

Performance-based financing: the same is different

Dimitri Renmans,^{1,2,*} Nathalie Holvoet,¹ Bart Criel² and Bruno Meessen²

¹Institute of Development Policy and Management, University of Antwerp, Lange Sint-Annastraat 7, 2000 Antwerp, Belgium and ²Department of Public Health, Institute of Tropical Medicine, Nationalestraat 155, 2000 Antwerp, Belgium

*Corresponding author. Lange Sint-Annastraat 7, 2000 Antwerp, Belgium E-mail: dimitri.renmans@uantwerpen.be

Accepted on 28 February 2017

Abstract

Although it is increasingly acknowledged within the Performance-Based Financing (PBF) research community that PBF is more than just payments based on outputs verified for quality, this narrow definition of PBF is still very present in many studies and evaluations. This leads to missed opportunities, misunderstandings and an unhelpful debate. Therefore, we reinforce the claim that PBF should be viewed as a reform package focused on targeted services with many different aspects that go beyond the health worker level. Failing to acknowledge the importance of the different elements of PBF negatively influences the task of practitioners, researchers and policymakers alike. After making the case for this wider definition, we propose three research pathways (describing, understanding and framing PBF) and give a short and tentative starting point for future research, leaving the floor open for more in-depth discussions. From these three vantage points it appears that when it comes to PBF 'the same is different'. Notwithstanding the increased complexity due to the use of the wider definition, progress on these three different research pathways will strongly improve our knowledge, lead to better adapted PBF programs and create a more nuanced debate on PBF.

Keywords: Developing countries, health care reform, health financing, health policy, research

Key Messages

- The narrow definition which sees PBF merely as payments based on performance is inadequate and should be replaced by a much broader view on PBF that sees it as a reform package.
- This wider definition necessitates an even more thorough description of the project and of the context. This is needed to compare and evaluate very different PBF schemes in very different contexts.
- The wider definition also results in a more complex theory of change with multiple drivers of change, complex interlinkages and a wide array of theories from very different scientific fields.
- The wider definition puts the ideological framing of PBF as a market-based reform under stress and gives way to a more ideologically diversified view on the features of a PBF scheme.

Introduction

Although Performance-Based Financing (PBF) in low- and middle-income countries has been around for more than 10 years and despite some interesting studies and findings, we still know too little about the mechanisms that lead to the reported outcomes (see Renmans *et al.* 2016). According to Witter *et al.* (2012), the lack of robust studies is the main explanation for this gap. We argue that the problem already starts at the definition of the construct. In the literature there is an explicit and implicit overemphasis (apparent in the research designs) on the payments based on performance (defined as outputs verified for certain quality measures) as being the only element of PBF (see Kalk *et al.* 2010; Binagwaho *et al.* 2014; Bonfrer *et al.* 2014; Menya *et al.* 2015; Engineer *et al.* 2016; Khim 2016).¹ This leads to an inadvertently unproductive ideological pollution of the debate, where emotional arguments sometimes dominate a discussion that too often centres around the virtues and drawbacks of using market mechanisms in the healthcare sector (see Mayaka Manitu *et al.* 2015a, b for a structured discussion between proponents and opponents). By emphasizing, as has been done before (Meessen *et al.* 2006, 2011), that PBF is more than only payments based on performance and comprises a package of other reforms, we hope to facilitate the building of common ground between proponents and opponents of PBF. However, moving towards such a broader definition leads to another challenge: what then would differentiate a PBF reform package from other reforms? Attempts to create such a wider definition have so far been unsatisfactory. We therefore propose a definition that aims to be neutral and acceptable for both proponents and opponents. The broadening of the PBF definition opens up opportunities for more and better research. We identify three research pathways that deserve to be investigated more thoroughly as a consequence of adopting a broader PBF definition: the description, understanding and framing of PBF schemes.

