Exploring front liners' knowledge, participation and evaluation in the implementation of a pay for performance program (PMAQ) in primary health care in Brazil

Journal:	*Journal of Health Organization and Management*
Manuscript ID	JHOM-04-2020-0154.R2
Manuscript Type:	Original Article
Keywords:	Implementation, Primary care, Performance, Working conditions, Qualitative research, Brazil

[Digite aqui]

(Total of 302 words)

TITLE: Exploring front liners' knowledge, participation and evaluation in the implementation of a pay for performance program (PMAQ) in primary health care in Brazil

TABLES

Table 1 - Goiania as illustrative case of critical organizational capacity in Brazil: comparison with other capitals and related states

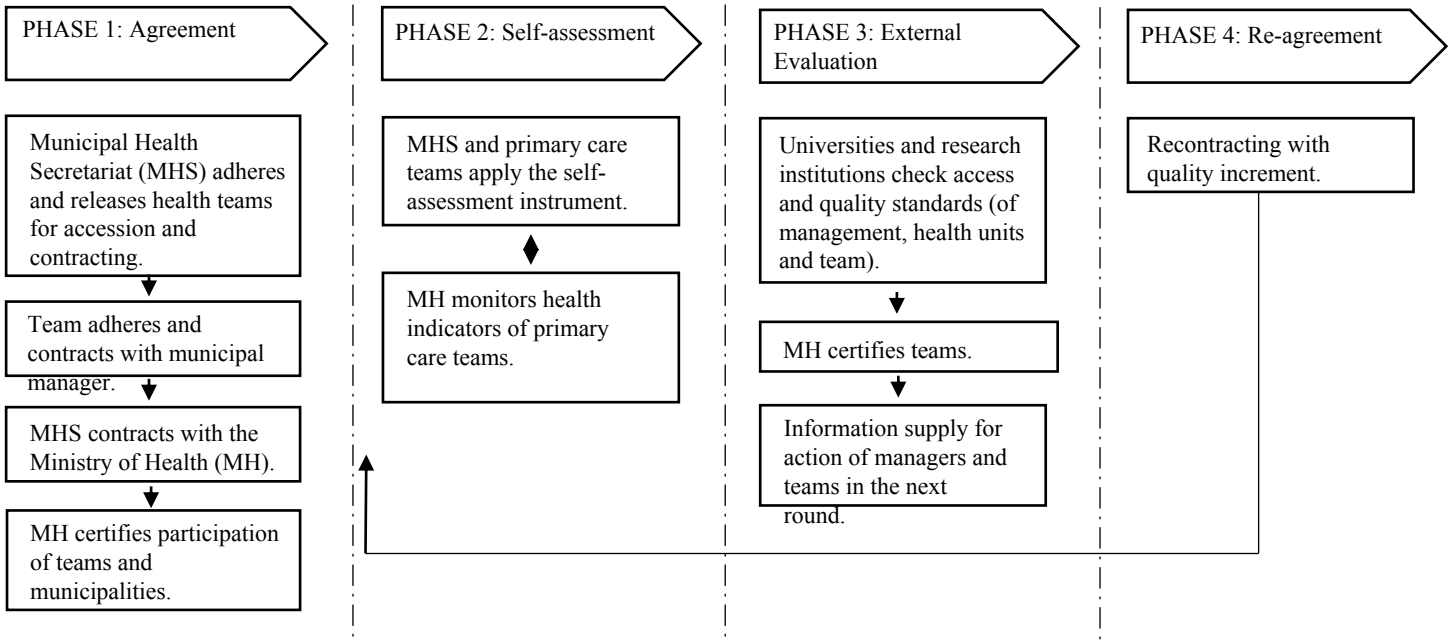
Questions	*City of Goiânia*	*City of Fortaleza*	*City of Vitória*	*State of Goiás (1)*	*State of Ceará (2)*	*State of Espírito Santo (3)*	*Brazil*
% health teams that received support for planning/ organisation (a)	55,9	73,3	89	78,4	90,8	80,5	85,6
% of teams who said managers provided information to be used in the analysis of the health situation (b)	44,1	75	94,7	71,5	95,1	86,9	86,8
% of teams with monthly reports consolidated in the system (c)	44,8	82,5	88,7	70,8	90	85,1	85,9
% of teams with defined results and goals for monitoring (d)	66,2	64,4	82,2	69,4	79,7	74,5	78,4
% of health units with one procedure room (e)	47,6	41,1	57,7	47,9	52,8	36,1	45,8
% of teams that have access to the internet in health units (f)	11,9	27,5	100	43,3	14,6	31,2	35,4
% of health units with mould near the sinks, the toilets (g)	51.8	49.5	34.6	24	26	46.2	24
% of CHW who are not part of health teams with shortage of professionals (h)	25	0	15.4	11.1	6.5	12.2	15.3

Notes: Goiania is the capital of Goias state (1), while Fortaleza and Vitoria are the capitals of Ceara (2) and Espirito Santo (3).
Sources: I) Ministerio da Saude (2015a): (a) pp. 57-58, (b) pp. 66-67, (c) pp. 76-77, (d) pp. 55-56. II) Ministerio da Saude (2015b): (e) pp. 228-229, (f) pp.362-363, (g) pp. 186-187, (h) pp.39-40.

Table 2 - Participants

Type of frontline staff	Health Districts			Total	
	East	Northeast	Southwest	N	%
Doctors	3	3	2	8	32%
Nurses	2	2	3	7	28%
CHW	2	2	2	6	24%
Managers	1	2	1	4	16%
Total	**8**	**9**	**8**	**25**	**100%**

Figure 1 - PMAQ PHASES – 2ND ROUND



Abstract

Design– This paper develops an implementation theory-driven qualitative analysis. The research is developed in the city of Goiania (Brazil): a challenging organizational context in primary care (PHC). Interviews were carried out with 25 front liners - managers, doctors, nurses and community health workers. Data was thematically and hierarchically analysed according to theoretical concepts such as policy knowledge, policy adherence, forms of accountability, alternative logics, organizational capacity and policy feedback.

Findings - Results show the need to foster organizational capacity, knowledge, participation and policy feedback at the frontline. Successful implementation would require those adaptations to counteract policy challenges/failures or the emergence of alternative logics.

Research Limitations – The study was conducted in only one setting, however, our sample includes different types of professionals working in units with different levels of organization capacity, located in distinct HDs, expressing well the implementation of PMAQ/P4P. Qualitative researches need to be developed for further exploring the same/other factors.

