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FACT SHEET

Adapting Global Pain Guidelines to Local Contexts: Strategies for Low- and Middle-Income Countries

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Pain management guidelines are critical tools in global health, designed to improve treatment, reduce disparities, and preserve patient dignity. Typically developed in high-resource countries, these guidelines are grounded in robust scientific evidence and clinical expertise. Yet, in low- and middle-income countries (LMICs), where healthcare systems may lack specialized services, essential medicines, or trained personnel, these guidelines often require thoughtful adaptation to be effective [4]. Adapting global guidelines allows LMICs to bridge the gap between evidence-based standards and ground realities. This approach respects local values, optimizes limited resources, and promotes ethical care without compromising clinical integrity. By tailoring existing recommendations to align with resource availability, health workforce capacity, cultural practices, and epidemiological priorities, adaptation becomes feasible and essential [2].

Why Local Adaptation Matters

Many global pain management guidelines assume the availability of diagnostic infrastructure, multidisciplinary teams, and a wide range of medications. These assumptions, however, do not hold true in much of the world [3, 9]. In many LMICs, healthcare delivery is decentralized, resources are constrained, and access to pain relief remains severely limited. Additionally, the experience and expression of pain are shaped by cultural values and community beliefs. Misconceptions about pain medications, especially opioids, are widespread, often linked to fear of addiction or social stigma [7]. Therefore, adapting guidelines is not merely a practical concern but a moral one. Without adaptation, standardized care cannot reach those who need it most.

Challenges in Implementing Global Guidelines in LMICs

Implementation is often hindered by a combination of policy, infrastructure, and social barriers. Access to opioids remains restricted due to stringent regulatory frameworks and underdeveloped distribution systems [10]. Even where such medications are approved, supply chains often break down at the local level, particularly in rural and peri-urban areas. There is a critical shortage of trained health professionals with expertise in pain management [11]. Most existing services are centralized in large urban hospitals, making them inaccessible to the broader population [12]. Cultural stigma associated with both pain and the use of analgesics further discourages patients from seeking or continuing treatment. Together, these factors create an environment in which untreated pain is normalized, and suffering becomes invisible [7].

Strategies for Effective Adaptation

- Adapting guidelines begins with prioritizing local epidemiological needs. Countries must first identify which pain conditions are most prevalent and disabling, such as untreated injuries, late-stage cancers, or chronic musculoskeletal pain, and focus on interventions that address these realities [4].
- Alongside this, a detailed resource assessment is essential. Knowing what medications, equipment, and human resources are available helps ensure that adapted protocols are achievable, not merely aspirational.

- Sociocultural, linguistic, and political factors must be considered at the outset. Guidelines should be translated into local languages and adjusted for cultural acceptability. Incorporating safe and familiar traditional practices, like yoga, cupping, or herbal applications, can enhance patient trust and adherence [2]. The biopsychosocial approach must be incorporated in place of the biomedical model. Adapted guidelines must harmonize with local values and beliefs, as long as safety and efficacy are not compromised [2].

- Workforce development is another crucial area. Since most LMICs face a shortage of pain specialists, training must target general practitioners, nurses, and community health workers [5]. These professionals can deliver front-line pain management if provided with practical tools and decision aids. Simplified protocols, pictorial validated pain scales, and mobile applications designed for low-literacy users can support this decentralization of care.

- Drug recommendations must be evidence-based and realistic. Instead of relying on unavailable or unaffordable medications, adapted guidelines should centre on widely-accessible drugs such as paracetamol, ibuprofen, and locally approved opioids when indicated [4, 10]. Affordability and supply chain stability are critical to sustaining long-term implementation.

- Where opioid use is appropriate, countries must review and reform outdated drug laws, aligning them with WHO recommendations and international human rights frameworks. Balancing the legitimate need for pain relief with concerns about misuse requires transparent policies, capacity building, and accountability, not prohibition.

Case Examples of Successful Adaptation

1. In Pakistan, Aga Khan University developed an Acute Pain Management Guideline tailored to local infrastructure and clinical workflows [1]. This initiative demonstrated how academic institutions can play a pivotal role in bridging the gap between global evidence and national healthcare realities.

2. In Uganda, nurse-led palliative care services have significantly improved access to oral morphine, particularly in rural districts. After receiving focused training and regulatory support, nurses became key providers of pain relief, reflecting the potential of task-shifting strategies [6].

3. Meanwhile, India's National Cancer Grid has produced resource-stratified palliative care guidelines that allow institutions at various levels of care to implement best practices within their means [8]. These examples show that adaptation is possible and transformative.

