

María Victorina López Varela: Turning the tide

In 2002, pneumologist María Victorina López Varela at the University of the Republic and Hospital Maciel in Montevideo, Uruguay, joined forces with researchers in five other Latin American countries to launch the first large-scale assessment of the prevalence of chronic obstructive pulmonary disease (COPD) in the region — the PLATINO study.

What was the picture of COPD in Latin America in 2002?

There was no data on COPD prevalence in the region. Scientists, including myself, had worked on the disease for many years in universities, yet we didn't know the reality of COPD on our continent. That's why we launched the PLATINO study.

What did PLATINO involve?

It looked at the prevalence of COPD in around 5,000 people aged 40 or older, and the risk factors associated with the condition. It ran from 2002 to 2004 in five cities: Mexico City, Santiago, Montevideo, Caracas and São Paulo in Brazil. These are each the largest metropolitan areas in their respective countries, with a combined population of around 50 million. Their residents represent a variety of ethnic groups, and the cities are at different altitudes and in different climates. For the first time, we could find out how many people had the disease.

What did the study reveal?

It showed that COPD was a bigger problem in Latin America than previously thought. The overall crude prevalence of COPD was 14.3%, more than double the rate in the United States. But there were notable differences between the cities — the prevalence in Montevideo was 19.7%, whereas in Mexico City it was only 7.8% (M. Montes de Oca *et al.* *BRN Rev.* **3**, 3–17; 2017). When adjusted for key risk factors such as age, the prevalence ranking was largely maintained. We also learnt that 89% of people with COPD had previously gone undiagnosed — a higher rate than in other parts of the world.

How has the situation changed since then?

Not much. We performed a follow-up to PLATINO between 2008 and 2012 in the three cities with the highest prevalence:



María Victorina López Varela is trying to work out why the rate of COPD is so high in Uruguay.

Montevideo, Santiago (16.9%) and São Paulo (15.8%). We found the prevalence of stage 2–4 COPD to be quite stable, which suggests there is still a need for governments to take action.

Why was the prevalence in Montevideo in 2005 almost double the global rate?

We don't really know. A high smoking prevalence might have played a part, but smoking has declined since 2006, when anti-tobacco laws were introduced, and COPD prevalence has not. We also thought altitude might be a factor — we saw a correlation between the altitude of the five cities and their COPD rates (Mexico City sits at 2,240 metres above sea level, and Montevideo at only 35 metres). But a survey in five cities in Colombia did not find a correlation (A. Caballero *et al.* *Chest* **133**, 343–349; 2008).

There might also be a genetic explanation; we took blood samples to analyse, but need more funding to do so. And it could be that the way spirometry is commonly performed in Uruguay increases the likelihood of seeing signs of airway obstruction — people are often asked to blow for longer than the standard six seconds, according to our research.

What actions should be taken to improve the management of COPD in Latin America?

Definitely smoking cessation. However, 20% of those diagnosed with COPD are non-smokers.

Reducing exposure to indoor air pollution from biomass cooking stoves is also important. And, in the past few years, several studies have revealed other risk factors that should be addressed, such as experiencing respiratory disease as a child and being born to a severely malnourished mother. And of course, we need to continue to collect more data, especially on mortality.

Are you confident that steps to tackle COPD in Latin America will be taken?

We still need to raise awareness. Even now, much of the general population and many policymakers are unaware of COPD. Underdiagnosis is still above 80% in the region. To help solve this problem we developed the 'PUMA' questionnaire, which physicians can use to quickly identify people who need to be tested with spirometry. It won't solve everything by itself, however — we also need spirometry to be more widely available in primary care in Latin America.

It is also important to make sure that treatment is available to those who are diagnosed. The key to this is for the World Health Organization to maintain an up-to-date list of essential medicines for COPD.

Interview by Laura Vargas-Parada

This interview has been edited for length and clarity.