MORAL TENSIONS IN DECISION-MAKING ON PUBLIC HEALTH POLICIES AND PROGRAMS, WITHIN THE COMPETITIVE MARKETPLACE MODEL OF THE COLOMBIAN HEALTH SYSTEM: AN EXPERIENCE USING MIXED METHODS RESEARCH, 2012-2016.

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Abstract

Background: The Colombian Health System has experienced significant reforms from 1993 intended to improve coverage, accessibility and quality of health service provision. These reforms, based on a competitive marketplace model, increased the participation of the private insurers and providers and at the same time constrained the public health sector; also public health policies and programs were discouraged affecting negatively the accessibility of the population to the preventive programs and the public health.

Objective: To understand the decision-making process in public health policies and programs and its relationship with accessibility and quality to them, within the competitive market model of the Colombian Health System.

Methodology: A sequential mixed methods research (MMR) approach was conducted in two-stages from 2012-2016. In the first stage, a qualitative study was conducted in six Colombian cities using Grounded Theory method; for that 102 individual interviews were conducted to health professionals, who were working at least five years in the provision and management of public health policies and programs, within private and/or public institutions. Also 14 focus groups with community leaders were conducted. The second stage, involved: 1) two quantitative studies: a) a survey about the labor conditions of the personnel working in public health policies and programs, and b) a geo-coding investigation about geographical location of providers of public health programs; c) qualitative study employing a narrative approach, in order to do a deeper analysis of values, administrative, professional and personal strategies that some health professionals put in place to overcome the limitations that the community faces to access to public health programs.

Findings: Two sets of values were found to be in conflict, resulting in significant moral tensions in the decision-making processes regarding the provision of public health programs. One values set fosters health as a human right and the other assumes health as a commodity that can be bought and sold within the health care marketplace. The MMR approach allowed for obtaining a more comprehensive understanding of the human resource limitations, geographical barriers in delivering public health programs.

Conclusion: The competitive market model of the health system has generated a conflicted set of values affecting the decision-making regarding provision of public health policies and programs; poor people have to tackle several kind of barriers, specially geographical ones to access to public health programs; health professional working in public health programs face difficult labor conditions that affect quality of services.

Key words: Human resources, Sequential Mixed Methods research, Decision-making, Public health.

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Background

The Colombian health system is now a mix of public and private sectors, in which the latter has become dominant as insurer and as provider. The current health system is based upon health sector reforms put in place in a majority of Latin American countries during the 1990s that sought to provide increased accessibility, coverage and quality of health services, especially for the poorest segments of the population. In Colombia, the national government introduced, through Law 10 of 1990, a decentralization process in the health sector designed to improve the institutional capacity of local municipal governmental units to lead and manage the delivery of public health services. Win Law 100 of 1993, a second major health reform, Social Security System for Health (SSSH), was introduced and was based on the principles of decentralization, solidarity, equity, universality, integrity, unity, efficiency, effectiveness and participation. SSSH created a system of private health insurers (Health Promoter Enterprises - HPE) and converted public hospitals into Social Enterprises of the State. These market oriented reforms led to increased privatization and competition among insurers and providers that resulted in an increased supply of private providers and a simultaneous decrease in the availability of public providers. In addition, Law 100 defined a compulsory package of health benefits and a per-capita payment unit for each individual as well as providing for an overall increase in financial resources for the health sector. These reform efforts resulted in a health system that has become very complex and in which new problems have emerged. Some of these include conflictive relationships between public and private stakeholders, institutions and pharmaceutical enterprises[1,2] as well as issues relating to coverage, accessibility and quality of public health services[3, 4, 5, 6].

Public Policy analysis is a complex issue of inquiry, that requires integrated research approaches in order to get understanding of the interweaved dimensions involved. Also public health is a complex field that implies knowledge, practice and values, which are interrelated as knowledge influences practice by determining which actions to put in place[7] and practice in turn generates new knowledge.[8,9] In addition to *knowledge* and *practice*, it is also important to consider the *axiological* dimension of public health which is related to the *values* as the foundation for public health knowledge and practice. In this sense, more recently, public health values have been focused on promoting social justice, equity and transforming the life conditions of the population in order to improve health. Similarly, decision-making in public health has become an area of increased interest and

attention but continues to be less well understood. Decision-making has been found to be influenced by many factors including research, financial stability, stakeholder's interests, and public opinion, degree of community support, strategic fit and social context.[10]

The aim of this manuscript is to present the sequential mixed methods study conducted in order to analyze the decision-making process in public health policies and programs and its relationship with accessibility and quality of these programs, within the Colombian health system. The methodology had two stages: the first was a qualitative study, using Grounded Theory, followed by a second stage in which two quantitative studies and other qualitative were conducted in order to get major comprehension of three core categories that emerged from the qualitative study. The core findings of the whole research resulted in the development of a 'values perspective' that suggest significant moral tensions and implications in the decision-making process related to accessibility and quality of public health policies and programs within the Colombian health system. The research was approved by the Ethical Committee of the National School of Public Health of the University of Antioquia, Colombia.

