1. ***Title of the article:***

Brazilian payment for performance (PMAQ) seen from a global health and public policy perspective - What does it mean for research and policy?

2. ***Authors' names:***

Fabiana C. Saddi, Post-doc, PhD, MA, BA (Hons)

Stephen Peckham, BSc (Hons), MA (Econ), HMFPH

3. ***Authors' affiliations:***

Dr. Saddi is PNPD-CAPES Post-doctoral Research Fellow and Senior Lecturer in Public Policy at the Programme of Post-Graduation in Political Science, Faculty of Social Science, Federal University of Goias, Brazil.

Prof. Peckham is Director of the Centre for Health Services Studies and Professor of Health Policy at the University of Kent. He is also Professor of Health Policy and Director of the Department of Health funded Policy Research Unit in Commissioning and the Healthcare System (PRUComm) at the London School of Hygiene and Tropical Medicine.

4. ***Acknowledgments***

We thank the editors of the Supplement for the opportunity, and the two blind peer-reviewers for their comments on the article's first version.

5. ***Conflicts of Interest and Source of Funding***

None conflict of interest declared

Abstracts: This Supplement of the JACM on the Brazilian PMAQ reveals a relevant gap in the Brazilian literature on pay for performance/PMAQ, and is therefore an opportunity to bring contributions from global health and public policy to the debate. We discuss the relevant gap in the light of developments in evaluation and policy analysis. We afterwards present the state of knowledge regarding global health and public policy in pay for performance, giving attention to diverse themes, methods, types of analyses, theoretical contributions and limitations. Finally, we suggest some possible implications for research and policy in Brazil.

Key words: Brazil; primary health care; pay for performance; Global Health; Public Policy; quality improvement.

This article opens new and broader possibilities in terms of future research and policy implications for the Brazilian National Program for Improving Access and Quality of Primary Care (PMAQ). Quality improvement and payment for performance programs in primary health care have been implemented in several countries around the world, constituting one of the major themes in global health and public policy. The Brazilian PMAQ is currently at the beginning of its 3rd round. The political significance of this Supplement of the Journal of Ambulatory Care Management (JACM) on the Brazilian PMAQ not only lies in the credibility of the institutional actors and scholars involved, but in three main correlated facts: it reveals the limitations of the state of the art of knowledge/literature about pay for performance/PMAQ in Brazil, and is an opportunity to bring the contributions of global health and public policy to the debate.

PMAQ is indeed in the process of contributing to the improvement of primary

health care quality in Brazil (Macinko, Harris, & Rocha, 2017). Its database is currently essential for policymakers, public policy managers and researchers, given its national coverage, comprising a census of the structure of health care units and performance data related to managers, health care teams (doctors, nurses, community health agents, dentists) and patients. However, policy tools and analyses based on PMAQ data are still under construction and in their initial stage. The development of these tools and analyses has to date, been reliant on reviews of data derived from PMAQ. There has been little analysis of the PMAQ implementation process or comparative analysis with performance programs from other health systems which would yield useful insights into supporting both overall program design and support more effective implementation.

The state of the art of Knowledge about PMAQ: the relevant gap

This JACM edition demonstrates that there is indeed a relevant gap in the state of the art of the knowledge about PMAQ in terms of the adoption of more diverse policy analyses and methods such as those employed in global health and public policy. The papers by Brazilian scholars published in this Supplement (Fausto et al., 2017; Matta-Machado et al., 2017; Mello, Tonini, Sousa da Silva, Dutt-Ross, & de Souza Velasque, 2017; Neves, Giordani, Ferla, & Hugo, 2017; Rocha et al., 2017; Tomasi et al., 2017) follow a quantitative, descriptive type of analysis based on official PMAQ data, focusing on specific clinical or epidemiological themes. They also comprise good examples of the hegemonic literature about pay for performance/PMAQ in Brazil. In this, scholars from the Collective Health field (1) (and Preventive Medicine), and precisely those involved in the official implementation of the program as external assessors, have been generating new knowledge about the PMAQ, particularly since the publication of the special issue of the Brazilian journal *Saúde em Debates* (Centro Brasileiro de Estudos de Saúde, 2014). These articles, like those of the Brazilian

scholars published in this Supplement, also mainly report quantitative studies either solely or predominantly consisting of descriptive analyses utilising PMAQ data. Few works by external assessors of PMAQ provide narratives or descriptions of the experience of data collection undertaken in diverse Brazilian states (Fausto & Fonseca, 2013; Rodrigues, Santos & Pereira, 2014), and they do not advance much analytically in terms of lessons for future policy developments. To date, there have few studies undertaking implementation analyses, using qualitative methods or wider discussions of the PMAQ program within the wider international global health and public policy literature (Saddi, Harris, Parreira, & Pego, 2017).

