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VIEWPOINT

Segmentation and fragmentation of health systems and the quest for universal health coverage: conceptual clarifications from the Mexican case

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Abstract

Health systems are complex entities. The Mexican health system includes the private and public sectors, and subsystems that target different populations based on corporatist criteria. Lack of unity and its consequences can be better understood using two concepts, *segmentation* and *fragmentation*. These reveal mechanisms and strategies that impede progress toward universality and equity in Mexico and other low- and middle-income countries. *Segmentation* refers to separation of the population by position in the labour market. *Fragmentation* refers to institutions, and to financial aspects, health care levels, states' systems of care, and organizational models. These elements explain inequitable allocation of resources and packages of health services offered by each institution to its population. Overcoming *segmentation* will require a shift from employment to citizenship as the basis for eligibility for public health care. Shortcomings of *fragmentation* can be avoided by establishing a common package of guaranteed benefits. Mexico illustrates how these two concepts characterize a common reality in low- and middle-income countries.

Keywords Health systems · Public health systems research · Health systems plans · Healthcare financing · Health services · Universal health coverage · Mexico

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Key messages

- Although segmentation and fragmentation are used synonymously in analyses of health systems, they refer to specific characteristics that need to be clarified for a thorough understanding of the design and functioning of health systems around the world.
- *Segmentation* refers to separation of the population by position in the labour market. *Fragmentation* refers to institutions, and to financial aspects, health care levels, states' systems of care, and organizational models.
- Overcoming *segmentation* depends on establishing citizenship as basis of eligibility for public health care. States can avoid shortcomings of *fragmentation* by establishing a common package of guaranteed benefits.

Introduction

Incredible as it may seem, we must insist repeatedly that health systems become precisely that *systems*: organised sets of components and relationships that interact. They are part of larger systems, the societies in, and for which they operate. Each health system exists among and interacts with other social systems: an education system, a political system, an organization of labour and the labour market, a communication system, and a transportation system, among others. Health systems encompass subsystems characterized by numerous and multidirectional interrelationships [1]. Health systems are complex entities governed by non-linear interaction laws, self-organization, and emergent phenomena [2].

As do several other health systems in the world, and particularly those in Latin American and Caribbean (LAC) countries, the architecture of the health system of Mexico includes a diversity of organizational modalities or subsystems that go beyond the basic division between the private and public health sectors [3, 4]. In Mexico, these organizational modalities include three main traits:

- each targets different populations according to elemental corporatist eligibility criteria linked to the private and public sectors of the formal economy,
- each has heterogeneous forms of financing, and
- each includes different portfolios of services [5].

Each has somewhat different forms of subnational governance. Since the start of their modern development in 1940s, these differences have led to a lack of unity in most LAC health systems, including that of Mexico [6]. Disunity, the central feature, makes it difficult to understand or to build a coherent national health system capable of providing effective universal health coverage (UHC) and of responding to the health needs of the entire population in an equitable manner [7].

There is consensus among analysts that Mexico's public health system is an *unarticulated system* [8, 9], one that lacks unity in several dimensions. Improving clarity about what this means can help us understand the multiple breakdowns of the Mexican health system and help us try to remedy them. We use two concepts related to lack of unity that can guide health policy and may also be useful politically: *segmentation* and *fragmentation* [7, 9–14]. As will be noted below, this distinction is necessary to clarify political standpoints—with their implicit approaches, values, and principles—on how to achieve UHC. To date the literature does not reflect sufficient understanding of the concepts and their potential utility.

Thus, this viewpoint discusses the utility of the concepts of segmentation and fragmentation to understand and distinguish the most relevant aspects of the lack of unity of the Mexican public health system and to advance some ideas about how to progress towards a more democratic health system and UHC.