Methodological approach

A Mixed Method Research (MMR) approach, involving qualitative[11] and quantitative methods was used, grounded in *dialect* and *pragmatic* epistemological stances. A *sequential* MMR design was built progressively throughout the course of the research process. According to the literature[12], in some MMR designs qualitative and quantitative methods are use separately but simultaneously to study a phenomenon (parallel and convergent designs), while in other designs, a qualitative or qualitative study is conducted first, followed by a second study using the other approach, with the aim of complementing and enhancing the findings of the first study (sequential designs). In some cases, a MMR approach cannot be determined at the beginning of the research, because the design is built throughout the study according to the epistemological stances and interests of the researchers, the topic and research questions, the resources available for further study and the findings emerging during the research process. In this sense, Greene points out that "the process of developing a thoughtful and appropriate MMR design is less a process of following a formula or set of prescriptive guidelines and is more an artful crafting of the kind of mix that will best fulfill the intended purposes for mixing within the practical resources and contexts at hand".[13]

This study was carried out from 2012 - 2015 in six Colombian capital cities (Barranquilla, Bucaramanga, Pasto, Leticia, Medellín and Bogotá) located in different regions of the country, which have differences in their social, economic, political, institutional developmental levels and health conditions among the populations. This research involved two interrelated stages.

First stage

In this stage, an exploratory qualitative research design[14] was carried out using the Grounded Theory Method.[15] Information was obtained through individual interviews and a several focus groups,[16] based on guides for individual interview and focus groups constructed according to the objectives of the study.

Individual interviews were conducted to a theoretical sample of 102 professionals, who were involved in public health policies and/or programs as decision-makers, administrators, and/or direct providers over the past five years, from six Colombian cities (average 17 per city). They were selected from different public and/or private health institutions (i.e., municipal health institutions, hospitals, clinics, health insurers, municipal councils, and governmental surveillance and control institutions). Additional participants were identified using a snowball recruitment technique.[16] Individual interviews took an average of 60 minutes to complete. Participants in the interviews represented a wide range of disciplines and roles (e.g., nurses, physicians, dentists, social workers, psychologists, nutritionists, administrators) which permitted obtaining information from a wide variety of perspectives.

A total of 14 focus groups[17] were conducted with 64 community leader participants (average of 5 people per group) from the same six Colombian cities, who had to have at least four years of work experience in community organizations and/or health user associations. Each focus groups took 70-90 minutes to complete. Most of the participants were age 60 or above and had an average of 25 years of involvement in community organizations and 40% of them had formalized professional training.

All of the participants in the individual interviews and focus groups were contacted by telephone and/or E-mail in order to provide them with information about the research, to obtain their consent to voluntarily participate in the study, and to schedule the appointments; and all of them were asked to sign the informed consent before

participating. The individual interviews and the focus groups were conducted by two researchers in places agreeable to the participants and that ensured privacy, confidentiality and good quality audio recording.

The collection and analysis were carried out progressively and simultaneously. The analysis involved a codification and categorization using *constant comparative method* process based on the Grounded Theory Method ([15]). The processing and analysis of the information was facilitated through Microsoft Word, Excel and CmapTools version 4.16 software.

Main findings of the first stage

Eight main categories that emerged from the first stage of the research are summarized as follows, which were published in extend in a book.[18]