Social Implications: Findings can be used to improve discussions/planning and design of P4P programs in the city and State of Goias.

Originality/value - The majority of analysis of PMAQ are of a quantitative or results-based nature. This article focuses on politically significant and unanswered questions regarding the implementation of PMAQ.

1. Introduction

This paper explores the implementation of payment for performance programs in challenging organizational contexts in primary health care (PHC). Drawing on both implementation theory and realistic-political literature on performance measurement to uncover and explore front liners' perspectives and challenges regarding the implementation of a pay for performance program (P4P) in the city of Goiania (Brazil).

1.1.Overview

In both high (HICs) and low- and middle-income countries (LMICs), questions have been raised regarding if and how frontline health workers have been effectively motivated or involved in the implementation of payment-for-performance (P4P) programs, and if P4P or

performance based-financing (PBF) have positively affected health systems. In high-income countries, it is known that P4P has not contributed to generating the expected changes to the work routine, and doubts have also been raised regarding other expected outcomes (Forbers *et al*., 2016; Roland and Guthrie, 2016). Debates are also underway regarding the feasibility of the design (Eijkenaar *et al.*, 2013). The lack of knowledge or feedback (Lee *et al.*, 2012) are considered barriers to their implementation, especially in LMICs, mainly due to, but not only, challenging and complex organizational contexts (Singh *et al.*, 2020).

The Brazilian National Program for Improving Access and Quality (PMAQ) was introduced with the aim of increasing access to, and improvement in, PHC, guaranteeing comparable national, regional and local standards of quality and providing greater transparency and effectiveness of governmental measures regarding PHC. Among the specific PMAQ objectives, the following are highlighted: to increase the impact on the health conditions of the population; to provide organizational standards for basic care units; to promote adherence to PHC principles; to foster the quality of PHC management; to institutionalize a PHC assessment culture. PMAQ also stresses that health professionals should be involved and mobilized during its implementation (Ministério da Saúde, 2013).

In Brazil new programs are usually developed and scaled by the Health Minister's Department of Basic Health Care; they entail the introduction of new agreements/contracts and fund transfers from the federal government to the municipal level. Once the Municipal Health Secretariat (MHS) adheres to the program, the program is passed on to health districts. Regarding the units' frontline services, new programs are usually introduced by the local managers or district managers to the health teams, and generally do not involve a comprehensive, communicative or educational strategy. The new program is implemented along with other demands taking place, following the timing stipulated by superiors' demands.

In this work, we will be focusing on the 2nd round of PMAQ. PMAQ's third round was completed in 2018, and rounds have an average two-year-length. In its 2nd round, the program was developed in four phases (Figure 1): agreement, self-assessment, external evaluation, re-agreement (Ministério da Saúde, 2013). Following the performance targets stated in the agreement phase, the MHS received incremental funding proportional to the scores obtained during PMAQ's assessment. The financial resources destined from the Ministry of Health (MH) to the municipal level were transferred to the Municipal Health Funds. PMAQ established that the municipal government could invest PMAQ's fund in primary care in a flexible way, with no obligation to transfer them to the health teams, although teams did expect to be rewarded for their performance (and some have been).

Figure 1 – PMAQ phases in the second cycle

1.2. Knowledge gap

In Brazil, PMAQ features in a small number of peer-reviewed qualitative analyses from 2014-2017 (N= 5, 56%), with a more significant number of publications in 2018 (January-October) (N= 4; 44%) (Saddi and Peckham, 2019). The majority of PMAQ analyses are quantitative, revealing that there is a significant knowledge gap about PMAQ`s implementation process (Macinko *et al.*, 2017; Saddi and Peckham, 2018).

1.3. Aim and Objectives

The objective of this paper is to understand how frontline staff know, participate in and evaluate the PMAQ in its second round, in a challenging organizational capacity context in PHC. Our specific objectives are to verify: 1) if and in what ways frontline actors (and which of them) know the program, 2) which members of the health team effectively participated in the implementation of PMAQ and how it occurred and 3) if and how PMAQ modified the way in which the professionals assess and plan the working process. The study is developed for the city of Goiania, as an illustration of a challenging policy capacity context in PHC. Results are discussed as a showcase for Brazil and other low- and middle-income countries (LMICs) presenting critical organizational capacity issues in PHC.

1.4. Primary Health Care in Goiania

In Goiania, PHC and its Family Health Strategy (FHS) were created only in late 1990. This implementation took place late in relation to other capitals in Brazil, being created in the furthest areas of the city to serve the poorest population. This was the period in which the left-wing government took over the capital, elected, among other reasons, due to promises to increase access to health services. PHC services are offered to only 49% of the population of Goiania, located in areas far from the city centre. Currently, the Capital has 193 FHS teams that work in 59 Basic Health Units. The high turnover of doctors and deficits of health professionals is another characteristic of PHC services in the city.

Moreover, PHC is confronted by inadequate infrastructure, lack of professionals and equipment and poor levels of management and monitoring (Table 1). Health teams need to cope with complex demands coming from the MHS/ health districts (HD), health unit colleagues and users/community. A systematic routine assessment of work is not adopted in most of the units,

though they usually meet once a week to plan their work. Frontline health workers complain of not taking part in or not being consulted during the decision-making at the MHS.

Table 1 - Goiania as an illustration of a challenging organizational context in PHC

2. Literature and related hypotheses

2.1. Public Policy and Implementation literature

The political literature on public policy and implementation can be used to shed new light on the implementation of P4P programs. We know both from public policy and implementation theory (Hupe and Hill, 2007; May and Winter, 2009; Meyers and Nielsen, 2012, May, 2012), as well as from health policy and system research (Gilson, 2016; Peters *et al.*, 2009), that well designed policies involving rational choices of instruments and goals are not sufficient to realize, strengthen or improve implementation on the ground. We also know that implementation takes place in a complex and demanding context, depending greatly on the knowledge/values, interests and actions (or decisions) of frontline actors, as well as on the organizational capacity of the institution to roll it out (May and Winter, 2009; Meyers and Nielsen, 2012).

Peter Hupe and Michael Hill (2007) have called attention to three types of competing/conflicting forms of accountability that can influence the actions/decisions of frontline workers:

> street-level bureaucrats are held accountable in various relations: bottom-up as well as top-down, but also 'sideways'. Those forms of accountability refer to actions related to the system, organizational and individual scales… Within the web of these multiple accountabilities … street-level bureaucrats constantly weigh how to act (p. 296).

