

# Brazilian National Institute of Geography and Statistics (IBGE) in partnership with Brazilian Ministry of Health launch the major national household survey using Primary Care Assessment Tool (PCAT) in the world

## A Brazilian “Continent” and its Geographical Challenges toward a National Health Survey

Like India, Brazil can also be considered a “continent” given its size and complexity in geographical accessibility of remote regions. Brazil has an area of about 8.5 million Km<sup>2</sup> (201.1 million people, i.e., a population density of 23.6 inhabitants/km<sup>2</sup>)<sup>[1]</sup> with 5,570 municipalities, 27 states and 5 regions: north (where we have the Amazon Region), northeast (one of the most deprived areas), southeast and southern (the most industrialized, with São Paulo, Rio de Janeiro, Rio Grande do Sul, for example), and the central-west (with subsistence agriculture). Poverty is also present as a mosaic of inequalities within the same city, such as the neighborhood of Old Delhi and New Delhi in India. For example, in Rio de Janeiro, we have one of the most vulnerable areas, a slum, similar to what we see in Old Delhi; but geographically the area is a jagged hill. Houses have been constructed in such a way that some Brazilian architects even dubbed it as the “architecture of the impossible” [Figure 1].

## Amazon Region of Brazil: A Giant Challenge to Household Surveys

The Amazon region of Brazil comprises 773 municipalities spanning over three geographic regions and part of nine states.<sup>[2]</sup> This region has a population of ≈23.6 million inhabitants living in an area of 5.2 million km<sup>2</sup> (≈61% of Brazil), and a demographic density that is 10 × less than the national average. Its population, however, corresponds to 12.3% of the total inhabitants of Brazil. The Northern



**Figure 1:** View of one of the major slums in Rio de Janeiro, Brazil. Source: Photo taken by Vinicius Ribeiro in Rio de Janeiro, Brazil

Region still consists of large urban voids due to the giant interiorization and large uninhabited areas such as the one occupied by the Amazon Forest. Only the immunization health actions (vaccines) and IBGE were able to reach those locations and conduct their household surveys, as they have a structure of over 500 data collection support agencies, distributed throughout the country (the same used by the National Demographic Census).

## IBGE and the Launch of the Major National Household Survey using PCAT in the World

Until 2016, the largest sample survey performed with PCAT in a single city in the world was in Rio de Janeiro ( $n = 6,675$ ).<sup>[3,4]</sup> In August 2019, IBGE began the major fieldwork ever done using PCAT by visiting more than 108,000 households in all Brazilian regions, including the Amazon Region mentioned previously. In partnership with the Brazilian Ministry of Health, 2,167 selected municipalities will be visited from a statistical sample of the same geographic database that will be used in the 2020 Census. PCAT – Brazilian short validated version - is being applied to adults 18 years and older, as a part of the major household survey ever conducted: the Brazilian National Health Survey (PNS-2019).<sup>[5]</sup> We believe this initiative is a pioneer in the world and that it can encourage other countries like India to develop similar initiatives in partnership with Indian Statistical Institute to draw up a baseline for future studies and support National Government for decision-making in primary health care.

## Financial support and sponsorship

Nil.

## Conflicts of interest

There are no conflicts of interest.

**Erno Harzheim<sup>1,2</sup>, Luiz Felipe Pinto<sup>3,4</sup>,  
Otávio Pereira D'Avila<sup>5</sup>,  
Lisiane Hauser<sup>6</sup>**

<sup>1</sup>Family Physician, Federal University of Rio Grande do Sul (UFRGS), Medicine School, <sup>2</sup>Erno Harzheim, Rua Ramiro Barcellos, 2400 Santa Cecília, Porto Alegre, Rio Grande do Sul, <sup>3</sup>Statistician, Associate Professor (PhD) at the Federal University of Rio de Janeiro (UFRJ), Medicine School, Brazil, <sup>4</sup>Primary Care Evaluation, Instituto de Higiene e Medicina Tropical (IHMT)/Universidade Nova de Lisboa, Portugal, <sup>5</sup>Dentist in Primary Health Care, Federal University of Pelotas, Rio Grande do Sul (UFPe), Dentist School, <sup>6</sup>Statistician, Telehealth (Telessaúde), Federal University of Rio Grande do Sul (UFRGS), Brazil

**Address for correspondence:** Dr. Luiz Felipe Pinto,  
Bv 28 de Setembro, 86 apt 402 b1, Vila Isabel,  
Rio de Janeiro 20551-031, Brazil.  
E-mail: felipepinto.rio2016@gmail.com

### References

1. Brazilian National Institute of Geography and Statistics (Instituto Nacional de Geografia e Estatística-IBGE). IBGE divulga as estimativas da população dos municípios para 2019 [IBGE releases estimates of municipal population for 2019]. [cited 2019 Sept 18]. Available from: <https://agenciadenoticias.ibge.gov.br/agencia-sala-de-imprensa/2013-agencia-de-noticias/releas/25278-ibge-divulga-as-estimativas-da-populacao-dos-municipios-para-2019>.
2. Penna G, Pinto LF, Soranz D, Glatt R. High incidence of diseases endemic to the amazon region of Brazil, 2001-2006. *Emerg Infect Dis* 2009;15:626-32.
3. Harzheim E, Pinto LF, Hauser L, Soranz D. Assessment of child and adult users of the degree of orientation of primary

healthcare in the city of Rio de Janeiro, Brazil. *Ciênc Saúde Colet* 2016;21:1399-408.

4. Harzheim E, Gonçalves MR, D'Ávila OP, Hauser L, Pinto LF. Atenção primária à saúde no Brasil: conceitos, práticas e pesquisa. Capítulo 17: Estudos de PCATool no Brasil. In: Mendonça MHM, Matta GC, Gondim R, Giovanella L, editors. Rio de Janeiro: Editora Fiocruz; 2018 (1ª edição). 610p.
5. Brazil. Federal University of Rio Grande do Sul (UFRGS). Launch of Fieldwork of Brazilian National Health Survey (PNS-2019) from Brazilian Institute of Geography and Statistics (IBGE)-TelessaúdeRS-UFRGS. [cited 2019 Sept 18]. Available from: <https://www.ufrgs.br/telessaude/rs/noticias/launch-of-fieldwork-of-brazilian-national-health-survey-pns-2019-from-brazilian-institute-of-geography-and-statistics-ibge/>.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

**Received:** 21-09-2019

**Revised:** 21-09-2019

**Accepted:** 30-09-2019

**Published:** 10-12-2019

#### Access this article online

##### Quick Response Code:



##### Website:

[www.jfmpc.com](http://www.jfmpc.com)

##### DOI:

10.4103/jfmpc.jfmpc\_804\_19

**How to cite this article:** Harzheim E, Pinto LF, D'Avila OP, Hauser L. Brazilian National Institute of Geography and Statistics (IBGE) in partnership with Brazilian Ministry of Health launch the major national household survey using Primary Care Assessment Tool (PCAT) in the world. *J Family Med Prim Care* 2019;8:4042-3.

© 2019 Journal of Family Medicine and Primary Care | Published by Wolters Kluwer - Medknow