

Programa de Pós-Graduação em Saúde Pública – Acadêmico

Curso de Mestrado Acadêmico e Doutorado Acadêmico em Saúde Pública - TURMA 2021

ETAPA II PROVA DE INGLÊS

PROVA E GABARITO

PART 1

Please answer questions 1 to 10 with reference to Text 1. There is one and only one correct answer to each question.

Q1. According to Paragraph 1,

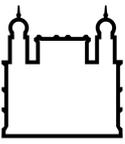
- A. in Latin America and the Caribbean 10% of the population earn almost half of the total income.
- B. around 556 million individuals in Latin America and the Caribbean live in poverty.
- C. the United Nations Millennium Development Goals do not cover control of infectious diseases.
- D. around 33% of Latin Americans live in rural areas.

Q2. Which of the following groups is NOT disproportionately affected by Neglected Tropical Diseases (NTDs)?

- A. African Brazilians
- B. females
- C. the elderly
- D. the poor

Q3. According to Paragraph 3, what is the main difference between the two patterns of distribution of NTDs?

- A. One is restricted to Caribbean islands.
- B. One is transmitted by helminths, the other by viruses.
- C. One is found throughout the region, while the other is confined to certain areas.
- D. They affect people living in urban and rural areas respectively.



Q4. Why, according to Paragraph 3, are NTDs considered a 'moral burden'?

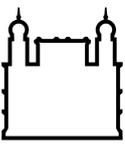
- A. Because they have been neglected by scientists in rich countries.
- B. Because they are deemed by some to indicate the shortcomings of primary health care in some regions.
- C. Because they cause disability, poverty and unemployment.
- D. Because not all healthcare professionals agree that it is ethical to treat them.

Q5. Why, according to Paragraph 4, is it not possible to accurately estimate the disease burden for some NTDs?

- A. Because many people are misdiagnosed with dengue fever.
- B. Because some of them often occur in inaccessible or troubled regions.
- C. Because Chagas disease may not be an STH-related disease.
- D. Because there are many undiscovered NTDs.

Q6. Which of the following statistics is given in Paragraph 5?

- A. Forty percent of Latin Americans belong to just one ethnic group.
- B. Eighty percent of the indigenous population of the LAC region is concentrated in six Latin American countries.
- C. Seven percent of Latin Americans live in rural areas.
- D. Most indigenous people in Latin America pick up some kind of infection in a labor camp.



Q7. Which of the following statements can reasonably be deduced to be true from the section highlighted in bold in Paragraph 5?

- A. Trachoma causes STH infection.
- B. STH infection inhibits growth in humans.
- C. STH infection has not been adequately mapped in Brazil.
- D. STH infection is less likely to occur among indigenous people than trachoma.

Q8. Which of the following is an example of past success mentioned in Paragraph 6?

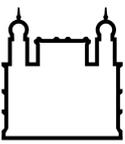
- A. Ivermectin is no longer used to treat such diseases.
- B. All health workers on the island of Hispaniola now have the MDA qualification.
- C. Ocular disease has been eliminated in all but six countries.
- D. Transmission of lymphatic filariasis in Brazil has been eliminated from all but one or two small regions.

Q9. Which of the following, according to Paragraph 6, has contributed to reducing the number of cases of Chagas disease?

- A. Reducing the incidence of schistosomiasis.
- B. Declining insect populations as a result of global warming.
- C. Enabling Chagas disease carriers to share their experiences on social networks.
- D. Provision of better human habitation.

Q10. Which of the following is NOT mentioned in Paragraph 7 as an obstacle to the control of Chagas disease?

- A. The invasion of areas where existing *T. infestans* vectors are under control by new vectors.
- B. The declining effectiveness of insecticides.
- C. Failure to diagnose Chagas disease in the chronic phase of the disease.
- D. The cost and toxicity of drugs used to treat the disease.



