



# PA4187: Global Asthma Network survey of national asthma strategies Where are the gaps?

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## Abstract

### Background

Asthma affects about 334 million people globally, many of whom are unnecessarily disabled. Several countries or regions within countries have developed an effective national asthma strategy resulting in reduction of the burden of asthma to individuals and society. There has been no systematic appraisal of the extent of national asthma strategies in the world.

### Methods

The Global Asthma Network (GAN) undertook an email survey of principal investigators of GAN centres in 2013-2015. One of the questions was: "Has a national asthma strategy been developed in your country for the next five years? For children? For adults?" (Yes/No/Don't Know). The survey was sent to 276 investigators in 120 countries.

### Findings

213 (77.2%) investigators in 112 (93.3%) countries answered this question. Of these countries, 26 (23.2%) reported having a national asthma strategy for children and 24 (21.4%) for adults; 22 (19.6%) countries had a strategy for both children and adults; 28 (25%) had a strategy for at least one age group. Strategies were more significantly common in countries with high prevalence of current wheeze than low prevalence (11/13 (85%) and 7/31 (22.6%) respectively,  $p < 0.001$ ).

### Interpretation

In about one in four countries a national asthma strategy was reported. As the global prevalence of asthma has risen, especially in the most populated countries, a large reduction in the global burden of asthma could be achieved potentially, if more countries had an effective asthma strategy.

### Funding

The International Union against Tuberculosis and Lung Disease

## Hypothesis, Aims, Methods

### Hypothesis

**That most countries in the world do not have a national asthma strategy.**

### Aim

**To identify the countries that have a national asthma strategy for children and adults.**

### Methods

A cross-sectional email survey of GAN centres was carried out between 2013 and 2014. The survey was sent to GAN principal investigators in 276 centres in 120 countries, 41 were high-income countries (HICs) and 79 low-and middle-income countries (LMICs), defined by the criteria used by the World Bank 2015.

The survey form had eight questions, one of which was "Has a national asthma strategy been developed in your country for the next five years? For children? (Yes/No/Don't Know), for adults?" (Yes/No/Don't Know).

Country findings were compared with the prevalence of asthma symptoms in 13-14 year olds in countries where this had been estimated in the International Study of Asthma and Allergies in Childhood (ISAAC) Phase Three. Countries were categorised as high prevalence if the prevalence of current wheeze was  $>20\%$ , and low prevalence if the prevalence of current wheeze was  $<10\%$ . The Chi-Squared test was used for statistical analyses.