From these vantage points, it quickly becomes evident that ‘the same is different’; every PBF scheme has different features, is implemented in a different context, triggers different mechanisms and has different objectives. Despite the introduction of even more complexity, we claim that if we manage to advance on these three research pathways we will strongly improve our understanding of PBF schemes.

This is a purely conceptual/methodological paper and does not claim to be a guide on how to implement PBF in practice or how its implementation has evolved historically. It rather looks at how PBF has been evaluated and researched up until now. It is neither the paper’s objective to engage in a normative debate on the desirability of PBF, or on its success in actually enhancing (or not) systems’ performance, but rather to create a more rational basis for these discussions, which we believe is still missing.

In the following section, we will present the case for a wide and neutral definition of PBF. Afterwards, we discuss the three research pathways that this broader definition opens up. We end the paper with a short section on the implications for future research design.

From a narrow to a wide definition

The majority of definitions used in scientific articles are a variation of the following: PBF is a financing mechanism that gives healthcare providers (facilities or health workers) financial payments based on the achievement of predetermined targets, goals or outputs after being verified for quality (see Borghi *et al.* 2015; Janssen *et al.* 2015; Rudasingwa *et al.* 2015). This narrow definition can be seen as an artefact of the early days of PBF when branding was important to

distinguish it from ‘competing’ propositions. The first issue was to clear up the possible confusion between the contracting-in approach of PBF and the contracting-out approach of Performance-Based Contracting. Whereas the former is directed towards health service providers acting within the national health system as in Rwanda (see Rusa *et al.* 2009); the latter mainly focuses on non-state entities (not necessarily providers) outside the hierarchical structure of the national health system (see Loevinsohn and Harding 2005) as in Haiti (Eichler *et al.* 2001) or Cambodia (Bhushan *et al.* 2002).² When the World Bank established its Health Results Innovation Trust Fund, a second issue was to distinguish PBF from other forms of Results-Based Financing; this was done by pointing out PBF’s emphasis on quality, its focus on the supply-side of healthcare and its purely financial nature (see Musgrove 2011 which ‘stabilizes’ this distinction).

The narrow definition is also very popular due to its clarity and specificity and thus usefulness for impact evaluations (certainly randomized controlled trials). However, its usage is not unproblematic. It is questionable whether such a narrow PBF scheme corresponds to reality. Within the context of low- and middle-income countries, the implementation of financial incentives based on performance (the narrow definition) is often not a stand-alone intervention but is embedded in a broader set of reforms pertaining to other dimensions of the health system aiming to strengthen the enhancement of performance (as defined below) (e.g. community involvement or more autonomy at the health facility level) (e.g. République du Tchad 2011; Consortium AEDES/IRESKO 2012). Using the narrow definition may thus be misleading. Studies claiming to be reporting on the ‘narrow definition’ of PBF are often reporting on a package of reforms with many different possible drivers of change (e.g. Gertler and Vermeersch 2012; de Walque *et al.* 2015). Moreover, the narrow definition overlooks possible interlinkages between the payments and the other aspects of the reform process, which in turn leads to specific research models not designed to discover or test these interlinkages (e.g. impact evaluations without process evaluations).

In order to address the limitations of the narrow PBF definition, a broader view has been proposed (Meessen *et al.* 2011; Witter *et al.* 2013) which is becoming increasingly mainstream in the scientific community as was witnessed during a recent workshop in Dar Es Salaam, Tanzania (Witter 2015). However, if PBF is a reform *package* we need to be clear about what makes it different from other broad reforms. What is the unique selling point of PBF reform and what does it consist of? Within the online ‘Community of Practice on PBF’³ an effort was made in 2010 to arrive at such a wider definition. However, the resulting definition of this effort⁴ is itself not unproblematic. While it does a much better job of capturing the ‘amorphous’ nature of PBF, it remains too vague to be used as a practical definition. More importantly, the one-sided ideological inclination of the definition makes it ill-suited to act as a basis for discussion. This also closes some doors within the debate which we would like to open further on in this paper (see section on framing). To stimulate and structure the debate, there is a need to come up with a more neutral and descriptive definition void of references to a single underlying theory, ideological propositions and value-laden notions, one that is acceptable to a broad audience (PBF opponents and proponents). Such a definition should approach PBF, like many other interventions, as a loose construct based on principles and not on specific features (e.g. community involvement as a principle may be implemented very differently from co-decision making at facility level to filling-in client satisfaction surveys) (Meessen 2009). At the same time, it is essential that the definition points out what the added value is of payments based on performance. Only then can a

