

# New PACK training tackles common diseases in developing countries

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An educational outreach training package has shown to be effective for improving management of respiratory diseases in Brazil, raising hopes it could be rolled out to treat other common, severe diseases in low- and

middle-income countries.

Researchers from the University of East Anglia (UEA) and the University of Cape Town, with partners from Brazil, the UK and South Africa, have created the Practical Approach to Care Kit (PACK) to provide basic, cost-effective ways to diagnose and treat diseases such as [chronic obstructive pulmonary disease](#) (COPD) and asthma.

The "Effects of PACK guide training on the management of asthma and chronic obstructive pulmonary [disease](#) by [primary care](#) clinicians: a pragmatic cluster randomized controlled trial in Florianópolis, Brazil," was published this week in the *British Medical Journal Global Health*.

Prof Max Bachmann, professor of [health](#) services research at UEA's Norwich Medical School, led the study in the Brazilian city of Florianópolis. PACK is now being used in all municipal clinics in Florianópolis, where doctors and nurses have been trained in the effective diagnosis and treatment of COPD and asthma, as well as other [common diseases](#).

Prof Bachmann said: "Better primary care for these diseases will improve the health of whole populations of adult Brazilians, especially older people with multiple long-terms conditions.

"Respiratory diseases such as COPD and asthma are common and can be disabling or life-threatening, but are often under-recognized and under-treated or incorrectly treated in Brazil."

The Global Burden of Disease Study 2016 ranked COPD as the eighth-highest disease in Brazil in terms of disability-adjusted life years lost. Asthma was ranked 17th in terms of years lived with disability. WHO's World Health Survey found that 23 percent of Brazilian adults aged 18 to 45 years reported wheezing in the last year, of whom only 12 percent

had a doctor diagnosis of asthma.

Florianópolis has a population of 486,000 and was the first Brazilian municipality to provide universal health coverage under the auspices of the national Family Health Strategy. Although it is one of the wealthiest cities in Brazil, with a large private health sector, a substantial proportion of its population has lower incomes and depends on free municipal primary care facilities.

Prof Bachmann said: "Provision of good-quality primary healthcare, including investigation, diagnosis and appropriate treatment of asthma, COPD and comorbid conditions, is a crucial part of the solution."

PACK gives doctors and nurses customized, up-to-date, evidence-based, point-of-care, clinical decision support. The Brazilian research found training improved cooperation between doctors and nurses, while expanding the nurses' roles and confidence. Nurses were not authorized to prescribe asthma or COPD medication or to request spirometry, but they were trained to refer patients whom they identified as needing these interventions to doctors in their primary care teams.

Prof Bachmann said: "Training doctors and nurses together aimed to align their clinical decision-making. These results add to previous evidence about interventions to promote inter-professional collaboration."

Previous research in South Africa found that earlier versions of PACK improved [asthma](#) treatment in primary health care clinics, while also improving diagnosis, treatment and health outcomes for other chronic diseases such as tuberculosis and HIV. The PACK program is also being rolled out in Nigeria and Ethiopia, with plans to do the same in China and Vietnam. This is the first trial of PACK outside South Africa, and shows that it can work in different settings.

**More information:** Max Oscar Bachmann et al. Effects of PACK guide training on the management of asthma and chronic obstructive pulmonary disease by primary care clinicians: a pragmatic cluster randomised controlled trial in Florianópolis, Brazil, *BMJ Global Health* (2019). [DOI: 10.1136/bmjgh-2019-001921](https://doi.org/10.1136/bmjgh-2019-001921)

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