel management program should be implemented for persistent constipation or bowel incontinence	N	N	N	Y	N	N	N	N	Y
Neuropathic pain									
Offer a choice of amitriptyline, duloxetine, gabapentin, or pregabalin as initial treatment for neuropathic pain; if the initial treatment is not effective or is not tolerated, offer one of the remaining three drugs, and consider switching again if the second and third drugs tried are also not effective or not tolerated. Consider capsaicin cream for people with localized neuropathic pain who wish to avoid, or who cannot tolerate, oral treatments	P	N	Y	P	N	N	N	N	Y
Discharge from hospital and ongoing care									
Before discharge, agree a health and social care plan with the patient and family/carer; establish they have a safe and enabling home environment, check carers have the support they need	Y	N	P	P	N	N	Y	N	Y
People with disabilities after stroke should be followed up within 72 h by the specialist stroke rehabilitation teams	N	N	N	N	N	N	N	N	N
People with ongoing rehabilitation goals and those with difficulty performing activities of daily living should have ongoing access to specialized stroke services after leaving hospital	N	N	Y	Y	N	N	N	P	Y
A planned transition from structured aerobic exercise (in hospital) to more self-directed physical activity at home or in the community should be implemented	N	N	P	Y	N	N	N	N	Y
Encourage participation in evidence-based community exercise programs	N	N	N	N	N	N	N	N	Y
Review health and social care needs of people after stroke and their caregivers at 6 months and annually thereafter. This includes people in care homes	N	N	N	P	N	N	N	N	P
Hospitals should maintain a data collection system to monitor performance metrics.	N	N	N	N	N	N	N	N	N
Participation in an external stroke data repository is also recommended	N	N	N	N	N	N	N	N	N

Notes: Y – recommendation present, N – recommendation not present, P – recommendation partially present. AR: Argentina, BO: Bolivia, BR: Brazil, CH: Chile, CO: Colombia, GU: Guatemala, ME: Mexico, PE: Peru, UR: Uruguay.

evaluation to understand how the available infrastructure and resources could be best employed.

None of the countries' guidelines included recommendations on data collection. Nonetheless, numerous initiatives have sought to enhance hospital care by monitoring quality-of-care indicators.<sup>34</sup> However, there is an urgent need to expand hospital registries to include outpatient care to capture quality-of-care measures for rehabilitation. We suggest a regional approach to capture information on such measures.<sup>35</sup> Available registries, such as ResQ,<sup>36</sup> could be useful in reporting insights into stroke survivors' long-term outcomes.

The critical appraisal using AGREE II identified rigour of

development and applicability as the main areas requiring attention to enhance future guidelines. The low scores on rigour of development were mainly attributed to the lack of predetermined criteria and comprehensive search strategies. This finding calls for better adherence to systematic approaches to the literature to ensure all relevant information is captured while reducing potential bias. Platforms such as PROSPERO and the Open Science Framework (OSF) provide a space to register systematic review protocols. Lastly, guidelines showed a lack of applicability of the recommendations, creating a gap between evidence-based practice and implementation. This gap could be addressed by using available tools such as the ADAPTE three-step method.<sup>37</sup>

Following the ADAPTE methodology would increase efficiency by leveraging rigorous guidelines, ensuring applicability through contextualisation, and securing acceptance from healthcare professionals, patients, and their carers.

### Strengths and limitations

This systematic review employs a comprehensive benchmarking approach, comparing available guidelines with the WSO's guidelines, ensuring the analysis is grounded in internationally recognised practices and contributing to efforts to standardise stroke care. However, we also acknowledge some limitations. The study focuses solely on the content of the guidelines, not on patient outcomes. We also did not evaluate the implementation of recommendations, leaving a gap between the interventions outlined in the guidelines and actual healthcare delivery. Lastly, our search strategy focused only on Spanish and English literature, omitting other languages spoken in Latin America (i.e., French). However, we explored the websites of non-English or Spanish-speaking countries and consulted regional leaders to identify available guidelines. Future research is needed to mitigate discrepancies in post-stroke rehabilitation across Latin America, especially in countries with no specific guidelines and in those with guidelines but limited recommendations.

### Conclusions

The lack of post-stroke rehabilitation guidelines in most Latin American countries suggests a great disparity in post-stroke rehabilitation management. Moreover, there are important gaps in available guidelines, particularly in palliative care, the management of mood disorders, and community-based approaches. There is also a need to enhance data collection for post-stroke rehabilitation to identify stroke survivors' long-term needs. Future research should focus on developing comprehensive post-stroke rehabilitation guidelines and strategies for their effective implementation. Addressing these gaps could play a transformative role in optimising resources while enhancing patient outcomes, reducing the burden of disability, and promoting equitable access to rehabilitation services in Latin America.

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### Declaration of generative AI and AI-assisted technologies in the manuscript preparation process

During the preparation of this work, the authors used ChatGPT 5.1 to enhance the work's readability and synthesise information for the abstract. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the published article.

### CRedit authorship contribution statement

**Ana Karen Flores-Cázares:** Data curation, Formal analysis, Investigation, Writing – original draft. **Pablo Emilio Nájjar-Félix:** Data curation, Formal analysis, Investigation, Writing – original draft. **Jesús Homero Silva-Velázquez:** Data curation, Formal analysis, Investigation, Writing – original draft. **Violeta Marroquin-Marquez:** Data curation, Formal analysis, Investigation, Writing – original draft. **Alejandra Aguiñaga-Rodríguez:** Data curation, Formal analysis, Investigation, Writing – original draft. **Ana Cláudia de Souza:** Methodology, Validation, Writing – review & editing. **Sean Savitz:** Methodology, Validation, Writing – review & editing. **Anne Forster:** Methodology, Supervision, Writing – original draft. **Alejandro Gonzalez-Aquines:**

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### Declaration of competing interest

The authors declare no competing interests.

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### Supplementary materials

Supplementary material associated with this article can be found, in the online version, at [doi:10.1016/j.jstrokecerebrovasdis.2026.108625](https://doi.org/10.1016/j.jstrokecerebrovasdis.2026.108625).

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