## Improving Pain Management for Trauma Patients at Two Rwandan Emergency Departments

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Abstract: Background: Little is known regarding the effectiveness of pain protocols and guidelines used in Emergency Departments (ED) in Sub-Saharan Africa (SSA). Therefore, to shed light on this research gap, this study aimed to evaluate the quality of pain management following the implementation of both the WHO pain ladder-based trauma pain management protocol in two Rwandan teaching hospitals. Methods: This was a pre-and post-intervention study. The intervention was a 1-day acute pain course training for ED clinical staff followed by 1 week of mentorship on the use of the WHO pain ladder-based trauma pain management. Results: 261 participants were enrolled in the study (124 before the intervention and 137 after the intervention). The number of patients with undocumented pain scores decreased from 58% to 24% after the intervention (p-value > 0.001), and most patients (62%) had mild pain. In addition, patients who were satisfied with the quality of pain management increased significantly from 42% before the intervention to 80% (p-value > 0.001). Barriers were identified, however, including inadequate training and experience, shortage of staff, and patient's reluctance to report pain. Conclusion: The implementation of the WHO pain ladder-based trauma pain management protocol significantly improved the quality of pain management in both CHUK and CHUB referral Hospital emergency departments. Despite this, some barriers remain, such as inadequate training and experience, shortage of staff, and patient's reluctance to report pain. Appropriate interventions should be implemented to address the identified barriers and ensure adequate pain management for patients admitted at the emergency departments in referral hospitals in Rwanda.

**Keywords:** pain management, trauma, emergency departments, Rwanda

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