Segmentation and fragmentation: conceptual clarifications

Contrary to generally accepted interpretations [16, 17], segmentation and fragmentation are not synonyms. Each can be used to describe relevant and distinct traits of a health system, particularly the public sector of the Mexican health system, as well as that of other low-and-middle-income countries [16]. The online Oxford Learners' Dictionary defines fragmentation as "the act or process of breaking or making something into small pieces or parts" [17]. Although like the definition of segmentation: "the act of dividing something into different parts" [17], certain nuances come into light when we consider the examples of how each can be used: "…the fragmentation of the country into small independent states" [8], and "…the segmentation of social classes" [9].

The dictionary led us to the corresponding nouns: *fragment* and *segment*. A fragment is "a small part of something that has broken off or comes from something larger" [18]; a segment is "a part that is *separate from other* parts or can be considered separately" [19]. Both are "parts" of something larger, but the fragment is related to some sort of accident, it "has broken off", while the segment "can be considered separately" even though it remains as an unbroken part of the whole. Thus, segmentation points to an effort or intention, mentally or conceptually, to separate something into different parts to understand it, but these parts are not isolated. Following suggestions in the online Oxford Learners' Dictionary, we searched for the lists of synonyms for fragmentation and segmentation on Thesaurus.com only to find that the list of 38 synonyms for segmentation does not include the word fragmentation [20]. The much shorter list of four synonyms for fragmentation includes only dissolution, decentralization, demoralization, and putrefaction [21]. The list of synonyms for fragment includes 28 terms, none of which is segment [22]. The 15 synonyms for segment do not include fragment [23].

To better understand each concept, we looked at their application to economics. A similar search to the one described above, using the online dictionary of the *Real Academia de la Lengua Española*, gave us a definition for "market segment": *Cada*

uno de los grupos homogéneos diferenciados a los que se dirige la política comercial de una empresa (Each of the differentiated homogeneous groups targeted by a company's commercial policy) [24]. Our search for English language definitions of segmentation directed us to the website of *The Economic Times*, where we found something quite similar [25]:

> Segmentation means to divide the marketplace into parts, or segments, which are definable, accessible, actionable, and profitable and have a growth potential. In other words, a company would find it impossible to target the entire market, because of time, cost, and effort restrictions. It needs to have a 'definable' segment - a mass of people who can be identified and targeted with reasonable effort, cost, and time.

Why refer to definitions of segmentation related to economics and the working of markets? Health systems are influenced by economic and political factors—for example, the relationships among employers, employees, and unions—but first and foremost health is an absolute social value and a human right. In this sense, health systems are vehicles for protecting this social value and human right. This is why we argue there is a need to differentiate and discern what each tells us about health systems in general, and the unarticulated Mexican health system. This health system not only lacks unity, but it also demonstrates multiple kinds of ruptures. We need to clarify these to open a path for shaping new policies and support the political struggle they imply. Without these distinctions we will still be far from attaining UHC.

Before deepening the analysis to address the implications of segmentation in the Mexican health system, let us reconsider the differences between "…the fragmentation of the country into small independent states" [8], and "…the segmentation of social classes" [9]. Fragmentation of a country into independent states does not convey any sense of qualification, degree, status level nor any other difference among the states as fragments of a federally organized nation. In contrast, the distinction of social classes implies socially qualified categories, income levels or other characteristics that convey the notion of more and less favoured populations. It implies the existence of populations with *different levels of access to all kinds of goods and services*. Thus, segmentation is a concept particularly useful to understand market dynamics as well as social classes. It is, therefore, a good tool to support a socioeconomic analysis, and other structural considerations such as discrimination based on occupational status or any other social criteria.

