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Decentralization and equity: public health expenditure in the municipalities of the province of Buenos Aires

Descentralización y equidad: el gasto público en salud en los municipios de la provincia de Buenos Aires

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ABSTRACT In this paper we analyze the degree of equity in access to the public health care system in the Province of Buenos Aires (Argentina). Through a quantitative retrospective study, we analyze the inequalities in the distribution of the total public health expenditure per capita. This variable is used as a proxy for the ability of the inhabitants of each jurisdiction to access health care services. The results indicate the existence of large disparities in the levels of expenditure devoted to the population without health coverage. Moreover, the existence of greater health care needs (estimated using infant mortality rates and percentage of homes with basic needs unmet) does not translate into higher levels of public expenditure. Finally, we detect a positive association between the relative wealth of municipalities (measured by the gross geographic product per capita) and the public health expenditure per capita.
KEY WORDS Decentralization; Financial Resources in Health; Equity in Health; Equity in Access; Argentina.

RESUMEN El objetivo del presente trabajo es analizar el grado de equidad en el acceso a los servicios de salud del subsector público entre los habitantes sin cobertura de salud de los municipios de la provincia de Buenos Aires (Argentina). Mediante un estudio cuantitativo y retrospectivo se analizó la desigualdad en la distribución del gasto público en salud per cápita, variable que se emplea como una proxy de la capacidad de acceso a los servicios de salud de los habitantes de cada jurisdicción. Los resultados indican la existencia de fuertes disparidades en los niveles de gasto en salud por habitante sin cobertura sanitaria. Asimismo, la existencia de mayores necesidades de atención de la salud (estimadas con la tasa de mortalidad infantil y el porcentaje de hogares con necesidades básicas insatisfechas) no se corresponde con niveles más altos de gasto público. Finalmente, se detectó una asociación positiva entre la riqueza relativa de los municipios (medida por el producto bruto geográfico per cápita) y el monto per cápita de las erogaciones en salud.
PALABRAS CLAVES Descentralización; Recursos Financieros en Salud; Equidad en Salud; Equidad en el acceso; Argentina.

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INTRODUCTION

The trend observed in the last decades towards greater decentralization of spending responsibilities to the lower levels of government is justified by the literature of fiscal federalism. The literature explains that, in order to increase the efficiency of resource allocation, certain spending responsibilities should be designated to the government level which most closely represents the preferences of beneficiaries (1,2).

In the province of Buenos Aires (Argentina), some responsibilities of the public healthcare system are decentralized. While this decision was made with the argument of achieving greater efficiency, its objectives in terms of equity were not as clear. This process began in the late 1970s with the transfer of primary healthcare services and some low complexity healthcare facilities to the municipalities, services whose direct beneficiaries are the residents of the area in which the centers are located. On the other hand, the provinces were given the responsibility of providing high complexity services through the provincial hospital network, whose main users are patients from a much larger area of influence. Within this context, and with the exception of the hospitals of the armed forces, the national government only takes part in the public health expenditure carried out in the municipalities of each province through different programs to provide information, services, medicine and supplies which are distributed through the network of municipal and provincial healthcare facilities.

Despite the potential efficiency gained by the introduction of fiscal federalism into the public health sector, one of the risks is the possibility of inequities arising in the access to medical and public health goods and services among the different geographic areas (3,4). It can be expected that the greater influence of the municipalities in the budgetary decisions of the public health sector, in addition to the differential capacity to generate and utilize resources and the diverse preferences existing regarding public expenditure, will result in different levels of service provision among the local governments which will not necessarily be related to the healthcare needs of each population (5).

Health equity can be addressed from two standpoints: equity in health results and equity in healthcare. The goal of the former is that each individual have the same possibilities of reaching his or her maximum health potential. However, equity in the access to healthcare is based on the principle that individuals with the same healthcare needs should be guaranteed that they will have the same possibility of accessing high quality healthcare goods and services (6). The latter concept is the one that will be used in this paper.

It must be noted that equal access to medical and public health services is not always equitable. While equality implies uniform treatment of individuals or populations, equity requires differential treatment based on each individual's needs. In this way, inequalities in access may be equitable if they respond to differing healthcare needs.

Considering that public health expenditure may be decisive in the equitable provision of medical and healthcare services, we consider it relevant to analyze the distribution of public health expenditure among the municipalities that make up the province of Buenos Aires.

OBJECTIVES

The main objective of this paper is to analyze the degree of equity in the healthcare services access offered by the public subsector to the population without employment-based or prepaid medical coverage in the municipalities of the province of Buenos Aires (Argentina).