Table 1. Points of (dis)agreement and implications for definition, adapted from [Mayaka Manitu et al. \(2015a\)](#)

Discussion point	(Dis)agreement	Implications for definition
PBF is not adapted to tackle social determinants or health inequities	Agreement	Do not include in definition
PBF is focused on the health services/supply side	Agreement	PBF is a supply side intervention
It is not a panacea and needs to be accompanied by other policies in order to fully tackle financial and other barriers.	Agreement	PBF is only one among many other interventions, programs and policies in the health-care sector.
Focus on measurable results is a weakness as it has possible negative side-effects on unmeasurable issues (-) < -> It helps to focus on priority issues like strategic purchasing (+)	Disagreement	PBF focuses on specific measures of quality and quantity
The verification of the delivered services through the community may create distrust and endanger the positive relationship between the community and the health workers (-) < -> the involvement of the community empowers them and engages them in the management of the facility which may lead to a more equal and constructive relationship (+)	Disagreement	Include community 'involvement', rather than 'empowerment' in the definition
Health managers need to have sufficient autonomy in order to implement the best suited strategies	Agreement	Include 'autonomy' in the definition
PBF creates parallel structures and is thus not able to improve the health system (-) < -> It does not create parallel structures but new structures that counterbalance existing power relations. The division of functions is essential (+)	Disagreement	The definition should recognize that PBF creates new functions and emphasizes a division of functions (between purchaser, provider and verifier). Without reference to whether they act as counterbalance or as parallel structure
Given the limited number of facilities patients cannot choose their health facility (-), however several proponents claim that such competition between facilities is important for PBF (+)	Relative agreement	Do not include 'competition' in the definition
PBF is just another financing mechanism (-) < -> PBF is a broader reform (+)	Disagreement	Look into the several toolkits that depict how to implement a PBF scheme

Note: (-)= argument voiced by the opponents; (+)= argument voiced by the proponents

Table 2. Elements of the different PBF toolkits

World Bank	SINA health	AIDSTAR	KIT/SNV
autonomy	autonomy	autonomy	autonomy
Clarification of roles and objectives (for health administration)	Clear contracts and roles (for the regulators)	Clearly defined roles and responsibilities	Clear roles, responsibilities and goals
Improved planning	Improved planning	Improved planning	Results-based planning
Community participation	Community empowerment	Participation of stakeholders	Community/patient participation
Separation of functions	Separation of functions	Separation of functions	Separation of functions
Better data analysis	Effective M&E	Effective HIS, HMIS and M&E	Independent monitoring and verification
Accountability arrangements		Transparency and accountability	Clear accountability relations
Improved financial management	Improved financial management		
Within broader reform			Within broader reform
Feedback		Performance feedback	
Improved stewardship			Regulation by MoH
Training	Training		Competition
(Fritsche et al. 2014)	Competition (SINA Health 2015)	(The AIDSTAR-Two project 2011)	(Toonen and van der Wal 2012)

PBF reform package have a distinct identity and claim its status as a reform *package*.

So as to set the scene for the debate and the remainder of the article, we propose a preliminary definition. In order to make the definition acceptable for both proponents and opponents, we take their different points of (dis)agreement as our starting point. These are drawn from the study of [Mayaka Manitu et al. \(2015a\)](#), which gives a structured overview of the debate (see [Table 1](#)). From this analysis we conclude that PBF is to be defined as a supply-side intervention, with a general focus on predefined services and quality measures, involving but not necessarily empowering the community, giving

autonomy to the health facilities and creating new structures in order to secure a division of functions within the PBF scheme (purchaser, provider, verifier).