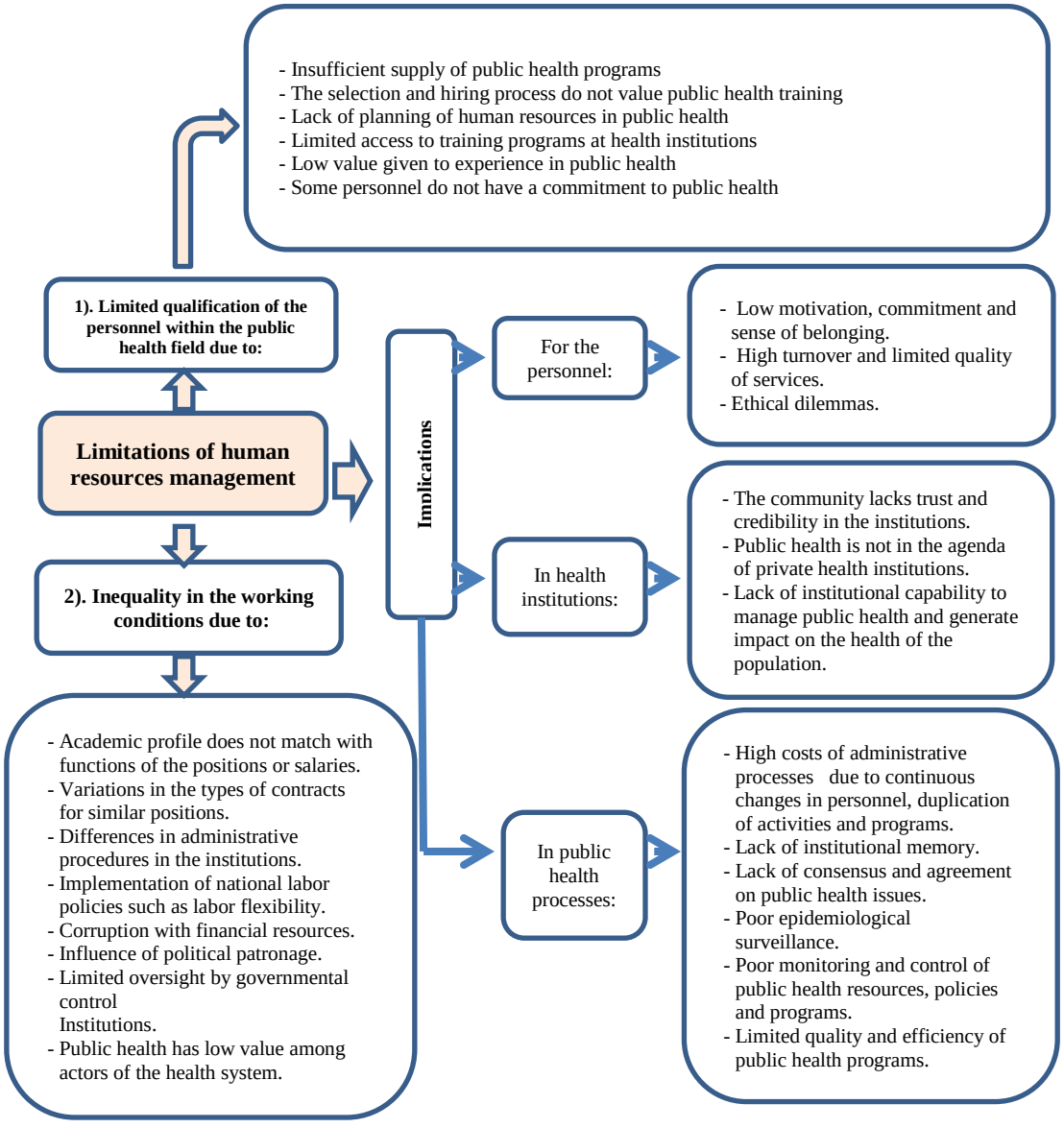
a. Weak stewardship and governance in public health.
b. Multiple theoretical frameworks have been applied in public health policies and programs such as: social determinants of health, primary health care, human vital cycle, health promotion and prevention of risks, among others.
c. Wide number but fragmented of public health policies and programs.
d. Political dimensions and relationships of the actors involved in public health decision-making.
e. Strengthens and weaknesses of community participation in public health.
f. Inequalities and limitations on health human resource management.
g. Limitations in accessibility and quality of the public health programs.
h. Axiological tensions in public health decision-making: private profitable interest vs. health as fundamental human right.

Second stage

The second stage of this research was not originally planned but was deemed to be necessary based on the findings of the first stage, in order to obtain a better understanding of last three of the eight core categories previously listed.

Inequalities in human resources management

The qualitative findings from stage one suggested that the labor conditions of the personnel working in public health were limited and difficult. Figure 1 provides a conceptual map indicating that these limitations can be categorized into two major areas: 1) the qualifications of the personnel working in public health programs; and 2) the inequalities in their working conditions.



Source: Molina, G. Ramírez A. & Ruiz Adriana (Eds). 2014.[18]

Figure 1.Characteristics of human resources management in public health programs in five Colombian cities.

In order to complement and provide a deeper understanding of the limitations and inequalities in human resources management, a cross-sectional quantitative study (a survey) was conducted[19] in five cities (Barranquilla, Bucaramanga, Leticia, Medellín and Pasto), focusing on describing the labor conditions of personnel working in public health policies and programs. The sampling frame for this study was generated from a database of the Ministry of Health. In addition, data was obtained from 514 hospitals that supply public health programs and services throughout the five cities involved in the research by 2013. A random sample of institutions was estimated for each city, with proportional probability to the number of public health programs that each institution offered.[20] A total of 50 institutions were selected: 11 in Barranquilla, 10 in Bucaramanga, 7 in Leticia, 10 in Medellín, and 12 in Pasto. From these institutions, a random sample of 675 people was estimated proportionally distributed, among the five cities within the 50 institutions.