According to developments in evaluation and policy analysis, studies focusing solely or primarily on quantitative data, or on program outcomes, are considered limited in terms of policy learning and uses to promote concrete changes or improvements in the policy process. The need for implementation research is widely recognised (Exworthy & Powell 2004; Hill & Hupe, 2008; Schofield, 2001). Evidence for policy development and evaluation of programme implementation and impact are seen as key elements of ensuring the successful development and implementation. The disconnect between policy research, policy impact monitoring and policy practice, is well acknowledged and evaluation often comes too late to be of use for policy decision-making (World Health Organisation Europe, 2015). Evaluation of policy – both content and process/implementation – is therefore, essential to ensure that policy programs are successfully implemented and that policy and decision-makers understand how to support successful implementation.

Common breakthroughs in evaluation and policy analysis refer to the (re)valorisation of the interdisciplinary integrative nature of both fields, as well as to the adoption of a varied range of methods and types of analysis, considered as either

complementary or as an alternative (or critical perspective) to the more positivist type of work. Good examples are the adoption of multi-methods, mixed methods, interpretations and communicative practices approaches (Fischer & Gottweis, 2012; Fischer, Miller, & Sidney 2006; Patton, 2014). In evaluation, breakthroughs also refer to the incorporation of the themes of uses and influences of evaluations (Bjørnholt & Larsen, 2014; Mark & Henry 2004; Patton, 2014). In policy analysis, diverse approaches have been applied to understand and improve the formulation and/or implementation processes (Fischer & Gottweis, 2012; Fischer et al., 2006; Howlett, Ramesh, & Perl, 2013). They have focused, for instance, on qualitative data collection regarding key actors' ideas, interests (or motivations) and actions (and interactions), in diverse and complex macro/micro political contexts, taking into account how they have shaped and can help to re-shape the design and/or implementation of public policies.

Therefore, the predominance of a quantitative type of analysis related to the PMAQ can be seen as a narrow form of policy learning and present some politically significant limitations. They leave behind the complexities and political and pragmatic conditions and challenges that orient the (re)formulation or (re)design and implementation of programmes. Nor do they take into account the undesired consequences involved in the implementation of performance programs. They do not offer more contextualised real-world lessons that could be employed to promote further quality improvements in the policy/system. This means that some questions about PMAQ remain still to be answered. Principal broad questions are how have evaluations been used? How has the PMAQ been formulated and implemented?

Despite previous studies we still know very little regarding how PMAQ data has been used by policymakers at distinct government levels in the Brazilian Federation to support policy development and implementation. Moreover, we don't know how and

the extent to which PMAQ's hegemonic research/evaluation path of influence has affected policy decision making. From the perspective of policy formulation and design (Howlett et al., 2013; Margetts & Hood, 2016; May, 2003), we still know very little regarding how distinct actors, interests, institutions and facts have impacted on the formulation and re-design of the program in the different rounds. We know little about which, or how, tools and strategies related to specific policy goals have been designed and adopted in the process, so as to better support the implementation and achieve program goals. We also do not know how mechanisms or tools of feedback have been employed or affected the (re-) design of the PMAQ in the previous rounds and if or how they are thought to be implemented in the present one.

Of particular concern is that our understanding of policy implementation is still very limited from the implementation perspective (Exworthy & Powell 2004; Hill & Hupe, 2008; Schofield, 2001). For example, we do not know how front line health workers have in fact been involved with PMAQ, and what types of motivations have characterised the implementation of PMAQ around the country and during each round. Nor do we have any evidence on what main PMAQ strategies and tools have been implemented in health units given their particular organizational capacities, and the extent to which they were created as a response to implementation challenges. There is also a gap in knowledge regarding the extent to which PMAQ has directed health team efforts toward achieving program targets, and whether PMAQ has actually contributed to the creation of a culture of evaluation and planning on the front line in different health units around Brazil. Neither do we understand how the financial incentive transferred by the Federal Government has been used in diverse municipalities, in distinct regions of the country, and if and how they have impacted on the quality of care at the organizational and/or professional level/s.