The specific objectives are: 1) to assess the level of inequality in the distribution of public health expenditure per capita among the population without healthcare coverage in the municipalities of the province of Buenos Aires; 2) to analyze the degree of association between public health expenditure in the municipalities per capita and the healthcare needs of each jurisdiction; and 3) to examine the relationship between the relative wealth of each county and the public health expenditure in the municipalities per capita.

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METHODOLOGY

Through a descriptive and quantitative study, we analyzed the inequality in the ability of inhabitants without employment-based or prepaid medical coverage in the municipalities of the province of Buenos Aires (Argentina) to access healthcare services. Such ability was operationally defined using the criterion proposed by Mooney (7), which considers the variable "public health expenditure per capita" as a measurement of the magnitude of the basket of healthcare goods and services that each jurisdiction makes available to its inhabitants. In this way, if the healthcare needs of two populations are equivalent, equity in access would require equal values of public health expenditure per capita. On the other hand, and according to the same criterion, the populations with greater healthcare needs should have greater expenditures per capita in order to obtain equitable treatment.

As a measurement of the public health expenditure in the municipalities, the sum total of the municipal expenditure for health and the provincial hospital expenditure, broken down by jurisdiction, was used. The breakdown by jurisdiction was carried out by reassigning part of the total budget executed by the provincial hospitals to each county of the province, using as the distribution criterion the place of residence of discharged patients. The data used are accrued values from the year 2007, obtained from the Division of Systematized Information [*Dirección de Información Sistematizada*] of the Ministry of Health of the Province of Buenos Aires. It is worth mentioning that the estimation of the public health expenditure in each municipality excludes the expenditures of specific provincial (a) and national (b) programs. In the calculation of the values per capita, only the population without healthcare coverage was considered (8), which was taken from the 2001 National Census of Population, Homes and Households [*Censo Nacional de Población, Hogares y Viviendas*] (9) (c).

Throughout section 1, it is assumed that all individuals without healthcare coverage have the same healthcare needs. Thus, different levels of health expenditure per capita would imply access to baskets of medical and healthcare goods and services of differing magnitude and would therefore be inequitable. The methodology used to analyze the degree of inequality in the public health expenditure values per capita in the municipalities among the inhabitants of the different counties of the province of Buenos Aires consisted of the following stages:

1. The population was divided into quintiles according to the amount of public health expenditure per capita received, as determined by the municipality of residence. In this way, the first quintile would be composed of the 20% of the population without healthcare coverage receiving the lowest amounts per capita, and the last quintile would correspond to the 20% of the population without healthcare coverage receiving the highest amounts per capita.
2. The public health expenditure in the municipalities and the average municipal expenditure for health per capita were analyzed for each quintile and their respective concentration curves were plotted.
3. The composition of the population without healthcare coverage was determined for each quintile according to the municipality of origin, classified by population density into: metropolitan periphery, rural area, semirural area and urban center from the interior of the country (d).

In section 2, the assumption that the population's healthcare needs were equal was lifted (e) in order to establish whether the differences observed in the public health expenditures in the municipalities were equitable. The medical care needs of each municipality were estimated using the following two indicators:

- Infant mortality rate: This indicator was included given that it is considered a very sensitive proxy variable for the general health status of a population (10). This information was obtained from the Division of Systematized Information of the Ministry of Health of the Province of Buenos Aires for the year 2007.
- Percentage of homes with unmet basic needs: This indicator was included owing to the numerous studies that highlight the existence of a direct relationship between the poverty level and the prevalence of certain diseases, where greater morbidity leads to a greater need for

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health expenditure (11). These data were obtained from the 2001 National Census of Population, Homes and Households (9) (c).

The methodology applied to determine if the inequalities observed in the public health expenditure of each municipality are justified by the different local healthcare needs consisted of the following stages:

1. The municipalities were grouped by quintiles of need, in such a way that the first quintile included the 20% of municipalities with the lowest percentages of population with unmet basic needs and the lowest infant mortality rate, and the last quintile included the 20% of municipalities with the greatest values for these conditions.
2. It was analyzed whether greater need as measured through these indicators corresponded to higher average values per capita of public health expenditure in the municipalities and municipal expenditure for health.

Finally, in section 3 the following procedure was applied in order to determine the relationship between the wealth of each municipality, measured by its gross geographic product per capita, and health expenditure per capita:

1. In order to estimate the gross geographic product per capita for each municipality, the municipal gross geographic product series for the year 2003 was used, taken from the information provided by the Economic Coordination Undersecretariat of the Ministry of Economy of the Province of Buenos and the estimate of the population of each municipality in the year 2003 made by the National Institute of Statistics and Censuses [*Instituto Nacional de Estadística y Censos*] (12).
2. The municipalities were grouped by quintiles of gross geographic product per capita, in such a way that the first quintile included the 20% of municipalities with the lowest gross geographic product, and the last quintile included the 20% with greater relative wealth.
3. A comparison was made between the public expenditure and the municipal expenditure for health values per capita for each quintile of gross geographic product.