A questionnaire was constructed around the following topics: social and demographic data, academic level and discipline type, years of experience working in public health, type of labor contracts during the years 2012 - 2014, criteria for selection and hiring of health personnel, average monthly salary, social security benefits and labor incentives, training received regarding public health programs and policies, performance in the evaluation process, and the organizational environment. The questionnaire was pilot tested and the final version was deployed online with the option to be interviewed in a face to face meeting. The persons who were randomly selected to participate in the study were contacted by e-mail and invited to participate in the study. Information about the research and an informed consent process was conducted prior to responding to the survey. A database was created to capture the survey responses and descriptive analysis followed by associational analysis was conducted. The survey was completed by 672 persons.

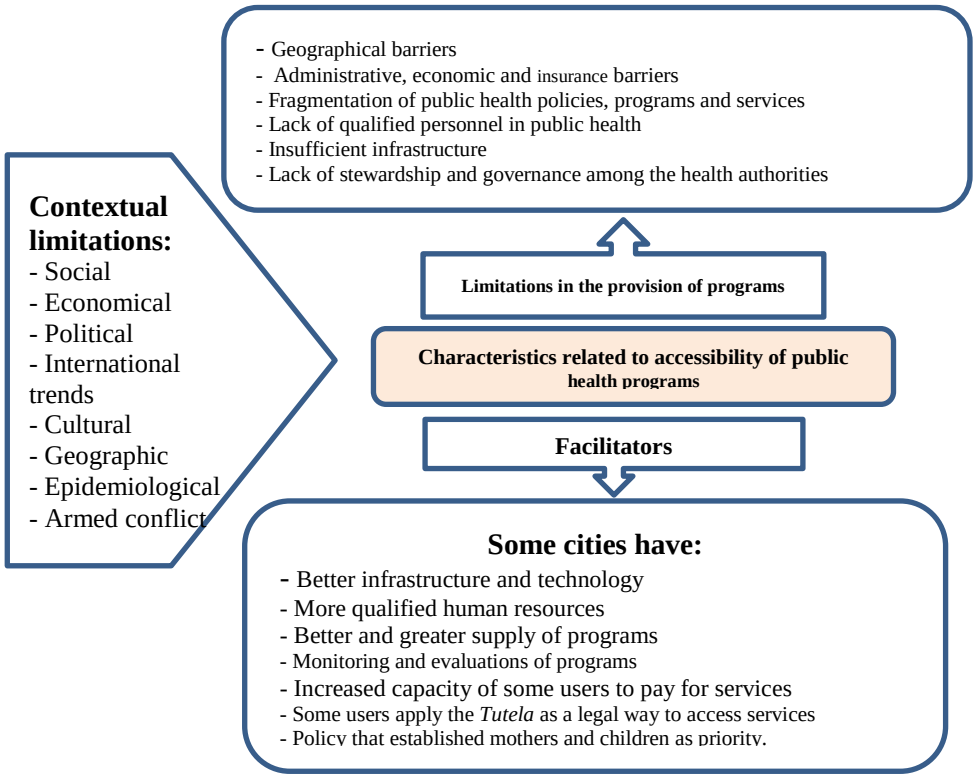
Findings of the survey on labor conditions of human resources

The training and educational characteristics of the respondents indicate a wide diversity in the background and preparation of the Colombian public health workforce. The training level of the respondents show that 116 (17.3%) had para-professional assistant training, 126 (18.8%) technical training and 442 (65.8%) had professional training. A wide variety of disciplines were represented including mainly nurses, physicians, dentists, psychologist, social workers and administrators, among others. Of the 441 professionals

surveyed, 74.7% (330) had a postgraduate degree, of which 24.6% (165) had a diploma, 20.5% (138) had a specialization, 3.7% (25) had a master's degree, and only 0.3% (2) had a doctorate degree. Over half of the employees (53%) reported having an unstable contract (e.g., based on commission, fee for service, outsourced, short fixed term) in 2014 while 54.1% held unstable contracts in 2013. In addition, respondents reported having very low salaries and there was inequity reported for performance of the same contractual duties. In 2014 almost 40% of the personnel reported not having any social security benefit coverage. These findings concerning the professional preparation and types of labor contracts issued to the study participants document the instability and inequities of labor conditions of the public health workforce in these cities.

Limitations in accessibility and quality of the public health programs

Findings from the first stage of the research indicated that geographic barriers, among others, are important contributors to preventing people from accessing public health programs (Figure 2).



Source: Molina G. Ramírez A. & Ruiz Adriana (Eds). 2014.[18]

Figure 2. Main aspects related to accessibility to public health programs within the Colombian health System, 2013-2014.