Contributions from Global Health and Public Policy

Globally, in addition to the classic descriptive and economic/quantitative analyses of policy performance, other themes of a more political and policy nature, as well as multi-methods and diverse types of analyses, and theoretical considerations, are taken into account, guiding the debate and practice of quality and performance policies around the world. Themes such as organizational capacity, staff engagement, professional stress and work overload are also extensively considered (Peckham, 2007; Roland & Guthrie, 2016). Organizational capacity issues have also been considered important to highlight the need for capacity building in African countries, for instance, and foster the successful delivery of performance programs (Toonen, Canavan, Vergeer, & Elovainio, 2009). Researchers have taken into account the cognitive/subjective aspects ("alternative logics") in performance measurement (Politt, 2013) and claimed that focusing on what is measured induces potentially dysfunctional effort substitution and gaming behaviours (Bevan & Hood, 2006). Moreover, performance indicators have been considered political instruments (Bjornholt & Larsen, 2014), and used in diverse and complementary ways in the construction of improvement frameworks and tools to measure and monitor policies.

Multi-methods and diverse types of analyses are utilized to study the formulation and implementation of performance programs. Most of these methods take into account the context and complexities involved during implementation. Stakeholder or actor analyses, together with participation and/or policy process theories have been used to study how international and national actors participate in the formulation of performance programs. These include qualitative studies involving non-participant observations of policy meetings and key informant interviews (Amy, Brown, Harman,

& Papamichail, 2014); policy analysis methods that employ document analyses and key informant interviews to analyse contractual arrangements of different levels of involvement from local to international actors to understand the process of redesign and delivery improvement (Khim, Ir & Leslie, 2017) and qualitative research designs and frameworks (Bhatnagar & George, 2015) including focus groups and in-depth interviews (Songstad, Lindkvist, Moland, Chimhutu, & Blystad, 2012) to explore front line health workers perspectives and motivations. Contextual factor analyses, applying focus groups and interviews have also been used (Olafsdottir et al., 2014) along with mixed methods studies (Kristensen, McDonald, & Sutton, 2013).

There are also a number of systematic reviews on providers' attitudes or effects of performance programs that provide useful insights for designing or redesigning successful programs (Eijkenaar, 2013; Forbes et al., 2016; Langdown & Peckham, 2014; Lee, Lee, & Jo, 2012). For example the review by Eijkenaar (2013) led to new perspectives on designing performance programs:

> (…) undesired effects of P4P will often be a result of diminished intrinsic motivation. It is therefore important that providers are actively involved in designing the program, especially in developing and maintaining the aspects of performance to be measured. This increases the likelihood of provider support and alignment with their professional norms and values … In this respect, it is also important that program evaluations include qualitative studies to monitor the impact on providers' intrinsic motivations (Eijkenaar, 2013, p. 140).

In this process of mobilising diverse themes and types of analysis of pay for performance, questions have also been raised about the future of those programs and, more specifically, regarding the extent to which the financial benefit involved has impacted on health workers and local health organisations. Researchers also question

whether this benefit has affected the quality of care in other areas not targeted by the program, whether it has been effective to improve performance or can be considered essential for the maintenance of the quality of care itself. In different ways, these questions are made in both high income (Forbes, Marchand, & Peckham, 2016; Peckham & Wallace 2010; Roland & Guthrie, 2016) and middle and low income countries (Bhatnagar & George, 2016; Lee et al., 2012). Findings have also revealed, in this case related (possibly) more to middle and low income countries, that workers and managers were not fully aware of performance indicators and standards. Further, front line professionals have limited prospects for career progression, and there has been inadequate performance feedback and poor reward mechanisms (Lee et al., 2012). Fundamentally, we need to understand the relationship between performance programs such as pay for performance and what constitutes and produces high quality primary care (Peckham & Wallace 2010). For example, it would be useful to explore the extent to which PMAQ relates to quality criteria for primary care such as those in the ten building blocks for high quality primary care (Bodenheimer, Ghorob, Willard-Grace, & Grumbach, 2014). The PMAQ, like many other performance systems, relies on a set of measurement criteria that can be easily measured. Internationally, the performance domain of P4P schemes is generally divided into two main components: health care delivery and the technical quality of clinical care (Hogg, Rowan, Russell, Geneau, & Muldoon, 2007). Generally, most P4P systems focus on aspects of clinical care rather than including delivery systems as they rely on measurable, routinely collected data. It is also important not to confuse performance indicators with health outcomes (Giuffrida, Gravelle, & Roland, 1999; Langdown & Peckham, 2014). Perhaps a key point is to examine the match between performance targets and those criteria generally seen as central to the provision of high-quality primary care which the PMAQ seeks to