RESULTS

1. Evaluation of the equity of public health expenditure

With the purpose of addressing the inequality in the distribution of health expenditure among municipalities, the following variables were evaluated: public health expenditure in the municipalities and municipal expenditure for health. In Figure 1, their average values per capita are presented, arranged in population quintiles according to the public health expenditure in the municipalities per capita. The results of this figure show considerable disparities in the average values of the analyzed variables.

Next, in Figure 2 the concentration curves of each variable are presented. They were constructed to analyze the inequality in the distribution of public health expenditure in the municipalities per capita in relation to the municipal expenditure for health per capita. In this figure, the horizontal axis measures the cumulative percentage of population without healthcare coverage in ascending order according to public health expenditure in the municipalities per capita, while the vertical axis measures the cumulative percentage of public health expenditure in the municipalities and the municipal expenditure for health. The equidistribution line shows a perfectly egalitarian situation, in which each proportion of the population with lower public health expenditure in the municipalities per capita receives the same proportion of public health expenditure in the municipalities and of total municipal expenditure for health. The further the density curve lies from equidistribution line, the more unequal the distribution of the plotted variable.

When analyzing Figure 2, one can conclude that the municipal expenditure for health is distributed more unequally in the population without healthcare coverage than the public health expenditure in the municipalities per capita. Since the latter is the sum total of municipal expenditure for health and provincial hospital expenditure, it can be inferred that the provincial intervention tends to reduce the differences existing in the municipal expenditures for health. With the purpose of showing the magnitude of the provincial

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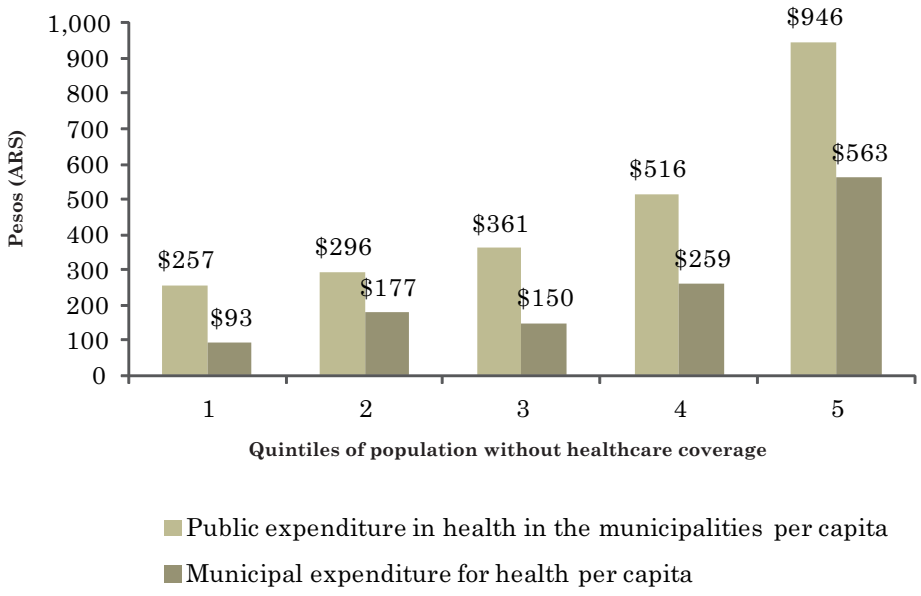

Figure 1. Average public health expenditure per capita. Analysis by quintiles of population without healthcare coverage arranged according to public health expenditure in the municipalities per capita. Province of Buenos Aires, 2007.

Source: Own elaboration based on data provided by the Division of Systematized Information of the Ministry of Health of the Province of Buenos Aires and the 2001 National Census of Population, Homes and Households (9).