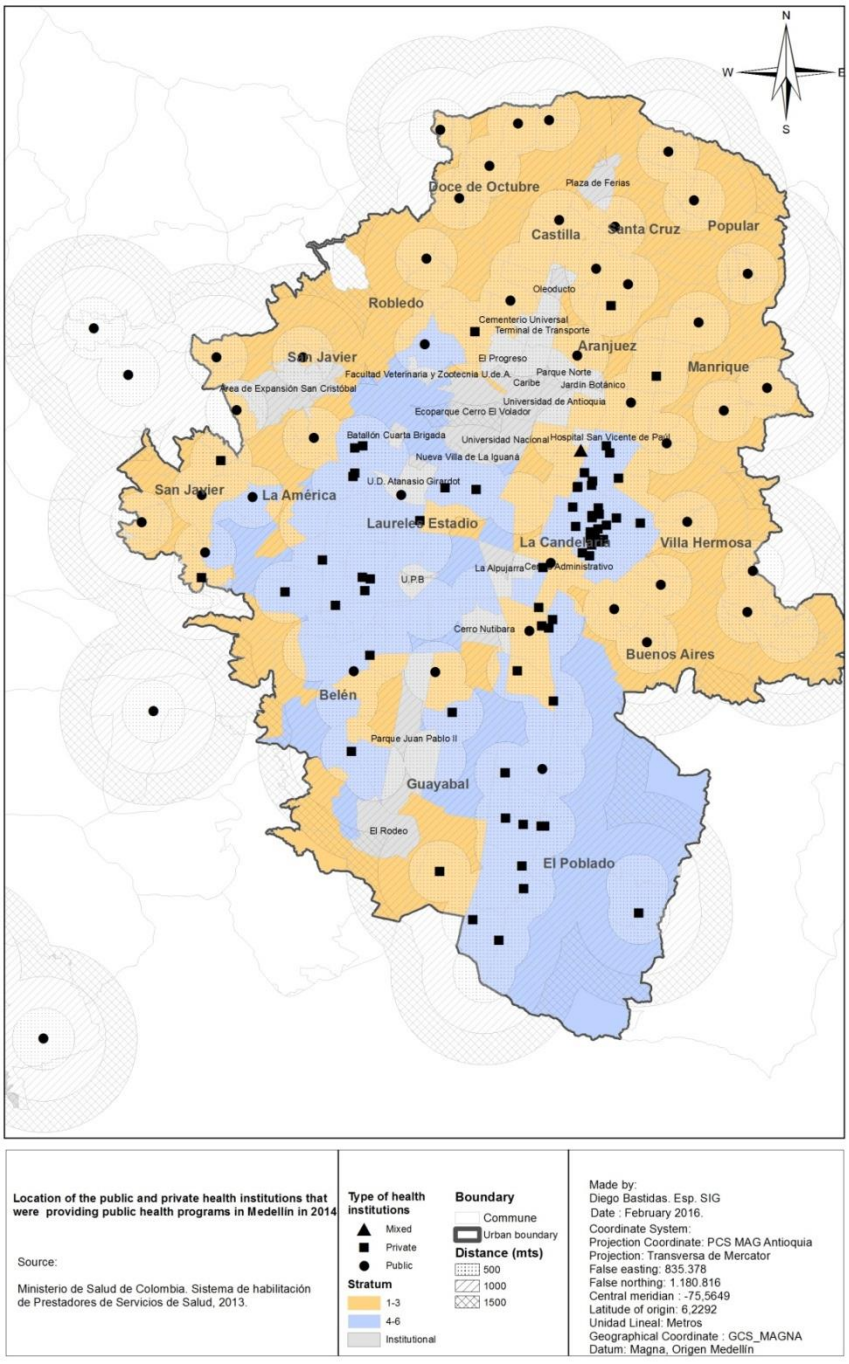
Therefore, a geo-coding study of the institutions that provide public health programs in each of the five cities was conducted in order to ascertain the degree of geographic access people have to public health services. The method was a descriptive cross-sectional study of health institutions that provide public health programs, based on databases provided by the Ministry of Health and/or of the Municipal Health Secretary in 2013, which was verified in 2014 by telephone, in order to confirm address, type of institution (private, public or mixed), and the public health programs being provided. Location data and type of institution were used for the geo-coding process. The geo-coding process was carried out through geographical information system tools[21,22] which allow for the identification of location of institutions on a map of the city. This visual representation allows for understanding the geographic accessibility of these programs. In Medellín, the geo-coding process of the health institutions was carried out using the geo-portal of the city called MedellínMapGis®; while the other cities were mapped using the geographical services of Google Maps.