address through external assessment and by accounting for the diversity of socioeconomic, epidemiological and demographic scenarios between the Brazilian municipalities by grouping primary care teams into categories for developing a final assessment score. However, the bulk of the final score is still focused primarily on what can be measured through the primary care information system. Whether this equates to quality remains, therefore a question deserving further analysis (Bodenheimer et al., 2014; Hogg et al., 2007; Peckham & Wallace, 2010).

Moreover, varied theoretical approaches have been employed to understand the policy process and to improve both the implementation and design of pay for performance programs. Diverse theories focused on change, as well as on lessons and insights derived from those theories have been and can be employed even more extensively - and in a comparative and policy relevant manner - to study performance and improvement in health policy. This is because the main challenges in performance and quality improvement rest in the promotion of effective changes in organizations and in professional behaviour. Good examples are the theory of organizational culture and motivational theories (Gagne, 2014; Talbot, 2010). According to the theory of organizational culture, changes in the culture stimulate changes in performance. This theoretical perspective can help to explain why an organization or group of co-workers focuses on certain priorities during implementation (Scott, Mannion, Marshall, & Davies, 2003). Motivational theories emphasizing attitudes, perceptions and intentions of health professionals and managers have also been widely employed, as they can shed light on the diverse reasons – such as power, status and professional responsibility - that can explain professional behaviours during implementation, as well as provide contextual evidence that could be useful to redesign programs and consider how they effect professional behaviour (Herzer & Pronovost, 2015; Yé et al., 2016).

The literature however, is not free of limitations. Scholars have pointed out the need to establish a stronger theoretical foundation for academic analyses of how performance information and knowledge affect organizational decision making and behaviour, as well as how managers or elected representatives are supposed to use the information (Moynihan, Donald, Sanjay, Pandey, & Bradley, 2012; Talbot 2010). Concomitantly, there is currently a gap in the literature about what are most effective use of public policy lessons, especially regarding feedback and policy learning considerations and other policy tools or mechanisms in the redesign /re-formulation of policies. Perhaps a key question to be addressed is how performance shapes decision making from a national and international comparative perspective, in high-, low-, and middle-income countries. Despite the limitations of evidence and knowledge of implementation processes, the improvements realized up until the present have already brought some valuable examples to deepen analyses into the PMAQ.

Implications for research and policy

Brazilian researchers and policymakers could profit from contributions from such broader analyses when considering future research and policy implications. They would entail reformulations or changes to the PMAQ practical research and policy agenda. Three possible general implications would be: the extension of PMAQ analyses and discussions to new methodological and policy related fields; the adoption of new policy pilots and strategies aiming at quality improvement; and the establishment of international collaborations in the field.

The extension of PMAQ analyses and policy discussions to diverse policy related fields could take place in a number of ways. Collective Health researchers, especially those working in the external assessment of the PMAQ, could engage or be

encouraged to undertake other types of analysis, employ frameworks and theories of the public policy process and/or taking into account qualitative data and experiences in the field. Postgraduate programs in Public Health and Collective Health in Brazil could encourage postgraduates to carry out research that goes beyond the use of quantitative methods, or that reconciles this with other methods and new subjective data collection with actors involved in policymaking and implementation. Brazilian Collective Health, generally, could go deeper into the use of concepts and methods derived from global health and public policy. This initiative could be encouraged or implemented by collective actors, such as the Brazilian Association of Collective Health (ABRASCO), or research groups or research networks.

Additionally, researchers from other areas, such as the Social Sciences - Sociology and Political Science -, Political Economy and Administration, could be attracted to the PMAQ through calls for research grants, or invitations to participate in discussions and publications. These researchers could also begin to incorporate the PMAQ into their public policy research agendas. The Ministry of Health in partnership with researchers from diverse areas could foster a new type of dialogue forum, with the insertion of themes and discussions regarding global health and public policy. This forum could entail new forms of interaction between policymakers, researchers and those on the front line, not limited to a specific field of knowledge or practice.