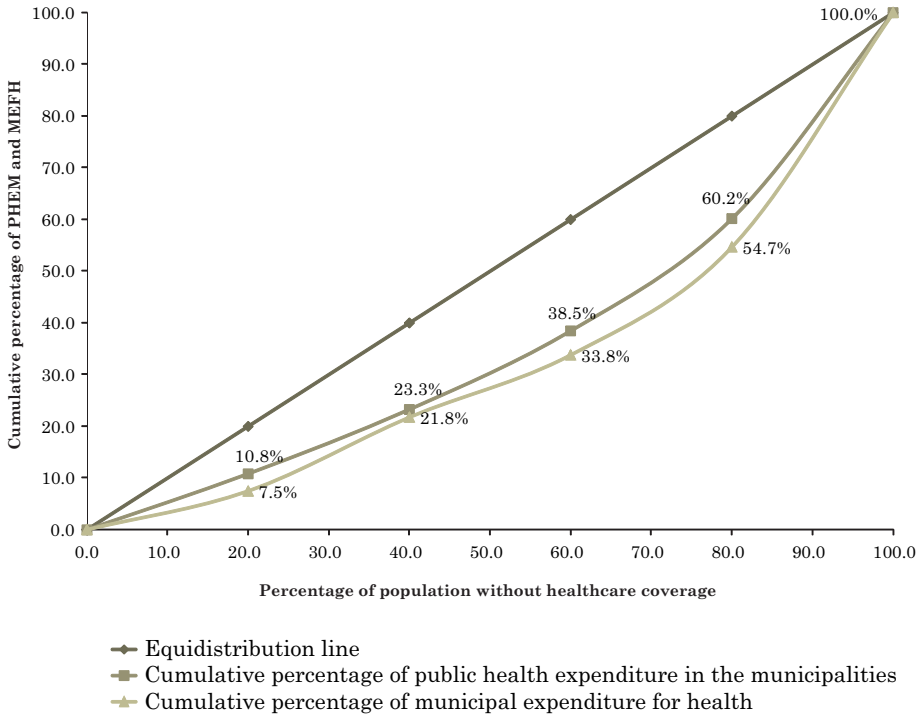

Figure 2. Concentration curves of public health expenditure. Population arranged according to the public health expenditure in the municipalities per capita. Province of Buenos Aires, 2007.

Source: Own elaboration based on data provided by the Division of Systematized Information of the Ministry of Health of the Province of Buenos Aires and the 2001 National Census of Population, Homes and Households (9).
PHEM = Public health expenditure in the municipalities. MEFH= Municipal expenditure for health.

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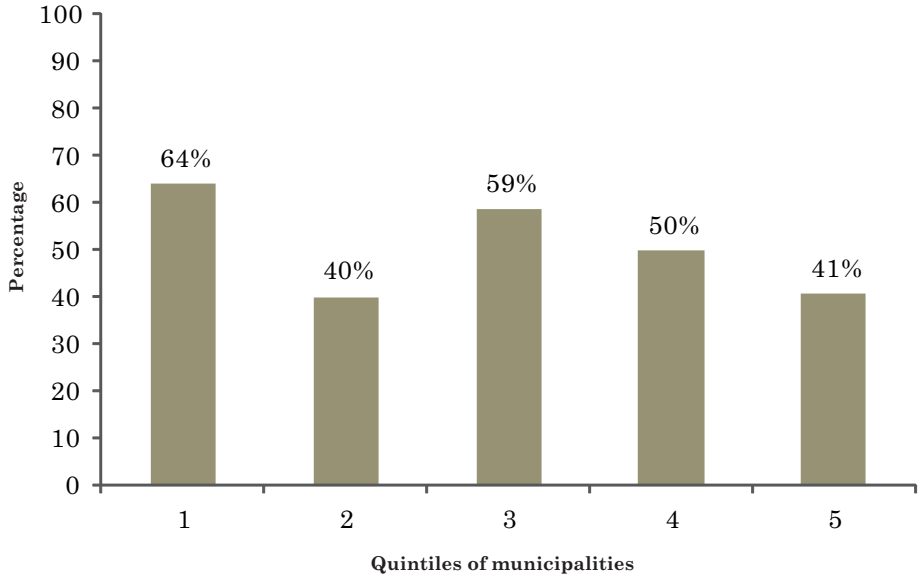

Figure 3. Average participation of provincial hospital expenditure in public health expenditure in municipalities. Analysis by quintile of municipalities arranged according to public health expenditure in the municipalities per capita. Province of Buenos Aires, 2007.

Source: Own elaboration based on data provided by the Division of Systematized Information of the Ministry of Health of the Province of Buenos Aires and the 2001 National Census of Population, Homes and Households (9).

state's intervention in each quintile of population without healthcare coverage, the estimation of the proportion of public health expenditure in the municipalities that corresponds to provincial hospital expenditure by quintile is introduced in Figure 3. With the exception of the second quintile, it is observed that provincial hospital spending tends to be smaller as public health expenditure in the municipalities per capita grows. This may suggest that, in local governments with low levels of public health expenditure in the municipalities per capita, the province complements to a greater extent the health spending, a desirable fact from the point of view of equity in access.

Finally, since each quintile of public health expenditure is composed of individuals from different provincial municipalities, the districts were classified according to their population density into: metropolitan periphery, rural area, semirural area, and urban center from the interior of the country (d). In Table 1, the percentage of population without healthcare coverage in each category of municipalities making up the quintiles of public health expenditure in the municipalities per capita is evaluated.