Findings on the geo-coding study

The findings of the geo-coding study reveal the uneven geographic distribution patterns of the provision of public health programs; from 2013 to 2014 30% of those institutions that had been providing public health programs were no longer doing so, due to the instability of the contracting process between health insurers and providers. More than 75% of the public health programming was supplied by private health institutions in Medellín, Bucaramanga and Leticia; while in Pasto 52.8% of these programs were being provided by public institutions; however the public institutions were providing public health programs to the poorest zones of Medellín, Bucaramanga and Pasto (those classified in the lowest socio-economic stratum 0 to 3); while the private sector provided these programs in the richest zones (highest stratum 4 to 6) (Figure 3). In Leticia, the smallest city included in this research, there were five private institutions and only one public institution that provided public health programs to all members of the population.[23]

These findings contribute to more understanding of the general concern regarding the poor geographical accessibility to public health programs, that was found with the qualitative study carried out at the first stage. Poor people do not have public health programs provided by the private sector in their neighborhood, in spite that some poor

population is affiliated to a private insurer; poor neighborhoods depend almost completely of the public providers.



Source: Molina, *et al*. 2015, p. 229.[22.]

Note: Stratum 1 – 3 area the zones with lower socio-economic level; stratum 4-6 are the zones with higher socio-economic level.

Figure 3. Map of the geographical location of the public, private and mixed health institutions of Medellin, Colombia, that were providing public health programs, according to the socioeconomic stratum of the neighborhoods, 2014.

Axiological tension in public health decision-making (h category)

Findings from the first stage indicate that values provided the rationale for identifying the priorities and mechanisms involved in decision-making for provision of public health programs. Therefore, an additional study using personal narratives was conducted in order to obtain a deeper understanding of the role that values have for practitioners in public health decision – making. For this study, seven health professionals (one per city, with the exception of Bucaramanga which had 2 professionals), who have broad and lengthy experiences (20 years or more) working with multiple public health issues and programs were involved in the study. Once they were trained in the narrative method, each participant talked and wrote about their most meaningful professional and life-experiences in carrying out public health programs for over 20 years. They highlighted reflections, values, strengthens, and the associated problems that they had to tackle in conducting public health programs in different settings. The titles and topics of the narratives are as follows:

Title of the narrative	Topic
A city that plays to win, time to death (Pasto)	Participative process to define and implement a municipal policy to prevent smoking
Agreements and disagreements between health personal and users of a public health program (maternity care.	Relationship between health personnel and pregnant women as users of a maternity care program
My initiation into a wonderful community adventure.	Multiples ups and downs in implementing a primary care program in a community
Stories about Tuberculosis in Bogotá	Success and failures of the Tuberculosis program in Bogotá: The role, knowledge and values of the health personnel to achieve effectiveness of this program
The city of a hundred suns and a hundred moons (Medellin)	Contradictions, achievements and failures, ups and downs in public health issues in a big city.
Feelings about work experiences in the Amazonian region (Leticia)	Personal and professional experiences, knowledge, skills, values and strategies required to put in place public health programs in a dispersed and difficult rural area.
From the village to the big city (Barranquilla).	Values, strategies and process to build community participation in public health.

A qualitative analysis of the narratives provided an enhanced understanding of the moral tensions involved in the public health decision-making process. First, these seven professionals have an inherent leadership capability, knowledge, experience and commitment to public health; interdisciplinary approach, solidarity, cooperation, transparency, heroism, and recognition by the community, which permits them to be able to positively influence public health policies and programs, in spite of the complex political, social, institutional environments in which they work, including the strong forces for profitability demanded by the competitive market model of the Colombian health system. However, they also reported having to overcome many pressures and tensions from the institutions, political actors, and even some of some of their colleagues, who are looking mainly at financial profitability. They reported observing that many administrative, economic and political mechanisms and barriers have been put in place, mainly by the private insurers, in order to achieve financial profitability goals, but these barriers prevent people from having access to public health programs. Second, the analysis points to the presence of conflicting power relationships within and between the institutions which make it difficult to develop and maintain public health programs. The professionals reported that often times a person who has not been trained in public health may be appointed for a formal administrative position in this field. A third observation echoed in many of the narratives was the imbalance in the political, economic and institutional power, values and commitment between the private and public sectors in relation of public health. They reported that the public health sector (e.g., municipal health authorities, hospitals, clinics) it is weak because it lacks of governmental investment, has a limited administrative infrastructure, must respond to complex regulation and has limited technology, management capacities and strong patronage influence. The patronage system was identified as a significant barrier for development of the public health sector, because it influences the recruitment and hiring of personnel who may not have the appropriate qualifications for their positions. It is worth noting that there is also very limited governance of the governmental institutions, as is found in other studies.[4,5,6,24] The public sector is being viewed as having a greater commitment to the provision of public health programs to the poorest while the private sector does not have this level of commitment, because it has been more focused on getting financial profitability at expense of public resources and preventing people to access services in order to decreased costs. The private sector (e.g., health insurers, hospitals, clinics) has obtained economic and political growth and power to influence governmental decision-

making, because the privatization policies have facilitated it to access to public resources and make financial profit with them. However the private sector is not willing to engage in the provision of public health programs to the poorest because it does not bring financial profit in short and middle term; it is focused on service provision to populations with higher social and economic levels.