Researchers together with the Ministry of Health, states and municipalities could initiate pilot projects that employ multi-method and qualitative method data collection and analysis. They would aim to better understand best practice cases derived from the PMAQ, as an example and a way of learning and generating evidence for the construction of strategies of quality improvement in primary health. In addition, various forms of educational and front-line training activities for the PMAQ could be adopted in

order to strengthen or promote appreciation and greater understanding of PMAQ at the front line of implementation. Front-line dialogues and feedback mechanisms on PMAQ and quality improvement could be adopted, as well as mechanisms for implementing and strengthening feedback and redesigning the program, focusing on the building of sustainable monitoring strategies. Given the low level of autonomy and organizational capacity of most Brazilian municipalities, and the bureaucratic challenges that characterize management in municipalities with greater organizational capacity, it would be interesting if the Ministry of Health, and the Department of Primary Care in particular, would also provide these mechanisms and tools that could enhance program implementation.

In order to advance in terms of knowledge transfer (from and to other countries), the Ministry of Health, together with states and municipalities, could enter into international agreements to learn from other countries. Brazilian researchers could also establish international research partnerships, aiming to bring comparative policy lessons from other countries to PMAQ and vice versa.

Those three broad types of implications are not exhaustive, and can be seen as examples of how to strengthen PMAQ and primary health care through a global health and public policy perspective.

References

Bevan, G., & Hood, C. (2006). 'What's Measured Is What Matters: Targets and Gaming in the English Public Health Care System'. *Public Administration, 84* (3), 517–538.

Bhatnagar, A., & George, A. (2016). Motivating health workers up to a limit: partial effects of performance-based financing on working environments in Nigeria. *Health Policy and Planning, 31(7),* 868-877. https://doi.org/10.1093/heapol/czw002

Bjornholt, B., & Larsen, F. (2014) The politics of performance measurement: 'Evaluation use as mediator for politics'. *Evaluation, 20*(4), 400-411. DOI: 10.1177/1356389014551485

Bodenheimer, T., Ghorob, A., Willard-Grace, R., & Grumbach, K. (2014). The 10 Building Blocks of High-Performing Primary Care. *Annals of Family Medicine*, *12*(2), 166–171. http://doi.org/10.1370/afm.1616

Centro Brasileiro de Estudos de Saúde. (2014). *Saude em Debate, 38*, N. Especial, Rio de Janeiro. Retrieved from the Centro Brasileiro de Estudos da Saúde website: http://cebes.org.br/site/wp-content/uploads/2014/11/RSD_AB_WEB_031114.pdf

Eijkenaar, F. (2013). *Effects of pay-for-performance in health care: a systematic review of systematic reviews. Pay-for-Performance for Healthcare Providers Design, performance measurement, and (unintended) effects*. Netherlands: Het instituut Beleid & Management Gezondheidszorg. Retrieved from https://www.bmg.eur.nl/fileadmin/ASSETS/bmg/Onderzoek/Promoties/Promoties_2013/Frank_Proefschrift.pdf

Exworthy, M., & Powell, M. (2004). Big windows and little windows: implementation in the 'congested state'. *Public Administration*, *82*(2), 263-281. DOI: 10.1111/j.0033-3298.2004.00394.x

Fausto, M. C. R., Bousquat, A., Lima, J. G., Giovanella, L., Almeida, P. F., Mendonça, M. H. M., ... Silva, A. T. C. (2017). Evaluation of Brazilian primary health care from the perspective of the users: Accessible, continuous, and acceptable? *The Journal of Ambulatory Care Management, 40*(Suppl. 2), S60–S70. doi: 10.1097/JAC.0000000000000183

Fausto, M. C. R., & Fonseca, H. M. S. (Eds.) (2013). *Rotas da atenção básica no Brasil: experiências do trabalho de campo PMAQ AB*. Rio de Janeiro, RJ: Saberes Editora.

Fischer, F., & Gottweis, H. (Eds.). (2012). *The argumentative turn revisited: public policy as communicative practice*. Durham & London: Duke University Press.

Fischer, F., Miller, G. J., & Sidney. M. S. (Eds.) (2006). *Handbook of Public Policy Analysis Theory, Politics, and Methods*. Boca Raton: CRS Press, Taylor & Francis Group.