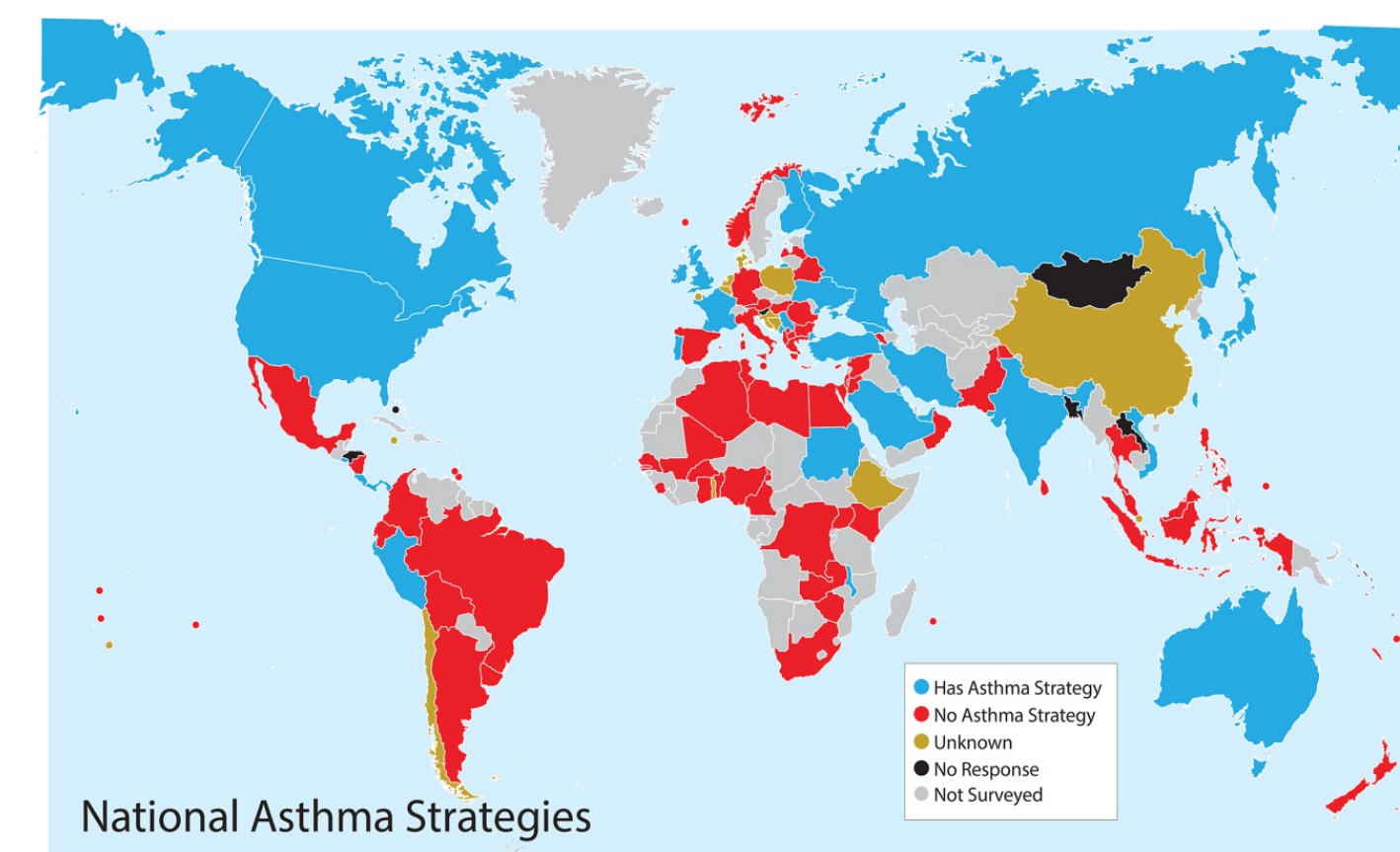
## Results

**213/276 (77.2%) investigators in 112/120 (93.3%) countries completed the national asthma strategy question.**

**Of the 112 countries, 26 (23.2%) reported a national asthma strategy for children, 24 (21.4%) reported a national asthma strategy for adults, and 22 (19.6%) countries had strategies for both children and adults, and 28 (25%) had a national asthma strategy for at least one age group (see illustration).**

**Of the 28 countries who reported a national asthma strategy for at least one age group 13 (46.4%) were HICs and 15 (53.6%) LMICs. Strategies were reported in 13/38 (34.2%) HICs and 15/74 (20.3%) LMICs; these differences between LMICs and HICs were not statistically significant  $p=0.107$ .**

**In countries with high prevalence of current wheeze strategies were more significantly common than in low prevalence countries (11/13 (85%) and 7/31 (22.6%) respectively,  $p < 0.001$ ).**



## Summary

**This study surveyed GAN investigators in more than half the world's countries and found only about one in four had a national asthma strategy.**

**There would be a large reduction of the burden and costs of asthma in the world if the gains in Finland over 10 years were replicated. Finland found the proportion with severe asthma fell by 50%, the number of emergency visits fell by 24% in adults and 61% in children, hospital days fell by 54%, significant disability decreased by about 76%, costs per patient per year fell by 36%, and deaths by 31%.**

## Discussion

**In about one in four countries a national asthma strategy was reported, proportionately more commonly in those with known high asthma prevalence. A large reduction in the global burden of asthma could be achieved potentially, if more countries had an effective national asthma strategy.**

## References

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## Background

**Asthma affects about 334 million people in the world, and is the 14th highest ranked cause of years lived with disability.**

**The first comprehensive national asthma strategy was developed in Finland in 1994. There has been no survey of national asthma strategies in the world, and the Global Asthma Network (GAN) has collaborators in more than half of the world's countries to be surveyed.**

**The components of a successful national asthma strategy are government commitment, policies and legislation, management by the health ministry, funding and capacity building, a registry of outcome data before and after implementation (prevalence, severity, asthma control, hospitalisations, mortality), asthma management guidelines suitable for the country, access to medical care and quality-assured, affordable, essential asthma medicines for everyone with asthma, education of the public, continued education of health professionals, economic analyses, process and outcome evaluation, follow-up programmes, and continued asthma research.**