



Inhaled corticosteroids in asthma and the need for universal health coverage

To the Editor:

We read with great interest the article on inhaled corticosteroids (ICS) and their effect on asthma progression and mortality recently published in the *European Respiratory Journal* [1]. The article presents an excellent review on asthma natural history, lung function evolution and the role of exacerbations in the course of the disease, and on mortality as well as the effect of ICS on the disease. We absolutely agree with the writers that the introduction of ICS has indeed made a huge impact on asthma morbidity and mortality. Before their introduction, severe asthma exacerbations and deaths were frequently seen in Europe, North America, Australia and New Zealand [2–4]. These were reduced drastically after the introduction of ICS and health programmes to ensure access to medications and training of healthcare personnel working in the community to diagnose and manage asthma: In Finland, the 10 year asthma plan showed that with the initiation of the programme in 1993, asthma morbidity fell and hospital days were reduced by 54% from 1993 to 2003 [5]. At the same time, more asthma patients were diagnosed and treated but the overall cost and per patient cost was also reduced.

Asthma mortality is indeed fortunately not high, but asthma is a very common disease; it is the most common chronic disease in childhood and is quite common in young, and also older, adults too [6]. Even in countries with good healthcare, there are still deaths from asthma: 1160 deaths were reported in the UK in 2011–2012 [7]. In developing countries, mortality from chronic respiratory diseases is usually higher than in developed countries and asthma mortality could be responsible for up to 30% of all chronic respiratory disease mortality [8]. Currently, most asthma deaths present in patients who live in Asia and Africa and still remain undiagnosed and untreated. The bulk of these patients are not severe asthma patients by the European Respiratory Society/American Thoracic Society definition [9], they are severe according to the World Health Organization (WHO)-related definition which includes untreated patients [10]. They may even suffer from mild or moderate asthma, but experience a catastrophic exacerbation, and have no means of managing this exacerbation.

Appropriate diagnosis and treatment with ICS has made a big impact on asthma care, morbidity and mortality, and this was the major reason to include ICS in the WHO list of essential drugs [11]. And, because of the morbidity and mortality associated with underuse of ICS and over-reliance on beta-agonists alone, the latest Global Initiative for Asthma (GINA) guidelines recommend the concurrent use of quick-acting beta-agonists and ICS in all asthma steps [12]. However, according to the most recent 2017 WHO global survey to assess national capacity for the prevention and control of non-communicable diseases (NCDs) in 2017, ICS remain the least likely to be reported as “generally available” out of 10 essential NCD medicines: in only 58% of countries are ICS generally available in pharmacies [13]. WHO has categorised asthma and chronic obstructive pulmonary disease (COPD) as NCDs, and the SDG (Sustainable Development Goals) target 3.4.1 is to reduce premature mortality by one-third by 2030. WHO Package of Essential NCD interventions (PEN) has provided protocols for management of asthma and COPD, which are feasible in all settings and should be the starting point [14]. WHO Global Alliance against Respiratory Diseases (GARD) is bringing together various stakeholders, including the Forum of International Respiratory Societies, International Primary Care Respiratory Group, GINA and the Global Initiative for Chronic Obstructive Lung Disease, to advance the prevention and control of asthma and COPD.

It is high time that asthma and COPD diagnosis and management are included as essential components of universal health coverage packages and delivered through strengthened primary healthcare and links to specialists. We now need to push for national and sub-national asthma and chronic respiratory disease



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Evidence and ICS-based asthma care reduces morbidity and mortality, and improves quality of life. It should be instituted worldwide. <http://bit.ly/2J4sW7E>

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programmes. These can help increase the level of diagnosis and provision of treatment to patients worldwide and show how ICS-based asthma management can change the lives of patients, and reduce asthma morbidity and mortality; this is especially relevant in countries where patients are undertreated, due to scarcity of trained healthcare workers, lack of diagnosis, poor access to medications, and general lack of resources and planning.

Knowing what we do about the role of inhaled steroids in asthma, we cannot ethically run placebo-controlled trials to test their effect on mortality, lung function and disease modification. Moreover, as the authors say, too many patients need to be treated long term to test the effect on mortality and this is indeed difficult to do in a study. But, by instituting programmes, we can run long-term pragmatic trials and provide data on the effect of evidence-based care and the effect of ICS treatment in asthma before, during and after the initiation of such programmes.

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