Forbes, L., Marchand, C., & Peckham, S. (2016). *Review of the Quality and Outcomes Framework in England*. Retrieved from the Policy Research Unit in Commissioning and the Healthcare System website: http://blogs.lshtm.ac.uk/prucomm/2017/02/07/review-of-the-quality-and-outcomes-framework-in-england/

Gagne, M. (Ed.). (2014). *The Oxford Handbook of Work Engagement, Motivation, and Self-Determination Theory*. Oxford: Oxford University Press.

Giuffrida, A., Gravelle, H., & Roland, M. (1999). Measuring quality of care with routine data: avoiding confusion between performance indicators and health outcomes. *BMJ*, 319:94. oi: https://doi.org/10.1136/bmj.319.7202.94

Herzer, K. R., & Pronovost, P. J. (2015). Physician Motivation: Listening to What Pay for Performance Programs and Quality Improvement Collaboratives are Telling Us. *Joint Commission Journal on Quality and Patient Safety*, *41*(11), 522–528.

Hill, M., & Hupe, P. (2008). *Implementing public policy: An introduction to the study of operational governance*. London: Sage.

Hogg, W., Rowan, M., Russell, G., Geneau, R., & Muldoon, L. (2007). Framework for primary care organizations: the importance of a structural domain. *International Journal for Quality in Health Care*, *20*(5), 308-313.

Howlett, M., Ramesh, M., & Perl, A. (2013). *Política Pública: seus ciclos e subsistemas: uma abordagem integral*. Rio de Janeiro: Campus/Elsevier.

Khim, K., Ir, P. & Annear, P. L. (2017). Factors Driving Changes in the Design, Implementation, and Scaling-Up of the Contracting of Health Services in Rural Cambodia, 1997–2015. *Health Systems & Reform, 3*, 2, 105-116. DOI: 10.1080/23288604.2017.1291217

Kirschner, K., Braspenning, J., Jacobs, J. E., & Grol, R. (2012). Design choices made by target users for a pay-for-performance program in primary care: an action research approach. *BMC Family Practice, 27*, 13:25. doi: 10.1186/1471-2296-13-25

Kristensen, S.R., McDonald, & R., & Sutton, M. (2013). Should pay-for-performance schemes be locally designed? Evidence from the Commissioning for Quality and Innovation (CQUIN) Framework. *Journal of Health Services Research & Policy, 18*(2 Suppl), 38-49. doi: 10.1177/1355819613490148

Langdown, C., & Peckham, S. (2014). The use of financial incentives to help improve health outcomes: is the quality and outcomes framework fit for purpose? A systematic review. *Journal of Public Health, 36* (2), 251-258. DOI: https://doi.org/10.1093/pubmed/fdt077

Lee, J. Y., Lee, S., & Jo, M. (2012) Lessons From Healthcare Providers' Attitudes Toward Pay-for-performance: What Should Purchasers Consider in Designing and Implementing a Successful Program? *Journal of Preventive Medicine and Public Health, 45(3) ,* 137-147. https://doi.org/10.3961/jpmph.2012.45.3.137

Macinko, J., Harris, M. J., & Rocha, M.G. (2017). Brazil's National Program for Improving Primary Care Access and Quality (PMAQ): Fulfilling the Potential of the World's Largest Payment for Performance System in Primary Care. *The Journal of Ambulatory Care Management, 40*(Suppl. 2), S4-S11. doi: 10.1097/JAC.0000000000000189

Margetts, H., & Hood C. (2016) Tools Approaches. In B. Guy Peters & P. Zittoun (Eds.), *Contemporary Approaches on Public Policy* (pp. 133-154). London: Palgrave-McMillan.

Mark, M. M., & Henry, G. T. (2004). The Mechanisms and Outcomes of Evaluation Influence. *Evaluation, 10*(1), 35–57. DOI: 10.1177/1356389004042326.

Matta-Machado, A. T., de Lima, A., de Abreu, D., Araújo L., Sobrinho D. F., Lopes E., ... dos Santos A. (2017). Is the use of information and communication technology associated with certain aspects of women's primary health care in Brazil? An exploratory approach. *The Journal of Ambulatory Care Management, 40*(Suppl. 2), S49–S59. doi: 10.1097/JAC.0000000000000187

May, P. (2003). Policy design and implementation. In B. G. Peters & J. Pierre (Eds.), *The Sage Handbook of Public Administration* (pp. 223-233). London: Sage Publication.