In a complementary way, May and Winter (2009) present four sets of influences that tend to influence street-level bureaucratic actions during implementation:

> One set is the signals from political and administrative superiors about the content and importance of the policy… A second set of influences is the organizational implementation machinery… A third set of considerations is the knowledge and attitudes of the street-level bureaucrats concerning relevant tasks, their work situation, and clients. A fourth set is the

> contextual factors concerning workloads, client mix, and other external pressures… (and) the role of knowledge and policy perceptions of street-level bureaucrats along with contextual factors. (pp. 454-455).

Those authors also emphasise that most street-level bureaucrats are more prone to adhere to and implement policy goals when they understand the policy in question. It means that knowledge is a factor that directly influences the level of adherence and decisions related to policy goals. According to them:

> The signalling of policy goals … seem to have a limited influence. More important are the understanding of the national policy by street-level bureaucrats and their knowledge of the rules under the reform (May and Winter, 2009, p. 470).

Therefore, although the translation of policy goals into street-level measures depends on diverse factors, from the perspective of public policy theoretical literature, they can be understood according to issues such as the organizational capacity of the bureaucracy, the conflicting forms of accountability (administrative, professional and participatory) which take place at the front line, front liners knowledge about the program, the perspectives and participation (involvement/reactions) of frontline workers, as well as the pressures and other issues stemming from work processes at the front line.

These concerns have also been emphasized by the public health policy and system research literature in LMICs. A group of systematic reviews edited by David H. Peters and colleagues (Peters *et al.*, 2009) has brought new knowledge to the field. One of these reviews has shown that involvement and engagement of stakeholders including frontline actors is necessary for effective implementation (Ovretveit *et al.*, 2009). Another review has also stressed certain institutional factors to explain health policy delivery in LMICs:

> The degree and breadth of commitment to the stated objectives of the strategy or intervention, rules about how critical stakeholders are involved, and the incentives to make them work, incentives and disincentives for health workers (and ultimately organizations) to perform well (Bloom *et al.*, 2009, p. 203).

A further two inter-related concepts enable us to identify causes of and effective changes in actors' relations during implementation. Policy feedback enables us to analyse the need for

either incremental or drastic policy changes, while feedback effects is employed to reveal changes driven by feedback. Patashnik and Zelizer assert that weak policy feedback can be caused by: "weak policy design, inadequate or conflicting institutional support, and poor timing" (2009, p.33). Weak policy design can be caused by low per-capita resources, information problems and negative social construction. Conflicting institutional support is associated with absent state functions, multiple conflicting networks and conflicting governance structures. Poor timing can be explained by: "incompatibility of policy with the governing norms of the day" (Patashnik and Zelizer, 2009). Attention has also been given to the fact that feedback, though in diverse ways, can also exert a positive effect on dimensions such as motivations, organizational capacity and routines (Moynihan and Soss, 2014).

2.2. The political literature in performance measurement

The political literature in performance measurement have recently contributed to enhancing the importance of taking the politics (Lewis, 2015), the cognitive/subjective ("alternative logics") (Pollitt, 2013) and work task and organizational aspects of performance measurement programs into account.

Christopher Pollitt (2013) has highlighted some factors which encourage or deter gaming and/or cheating in performance management systems (PMS), and classified them in terms of background factors, task factors and features of PMS. They refer to themes/factors such as organizational culture (background factor); observability of outputs & outcomes (task factor), participation in policy design, data collection and validation (features of PMS). With regards to observability of outputs & outcomes, the author says that:

> Gaming and cheating may become more prevalent the less appropriate a PMS design is for the task, e.g. a hard, tightly coupled PMS imposed on a coping organization (Pollitt, 2013, p. 359).

From the perspective of staff participating in PM design, "PMS is more likely to be seen as 'fair' if staff are involved – therefore less gaming". Concerning the collection and validation of data: "If those being assessed collect the data there is a temptation to game or cheat, and especially if there is no independent validation" (Pollitt, 2013, p. 359). The author also stresses that: "alternative logics are closely related to the basic features of PMSs, and deserve to be considered more openly and extensively" (Pollitt, 2013, p. 360).

Among the more distinctive features of the literature on performance measurement, in relation to public policy, are perhaps: 1) the focus on alternative political (contradictory) logics

surrounding the implementation and 2) the study of PM as a chain related to its policy process, attached to the analyses or characterization of possible unintended results or unintended consequences of rational based programs that aim to strengthen/create a culture of evaluation at the frontline – especially in LMICs.

Taking into account the above literature, our hypotheses are:

- Hypothesis 1 [Question 1] - Front liners' knowledge and levels of understanding about the PMAQ, in a challenging organizational context, influences their adherence to the program and the way they commit to the program during the implementation.
- Hypothesis 2 [Question 2] - Front liners' participation in the PMAQ, in challenging organizational contexts with low understanding, are characterised by effectively low levels of engagement and changes in the work process during the implementation. This process tends to favour the development of gaming/cheating.
- Hypothesis 3 [Question 3] - Front liners' evaluation and perceived impact of PMAQ is influenced by the whole policy process of implementation, including their levels of knowledge/understanding, participation and perceived policy feedback/feedback effects of a challenging organizational context.

3. Methods

We develop a thematic exploratory qualitative analysis to delve into the implementation process of the PMAQ 2nd round in the city of Goiania. We have followed a purposive strategy in the selection of interviewers. They were chosen from three health districts (HD) in the city – Northeast, Southwest and East –where we had previously applied the semi-structured questionnaires (Table 2) (Saddi *et al*., 2018). When selecting informants to take part in the interviews, attention was given to ensure that we had a representation of interviewees from those health districts, as well as a representation from health team members – doctors, nurses and community health workers – and local managers. We also selected informants who were not on vacation, and who were still working in PHC units. We interviewed 25 informants (Table 2) until achieving saturation.

During the interviews, we adopted an open-ended approach. Interviews were recorded on audio and lasted around 30-40 minutes. They were undertaken in September and October of 2016 in the PHC units. The same researcher (FS) conducted all of the interviews. All informants signed a consent form and had the right to withdraw their consent at any time if they wished. The audio recordings were listened to and transcribed by two researchers (FS and FP). We

gave a code to each informant to guarantee information confidentiality. The research was approved by the Research Ethics Committee of the Federal University of Goiás, authorization number 26584514.3.0000.5083.