TEXT 1

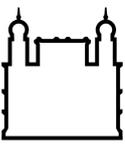
The Neglected Tropical Diseases in the Latin American and the Caribbean Region

1. The neglected tropical diseases (NTDs), a group of chronic, debilitating, and poverty-promoting parasitic, bacterial, and some viral and fungal infections, are among the most common causes of illness of the poorest people living in developing countries. Their control and elimination is now recognized as a priority for achieving United Nations Millennium Development Goals (MDGs) and targets for sustainable poverty reduction. Approximately 40% of the estimated 556 million people living in the Latin American and the Caribbean region (LAC) live below the poverty line, including 47 million people who live on less than US\$1 per day, and another 74 million people who live on less than US\$2 per day. Relative to sub-Saharan Africa and Asia, where NTDs also occur, the character of poverty in LAC is unique. In terms of income distribution, LAC exhibits the highest inequality anywhere, with the richest one-tenth of the population earning 48% of total income and the poorest tenth earning only 1.6%. Of LAC's estimated 213 million impoverished people, approximately one-third live in rural poverty as subsistence farmers, ranchers, and fishermen, typically in communities of indigenous and African descent where they face a high level of social exclusion and social inequity, including lack of access to safe water and health care services. Two-thirds of the region's poor live in urban and periurban communities where poverty combines with the conditions of unsafe water, poor sanitation, and the proliferation of rodent animal reservoirs and vectors.
2. Poverty is not the only major determinant for risk of acquiring NTDs in LAC. It combines with other inequities related to ethnicity (e.g., indigenous groups and people of African descent), age and gender (i.e., children and women), and a

patchwork of unique ecological niches to establish sometimes highly focal epidemiological NTD "hot spots." This has important implications for the control of NTDs in LAC, which may differ from the integrated NTD control currently being advocated for and tested in sub-Saharan Africa and elsewhere.

Burden and Geographic Distribution of Disease

3. The NTDs in LAC may be characterized by two major patterns of disease distribution.

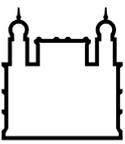


The first is a pattern of widespread endemicity such as that seen for the soil-transmitted helminth (STH) infections, Chagas disease, and dengue; the second pattern is one of geographically restricted endemicity as the result of concerted public health interventions and ecological conditions as seen for onchocerciasis, lymphatic filariasis (LF), and schistosomiasis in areas such as the Caribbean and Guyana shield. The latter group may represent a distinct situation from other parts of the world, as they may be said to represent a "last stronghold" of endemic focal communicable diseases, that can be eliminated in a region but are not yet. In this sense, the presence of such NTDs represents a moral burden as well as an epidemiological burden. Because they are seen by some as illustrations of the failure of primary health care implementation, the NTDs also represent a moral imperative for action to complete primary health care implementation where it has failed and make it accessible to all.

4. The major STH infections are the most prevalent NTDs, and the STH infections and Chagas disease are responsible for the highest estimated NTD burden in LAC. They are followed by dengue, schistosomiasis, leishmaniasis, and other NTDs. However, dengue is considered underreported in the LAC region, and because leishmaniasis frequently occurs in remote areas or regions of guerilla conflict, its disease burden is not well established except in some areas of Brazil, Peru, and Bolivia.

The NTD-Vulnerable Populations:
Peoples of Indigenous and African
Descent

5. The NTDs in the Americas are concentrated not only within pockets of intense poverty, but also among selected vulnerable populations, especially some indigenous populations and communities of African descent. In LAC, it is estimated that 7% of the total population and 40% of the rural population belong to a unique ethnic group. Rural poverty disproportionately affects indigenous people, particularly in Bolivia, Colombia, Ecuador, Guatemala, Mexico, and Peru, where 80% of these populations live. In Guatemala and in the neighboring states of southern Mexico, the indigenous populations suffer from some of the highest rates of STH infection in the Americas, as well as high rates of onchocerciasis and Chagas disease. Some of the indigenous populations acquire their infections in agricultural labor camps and on

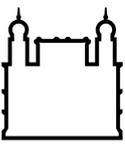


plantations. Similarly, the indigenous people of Bolivia and Peru experience high rates of fascioliasis, cysticercosis, and plague; those in Colombia are at risk for leishmaniasis, Chagas disease, and yellow fever; and **in Brazil, there are several well-documented examples of high levels of STH infection and subsequent growth stunting among indigenous people, as well as trachoma.** Indigenous people also often bear the brunt of vector-borne NTDs that emerge during conflict. In addition to LAC's indigenous communities, poor populations in communities of African descent, such as those found in parts of the Caribbean, Central America, and Brazil, suffer from high prevalence rates of NTDs, especially *N. americanus* hookworm infection, LF, onchocerciasis, and schistosomiasis. These infections were introduced into the region during the Middle Passage, so that their prevalence among the poor represents a tragic living legacy of the Atlantic slave trade

seems potentially eliminable. Through expanded use of insecticides, improved housing, and other interventions, great gains have been made by Iniciativa de Salud del Cono Sur (INCOSUR) in their efforts to eliminate Chagas disease from South America's southern cone. An exciting new effort to eliminate Chagas disease throughout the region by 2010 has been launched through a new Global Network for Chagas Elimination.