Mello, L. A. F., Tonini T., Sousa da Silva A., Dutt-Ross, S., & de Souza Velasque, L. (2017). Evaluation of primary health care units in the Rio De Janeiro City according to the results of PMAQ 2012. *The Journal of Ambulatory Care Management*, *40*(Suppl. 2), S71–S82. doi: 10.1097/JAC.0000000000000188

Moynihan, D. P., Pandey, S. K., & Wright, B. E. (2012). Setting the Table: How Transformational Leadership Fosters Performance Information Use. *Journal of Public Administration Research and Theory 22* (1), 143–164.

Neves, M., Giordani, J. M. A., Ferla, A. A., & Hugo F. N. (2017). Primary care dentistry in Brazil: From prevention to comprehensive care. *The Journal of Ambulatory Care Management,* *40*(Suppl. 2), S35–S48. doi: 10.1097/JAC.0000000000000186

Olafsdottir, A. E., Mayumana, I., Mashasi, I., Njau, I., Mamdani, M., Patouillard, E., … Borghi, J. (2014). Pay for performance: an analysis of the context of implementation in a pilot project in Tanzania. *BMC Health Services Research*, *14*, 392. http://doi.org/10.1186/1472-6963-14-392

Patton, M. Q. (2014). *Quality research and Evaluation Methods* (4th ed.). Thousand Oaks, CA: Sage.

Peckham, S. (2007). The New General Practice Contract and Reform of Primary Care in the United Kingdom. *Healthcare Policy*, *2*(4), 34–48.

Peckham, S., & Wallace, A. (2010). Pay for performance schemes in primary care: what have we learnt? *Quality in Primary Care*, *18*(2):111-6.

Pollitt, C. (2013). The Logics of Performance Management. *Evaluation, 19* (4)*,* 346-363. DOI: 10.1177/1356389013505040

Rocha, T. A. H., Silva, N. C.; Thomaz, E. B. A. F.; Queiroz, R. C. S.; Souza, M. R.; Lein, A., ... Facchini, L. A. (2017). Primary health care and cervical cancer mortality rates in Brazil: A longitudinal ecological study. *The Journal of Ambulatory Care Management, 40*(Suppl. 2), S24–S34. doi: 10.1097/JAC.0000000000000185

Rodrigues, V., Santos, C. R. I., & Pereira, M. U. (2014). A experiência de planejar e operacionalizar o PMAQ-AB no estado do Acre. *Saúde Debate, 38*, Especial, 173-181. DOI: 10.5935/0103-1104.2014S013

Roland, M., & Guthrie, B. (2016). Quality and Outcomes Framework: what have we learnt? *BMJ, 354*, 1-4. https://doi.org/10.1136/bmj.i4060

Saddi, F. C., Harris, M. J., Parreira, F., & Pego, R. A. (2017, June). *The politics of implementing a performance measurement program (PMAQ) at the front line of primary health care in Goiania, Brazil: a qualitative political analysis.* Paper presented at the IPPA 3rd International Conference on Public Policy, Singapore, Singapore. Retrieved from http://www.ippapublicpolicy.org//file/paper/5940367b9c589.pdf

Saddi, F. C. (2014). *Política e Saúde no Brasil e México em contexto de dupla transição Política. Curitiba: Editora Appris.*

Schofield, J. (2001). Time for a revival? Public policy implementation: a review of the literature and an agenda for future research. *International Journal of Management Reviews*, *3*(3), 245-263. DOI: 10.1111/1468-2370.00066

Scott, T., Mannion, R., Marshall, M., & Davies, H. (2003). Does organisational culture influence health care performance? A review of the evidence. *Journal of Health Services Research & Policy, 8*(2), 105-17. DOI:10.1258/135581903321466085

Songstad, N. G., Lindkvist, I., Moland, K. M., Chimhutu, V., & Blystad, A. (2012). Assessing performance enhancing tools: experiences with the open performance review and appraisal system (OPRAS) and expectations towards payment for performance (P4P) in the public health sector in Tanzania. *Globalization and Health*, *8*, 33. http://doi.org/10.1186/1744-8603-8-33

Talbot, C. (2010). *Theories of Performance: Organizational and Service Improvement in the Public Domain*. Oxford, UK: Oxford University Press.

