

Abstract title

Public Health and clinical approach to prevent childhood burns in Kenya

Name, Organisation

Jessica Medland

University of Notre Dame, Sydney, New South Wales

Background

The leading cause of burns in Kenyan children is scalds, including hot water, tea, milk, porridge and soup¹. Risk factors observed in rural Kenyan homes are unique, therefore prompting a review of existing targeted strategies. Exposure to paediatric burns cases in rural Kenya whilst I worked as volunteer Occupational Therapist, prompted the initiation of a community burns prevention program. "Mama Cynthia Kenya" hosts workshops in collaboration with local allied health professionals.

Aim

To explore and compare the Public Health and clinical approaches to burns prevention in children under 18 years of age in Kenya. Key findings aim to inform and develop a Swahili burns prevention poster for future burns prevention workshops.

Methods

Public Health approach was guided by the Centre for Disease Control and Prevention² injury prevention approach. Review of literature on paediatric burns in Kenya, including the comparison of risks and protective considerations, specific to demographics, environment and economic factors. Followed by the evaluation of current strategies trialled in low to middle income countries (LMIC) and consideration additional strategies for widespread adoption.

The clinical approach reviewed literature on treatment of burns in the clinical context. Followed by collaboration with local professionals in Kenya on their approach.

Result

In Kenya, the vast majority of paediatric burn injuries are unintentional and occur in an unsupervised home setting^{1,3}. The leading cause of burns in Kenyan children is scalds, followed by flame burns, while contact, chemical and electrical burns occur in smaller numbers^{1,4,5}. Ten key risk factors in a typical rural Kenyan home were identified and strategies incorporated into the updated Swahili burns prevention poster, including "establish a protective barrier around cooking fires." First aid measures were incorporated into the new poster, due to widespread flawed practices, such as applying oil to wounds³. The clinical approach aims to minimise post-burn injury through optimising first aid and treatment. There remains a significant disparity between treatment in LMIC and high income countries, therefore it is more important to focus on the Public Health approach to the issue.

Conclusion

Prevention is better than a cure, especially when faced with the limitation of an under resourced health system in Kenya.

References

¹ Mutsio, M., Khainga, S., Muoki, A., & Kimeu, M. (2014). Epidemiology of Burns in Patients Aged 0-13 Years at a Paediatric Hospital in Kenya. *East and Central African Journal of Surgery*, 19(3), 12-21.

² Centers for disease control and prevention (2019). *Injury prevention and control: Our Approach*. Retrieved from <https://www.cdc.gov/injury/about/approach.html>

³ Haq, A. (1990). Pattern of burn injuries at a Kenyan provincial hospital. *Burns*, 16(3), 185-189. doi:10.1016/0305-4179(90)90036-V

⁴ Dale, E. L., Mueller, M. A., Wang, L., Fogerty, M. D., Guy, J. S., & Nthumba, P. M. (2013). Epidemiology of operative burns at Kijabe Hospital from 2006 to 2010: pilot study of a web-based tool for creation of the Kenya Burn Repository. *Burns*, 39(4), 788-795. doi:10.1016/j.burns.2012.09.003

⁵ Wong, J. M., Nyacheio, D. O., Bensekri, N. A., Cosmas, L., Ondari, D., Yekta, S., . . . Breiman, R. F. (2014). Sustained high incidence of injuries from burns in a densely populated urban slum in Kenya: an emerging public health priority. *Burns*, 40(6), 1194-1200. doi:doi:10.1016/j.burns.2013.12.010