Table 2 - Participants: frontline staff by health districts

We have adopted a thematic analysis, which is one of the traditional approaches in qualitative analysis and "in which themes are identified, with the researcher focusing on the way the theme is treated or presented and the frequency of its occurrence" (Spencer and Ritchie, 2003). We have also constructed an analytic hierarchy attached to themes and participants to explore the relations between them as "the analytic hierarchy refers to the process through which qualitative 'findings' are built from the original raw data. It is described as a form of conceptual scaffolding within which the structure of the analysis is formed" (Spencer and Ritchie, 2003). The analysis involved three main related activities: data management, descriptive accounts and explanatory accounts.

Our three main questions - concerning frontline staff´s knowledge, participation and evaluation regarding the implementation of PMAQ - were coded and associated with specific themes highlighted by the implementation literature and the political approach of performance studies, presented above. The coding process was first done manually with half of the texts as we read and reread them searching for patterns, narrative threads, tensions, themes and sub-themes that shape qualitative texts into research texts. The codes, as well as new sub-themes were added line-by-line by two researchers (FS and FP), who compared results between both of them. Results were afterwards shared with other two researchers (MH, RP). Afterwards all interview texts were imported into Atlas.ti, and analysis was firstly performed by one researcher (FS) and then analysed and discussed with all other researchers. We began to search for themes and sub-themes, linking selected texts to the codes and their sub-themes. No new themes or sub-themes appeared in the analysis performed with all texts in the software. A more comprehensive analytical process occurred by means of using reports generated by Atlas.ti, as well as annotations registered during the process. It was at this point that we tried to detect how diverse themes were expressed in a priority-oriented and recurrent manner.

Themes were classified as first order/priority-oriented themes and as recurrent/background or second order themes. First order/priority-oriented themes are those revealed at the beginning of the narrative and more emphasized by respondents. Recurrent/background or second order themes refer to factors that characterize the

background/context of the narrative or that aggregate subsequent inter-related information that explains the first order/priority-oriented themes.

We explored what/how themes appeared in the informant's narrative regarding each dimension of implementation and in the implementation process as a whole. In the analysis of each dimension, we tried to detect how informants construct their prioritization of themes/factors in the narrative, by means of establishing relations or referring to other inter-related theme(s). We paid specific attention to how the repetition of similar themes/factors shaped and gave meaning to the policy implementation process.

4. Results

4.1. Result 1 - Predominance of Basic-Low Knowledge/ Valorisation and Conflicting Forms of adherence in a Challenging Organizational Context

In the analysis, front liners' knowledge of PMAQ were associated with partial adherence, diverse and predominant levels of basic/low knowledge and low organizational capacity. Alternative logics and gaming, as well as lack of feedback appeared as recurrent/background themes. Among those themes, adherence and low organizational capacity were emphasised more than the others.

Front liners hold three types of knowledge about the program. They were classified as high level in the case of local managers who used to hold positions in the HD or Municipal Health Secretariat (MHS), and were responsible for the program's presentation stage together with HD's managers. Other managers and nurses hold a basic level of knowledge about the program. Nurses work more closely to HD and local managers, as they develop the role of coordinators of the health team/CHW. Doctors and CHW hold either a low or a null level of knowledge, which is generally developed in presentations given by the HD. As stressed by the literature (May and Winter, 2009; Pollitt, 2013) the "signalling of programs goals" and closer contact with HD managers were not sufficient conditions to increase their understanding about and valorisation of the program.

Front liners' adhesion is particularly influenced by conflicting logics experienced in the presentation or introductory phase of PMAQ, as well as derived from the previous rounds. Adhesion were characterized in two ways: 1) as both an obligation and will to improve the quality of PHC and 2) by HD's pressures due to the Municipal Government's need to obtain funds, leading, for instance, to situations of refusal to adherence that were followed by pressure and gaming.

> I put down that I was signing because I was obliged. The Health District at the time said "If you don't sign, because you don't want to, you can leave. (Nurse, HD East)

> Adherence was mandatory. City Hall adhered to everything because of the funds that were coming. (Doctor, HD Southwest)

As a second order theme, low organizational capacity of the unit was a recurrent and strongly emphasised theme, involving deficits of health professionals (mainly CHW and doctors), low availability of medications and supplies availability, insufficient computers to fill in required data, and diversion of the CHWs' primordial function, in order to carry out other tasks due to reduced staff and workload. This poor organizational capacity coincided with the introduction of a new culture of "pressure for numbers (for production)", and helped to understand frontline professionals' dissatisfaction regarding working conditions and the future of PHC.

> We didn't have a receptionist for a year. We work a lot at the front desk. We also substitute the technician. We cover holes. If there's PMAQ, we also participate. This way, it took us three months to go back to the same house. (CHW, HD East).

In sum, PMAQ's low level of knowledge and valorisation at the frontline is associated with low organizational capacity, in terms of the availability of professionals and lack of resources for the accomplishment of these actions. These issues, due to the environment of pressures and instability, contribute to professionals' scepticism or demotivation concerning PMAQ.

> But we need to check how to do it, if it will be the full staff or not with PMAQ. Because in this logic, doctors don't have time for other things. (Doctor, HD Southwest).

> I have no sheets, no coat. I use paper instead of sheets. And then a robber comes and breaks in and steals all the materials from my locker. There's no security guard. (Nurse, HD Northeast)

Our first result indicates that most frontline health workers have a basic or low-level understanding of the PMAQ and tend not to value the program. It is seen as another top-down policy with absence of feedback, in a context where reluctance in terms of adherence can generate gaming and cheating between superiors and front liners. Everyday constraints, which

also attributed to low levels of organizational capacity, contribute to undermining frontline health workers perceptions/valorisation regarding the PMAQ. Local managers who held previous positions at the HD/HMS are an exception.

4.2. Result 2 - Partial Participation with Low Effective Engagement Followed by Alternative Logics

Frontline staff participation in the implementation of the PMAQ was influenced by the way they responded to contradictory demands and accountability, as well as by alternative logics and ambiguities embedded in PMAQ. Organizational capacity, feedback, adherence (knowledge), perceived impact, and difficulties in adopting an assessment culture appeared as recurrent/background themes.