Past Successes and Current Challenges

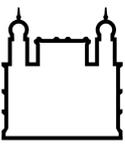
6. There have been some extraordinary successes in both national and regional efforts to take measures for controlling several of the most important NTDs in LAC. First among them has been great progress towards the elimination of LF and onchocerciasis. With respect to the former, Brazil has reduced LF transmission from 11 known foci to one to two small areas, and the at-risk populations in the Caribbean region, particularly in Haiti and Dominican Republic, are receiving MDA. Similarly, all six onchocerciasis-endemic countries have met their full treatment goals and no new ocular disease has been found in recent years; MDA with ivermectin continues in the foci with active transmission. In addition, the prevalence of both trachoma and leprosy has been declining in the region in recent decades and there is optimism that these two ancient scourges could be eliminated in the coming decade. In the Caribbean, the incidence of schistosomiasis has been dramatically reduced and the disease



Some countries, including Argentina, Belize, Ecuador, Haiti, Honduras, and Nicaragua, have recently initiated major expansions of their STH control programs.

7. At the same time, enormous challenges to NTD control remain. There is a need to complete elimination efforts for schistosomiasis in the Caribbean, and to eliminate the transmission of LF, onchocerciasis, and trachoma in Latin America. Control or elimination of the highest burden NTDs, e.g., Chagas disease, STH infections, and hookworm and schistosomiasis coinfections, still requires intensified efforts. Chagas disease remains one of the region's most devastating NTDs, and even in the southern cone where domestic transmission has been nearly eliminated through vector control of *T. infestans*, there are concerns about emerging insecticide resistance, or the possibility that the vacant niches will be eventually be occupied by other triatomine vectors. In the Chaco, elimination of *T. infestans* vectors has not been achieved, while in Mexico, Central America, the northern tropical regions of South America, and elsewhere, elimination efforts have been thwarted by sylvatic *T. dimidiata* vectors, which can reinvade dwellings following the use of insecticides. For the case management and treatment of both Chagas disease and leishmaniasis, the major drugs used are either expensive or toxic or both, and frequently require long periods of supervised therapy. There is an urgent need for developing safer anti-Chagas drug regimens and more accurate diagnostic tools to assess the efficacy of antitrypanosomal drugs, particularly during the chronic

phase of the disease. Hookworm infection and other STH infections remain highly prevalent, especially in Brazil, where co-endemic hookworm infection and schistosomiasis (and hookworm and schistosomiasis coinfections) account for large-scale disability and lost economic productivity. Overall, the nation of Brazil accounts for the highest NTD burden in the Americas, and even though Brazil is also the largest country in LAC, its NTD burden is disproportionately high. In addition to high rates of hookworm and schistosomiasis, Brazil also has the greatest number of cases of leishmaniasis, leprosy, and leptospirosis. Also of concern are the five priority NTD-endemic countries, Bolivia, Guyana, Haiti, Honduras, and Nicaragua, targeted by PAHO for accelerated technical cooperation.



TEXT 2

Is income inequality decreasing in Brazil?

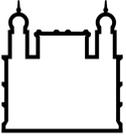
1. In the article entitled Poor Dad, Poor Son?

An Analysis of Intergenerational Income Mobility in the 1982 Birth Cohort in Pelotas, Rio Grande do Sul State, Brazil, published in this edition of *Cad Saúde Pública* (p. 1225), Tejada et al. estimated intergenerational income mobility in a medium-sized Brazilian city. The authors used data on 1,133 father/son pairs for whom they had information on the father's income in 1984 and the son's income in 2004, or 20 years later, when the sons were an average of 22.7 years old. Income in Brazilian Reals was deflated to November 2005 values based on the country's Expanded Consumer Price Index (IPCA). Statistical analysis used linear regression and quintile regressions to estimate income persistence between generations and to control for confounding variables. The authors estimated income persistence at 0.20 based on linear regression, while observing that **income persistence was not linear when measured by quantile regression, but was higher at the income extremes (0.29 for the poorest and 0.30 for the wealthiest) and lower in the middle-income strata (0.11), thus displaying a U-shaped effect.**