Segmentation of the Mexican health system

Starting with the creation of the *Instituto Mexicano del Seguro Social* (Mexican Social Security Institute) (IMSS) in 1943, and 20 years later with that of the *Instituto de Seguridad y Servicios Sociales para los Trabajadores del Estado* (State's Workers Security and Social Services Institute) (ISSSTE), Mexico established a clear distinction between two different kinds of citizens. First, Mexico accommodated those directly or indirectly linked to the formal economy because they (or the head of their household) had a place in the labour market and were employed in a

registered private company or a public institution. The rest of the population consisted of people who were unemployed, self-employed, or working in the informal economy. According to data from the National Occupation and Employment Survey (Encuesta Nacional de Ocupación y Empleo) during March 2023, 45.5% of the employed population (59 million) worked in the formal sector (26.5 million); the remaining 54.5% (slightly more than 32 million) worked in the informal sector [26].

Segmentation refers to separation of the population according to their positions in the labour market. The definition provided by *The Economic Times* helps us to see that Mexico created two "definable segments" of the population, one being: "people who can be identified and targeted with reasonable effort, cost and time". But it is the State, not a private company, that struggles to organize a certain kind of services particularly relevant for the development of the nation: health care for the working class. Because a large part of the working class has been, and remains excluded from the formal economy, they are underserved. Those served include only workers who participate in organized groups—mainly unions—with political and economic power. It is for these particular social groups organized in corporations that the State created social security institutions for their health care—among other social benefits. This history laid the foundation for segmentation [27].

Starting from this essential segmentation, Mexico created other segments over time. Corporativist criteria led the second-degree segmentation process: employment in the public or the private sector; or a particular public institution whose workers are forcefully affiliated with its specific union; or in different areas of the economic activity and, therefore, in their related unions [27, 28]. The first and most obvious corporativist second-degree segmentation is between workers in the private sector and employees of public institutions. After Mexico established this distinction, it rapidly created several others inside the public employees' segment: separating workers for the government (ISSSTE), the army (SEDENA) and the marine (MARINA) forces. The most privileged employees work for a publicly owned institution: the Mexican oil company *Petróleos Mexicanos* (PEMEX).

The term segmentation is very useful to distinguish those employed in the formal economy and benefiting from the social security, from those who earn a living outside the formal economy and are not entitled to social security. A secondary segmentation appeared between people employed in the public and private sectors of the formal economy. Then, a third segmentation inside the public sector separated public servants in different institutions or regions. Segmentation is a term related to the labour characteristics of the population.

Fragmentation of the Mexican health system

We have identified five areas of fragmentation of the Mexican health system. Financial fragmentation is the subject of important analyses of several LAC health systems that generally encompass other closely related domains of a health system [15]. Financial fragmentation includes collecting, pooling, and purchasing functions. This results in a diversity of sources of resources to pay for health care and other health system functions, with a higher proportion of out-of-pocket spending, concentration

in various dispersed funds that limit risk aggregation, and leads to inefficiencies, duplication, and the persistence of inequities [9]. Fragmentation also increases the propensity of catastrophic health expenditure [29]. Other aspects of the lack of unity also characterize the Mexican public health system. Each point towards different practical implications: (a) fragmentation of the institutions, (b) fragmentation of levels of health care, (c) fragmentation of the states' systems of health care, and (d) fragmentation of health care organization models.

Fragmentation of the institutions

The Mexican public health sector includes, or is formed by, several institutions. Those that provide health care to the population entitled to benefit from the social security include IMSS, ISSSTE, SEDENA, MARINA and PEMEX. Several other institutions are responsible for providing health care to the population that is not eligible for social security: the federal secretariat of health, the 32 states' secretariats of health, and IMSS-Bienestar [30]. The most important characteristic of all these institutions is that each is relatively autonomous regarding: (a) governance and administration; (b) explicit definition of priorities, programs, and strategies; (c) internal and external coordination, regulation of health care, as well as of sources, level of funds to finance their operations, and (d) design by each of a portfolio of health services. There is no relationship among these institutions to ensure their convergence to guarantee integration of the health care they provide to their enrollees into a continuum of care or the provision of a homogenous package of services including a uniform pricing system [31, 32].