The last point of disagreement in [Table 1](#) concerns the scope of a PBF reform. In order to settle this issue we analyse several toolkits that depict how a PBF scheme should be implemented. We prefer toolkits over real projects' manuals of procedure as the latter may differ due to political decisions or local configurations (e.g. when the Health Management Information System is already strong, it does not need to be improved by the PBF scheme). [Table 2](#) shows the different recurring elements found in four different toolkits ([The](#)

Table 3. Descriptive framework for a PBF scheme

Context	PBF elements	Issues to take into account
General health financing system	Financial incentives	<ul style="list-style-type: none"> • Amount in absolute terms, and relative to other incomes and per capita? • To whom (facilities or personnel)? What percentage accrue to the staff? • When are incentives paid and what is the periodicity? • How are incentives paid (directly or not?, by whom?, via bank account? ...) • What is the payment formula?
Other performance appreciation policies/tools	Service and quality measures	<ul style="list-style-type: none"> • Which services and dimensions of quality are incentivized? • Which measures and indicators are used? • What were the initial levels of the indicators? • Who has selected the indicators and measures? • How have indicators and measures been selected? • What is their timeframe? • Are they related to the outputs, outcomes, procedures or structural aspects of healthcare? • How are they measured?
General monitoring system (HMIS)	Monitoring and verification system	<ul style="list-style-type: none"> • Who performs this function and what is his/her hierarchical position/authority? • When and how often is it performed? • How is this function implemented? • What are the costs? • How does it make use of ICT?
Institutional set-up and division of responsibilities in the health sector	Split of functions	<ul style="list-style-type: none"> • Which agency, organization or department is responsible for the different functions, such as purchasing, provision, and verification of the health services? And what are their other functions? • How do they hierarchically relate to each other?
	Autonomy	<ul style="list-style-type: none"> • Which decisions can the facilities take? • Which budget can they use? • Do they have to report to a higher authority? Is there some kind of oversight over the decisions?
	Accountability arrangements	<ul style="list-style-type: none"> • What information is communicated? • To whom is this information communicated? • Through which channel?
Organization and participation of the community and patients in general	Community involvement	<ul style="list-style-type: none"> • How are they involved? • Who represents them? • What power do they have? • In what phase of the project/scheme are they involved? • What are their tasks/responsibilities?
Other planning tools, including those from international donors	Planning arrangements	<ul style="list-style-type: none"> • Which tool is used? • How does it relate to existing tools? • What are its specificities (timeframe, content, level of detail)? • How binding is it? Are their possible sanctions?
Related strategies	Ancillary components	<ul style="list-style-type: none"> • Are there other measures to support the financial incentives (e.g. training, workshops, extra supervision, accreditation, etc.)?

AIDSTAR-Two project 2011; Toonen and van der Wal 2012; Fritsche *et al.* 2014; SINA Health 2015). This analysis confirms our initial statement that PBF is a package of reforms and not limited to financial incentives. The first seven elements (autonomy, clarified roles (contracting-in), focus on planning, community participation, separation of functions, intensified monitoring and specific accountability arrangements) are present in at least three of the four toolkits and, therefore, should appear in the PBF definition. The other elements are only present in two out of the four toolkits (or less) and will not appear in our definition.

Drawing upon the analysis of the narrow definition, the points of (dis)agreement and the four different toolkits, we propose the following preliminary PBF definition:

“performance-based financing is a supply-side reform package that is guided towards improved performance (defined as increased

predefined services and improved quality measures) by using performance-based financial incentives for health providers (facilities and/or workers) through internal contracting and strengthening this with most or all of the following elements: a separation of functions (purchaser, provider, verifier), (spending) autonomy for the health facilities, strict monitoring and verification of services, community involvement, result-based planning and accountability arrangements.”