2. We know that the higher the intergenerational income persistence, the lower the intergenerational mobility, meaning that fathers are “transmitting” their social capital and monetary wealth to their sons. The more unequal a society, the more persistent income tends to be from one generation to the next. Previous studies have estimated that Brazil has one of the

world's highest levels of intergenerational income persistence, consistent with the country's heavy social inequality. In 1984, Brazil's Gini index was 58.8, dropping only slightly to 56.9 by 2004. However, recent data suggest that the country's social inequality has decreased substantially. In 2012 the Gini index reached

52.6. The current article demonstrates that social inequality in a middle-income Brazilian city is decreasing, since intergenerational income mobility has



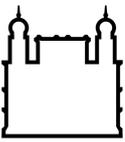
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increased, especially among the middle-income strata, and that income persistence has decreased. In other words, the older generations are no longer succeeding in “hereditarily” transmitting their wealth to their children at the same historical rate.

3. Is the old Brazil of the “hereditary captaincies” finally becoming more equal? Are we Brazilians really experiencing a continuing process of income transfer from the wealthiest to the poorest? The article suggests so, but the authors call attention to the fact that the fathers' income was recorded in a single year, 1984, while the sons' income was recorded at the beginning of their working age, at 22 or 23 years. When young adults enter the labor market, their income tends to be lower than after they have grown older. The two factors tend to underestimate income persistence and thus overestimate social mobility. One of the article's strengths was the use of quantile regressions to estimate the nonlinear effects of income persistence, since we know that the results of regression analyses are highly dependent on the models' adequate parametrization. The current study makes an important contribution to the literature by suggesting that intergenerational mobility increased in a middle-income Brazilian city in 2004, especially in the middle-income strata. These data corroborate other studies indicating that income inequality decreased in Brazil between 2003 and 2011.

4. The existing data suggest that this reduction may be explained by

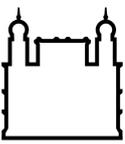
the country's conditional cash transfer programs, a government policy of increasing the real value of the minimum wage, growth in average years of schooling, and the private economy's dynamics (largely fueled by high international commodity prices), among other factors. However, this downward trend in inequality may have stalled since 2012. Piketty showed that social inequality has increased in high-income countries since the 1970s and that wealthier parents are increasingly able to transmit their wealth to



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their children. The social and political pact that accompanied the reduction in social inequality in Brazil appears to have faltered, considering the incumbent candidate's narrow victory in the recent presidential elections and the protests on the streets of dozens of Brazilian cities. According to Piketty, when return on capital outstrips the economy's growth, inequality tends to perpetuate itself or even increase. The grand super-cycle of high commodity prices that benefited Brazil appears to have run its course. The Brazilian economy's growth rate has slowed down, and by all bets it will be negative this year. The big question that emerges from the study by Tejada et al. is whether in Brazil, one of the world's most



unequal countries, this downward trend in social inequality has reached its limit and will reverse, as occurred more recently in high-income countries. At any rate, in a heavily patrimonial country, the evidence that intergenerational income transmission has lost its force (especially in the middle class) is good news. If this process continues, Brazil may succeed in disarming the trap of low growth and become a more egalitarian society.

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Cad. Saúde Pública, Rio de Janeiro, 31(6):1-2, jun, 2015

PART 2

Please answer questions 11 to 20 with reference to Text 2. There is one and only one correct answer to each question.

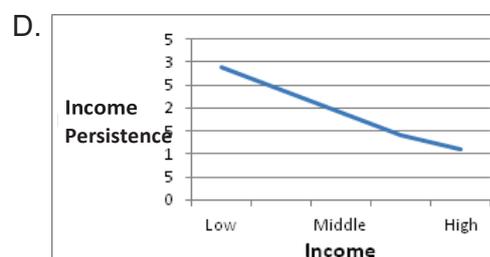
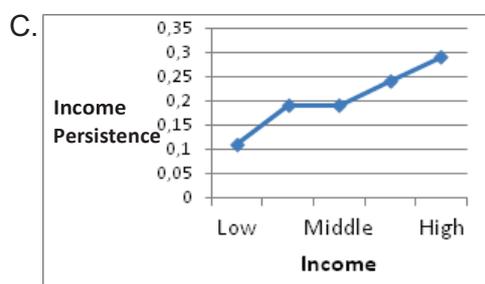
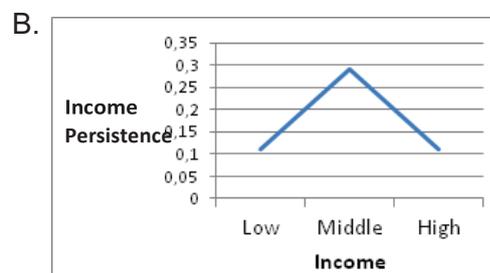
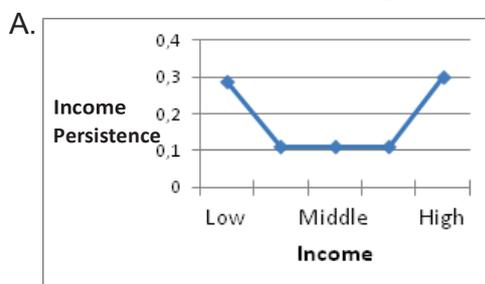
Q11. The article entitled **Poor Dad, Poor Son?**