Fragmentation of healthcare levels

Provision of services is fragmented by three levels of care. Patient referral mechanisms from one level to another are sometimes not explicit and usually lack elements such as adequate transportation or portable electronic files to ensure transfer of patients with sufficient information to guarantee the continuity of care, not to mention portability among health care institutions [32].

Fragmentation of the states' health care systems

Although currently under revision, decentralization of the national health system launched in 1982 led to the existence of 32 subnational health systems that have no clear nor homogenous mechanisms for cross-system provision and financing of care. Even if IMSS and ISSSTE have legal mechanisms for cross-billing of services, and some agreements have been tested for interinstitutional care of some health conditions such as obstetric emergencies, their scope is limited, and their use is infrequent [32].

Fragmentation of healthcare organization models

Fragmentation is also present due to numerous health care organization models with differing degrees of government control over service provider organizations and eligibility criteria for participation [33]. The social security model, based on the beneficiary's employment status, has a high degree of state control over its institutions. The public assistance care system, where eligibility criteria target social groups on the basis of vulnerability, depends on state welfare action.

Towards a better articulation of the Mexican healthcare system

In 1984, the Mexican Congress approved the establishment of the right to health (Article 4 of the Constitution). This was a most relevant step towards elimination of segmentation. It also eliminated the word "assistance" from the name of the ministry of health, called Secretaría de Salud (Health Secretariat) afterward. Since that time, it has been responsible for steering the entire health system towards attaining UHC.

Some reforms have been followed by regression. In 2019, the Congress amended Article 4 of the Constitution to establish a "welfare health system" aimed at people excluded from social security, contradictorily reinforcing the structural segmentation of the health system [14]. Instead, the goal should be to establish a universal health system that guarantees all citizens comprehensive, quality services, without discrimination based on employment status. In other words, a health system, in which contributions and benefits are distributed equitably. This is an ongoing challenge for most LAC countries as well as for other low- and middle-income countries in the world [14, 15, 34].

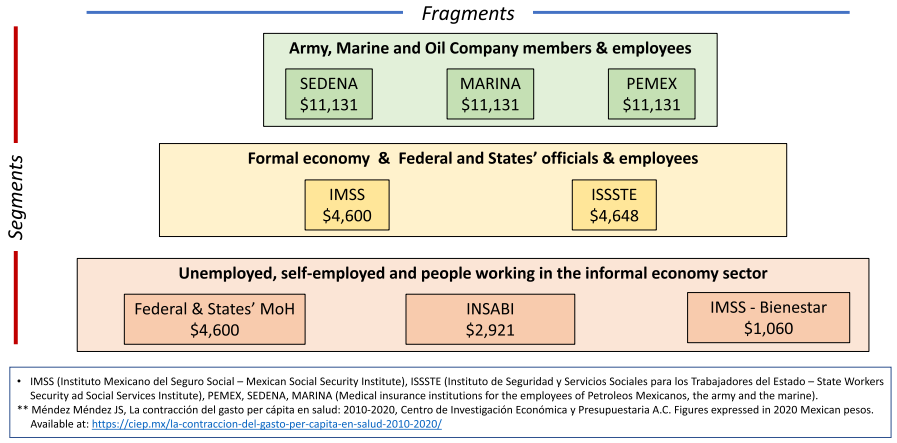

Fig. 1 Segmentation of populations, fragmentation of institutions and *per capita* expenditures in the Mexican public sector health system, 2020. *Source* based on Meneses-Navarro et al. [14]

The Mexican public health system today is still characterized by the segmentation of the population along with fragmentation of the public institutions devoted to health. These two concepts overlap, while their specificities define characteristics of the whole health system (Fig. 1). We can visualize a horizontal and almost pyramidal division of the population depending on the place held by the head of the household in the labour market: segmentation. This division defines the content and quality of the health care to which they are entitled. We also depict a complementary vertical separation of independent institutions responsible for each segment: fragmentation. Most important is the inequitable allocation of resources that each institution dedicates to the care of its assigned population segment. As noted above, this depends on corporatist criteria (Fig. 1).