Stakeholder Roles in Adaptation

The process of adapting guidelines is inherently collaborative. Healthcare providers and hospital administrators must take the lead in clinical implementation. Policymakers and regulators are critical in ensuring that national laws and financing systems support, rather than hinder, equitable pain care. Researchers have a responsibility to evaluate the effectiveness of adaptations and generate context-specific evidence. Civil society organizations, including patient advocacy groups and nonprofits, can amplify demand for better pain services, highlight inequities, and hold decision-makers accountable. Finally, global health agencies and donors should provide technical and financial support, without imposing rigid, one-size-fits-all models [3, 4].

A Call to Ethical Action

Failure to address untreated pain is not merely a gap in service delivery – it is an ethical injustice. No health system can claim to be equitable or compassionate if it allows suffering to persist when safe and effective remedies exist [7]. Adaptation is not a compromise, but a pathway to justice. LMICs must invest in workforce training, review regulatory barriers, simplify access to essential medicines, and align pain care models with their local contexts. In doing so, they uphold both the science of evidence-based medicine and the ethics of human dignity.

References

1. Aga Khan University. Acute Pain Management Guideline. https://guidelines.aku.edu/guideline_view.php?pdf=uploads/Acute%20Pain%20.pdf&id=174
2. Human Rights Watch. Global State of Pain Treatment: Access to Medicines and Palliative Care [Internet]. 2011. Accessed 18 July 2025. Available from: https://www.hrw.org/report/2011/06/02/global-state-pain-treatment/access-medicines-and-palliative-care.
3. International Narcotics Control Board. Report of the International Narcotics Control Board for 2022 [Internet]. Accessed 18 July 2025. Available from: https://www.incb.org/incb/en/publications/annual-reports/annual-report-2022.html.
4. Knaul FM, Farmer PE, Krakauer EL, De Lima L, Bhadelia A, Kwete XJ, Arreola-Ornelas H, Gómez-Dantés H, Rodriguez NM, Alleyne G, Connor SR, Hunter DJ, Lohman D, Radbruch L, Rajagopal MR, del Rocío Sáenz Madrigal M, Sheinbaum Pardo C, Stringer K, Torres C, Vargas-Peláez CM, Pastrana T. Alleviating the access abyss in palliative care and pain relief. Lancet. 2018;391(10128):1391–1454. https://doi.org/10.1016/S0140-6736(17)32513-8
5. MacRae MC, Fazal O, O'Donovan J. Community health workers in palliative care provision in low-income and middle-income countries: a systematic scoping review of the literature. BMJ Glob Health. 2020;5:e002368. https://doi.org/10.1136/bmjgh-2020-002368
6. Merriman A, Mwebesa E, Zirimenya L. Improving access to palliative care for patients with cancer in Africa: 25 years of Hospice Africa. Ecancermedicalscience. 2019;13:946. https://doi.org/10.3332/ecancer.2019.946
7. Morriss WW, Roques CJ. Pain management in low- and middle-income countries. BJA Educ. 2018;18(9):265–270. https://doi.org/10.1016/j.bjae.2018.05.006
8. National Cancer Grid. NCG Guidelines Manual 2021 [Internet]. Accessed 18 July 2025. Available from: https://www.ncgindia.org/assets/ncg-guidelines-2021/ncg-guidelines-manual-2021.pdf.
9. Powell RA, Schwartz L, Nouvet E, Sutton B, Petrova M, Marston J, Radbruch L, Harding R. Palliative care in humanitarian crises: always something to offer. Lancet. 2017;389(10078):1498–1499. https://doi.org/10.1016/S0140-6736(17)30978-9
10. Seya MJ, Gelders SFAM, Achara OU, Milani B, Scholten WK. A first comparison between the consumption of and the need for opioid analgesics at country, regional, and global levels. J Pain Palliat Care Pharmacother. 2011;25(1):6-18. https://doi.org/10.3109/15360288.2010.536307
11. Sharma S, Blyth FM, Mishra SR, Briggs AM. Health system strengthening is needed to respond to the burden of pain in low- and middle-income countries and to support healthy ageing. J Glob Health. 2019 Dec;9(2):020317. https://doi.org/10.7189/jogh.09.020317
12. Tapsfield J, Bates MJ. Hospital based palliative care in sub-Saharan Africa; a six month review from Malawi. BMC Palliat Care. 2011;10:12. https://doi.org/10.1186/1472-684X-10-12