Nurses (and local managers) had higher participation rates in the PMAQ, followed by CHWs and then doctors. In general, doctors that participated did so sporadically (generally more in the beginning). The exception was in units in HD East, where participants said everybody participated in PMAQ's discussions and planning. However, even then, some doctors claimed they only participated when required. This is because nurses were more accountable to the administration whereas most doctors are much less accountable to the public administration, as they hold provisory positions in PHC.

> Our staff's interest was absent. It needed to include the CHW and the doctor. (Manager, HD Southwest)

Low organizational capacity, absence of feedback from the previous round, low levels of adhesion and of understanding were the main recurrent background factors discussed by frontline staff when talking about their participation during the PMAQ 2nd round.

> Look, we didn't have doctors at the time, it was me and the CHW who discussed the questions and filled out the data. They came, presented and went away. We sent everything. We didn't hear about it after that. It was also like that in the other PMAQ. (Nurse, HD Southwest)

PMAQ is also considered as an ambiguous policy in terms of the uses of funding and transference of its financial benefit/reward. Frontline health workers were told that PMAQ's fund would be invested in infrastructure and used to increment the organizational capacity of

PHC. The fact that the fund has neither been invested nor transferred to them in the form of reward, make them see PMAQ as an ambiguous policy and attached to gaming.

> I still didn't get the result. They didn't use the incentive to bring improvement. (Nurse, HD Northeast).

> It was said that there would be a transfer to the doctor, the CHW. But here in Goiás we didn't even hear about this fund. (CHW, HD Southwest)

The program is also understood as a top-down policy. HD managers' participation were constituted as unexpected visits to collect the results, as well as pressure for information and data without taking into account front liners everyday/other work pressures, nor offering alternative planned strategy. Frontlines believe that their superiors/policymakers do not fully understand the unit´s context. Complaints are made with respect to the type of goals/indicators targeted by the program and to the pressure/rushed way in which the PMAQ has been implemented. In a context of basic and low understanding about the program, this perspective on low political responsiveness tend to be followed by unintended consequences and gaming, such as duplication of the same information given in the previous round and other sorts of gaming.

> […] they step inside to visit, where they will visit, they clean, paint and it's all beautiful. They put some makeup on PMAQ, because it needs to respond well. Otherwise the City Hall doesn't get the money. (Nurse, HD East)

> We did the discussion part, but I filled out the same way the other nurse did in the other PMAQ, I'm not too good at filling out. (Nurse, HD East)

> The way they did it, pressuring us to do it quickly, it was a mask. (Doctor, HD Southwest)

PMAQ is also seen as another program full of political rhetoric due to the existing gap existent between HD/MHS policy managers and front liner actors, because front liners did not receive the award, or due to the fact that some of the goals/tools that comprise the program were actually not implemented in Goiania, such as the Tele Medicine.

This work's second result reveals that frontline health workers' participation was characterized by basic and critical levels of engagement with the program, influenced by

management pressures and contradictory demands, followed by certain sorts of gaming and cheating. Factors such as a low level of organizational capacity and knowledge and absence of feedback explain their partial participation in the implementation of the PMAQ. Evidence from LMICs (Ovretveit *et al.*, 2009) show that engaged participation would be necessary for effective implementation.

4.3. Result 3 - Lack of Policy Feedback with Diverse Perceived Impact (Positive-Null) and Non-Sustainable Development of a Culture of Assessment

4.3.a. Changes in the work process?

Priority-oriented themes explaining how frontline staff evaluate policy changes due to PMAQ are associated with themes/factors such as lack of policy feedback, diverse positive-null perceived impact and non-adoption of an assessment culture. In general, interviewees complained about the lack of feedback on the work accomplished with PMAQ, and their unawareness of the results. Absence of feedback was expressed in terms of effects such as non-continuation of the activities, inadequate or lack of support and weak policy design. The analysis also shows that absence of feedback was possibly a result of the program's design, as lack of feedback and non-continuation also occurred in round one of PMAQ. The absence/ lack of feedback resulted in demotivation and did not foster sustainable increases in or maintenance of organizational procedures developed during the PMAQ.

The impact of PMAQ was classified in three ways by front liners: Absence of impact or null impact, positive perceptions associated to questionings about PMAQ and uncertainties regarded the impact of PMAQ.

Three reasons were given for considering that PMAQ did not actually impact PHC: 1) lack of organizational capacity remained during the implementation of PMAQ, and no complementary strategy/support was offered, 2) lack of support and absence of feedback, 3) planning remained on paper and was not implemented nor monitored afterwards. Among them, lack of support and absence of feedback were the themes more strongly emphasised.

> PMAQ brought a lot more work to us. And it remains there, with no support, with no answer. (Manager, HD Northeast).

Positive impacts reported concern over adoption of groups for hypertensive, diabetic and pregnant women, as well as the organization of the area map locating morbidities of patients

with coloured pins, and recording of data. However, those positive aspects were also associated with conflicting issues or negative impacts.

> Planning for the PMAQ was good for us, but there's no continuation. We didn't get a fund. I'd like to have access to the data, to know my grade. We never had access to the publication or the data. (Doctor, HD East).

Those who mentioned the adoption of groups also made references to negative impacts related to organizational capacity and alternative logics. Though the planning required by PMAQ helped them to organize and visualize their work better, the timing was very strict. Planning and organization of work remained in paper and were associated to the fact that the incentive has not been delivered. This means that health workers consider the positive impact of PMAQ in a more integrated form, observing how its impact did not include planning and changes made in their routine of work, low organizational capacity, low level of knowledge and ambiguities inherent the program were associated to its impact.

Informants who hold low levels of participation in the program do not know exactly in which aspects PMAQ impacted PHC. Their narratives are strongly associated with alternative logics. They associate it to the lack of continuation or even relate it to the absence of feedback or advertisement of the program's results within the professional of the unit. This means that those informants hold low level of knowledge regarding the PMAQ, and more specifically regarding the demands/problems that the program aimed to target, therefore they were unable to talk about changes caused by PMAQ.

> To be honest I don't know much about the program. I know it's an assessment program. The nurse can talk more about it. My work is focused on attending. (Doctor, HD Northeast)

4.3.b. Establishing a new assessment and monitoring culture?

According to front liners, three facts explain why the implementation of PMAQ did not contribute to the generation of a practice of routine assessment in the units. *1)* PMAQ was not a continuous assessment initiative, 2) all aspects of PMAQ were not completely implemented, as intended in the program guidance, and 3) the type of assessment provided by PMAQ was focused on result collection/presentation rather than the achievement of changes in practice.