According to the 2020 Population and Housing Census (Censo de Población y Vivienda) [35], of the total population (125.3 million people), 44.9% self-reported belonging to only one of the two segments of social security, and 51.9% declared belonging exclusively to the portion of the population with no social security (out of which 56.1% registered with Seguro Popular and/or INSABI and 43.9% had no health insurance), and 2.3% had some form of private insurance. Finally, in all data recorded, only 0.9% population reported health insurance enrolment in more than one of the schemes. Data from the public accounts and the federal budget show relative homogeneity in the funds assigned to the social security segments and a clear gap between these and the *per capita* expense allotted to the segments without social security (Fig. 1).

To overcome segmentation, the first step needs to be creation of a legal framework that specifies that the basis of eligibility for public health services is citizenship—not a corporatist criterion that is inherently discriminatory. Moving in this direction can be aided by establishing an equitable financial mechanism, preferably based on general taxation, and a common fund where resources are pooled, and risks are shared. Simultaneously, it will be essential to establish a common package of guaranteed benefits, to increase gradually. This implies a profound redesign of every function of the health system; that discussion exceeds the scope of this Viewpoint.

Fragmentation is not necessarily problematic if the State assures equitable packages of health services and articulation of activities performed by the different institutions. The main task for overcoming problems associated with fragmentation is strengthening the State's capacity to manage the entire health system regardless of which or how many institutions are involved, the levels of care, or how decentralized. The key is for the system—to function as a system: a single integrated and articulated one that guarantees prompt and continuous care for each user.

Segmentation and fragmentation of the public sector of the Mexican health system situation is shared to some extent by other countries, including Argentina [36], Guatemala [37], Honduras [38], Nicaragua [39], Perú [40], Dominican Republic [41], and El Salvador [42], among others. The distinction is not just a matter of academic or intellectual precision. Understanding this can guide policy development.

Fragmentation by itself is not an obstacle to UHC and equitable health service provision. Nor the existence of numerous institutions necessarily create a problem. Instead, it is allocation of resources, portability based on sharing of information about organizations and the people, and the content of health services packages that

can make the system work- articulately. In a country where only 45% of workers participate in the formal economy [26] problems linked to continuous and large-scale mobility of labour between the formal and informal sectors of the economy will never be solved without a fundamental change to include all citizens more equitably in the social security schemes. Any effort to advance towards UHC must start to eliminate the segmentation of corporatist groups.

Solving segmentation implies integrating the whole population, with citizenship as the basic principle for eligibility for health protection, and, ideally, all other benefits of social security. The aim is to guarantee access, quality, and continuity of health care for all in an equitable manner and with a people-focused approach. We need to create political consensus and to build a medium- and long-term vision of the state based on the citizens' right not just to some kind of health care, but to relatively equality in allocation of health-related goods, services, and the life opportunities they promote. In this task, public health research and practice will provide the basis to build equitable and universal health systems.

Conclusions

With all the particularities presented in this paper, the Mexican example may be useful for a wide perspective, because two the concepts describe a reality that is similar in many ways for low- and middle-income countries in LAC, and some in Asia. The need to change to more universal, equitable systems is urgent. Although there may be positive aspects of fragmentation, such as encouraging competition among the different institutions to attract their clientele by offering better egalitarian packages of health services, quality standards must be regulated by the State. In any case, it is still necessary to advance research that will ensure the application of the most adequate ways to democratically achieve UHC.