Table 1. Percentage of population without healthcare coverage by category of municipalities and by quintiles according to public health expenditure in the municipalities per capita. Province of Buenos Aires, 2007.

Quintiles of PHEM per capita	Categories of municipalities			
	Metropolitan periphery %	Rural %	Semirural %	Urban %
1	29,4	0,0	5,9	0,0
2	26,8	0,0	0,0	13,2
3	26,6	0,0	8,8	10,1
4	13,5	17,5	29,5	44,5
5	3,8	82,5	55,9	32,3

Source: Own elaboration based on data provided by the Division of Systematized Information of the Ministry of Health of the Province of Buenos Aires and the 2001 National Census of Population, Homes and Households (9).

PHEM = Public health expenditure in the municipalities.

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The analysis of Table 1 indicates that of the population without healthcare coverage, 56% of those that live in the metropolitan periphery, 6% of the semirural population and 13% of the residents of urban municipalities are found in the two lowest quintiles. If we turn our attention to the two highest quintiles, we find 100% of the rural population without healthcare coverage, followed by 85% of the population of the semirural municipalities, and 76% of the inhabitants of urban centers from the interior of the country.

This overall situation, which shows residents of the metropolitan periphery are clearly at a disadvantage in comparison to the rest, admits some exceptions: 1) 18% of the population of the metropolitan periphery without healthcare coverage is found in the two highest quintiles, 2) 6% of the semirural population is in the first quintile, and 3) 13% of the urban population in the second quintile. These results show the existence of large differences in public health expenditure in the municipalities per capita within each group of municipalities.

2. Public health expenditure versus healthcare needs

The inequalities detected in the public health expenditure per capita are not necessarily inequitable if the healthcare needs of each population are heterogeneous. In order to determine the validity of this argument, the assumption that all individuals in the province without employment-based or prepaid medical coverage have the same healthcare needs is put aside in this section. The following two alternative indicators of need are used: the percentage of homes with unmet basic needs and the infant mortality rate. First, Figure 4 presents the average public health expenditure in the municipalities and the municipal expenditure for health of the municipalities grouped by quintiles according to the percentage of homes with unmet basic needs.

Geographic allocations of health expenditure that attempt to achieve equity among jurisdictions should make redistributions in favor of the regions with more precarious socioeconomic and public

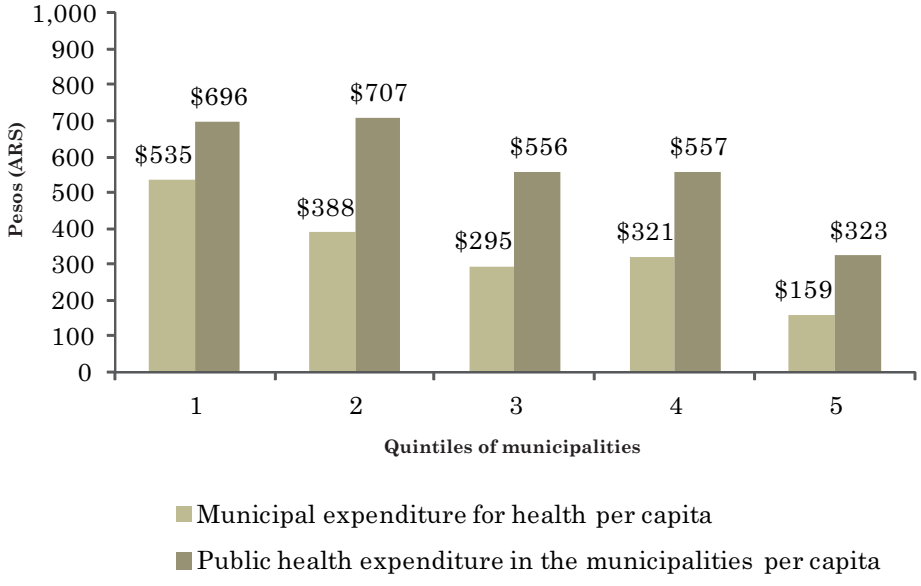

Figure 4. Average public health expenditure per capita (population without healthcare coverage). Analysis by quintiles of municipalities grouped according to their percentage of homes with unmet basic needs. Province of Buenos Aires, 2007.

Source: Own elaboration based on data provided by the Division of Systematized Information of the Ministry of Health of the Province of Buenos Aires and the 2001 National Census of Population, Homes and Households (9).

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health conditions (13). Nevertheless, it is not observed that the municipalities making up the more disadvantaged quintiles register greater average values of public health expenditure. On the contrary, the smaller the percentage of homes with unmet basic needs, the greater the public health expenditure per capita is. Indeed, comparing the values among the municipalities in the first quintile and those in the fifth quintile shows that, on average, the municipal expenditure of the first quintile is three times greater than that of the fifth quintile and the public health expenditure in the municipalities is slightly more than double.