> I believe it's important to assess. But afterwards we weren't able to go on, there's too much work. (Nurse, HD Southwest)

> We had that meeting, discussed, read, we need to go back and rescue what was left behind. It was so in the beginning, but there was no continuation. (CHW, HD East)

PMAQ's implementation was characterised as incomplete or partial, as described in the documents, once it did not manage to go beyond data collection and required registers. For instance, though telemedicine was constituted as a tool to support the implementation of PMAQ, it was not possible to use it because internet was not available in health units in Goiania.

The analysis also shows that front liners recognize the need to adopt a continuous evaluation strategy in PHC, and understand that PMAQ could be used to improve the work process in health units.

> Because of PMAQ we started to do research with patients identifying them as asthmatic and overweight. I think the impact was good, but it could be better, but the staff was incomplete. (Manager, HD Northeast)

> At the beginning I had no comprehension of PMAQ's importance. But it caused my staff to self-reflect at that time, towards improving quality. (Nurse, HD Southeast)

Our third result highlights that frontline health professionals' diverse positive-null and contradictory perspectives regarding how PMAQ has impacted their working process is mainly explained by the lack of policy feedback and support, low levels of perceived impact and non-adoption of an assessment culture. They also explain it in terms of other recurrent and background factors such as organizational capacity, adhesion, participation, alternative logics.

4.4. Complementary result - Dimensions of the implementation process are put together when evaluating the program

Regarding the existing relations between knowledge, participation and evaluation, this work reveals that frontline health workers evaluate PMAQ implementation in a comprehensive form and as part of a policy process, aggregating more themes to the discussion as the interviews went on, using recurrent/background themes to establish connections between policy dimensions regarding implementation (knowledge, participation and evaluation). When

discussing the knowledge/valorisation dimension, for instance, recurrent themes were less prominent than when discussing the dimensions of participation and evaluation. The number of and inter connections between recurrent themes was higher when talking about evaluation. As the interview process developed, certain themes either gained or regained significance in a comprehensive and integrative fashion, being used and reaffirmed/confirmed to evaluate the policy implementation process. As a whole, more recurrent and strongly emphasised themes referred to organizational capacity, adhesion, participation, feedback, alternative logics.

5. Discussion

Relevant policy issues arise when the implementation of P4P programs is studied from the perspective of frontline staff perceptions and attitudes in challenging organizational contexts – where frontline staff face contradictory forms of accountability, needing to make choices between them.

In a similar though distinctive way to our analysis, organizational capacity has also been identified as one of the main key factors in the implementation of P4P in LMICs. In those countries challenging organizational contexts either caused the failure of programs - as happened in Uganda (Ssengooba *et al.*, 2012) - or led to partial effects (Bhatnagar and George, 2016). In addition, lack of organisational capacity has acted as a main constraint on implementation (Singh *et al.*, 2020) and leads to low levels of adherence at the frontline by some members of the health team. Therefore, our present research, as well as research undertaken in LMICs, has shown that, though in diverse ways, programs need to be accompanied by capacity building strategies and human resource reforms.

Moreover, evidence has shown that the undesired effects of P4P in health policy are usually a result of low knowledge and motivation levels of frontline staff (Lee *et al.*, 2012; Eijkenaar *et al.*, 2013). A systematic review that explores front liners staff's perceptions on P4P in diverse countries revealed that efforts should be made to generate "increasing levels of provider awareness" about P4P, "providing technical and educational support, reducing their burden, developing cooperative relationships with providers […] and minimizing the unintended consequences" (Lee *et al.,* 2012)..

The literature also shows how it is important to actively involve actors in the formulation/design of the program (Lee *et al.*, 2012; Eijkenaar *et al.*, 2013), as "this increases the likelihood of provider support and alignment with their professional norms and values"[15].

In Brazil, analysis of the PMAQ carried out for the 1st and 2nd rounds tend either to overemphasize the results of performance indicators, or to use those results in a descriptive way to develop further studies (Brazilian Centre for Health Studies, 2014; Macinko *et al.*, 2017; Saddi and Peckham, 2018). In a similar way to our analysis, few recent studies have shown that the program is mostly perceived as another top-down policy, in which health workers in diverse ways consider (or do not consider) it valuable to improve quality of care, given the political/rhetorical and organizational questions that arise in a complex implementation context (Sossai *et al.*, 2016; Telles *et al.*, 2016). Studies also highlight some improvements in the work process and the need for sustainable changes (Feitosa *et al.*, 2016; Flores *et al.*, 2018), similar to those presented in this study.

In Goiania, the main factors driving the implementation of PMAQ/P4P at the frontline are the low organizational capacity of the bureaucracy, low levels of understanding and participation/engagement by frontline staff and absence of feedback received from policymakers. Poor knowledge/understanding regarding the policy, as well as an absence of feedback, did not encourage the participation of frontline workers. These policy issues occurred in a context of a challenging organizational capacity without the adoption of additional/complementary support during the PMAQ. However, the potential of positively transforming the work processes in the health units propelled by PMAQ is also recognized by health professionals, indicating the need to assist the continuity of these changes.

It is possible the themes that characterized our analysis of PMAQ in Goiania, which are factors driving the implementation of PMAQ, might have happened (and are possibly happening) in other parts of the state of Goias and Brazil. This might be occurring in PHC units experiencing similar organizational constraints, in cities were MHS/HD managers adopt a more top-down and less communicative/integrative style of relation with frontline staff. Analyses have shown the importance of taking managers' activities and perspectives into account in the evaluation of PMAQ. Among them, an analysis applied to a small city showed that managers were committed with PMAQ (Feitosa *et al.*, 2016), and another focusing on the case of a Health Region revealed both positive and negative aspects regarding managers involvement (Flores *et al.*, 2018).

Moreover, the analysis of the case of the PMAQ in Goiania uncovers and brings to light some relevant political regularities/challenges regarding the implementation of a P4P program that could be seen as policy assumptions to be explored in other cities/units in Goiania and at the state of Goias. It offers a policy perspective that calls attention to main recurrent themes and sub-themes shaping implementation namely: organizational capacity (in a more

anchored/structural/supportive aspect of the policy process), adherence/knowledge, participation, feedback (as social construction issues anchored in distinct organizational settings) and alternative logics (as misunderstandings/lack of communication between levels, unintended consequences/factors attributed to P4P).