Core findings that emerged from the sequential study employing a mixed methods study design

The overall findings of the two stages of this research suggest that there is an amalgam of tensions and conflicts between the values, purposes, interests and relationships of the institutions and actors who have a responsibility for defining and providing public health policies programs. Two sets of values were found to be in conflict as follows:

a. One set of values assumes *health as a commodity* that can be bought and sold in the marketplace of services operating within the managed competition model of the Colombian health system. In this model, most of the institutions involved in the health system (e.g., insurers, providers, and governmental organizations) are focused on achieving financial profitability goals. In order to attain that goals, administrative, economic, political and geographic barriers are put in place that result in inequity, low quality and limited access to public health programs. This approach encourages asymmetric information and individualism, lack of cooperation, of solidarity and limited trust between institutions and actors.
b. The other set of values assumes *health as human right*, which is guaranteed by the 1991 National Constitution of Colombia. In this approach some health professionals, who have expert knowledge, experiences and deep commitment to the provision of public health programs have been able to promote values such as solidarity, cooperation, and transparency between actors, institutions, social and community organizations, and citizens. These personnel view their work as promoting values such as equity, social justice and quality of life and they reject the predominant set of values focused on financial profitability. However, these professionals are under constant personal and professional pressures within their institutions because their values do not align with the profitability goals.

   These two sets of values lead to interpersonal and inter-institutional tensions, conflicts and ethical dilemmas at the individual, organizational and societal levels with regard

to the provision of public health programs and the development of policies that should be focused on program accessibility and quality.

Discussion and conclusions

The study of public health policies and programs demanded a methodological approach that allow for uncovering wider and deeper understandings of complex phenomena. A new set of relational patterns depicting the heretofore unexamined conflicts inherent in the decision-making process in public health programs and policies emerged at the conclusion of the sequential study. These relationships would have remained un-noticed and un-explored if a mixed method research approach had not been utilized throughout the research process.

The MMR design used in this research was built progressively in order to complement and corroborate the findings as they emerged from the first stage to the second one and finally to the set of synthesized findings described above. This approach was framed in the *dialect and pragmatic epistemological stances of MMR*,[12,25] that support the dialogue and complementarity of different epistemological and methodological perspectives, as constructivism and pragmatist. Researchers should have wide and inclusive epistemological, theoretical and methodological perspectives and research skills to be able to conceive, design and carried out studies using MMR. Teddlie & Tashakkoiri[12] pointed out that "researchers employing *dialectic stance* think dialectically, which involves consideration of opposing viewpoints and interaction with the "tensions" caused by their juxtaposition". This *dialect* stance is also linked to the concept of an MMR *way of thinking* developed by Greene, which involves "openness to multiple ways of seeing, hearing, multiple ways of making sense of the social world, and multiple standpoints of what is important and to be valued and cherished." [13]

The competitive marketplace model of the health system has generated a conflicted set of values affecting the decision-making regarding provision of public health policies and programs, and poor people have to face geographical barriers to access to these services, along with limited quality of them.

The geographical barriers given by the lack of provision of public health programs by the private sector in the poor areas of the cities, is in contradiction with the assumptions that grounded privatization and health sector reforms, which supported the idea that increasing

private participation within the health systems would allow to increase coverage, accessibility and quality of the provision of services for a whole population. Findings suggest the contrary, private sector has been focused mainly on getting financial profitability at the expense of the public health fiscal resources, rather than in contributing to improve the health situation of the population.

Implications for the public and the policy makers

The findings of the research allow us to recommend to policy makers of municipal, national and international levels, bear into account that the international trends of health sector reforms, based on market and competition model, privatization and profitable interest of the insurers and providers are preventing people to access to public health programs, especially to the poorest population. This fact, in turn, prevent to get the aims of the health reforms, which were focused on get major efficiency, coverage, accessibility of the health systems. Decision maker should recognized health as a human right, at the national and international contexts, and put in place all the necessary changes of the health system to protect health of the whole population, especially the most marginalized groups.

The findings of this research provide wide information to the community, governmental and private institutions, and academic sectors, among others, that allow them to understand the aspects that have being involved in the decision-making process in public health policies and programs, and their relationship with accessibility and quality of these programs. The comprehension of this aspects, would allow a more informed and effective participation of the community, citizens and organizations in several decision-making spaces regarding availability, quality and accessibility to these programs as a way to improve quality of life.

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References

1. Flórez CE, Soto VE. *Avances y desafíos de la equidad en el sistema de salud colombiano*. Documento de trabajo No.15. Bogotá: Fundación Corona, 2007.