In Figure 5, the analysis of the distribution of public health expenditure per capita using the infant mortality rate as a need indicator is presented. Once again, it is not observed that the municipalities with a greater infant mortality rate received higher levels of public health expenditure per capita.

3. Health expenditure versus the wealth of the municipalities

Finally, in this section, the distribution of the public health expenditure in the municipalities and the average municipal expenditure for health is analyzed, among the municipalities grouped by quintiles according to their relative wealth, measured by the gross geographic product. In Figure 6, it is observed that, with the exception of the fourth quintile, greater municipal relative wealth would appear to be directly associated with higher levels of municipal and public expenditure per capita.

It is possible to establish different hypotheses that justify the positive association between municipal wealth, the values of public health expenditure in the municipalities and the municipal expenditure for health per capita. Such a result could indicate that the richest communities give more importance to the public provision of a preferential good such as medical care. In addition, it could be explained in terms

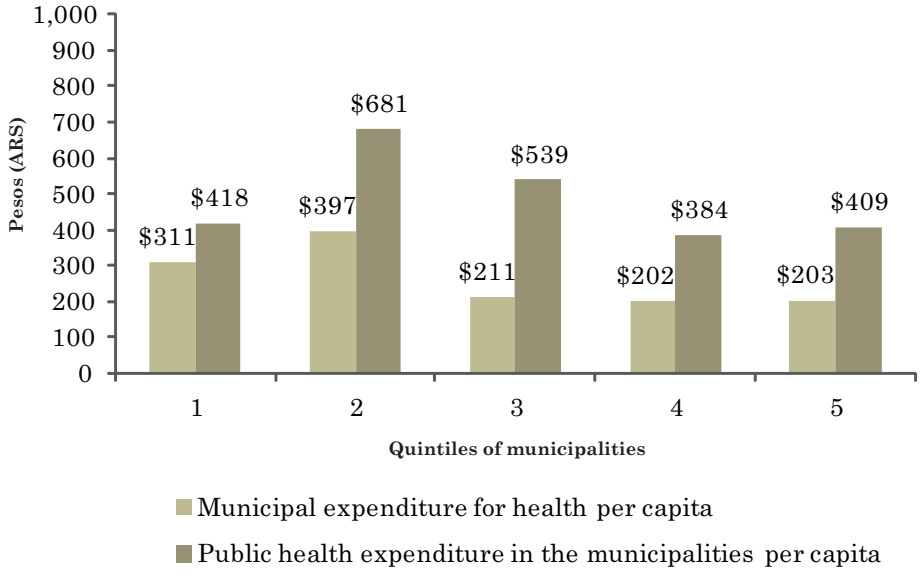

Figure 5. Average public health expenditure per capita (population without healthcare coverage). Analysis by quintiles of municipalities grouped according to infant mortality rate. Province of Buenos Aires, 2007.

Source: Own elaboration based on data provided by the Division of Systematized Information of the Ministry of Health of the Province of Buenos Aires and the 2001 National Census of Population, Homes and Households (9).

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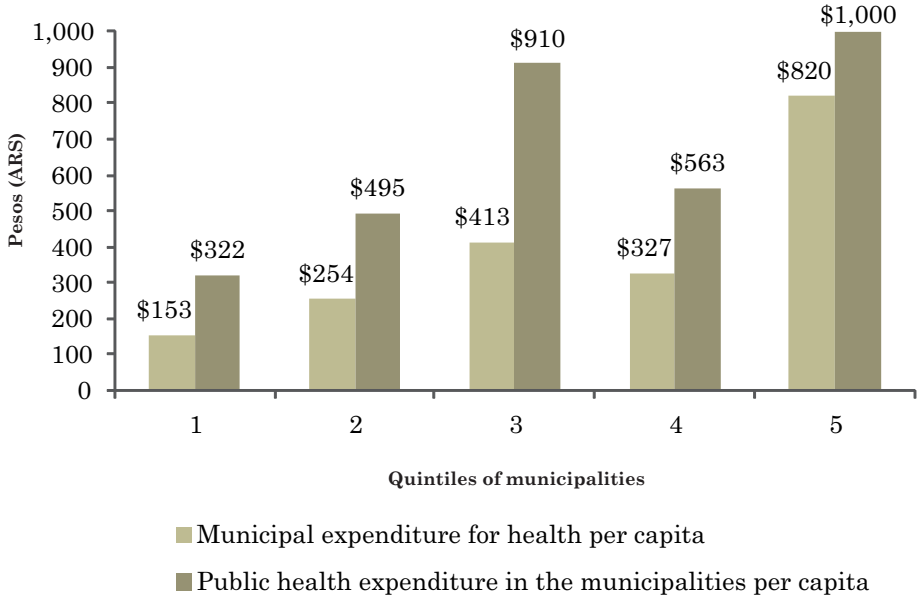

Figure 6. Average public health expenditure per capita (population without healthcare coverage). Analysis by quintiles of municipalities grouped according to gross geographic product per capita. Province of Buenos Aires, 2007.