References

1. Adam T, De Savigny D. Systems thinking for strengthening health systems in LMICs: need for a paradigm shift. Health Policy Plan. 2012;27(Suppl. 4):2006–8.
2. Lipsitz LA. Understanding health care as a complex system: the foundation for unintended consequences. JAMA. 2012;308(3):243–4.
3. Londoño JL, Frenk J. Pluralismo estructurado: Hacia un modelo innovador para la reforma de los sistemas de salud en América Latina, No 353. Inter-American Development Bank, Office of the Chief Economist; 1997. pp. 1–32.
4. Frenk J, Gómez-Dantés O. Health systems in Latin America: the search for universal health coverage. Arch Med Res. 2018;49(2):79–83.
5. Field MG. The concept of the "health system" at the macrosociological level. Soc Sci Med. 1973;7(10):763–85.
6. Gómez-Dantés O, Sesma S, Becerril VM, Knaul FM, Arreola H, Frenk J. Sistema de salud de México, vol. 53. Salud Publica de Mexico; 2011.
7. Gómez-Dantés O, Flamand L, Cerecero-García D, Morales-Vazquez M, Serván-Mori E. Origin, impacts, and potential solutions to the fragmentation of the Mexican health system: a consultation with key actors. Health Res Policy Syst. 2023;21(1):80.

8. Frenk J, Gómez-Dantés O. Para entender el sistema de salud de México. México: Nostra Ediciones; 2008.
9. Stange KC. The problem of fragmentation and the need for integrative solutions. Ann Fam Med. 2009;7(2):100–3.
10. Chong JL, Lim KK, Matchar DB. Population segmentation based on healthcare needs: a systematic review. Syst Rev. 2019;8(1):202.
11. Bernales-Baksai P. Tackling segmentation to advance universal health coverage: analysis of policy architectures of health care in Chile and Uruguay. Int J Equity Health. 2020;19(1):106.
12. Dureab F, Hussain T, Sheikh R, Al-Dheeb N, Al-Awlaqi S, Jahn A. Forms of health system fragmentation during conflict: the case of Yemen. Front Public Health. 2021;9: 659980.
13. Siqueira M, Coube M, Millett C, Rocha R, Hone T. The impacts of health systems financing fragmentation in low- and middle-income countries: a systematic review protocol. Syst Rev. 2021;10(1):164.
14. Meneses Navarro S, Pelcastre-Villafuerte BE, Becerril-Montekio V, Serván-Mori E. Overcoming the health systems' segmentation to achieve universal health coverage in Mexico. Int J Health Plan Manag. 2022;37(6):3357–64.
15. Bossert T, Blanchet N, Sheetz S, Pinto D, Cali J, Cuevas RP. Comparative review of health system integration in selected countries in Latin America. Inter-American Development Bank; 2014.
16. Atun R, de Andrade LOM, Almeida G, Cotlear D, Dmytraczenko T, Frenz P, et al. Health-system reform and universal health coverage in Latin America. Lancet. 2015;385(9974):1230–47.
17. Oxford University Press. Definition, pictures, pronunciation and usage notes | Oxford Advanced Learner's Dictionary at OxfordLearnersDictionaries.com. Oxford University Press; 2019 (cited 1 Feb 2023). https://www.oxfordlearnersdictionaries.com/us/definition/english/segmentation?q=segmentation.
18. Hutson DJ. Definition, pictures, pronunciation and usage notes | Oxford Advanced Learner's Dictionary at OxfordLearnersDictionaries.com. Oxford University Press; 2019 (cited 1 Feb 2023). https://www.oxfordlearnersdictionaries.com/us/definition/english/fragment_1?q=fragment
19. Segment_1 noun—definition, pictures, pronunciation and usage notes | Oxford Advanced Learner's Dictionary at OxfordLearnersDictionaries.com (cited 1 Feb 2023). https://www.oxfordlearnersdictionaries.com/us/definition/english/segment_1?q=segment.
20. SEGMENTATION synonyms: 100 synonyms and antonyms for SEGMENTATION | Thesaurus.com (cited 1 Feb 2023). https://www.thesaurus.com/browse/segmentation.
21. FRAGMENTATION synonyms: 25 synonyms and antonyms for FRAGMENTATION | Thesaurus.com (cited 10 Feb 2023). https://www.thesaurus.com/browse/fragmentation.
22. FRAGMENT synonyms: 53 synonyms and antonyms for FRAGMENT | Thesaurus.com (cited 1 Feb 2023). https://www.thesaurus.com/browse/fragment.
23. SEGMENT synonyms: 16 synonyms and antonyms for SEGMENT | Thesaurus.com (cited 1 Feb 2023). https://www.thesaurus.com/browse/segment.
24. segmento | Definición | Diccionario de la lengua española | RAE - ASALE (cited 1 Feb 2023). https://dle.rae.es/segmento?m=form.
25. Bennett C. What is ? Definition of meaning. Econ Times. 2021 (cited 1 Feb 2023). https://economictimes.indiatimes.com/definition/segmentation.
26. Indicadores De Ocup Ación Y Empleo 1 Octubre De 2022 Próxima publicación: 28 de diciembre.
27. El G-B. Seguro Social: evolución histórica, crisis y perspectivas de reforma. Mexico: Universidad Anáhuac; 2018.
28. Bernal García F. Corporativismo y Fascismo. Los sistemas de relaciones laborales autoritarios en la Europa de entreguerras. HISPANIA NOVA Primera Revista de Historia Contemporánea on-line en castellano Segunda Época. 2017.
29. Knaul FM, Wong R, Arreola-Ornelas H, Méndez O. Household catastrophic health expenditures: a comparative analysis of twelve Latin American and Caribbean Countries. Salud Publica Mex. 2011;53(supl2):S85-95.
30. Diario Oficial de la Federación 29 de noviembre. Decreto por el que se reforman, adicionan y derogan diversas disposiciones de la Ley General de Salud y de la Ley de los Institutos Nacionales de Salud. México: Diario Oficial de la Federación; 2019.
31. Gutiérrez-Alba G, González-Block MÁ, Reyes-Morales H. Challenges in the implementation of clinical practice guidelines in major public health institutions in Mexico: a multiple case study. Salud Publica Mex. 2015;57(6):547–54.