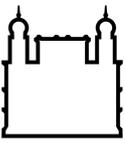
- A. compares fathers' incomes in 1984 with those of their sons in 2004.
- B. was published in a previous issue of *Cadernos de Saúde Pública*.
- C. bases its findings on data from various cities in Brazil.
- D. would best be described as a piece of popular journalism.

Q12. The aforementioned study

- A. adjusted income for inflation to levels in November 2005 in Brazil.
- B. excluded sons aged over 22.7 years.
- C. performed five regressions but was unable to correct confounding variables.
- D. found income to have increased by about 20% over the two decades.

Q13. Which of the following graphs best illustrates the section highlighted in bold at the end of Paragraph 1?



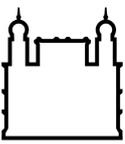


Q14. Which of the following statements best sums up the section highlighted in bold at the end of Paragraph 1?

- A. All sons tended to earn more than their fathers did twenty years earlier, regardless of social class.
- B. The income of the richest strata increased much more than that of the poor between 1984 and 2004.
- C. The income of the middle classes slumped drastically between 1984 and 2004.
- D. Income was more likely to remain the same across generations in both the lowest and the highest income strata.

Q15. The first part of Paragraph 2 tells us that

- A. in 2012, Brazil still ranked worst in the world in terms of social mobility.
- B. the Gini index is a measure of a country's per capita GDP.
- C. social inequality in Brazil remained relatively unchanged between 1984 and 2004, but dropped significantly thereafter.
- D. the transmission of income from one generation to the next does not necessarily result in greater social inequality.



Q16. Which of the following limitations of the study by Tejada et al. is mentioned in Paragraph 3?

- A. The income of the sons was measured at the beginning of their working life when incomes tend to be lower, whereas that of the fathers was measured in a single year, regardless of their age.
- B. Various confounding factors may have led the study to underestimate social inequality.
- C. It fails to take account of the possibility that the income levels of young people may decline in coming years owing to the uncertain economic outlook.
- D. Self-reported income levels tend to be unreliable.

Q17. Which of the following is NOT mentioned as a possible factor favoring a reduction in inequality in Brazil in the period between 2003 and 2011 in the first sentence of Paragraph 4?

- A. Improved levels of education among Brazilians.
- B. Government income redistribution policy.
- C. A thriving private sector benefiting from high commodity prices.
- D. The stability of the Brazilian national currency.

Q18. The author cites Piketty's argument to the effect that

- A. social inequality has been on the increase in all countries since the 1970s.
- B. inequality tends to remain

constant or increase when returns on capital exceed economic growth.

- C. commodity prices tend to rise and fall in cycles.
- D. the recent re-election of the Brazilian president has led to economic instability.

Q19. Which of the following would definitely NOT be an acceptable alternative to the word 'stalled' as used in Paragraph 4?

- A. ceased
- B. stopped
- C. come to a halt
- D. picked up

Q20. The author's conclusions regarding Brazil's economic future could be best described as

- A. hopeful but not overly optimistic
- B. highly speculative and controversial
- C. direly pessimistic
- D. dogmatically over-exuberant

Question	Answer			
1	A	B	C	D
2	A	B	C	D
3	A	B	C	D
4	A	B	C	D
5	A	B	C	D
6	A	B	C	D
7	A	B	C	D
8	A	B	C	D
9	A	B	C	D
10	A	B	C	D

Question	Answer			
11	A	B	C	D
12	A	B	C	D
13	A	B	C	D
14	A	B	C	D
15	A	B	C	D
16	A	B	C	D
17	A	B	C	D
18	A	B	C	D
19	A	B	C	D
20	A	B	C	D