Source: Own elaboration based on data provided by the Division of Systematized Information of the Ministry of Health of the Province of Buenos Aires and the 2001 National Census of Population, Homes and Households (9).

of the greater availability of public resources for municipal governments with greater relative wealth, which would therefore be in a condition to afford higher levels of health expenditure.

DISCUSSION

The territorial distribution of public expenditure directed toward providing medical and healthcare goods and services to individuals without healthcare coverage in the province of Buenos Aires is not adequate from the perspective of healthcare equity. The analysis by population quintiles highlights the existence of large disparities in the levels of public health expenditure per inhabitant without healthcare coverage, proving especially detrimental for residents of the municipalities of the metropolitan periphery. These inequalities are additionally inequitable if we assume that the entire population without healthcare coverage has the same healthcare needs.

The differences observed in the levels of public expenditure cannot be justified on the basis of a greater need for public health expenditure, as estimated by both the infant mortality rate and the percentage of homes with unmet basic needs. On the contrary, the wealth of each municipality seems to be positively associated with the public health expenditure in the municipalities per capita and the municipal expenditure for health per capita. This situation suggests the existence of differentiated access to public healthcare services in the provincial population without healthcare coverage according to their locality of residence, which favors inhabitants of "rich" municipalities.

When comparing the per capita values of public health expenditure in the municipalities and of provincial hospital expenditure, greater inequalities were registered in the former. It thus follows that the financial support of the province through hospital expenditure helps to reduce the inequality in public health expenditure in the municipalities in relation to municipal expenditure for health.

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The greater inequality in the health expenditure made by local governments (municipalities) in relation to the provincial hospital expenditure is consistent with the literature on fiscal federalism, which identifies the appearance of geographic inequities in the access to healthcare services as one of the risks of decentralization. Although it is possible that different preferences regarding the use of public expenditure may explain part of these inequities, a hypothesis more consistent with previous studies (14,15) would attribute the inequities to differences in the public resources available to local governments. If this is in fact the origin of the inequities, they can only be successfully addressed by reconsidering the funding mechanisms of municipal healthcare services.

Some limitations observed in the present research study that should be considered when evaluating the results are mentioned below.

One weakness arises from considering only the population without healthcare coverage of each municipality as a basis for the per capita calculations. Although it is assumed that the State has as a main objective the funding of healthcare for those without economic resources or healthcare insurance to meet their needs, part of the resources allocated to the first level of care (those directed to prevention and healthcare promotion activities) should be allocated to the entire population and not only to the population without healthcare coverage. This analysis was not possible due to lack of information regarding the percentages of public expenditure allocated to the first and second levels of care.

Another limitation is given by the fact that the analysis carried out does not include the national public expenditure for health destined towards the province of Buenos Aires. The reason for this was that it was impossible to obtain data broken down by jurisdiction. According to the information obtained from the Unit of Health Economic Analysis of the Ministry of Health of the Province of Buenos Aires, in the year 2007 the national expenditure amounted to 566 million pesos, accounting for approximately 11.5% of the consolidated public health expenditure in said province. The low percentage of national public health expenditure in the provincial total suggests that the amounts involved would not substantially modify the results found in relation to the public health expenditure per capita in the municipalities.

Finally, the measurement of provincial public health expenditure used only includes the provincial hospital expenditure, leaving aside other expenditure programs that should be included (b). Once again, this omission relates to the absence of data broken down by municipality. Maceira (16) classifies the components of the provincial public expenditure in: i) hospital and lab expenditure, ii) vaccination, iii) special programs (for catastrophic and endemic diseases), and iv) public health insurance. According to data provided by the Unit of Economic Analysis, in the year 2007, provincial expenditure for health amounted to 2,543 million pesos. In the same period, hospital expenditure amounted to 1,658 million pesos, representing approximately 65% of the total expenditure. Therefore, 35% of the provincial expenditure for health is not included in this study.

