

Asthma in low-income and middle-income countries: an urgent call to action

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The global burden of asthma is significant.¹ Although mortality rates have improved, recent data have suggested that even in developed economies, asthma deaths are at unacceptable levels and in many cases are associated with avoidable factors.^{2,3} Traditionally, asthma has been seen as a disease primarily impacting developed economies while communicable diseases were considered to be the major priority in low-income and middle-income countries. It is now recognised that chronic non-communicable diseases exert a greater impact than communicable diseases in these regions of the world.⁴ Despite awareness of this change in epidemiology, we currently lack robust epidemiological and health outcomes asthma data in these countries. The study by Kirenga and colleagues from Uganda fills such a gap and also highlights the importance of evaluating health outcomes in these settings.⁵

In this study, a cohort of 449 patients with asthma were identified and followed for 2 years documenting rates of exacerbations and mortality. Overall, 17 (3.7%) of patients died during the relatively short study period and close to two-thirds of the deaths were deemed to be asthma related. Sixty per cent of patients experienced one or more exacerbations annually and 32% of subjects experienced more than three exacerbations annually. These data identify a major care gap for a highly prevalent disease. The study results indicate that there needs to be a priority response to improve outcomes in this setting. All asthma guidelines emphasise the importance of access to controller therapy, most notably inhaled corticosteroids, which at a population level has been shown to provide protection against asthma mortality. In their article, Kirenga *et al* cite evidence from Brazil where improved access to inhaled corticosteroids was associated

with a reduction in mortality. Given the increased morbidity and mortality demonstrated in this report, it is likely that greater availability of inhaled corticosteroids would have an even greater impact in countries such as Uganda.

Although access to medications is important, the implications of this study go beyond the issue of access. It will only be through a broader systems approach to asthma management that outcomes will be improved. Such an approach will need to be multifaceted and should include better surveillance data, diagnostic strategies, access to medications and appropriate education. Although the availability of medications will be key, we know from other jurisdictions that patient education is important,⁶ especially with regard to inhaler technique, which has recently been shown to be as bad now as 25 years ago.⁷ The effectiveness of any intervention will require political recognition and subsequent endorsement by global agencies such as WHO as well as national governments. Unless there is such a political commitment, any efforts, over the long term, are unlikely to be successful. There are other important contributors to such a new systems approach. Historically, large-scale philanthropy, such as the Gates Foundation, has focused on communicable diseases and although there has been a broadening in such organisation's scope of activity, the avoidable morbidity and mortality demonstrated in the current Ugandan study points to the need for accelerated efforts by such potential transformational inputs. The potential for such inputs, by contributing to better surveillance data and also funding demonstration projects that can be used to convince governments of the merits of such interventions, should not be underestimated. The likely cost-effectiveness of improving asthma control among a largely young and working age group of subjects, as are patients with asthma, should in itself be a stimulus for governments to deal with this matter on an urgent basis.⁸

The current study also highlights an important gap in terms of where funding should be coming from in that the study itself was funded by pharma. Political will

and advocacy must come with a strong commitment to fund the various components as outlined above. Although there are excellent examples of consortia of pharma companies and academia coming together to fund large-scale epidemiological and intervention studies and the potential for such collaborations will create a scale and integration that will magnify the effectiveness of such a systems approach, ultimately long-term sustainability can only be achieved with funding from government.

In summary, the current study demonstrates an unacceptable level of outcomes among patients with asthma and requires a call to action by the medical community in partnerships as outlined above to address this urgent health problem. It especially identifies an unacceptable level of avoidable deaths, among patients with asthma, in a predominantly young population.

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