The main policy implications arising from this work are: 1) The greater the level of knowledge and understanding of frontline staff regarding the policy, and the more institutionalized or dynamic the feedback received from the top/(MH or MHS) are, the greater the likelihood of frontline staff effectively adhering and acting in accordance with the policy. 2) Poor interaction during the dissemination (and formulation) of the policy and increasing or contradictory demands/accountabilities, in a context of low organizational support, can be considered factors prone to limiting participation and effective engagement during implementation. 3) In an integrative manner, low levels of knowledge, low levels of participation and engagement, absence of policy feedback, and absence of alternatives to foster organizational capacity, do not favour the creation of an assessment culture or sustainable changes in the working process.

6. Conclusion

According to our research findings, in the challenging organizational context of PHC in Goiania, the implementation of a P4P program (and of PMAQ more specifically) focusing mainly or solely on the production of performance indicators/numbers, have not contributed to strengthen the public policy. From the viewpoint of Public Policy – and aligned with system strengthening and quality improvement perspectives -, successful implementation requires the adoption of additional/complementary strategies/tools at the frontline, to counteract policy failure or the emergence of alternative logics (and gaming/cheating). Organizational capacity, knowledge/motivation, participation and policy feedback are the types of strategies to be targeted. Organizational capacity could play a more definite background supportive role, providing the structure needed for the construction of understanding, participation and feedback/feedback effects. All those factors together can contribute to counteracting the emergence of alternative logics.

Fundamental lessons to be extracted from the analysis are directly associated to the case of Goiania. Those lessons can be broadly extended to other cities at the state of Goias. They bring new policy lessons and assumptions on how it would be possible to strengthen the implementation process of rational-based programs in complex and changing organizational

contexts. They refer to the need of 1) creating a new organizational culture and capacity. This is allied to the need of 2) developing new politics of adhesion, 3) fostering a participative culture in PHC and 4) adopting strategies that would foster more feedback from PMAQ/P4P and uses of PMAQ's/P4P's results. This would enable the construction of identifications with PMAQ/P4P at the frontline, as well as favour the development of a new culture of assessment/monitoring. There is the need to improve infrastructure, hire more frontline staff and increase materials supply in the units, which would depend on available resources. It is also about challenging lessons that can be adopted through strategies/tools of dialogue, and that, by being faced routinely in PHC, and not only related to a single program, would be constructing the necessary participative fundaments and involvement for a perception and understanding change of the frontline about the program.

In fact, the improvement of a P4P program – and of PMAQ - at the frontline in Goiania, would mean the initiation (or revision) of a new organizational culture in the implementation of PHC, privileging the frontline staff, with higher possibility of creating a (new) assessment culture and, consequently, guided by new adhesion, more feedback and uses of P4P results. This would make it possible the construction of a new way of valuing P4P programs and the policy process related to them.

7. References

Bhatnagar, A. and 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, Vol. 31, Issue, pp. 868–877.

Bloom, G., Standing, H. and Joshi, A. (2009), "Institutional Context of Health Services", in Peters, D.H., El-Saharty, S., Siadat, B., Janovsky, K. and Vujicic, M. (Eds.), *Improving Health Services Delivery in Developing Countries: From Evidence to Action*, The World Bank, Washington DC, pp. 203-216.

Brazilian Centre for Health Studies (2014). "Revista Saude em Devate Vol. 38 No. Especial: Avaliacao da Atencao Basica no Brasil", available at: http://cebes.org.br/site/wp-content/uploads/2014/11/RSD_AB_WEB_031114.pdf (accessed 14 April 2018).

Cunha, G.T., Castro, C.P., Oliveira, M.M., Ribeiro Santos, C.S., Rosa, I.F. and Rodrigues, M.C. (2013), "Programa Nacional de Melhoria ao Acesso e a Qualidade da Atenção Básica: um estudo qualitativo", 2nd Brazilian Congress on Politics, Planning and Management

in Health; 1-3 October, Belo Horizonte, Brazil, available at: http://www.politicaemsaude.com.br/anais/trabalhos/publicacoes/235.pdf (accessed 20 March 2019).

Eijkenaar, F., Emmert, M., Scheppach, M. and Schöffski, O. (2013), "Effects of pay-for-performance in health care: a systematic review of systematic reviews", *Health Policy*, Vol. 110, Issue 2-3, pp. 115-130, available at: https://doi.org/10.1016/j.healthpol.2013.01.008

Feitosa, R.M.M., Paulino, A.A., Júnior, J.O.S.L., Oliveira, K.K.D., Freitas, R.J.M. and Silva, W.F. (2016), "Mudanças ofertadas pelo Programa Nacional de Melhoria do Acesso e da Qualidade da Atenção Básica", *Saúde e Sociedade*, Vol.25, No.3, pp. 821-829, available at: https://doi.org/10.1590/s0104-12902016151514

Flôres, G.M.S., Weigelt, L.D., Rezende, M.S., Telles, R. and Krug, S.B.F. (2018), "Gestão pública no SUS: considerações acerca do PMAQ-AB", *Saúde em Debate*, Vol. 42, No. 116, pp. 237-247, available at: https://doi.org/10.1590/0103-1104201811619

Forbes, L.J., Marchand, C., Doran, T. and Peckham, S. (2017), "The role of the Quality and Outcomes Framework in the care of long-term conditions: a systematic review", *The British Journal of General Practice*, Vol. 67, No. 664, pp. e775–e784, available at: https://doi.org/10.3399/bjgp17X693077

Gilson, L. (2016), "Everyday Politics and the Leadership of Health Policy Implementation", *Health Systems & Reform,* Vol. 2, No. 3, pp. 187-193, available at: https://doi.org/10.1080/23288604.2016.1217367

Hupe, P. and Hill, M. (2007) "Street-Level Bureaucracy and Public Accountability", *Public Administration*, Vol. 85, Issue 2, pp. 279-299, available at: https://doi.org/10.1111/j.1467-9299.2007.00650.x

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*, Vol. 45, No. 3, pp. 137-147.