ENDNOTES

a. These programs include: Active Health; Reproductive Health and Responsible Procreation; Smoke-free Health; Maternal and Child Program; Public Health Insurance; Program against HIV-AIDS and STDs; Compulsive Gambling Program; Tuberculosis Program; Program for the Prevention, Diagnosis and Treatment of Diabetic Patients (PRODIABA); Program for Epilepsy Prevention (PROEPI); Program for the Prevention of Childhood Asthma (PROBAS); Program for the Prevention of Accidents and Lesions (PROPAL); Program for the Prevention of Genital and Mammarian Cancer (PROGEMA); Health in Movement Program for the Province; Program for Guaranteeing Healthcare Quality; Health and Sports Program; and Health and Environment Program.

b. Among the programs taking place in 2007, it is possible to mention REMEDIAR [program providing access to generic medicines], the Federal Health Program (PROFE), Essential Functions of Public Health Project, and the program Community Doctors, among others.

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c. It was not possible to use information from the 2010 census given that at the time this study was being developed, disaggregated data regarding healthcare coverage was not available by municipality.

d. The following classification criterion was employed: the urban municipalities from the interior of the country were the counties with over 100,000 inhabitants; the semirural were those with more than 50,000 and less than 100,000 inhabitants; and the rural those with a population of less than 50,000 individuals. The classification of the National Institute of Statistics and Censuses was adopted for the 24 metropolitan municipalities.

e. If we assume that the public health expenditure needs are heterogeneous, the inequalities observed in the amounts of public health expenditure in the municipalities per capita for the population without healthcare coverage in each municipality would not necessarily be unequal. In this case, vertical equity would require differential treatment (in terms of public health expenditure per capita) for populations with different levels of need.

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BIBLIOGRAPHIC REFERENCES

1. Musgrave R, Musgrave P. Public finance in theory and practice. New York: McGraw-Hill; 1989.

2. Ter-Minassian T, editor. Fiscal federalism in theory and practice. Washington DC: International Monetary Fund; 1997.

3. Okorafor O, Thomas S. Protecting resources for primary health care under fiscal federalism: option for resource allocation. Health Policy and Planning. 2007;22(6):415-426.

4. Bossert T, Larranaga O, Giedion R. Decentralization and equity of resource allocation: evidence from Colombia and Chile. Bulletin of the World Health Organization. 2003;81(2):95-100.

5. Oates W. An essay on fiscal federalism. Journal of Economic Literature. 1999;37(3):1120-1149.

6. Whitehead M. The concepts and principles of equity and health. Copenhagen: World Health Organization; 1990.

7. Mooney GH. Equity in health care: confronting the confusion. Effective Health Care. 1983;1(4):179-185.

8. Barbieri N, De la Puente C, Tarragona S. La equidad en el gasto público en Salud. La Plata: Instituto de Investigaciones de la Maestría en Finanzas Públicas Provinciales y Municipales; 2002. (Serie de Estudios en Finanzas Públicas Nº 9).

9. Instituto Nacional de Estadística y Censos. Censo Nacional de Población, Hogares y Vivienda 2001: Base de datos [Internet]. Buenos Aires: INDEC [cited 10 Jul 2012]. Available from: http://www.indec.gov.ar/cgibin/RpWebEngine.exe/PortalAction?&MODE=MAIN&BASE=CPV2001ARG&MAIN=WebServerMain.inl.

10. Reidpath D, Allote P. Infant mortality rate as an indicator of population health. Journal of Epidemiology and Community Health. 2003;57(5):344-346.

11. Poblete S, Vargas V. El ajuste socioeconómico en el financiamiento de la atención primaria. Revista Chilena de Medicina Familiar. 2007;8(1):24-31.

12. Instituto Nacional de Estadística y Censos. Proyecciones provinciales de población por sexo y grupos de edad 2001-2015. Buenos Aires: INDEC; 2005. (Serie Análisis Demográfico).

13. Porto SM. Equidad y distribución geográfica de recursos financieros en los sistemas de salud. Cadernos de Saúde Pública. 2002;18(4):939-957.

14. Barbieri NC. Política fiscal y política sanitaria: tensiones evidentes a partir de los criterios de reparto de la masa coparticipable y los métodos de determinación de transferencia. Salud Colectiva. 2007;3(1):49-61.

15. Chiara M, Di Virgilio M, Ariovich A. La coparticipación provincial por salud en el Gran Buenos Aires: Reflexiones en torno a la política local (2000-2005). Salud Colectiva. 2010;6(1):74-64.

16. Maceira D. Informe Final: Evaluación del Programa de Seguro Público de Salud de la Provincia de Buenos Aires [Internet]. Buenos Aires: CIPPEC; 2008 [citado 12 Jul 2012]. Available from: http://www.cippec.org/Main.php?do=documentsDoDownload&id=301.

CITATION
Lago FP, Moscoso NS, Elorza ME, Ripari NV. Decentralization and equity: public health expenditure in the municipalities of the province of Buenos Aires. Salud Colectiva. 2012;8(3):263-274.

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