32. Ramírez Rojas MG, Freyermuth-Enciso MG. Monitoreo al Convenio General de Colaboración Interinstitucional para la Atención de la Emergencia Obstétrica, 2011. Rev CONAMED. 2012;Supl 1:16–22.
33. Frenk J. La salud de la población. México: Fondo de Cultura Económica; 1993.
34. Maceira D. América Latina y el Caribe. Equidad y calidad frente al desafío de la segmentación. Rev Salud Pública. 2022;24(1):1–8.
35. INEGI. Censo de Población y Vivienda 2020, vol. 2020. pp. 22–4 (cited 28 March 2023). https://www.inegi.org.mx/programas/ccpv/2020/.
36. Belló M, Becerril-Montekio VM. The health system of Argentina. Salud Publica Mex. 2011;53(SUPPL. 2):s96–108.
37. Becerril-Montekio V, López-Dávila L. The health system of Guatemala. Salud Publica Mex. 2011;53(SUPPL. 2):s197–208.
38. Bermúdez-Madriz J, Sáenz M, Muiser J. Sistema de salud de Honduras. Salud Pública Mex. 2011;53(Supl):S209–19.
39. Muiser J, del Sáenz MR, Bermúdez JL. Sistema de salud de Nicaragua. Salud Pública Mex. 2011;53(Supl 2):S233–42.
40. Alcalde-Rabanal JE, Lazo-González O, Nigenda G. Sistema de salud de Perú. Salud Pública Mex. 2011;53(Supl 2):S243–54.
41. Rathe M, Moliné A. Sistema de salud de República Dominicana. Salud Publica Mex. 2011;53:S255–64.
42. Acosta M, del Saénz MR, Gutiérrez B, Bermúdez JL. Sistema de salud de El Salvador. Salud Publica Mex. 2011;53:S189–96.

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