Lewis, J.M. (2015), "The politics and consequences of performance measurement", *Policy and Society, 34*(1), pp. 1–12, available at: http://dx.doi.org/10.1016/j.polsoc.2015.03.001

Macinko, J., Harris, M. and Rocha, M. (2017), "Introduction to the Special edition on the Brazilian National Program for Improving Primary Care Access and Quality (PMAQ)",

Journal of Ambulatory Care Management, Vol. 40, Supl. 2, pp. 1-3, available at: doi: 10.1097/JAC.0000000000000191

May, P. (2012), "Policy Design and Implementation", in Peters, B. G. and Pierre, J. (Eds.) *Handbook of Public Administration*, Sage Publication, London, pp. 279-291.

May, P. and Winter, S. (2009), "Politicians, Managers, and Street-Level Bureaucrats: Influences on Policy Implementation". *Journal of Public Administration Research and Theory*, Volume 19, Issue 3, pp. 453–476, available at: https://doi.org/10.1093/jopart/mum030

Meyers, M. and Nielsen, V. (2012), "Street level bureaucrat and the implementation of public policy", in Peters, B. G. and Pierre, J. (Eds.), *The Sage Handbook of Public Administration*, Sage Publication, London. pp. 305-318.

Ministério da Saúde (2013), "Programa Nacional de Melhoria do Acesso e da Qualidade da Atenção Básica (PMAQ): Manual Instrutivo", Secretaria de Atenção à Saúde, Departamento de Atenção Básica, Brasília, available at: http://bvsms.saude.gov.br/bvs/publicacoes/manual_instrutivo_pmaq_atencao_basica.pdf (Accessed 29 January 2020).

Ministério da Saúde (2015a), "Retratos da Atenção Básica, N3, V1 - Gestão do Processo do Trabalho", Secretaria de Atenção à Saúde, Departamento de Atenção Básica, Brasília, Brasil, available at: http://bvsms.saude.gov.br/bvs/publicacoes/retratos_atencao_basica_2012_n3_vol1.pdf (accessed 22 April 2020).

Ministério da Saúde (2015b), "Retratos da Atenção Básica, Características das Unidades Básicas de Saúde" , N2, Vol. 1, Secretaria de Atenção à Saúde, Departamento de Atenção Básica, Brasília, Brasil, available at: http://bvsms.saude.gov.br/bvs/publicacoes/retratos_atencao_basica_gestao_atencao_n2_v1.pdf (accessed 22 April 2020).

Moynihan, D. P. and Soss, J. (2014), "Policy Feedback and the Politics of Administration", *Public Administration Review*, Vol. 74, Issue 3, pp. 320-332, available at: https://doi.org/10.1111/puar.12200

Ovretveit, J.; Siadat, S.; Peters, D.H.; Thota, A. and El-Saharty, S. (2009), "Review of Strategies to Strengthen Health Services", in Peters, D.H., El-Saharty, S., Siadat, B., Janovsky, K. and Vujicic, M. (Eds.), *Improving Health Services Delivery in*

Developing Countries: From Evidence to Action, The World Bank, Washington DC, pp. 101-126.

Patashnik, E.M. and Zelizer, J.E. (2009), "When Policy does Not remake Politics: The Limits of Policy Feedback". American Political Science Association 2009 Annual Meeting, Toronto, Canada, available at: https://ssrn.com/abstract=1449996 (Accessed 16 June 2019).

Peters, D.H., El-Saharty, S., Siadat, B., Janovsky, K. and Vujicic, M. (Eds.) (2009), *Improving Health Services Delivery in Developing Countries: From Evidence to Action*, The World Bank, Washington DC

Pollitt, C. (2013) "The Logics of Performance management", *Evaluation*, Vol. 19, Issue 4, pp. 346-363, available at: https://doi.org/10.1177/1356389013505040

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

Saddi, F.C. and Peckham, S. (2018), "PMAQ seen from a global health and public policy perspective - What does it mean for research and policy?", *Journal of Ambulatory Care Management*, Vol. 41, Issue 1, pp. 25-33, available at: doi: 10.1097/JAC.0000000000000220

Saddi, F.C. and Peckham, S. (2019), "Interim Report: How to strengthen leadership and the workforce through the re-design and implementation of a pay for performance program (PMAQ) in PHC in Brazil. A comparative health policy and system analysis", Interim Report delivered to the British Academy and Newton Fund, London.

Saddi, F.C., Harris, M.J., Coelho, G.A., Pego, R.A., Parreira, F., Pereira, W., Santos, A.K.C., Almeida, H.R. ; Costa, D.S. (2018), "Perceptions and evaluations of front-line health workers regarding the Brazilian National Program for Improving Access and Quality to Primary Care (PMAQ): a mixed-method approach", *Cadernos de Saúde Pública*, Vol.34, No.10, e00202417, available at: http://dx.doi.org/10.1590/0102-311X00202417.

Singh, N.S., Kovacs, R.J., Cassidy, R., Kristensen, S.R., Borghi, J., Brown, G.W. (2020), "A realist review to assess for whom, under what conditions and how pay for performance programmes work in low- and middle-income countries", Social Science & Medicine, Dec 18; 270:113624, doi: 10.1016/j.socscimed.2020.113624

Sossai, T.A., Galavote, H.S., Vieira, E.C.L., Freitas, P.S.S. and Lima, R.C.D. (2016), "Evidências sobre o Programa Nacional de Melhoria do Acesso e da Qualidade da

Atenção Básica", Brazilian Journal of Health Research, Vol. 18, No. 1, pp. 111-119, https://doi.org/10.21722/rbps.v18i1.15142

Spencer, L. and Ritchie, J. (2003) "Analysis, Practices, Principles and Processes", in Ritchie, J. and Lewis, J. (Eds.) (2003), *Qualitative Research Practice: A Guide for Social Science Students and Researchers*, Sage Publications, London

Ssengooba, F., Mcpake, B. and Palmer, N. (2012), "Why performance-based contracting failed in Uganda – An "open-box" evaluation of a complex health system intervention", *Social Science & Medicine*, Vol. 75, Issue 2, pp. 377-383.

Telles R., Weigelt, L.D., Rezende, M.S., Krug, S.B.F., Ferreira, R., Kessler, A.L., Barros, L.P., Jühlich, A.C. and Flores, G.M.S. (2016), "Implementação do Programa Nacional de Melhoria do Acesso e da Qualidade da atenção básica (PMAQ-AB)", *Journal of Epidemiology and Infection Control,* Vol. 1, No. 1, p. 1-10, available at: http://dx.doi.org/10.17058/reci.v1i1.7978