2. Restrepo JH, Lopera JF, Rodríguez SM. (2007). La integración vertical en el sistema de salud colombiano. *Revista de economía institucional.* 2007; *9(17):* 279-308.

3. Agudelo CA, Cardona J, Ortega J, Robledo R. Sistema de salud en Colombia: 20 años de logros y problemas. *CiêncSaúdeColet.* 2011; *16(6),* 2817-28.

4. Molina G, Muñoz I, Ramírez A. *Dilemas en las decisiones en la atención en salud en Colombia. Ética, derechos y deberes constitucionales frente a la rentabilidad financiera en el sistema de salud*. Medellín, Colombia: La Carreta; 2011.

5 . Echeverri O. Mercantilización de los servicios de salud para el desarrollo: el caso de Colombia. *Rev Panam Salud Pública. 2008; 24(3):* 210-216.

6. Yepes F, Ramírez M, Sánchez LH, Ramírez ML, Jaramillo I. Luces y sombras de la reforma de salud en Colombia. Ley 100 de 1993. *Revista Gerencia y Políticas en Salud. 2010; Sup. 9(18):*118-123.

7. Contandriopoulos, A. P. Elementos para una topografía del concepto de salud. *Ruptures, Revista Interdisciplinaria de la Salud*. 2006; *11(1):* 86–99.

8. Almeida N, Silva J. La crisis de la salud pública y el movimiento de la salud colectiva en Latinoamérica. *Cuadernos médico sociales.1999; 75:* 5-30.

9. Franco S. Los verbos esenciales de la salud pública. In: Granda, E. (Compilador). *La salud y la vida*. Quito: ALAMES, OPS, Universidad del Cauca; 2011.

10. Orton L, Lloyd-Williams F, Taylor-Robinson D, O'Flaherty M, Capwell S. The use of research evidence in public health decision making processes: Systematic review. *PLoS ONE. 2011; 6(7):* e21704.

11. Denzin N, Lincoln Y. *Handbook of Qualitative Research* (3ªed.). Thousand Oaks, California: Sage Publications, 2005.

12. Teddlie C, Tashakkori A. Overview of Contemporary Issues in Mixed Methods Research. In Tashakkori A. & Taddlie C. (Eds). *SAGE Handbook of Mixed Methods in Social & Behavioral Research*. Thousand Oaks, California: Sage, 2010:1-41.

13. Greene, J. C. *Mixed methods in social inquiry.* San Francisco, Estados Unidos: Jossey-Bass; 2007.

14. Creswell JW. *The Concise Introduction to Mixed Methods Research*. California: Sage Publications; 2015.

15. Corbin J, Strauss A. *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. Thousand Oaks, California: Sage Publications. Fourth edition; 2015.

16. Taylor SJ, Bogdan R. *Introducción a los métodos cualitativos en investigación. La búsqueda de los significados*. España: Paidós; 1992.

17. Dreachslin J. "Conducting Effective Focus Groups in the context of diversity: Theoretical Underpinnings and Practical Implications". *Qualiative Health Research.* 1998; *8(3):*813-820.

18. Molina G., Ramírez A. & Ruiz A. *Tensiones en las decisiones en Salud Pública en el sistema de salud colombiano: el bien común en confrontación con los intereses y prácticas particulares*. Medellín: Pulso y Letra editores, 2014.

19. Montero J. *Estadística Descriptiva*. Madrid, España: Editora de Producción; 2007.

20. Campos, M. *Más de 600 preguntas cortas de bioestadísticas y sus respuestas.* Murcia, España: Universidad de Murcia; 2007.

21. Moreno A. *Sistemas y Análisis de la Información Geográfica. Manual de autoaprendizaje con ArcGIS.* 2a. Edición. RA-MA S.A. Editorial y Publicaciones; 2008.

22. De Pietri D, Dietrich P, Mayo P, Carcagno A, De Titto E. Indicadores de accesibilidad geográfica a los centros de atención primaria para la gestión de inequidades. *Rev. Panam Salud Pública*. 2013; *34(6):*452–60.

23. Molina G, Oquendo T, Bastidas D, Rodríguez S. & Flórez M. Georreferenciación de la oferta de programas de salud pública en cuatro ciudades en el contexto del mercado competitivo del sistema de salud, Colombia 2014. *IATREIA.* 2015; *28(3):*223-239.

24. Molina G. & Ramírez, A. (2013). Conflicto de valores en el sistema de salud de Colombia: entre la economía de mercado y la normativa constitucional, 2007–2009. *Rev. Panam. Salud Publica.2013; 33(4):*287–293.

25. Biesta G. Pragmatism and the philosophical foundations of Mixed Methods Research. In Tashakkori A, Taddlie C. (Eds), *Handbook of Mixed Methods in Social & Behavioral Research*. Thousand Oaks, California: Sage. Second Edition, 2010: 95-117.