Tomasi, E., Cesar, M. A. D. C., Neves, R. G., Schmidt, P. R. C., Thumé, E., da Silveira D. S., ... Facchini, L. A. (2017). Diabetes care in Brazil: Program to Improve Primary Care Access and Quality—PMAQ. *The Journal of Ambulatory Care Management, 40*(Suppl. 2), S12-S23. doi: 10.1097/JAC.0000000000000184

Toonen, J., Canavan, A., Vergeer, P., & Elovainio, R. (2009). *Learning Lessons On Implementing Performance Based Financing, From A Multi-Country Evaluation*. Retrieved from The World Health Organization website http://www.who.int/contracting/PBF.pdf

World Health Organisation Europe. (2015). *Health system transformation: making it happen. Expert Meeting, Madrid, Spain, 17-18 December 2015.* Copenhagen: Author.

Yé, M., Diboulo, E., Kagoné, M., Sié, A., Sauerborn, R., & Loukanova, S. (2016). Health worker preferences for performance-based payment schemes in a rural

health district in Burkina Faso. *Global Health Action*, *9*, 10.3402/gha.v9.29103. http://doi.org/10.3402/gha.v9.29103

Footnote

1. The term originally comes from the collective health movement that debated and struggled for the creation of a universal health system in Brazil during the transition to democracy. They proposed a broader concept of health that would consider the social and political aspects of human life that goes beyond biomedicine concerns. Since the democratization, the field has gained new shapes and a huge number of representatives involved in two main institutions: the Brazilian Center for Health Studies (CEBES) and the Brazilian Association of Collective Health (ABRASCO) (Saddi, 2014). Though in diverse ways during the period, they have been guiding the theoretical and political discussions about health policies. With respect to primary care this debate is presently mainly developed by ABRASCO's Research Network of Primary Care that gathers most of PMAQ's external assessors.

ITEMIZED, POINT-BY-POINT RESPONSE TO THE COMMENTS OF THE REVIEWERS

[Reviewer #1, commentary]: The revised manuscript is a significant improvement and the author made good efforts to address the reviewers' comments. Only additional attention to language is needed to make the article more comprehensible and impactful. The document would benefit from additional copy-editing and attention to English (for example "hegemonic" is used quite a number of times and I'm not sure of the author is intentionally using a word with such negative connotations).

[Authors' response to reviewer 1]: Dear reviewer, Thanks for your comments. Besides taking into account the comments you have made, we have also made some other improvements, bringing to the text the contributions of a second author, so as to increase the quality and impact of the work, and better develop the English language revision.

Responding to your comments:

1. We have done a complete revision of the English language and done a better copy-editing.
2. We have removed repeated expressions, and especially those with negative connotations, substituting them for other words or expressions. The word "hegemonic" now appears only twice in the article (in two different pages), as we have either removed or substituted them.

Other improvements:

1. We have added the expression "payment for performance" to the title.
2. We have further improved the content of the article, bringing three main elements to the debate: 1) including aspects related to health system research, mentioning the disconnect between policy research, policy impact monitoring and policy (page 3, second paragraph) practice. 2) Clarifying the distinction between p4p and quality improvement (page 8), and 3) making suggestions on how to evaluate primary care quality via p4p/PMAQ (page 8 and 9).

Many thanks,

The authors

[Reviewer #2, commentary]: The author has adequately addressed all the original comments and has extended the article significantly to elaborate on many of the most important, salient points. The article is a well-reasoned argument making an important point regarding the methodological standpoints required to better understand P4P and its implications in Brazil.

[Authors' response to reviewer 2]: Dear reviewer, Thanks for your comments and for approving the publication of this manuscript. We have made further revision bringing the contributions of a second author, so as to increase the quality and impact of the work, and better develop the English language revision.

1. We have done a complete revision of the English language and done a better copy-editing.
2. We have removed repeated expressions, and especially those with negative connotations, substituting them for other words or expressions. The word "hegemonic" now appears only twice in the article (in two different pages), as we have either removed or substituted them.
3. We have added the expression "payment for performance" to the title.
4. We have added the expression "payment for performance" to the title.
5. We have further improved the content of the article, bringing three main elements to the debate: 1) including aspects related to health system research, mentioning the disconnect between policy research, policy impact monitoring and policy (page 3, second paragraph) practice. 2) Clarifying the distinction between p4p and quality improvement (page 8), and 3) making suggestions on how to evaluate primary care quality via p4p/PMAQ (page 8 and 9).

Many Tanks,

The authors