As this definition responds to the arguments of both PBF proponents and opponents it is sufficiently neutral, providing common ground to support further debate. The definition also describes the different elements of a PBF scheme, but gives, at the same time, enough policy space to interpret these elements differently.⁵ Finally, it positions the financial incentives as the guiding principle of the reform package, and as such distinguishes it from other reforms.

This wider definition gives impetus to three essential research pathways discussed in the next section.

Three research pathways

While moving towards this broader definition, we lose some of the advantages of the narrow definition, most importantly, its clarity and specificity. This loss presents some challenges but also some opportunities. We identify three research pathways that spring from our broader definition and can help to further our knowledge and structure the debate better.

Describing a PBF scheme or policy

A good description of the object under research is essential. It is not only important for foreign practitioners to learn from other experiences, it also facilitates linking the object under study with a higher-order construct. According to Shadish *et al.* (2002) “a precise explanation of constructs (...) allows future readers to critique the operations of past studies.” (p. 74). A clear construct is thus crucial in the transformation of particular study results into general knowledge and is essential if we want to compare studies from different settings. This need becomes even more apparent when we move towards the wider definition of PBF with multiple possible interpretations of the different elements included: ‘the same is different’. Whereas the description of PBF has often been limited to the incentives, targets and verification process (e.g. Matsuoka *et al.* 2014; Janssen *et al.* 2015; Ogundeji *et al.* 2016) every component that was mentioned in our preliminary definition needs to be sufficiently described (see Table 3 for a non-exhaustive list of issues to describe). Moreover, elements that are not part of our PBF definition but which are implemented in order to further support its implementation (e.g. training, workshops, accreditation system, etc.) (ancillary components) also need to be described, as they may have an important impact on the outcome.

It is important to recognize, however, that PBF schemes are implemented in a ‘complex adaptive system’ and rearrange a pre-existing ‘nexus of institutions’ (Paina and Peters 2012; Van Olmen *et al.* 2012; Meessen *et al.* 2006). The context, thus, becomes an inherent part of each PBF scheme and includes important drivers of change that influence the outcomes and the processes/mechanisms that are being initiated. Describing the context is thus essential. Identifying which aspects of the context are relevant, is closely related to the aforementioned debate on the PBF definition but also to its ‘theory of change’ (ToC) explained below. The most relevant ‘context’ elements are those related to the elements that generally comprise PBF (see Table 3) as these are the first the PBF elements will interact with. In addition, there are elements of the wider context (social, cultural, economic, institutional, epidemiological, etc.) whose discussion is beyond the scope of this article. Importantly, the proposed framework is a preliminary one since designing such a framework in a complex system is an iterative process responsive to new knowledge and insights (see Bossyns and Verlé 2016).

In order to improve comparative studies and our knowledge on PBF, we therefore advise researchers not to rush through the description of the project by limiting it to the financial incentives based on performance or of the context by limiting it to general geographical, economic, political and/or topographical statements, but to give it the attention necessary. This will enable other researchers, policy-makers and practitioners to make sense of the results and use them in an appropriate manner. The use of the process evaluation method can strongly reinforce this endeavour (Oakley *et al.* 2006).

Understanding a PBF scheme or policy

Notwithstanding the steep increase in interesting studies on PBF schemes, the extensive use of the narrow definition has pushed the systematic search for a ToC to the margins. The narrow PBF definition inevitably leads to the use of neo-classical economics to describe PBF’s ToC (see Kalk *et al.* 2010). This means, *inter alia*, assuming the health worker (or the health facility manager) to be a rational utility-maximizing individual (*homo economicus*) who adapts his/her behaviour according to the financial incentives that are provided (Jensen and Meckling 1976; Holmström and Milgrom 1991; Laffont and Martimort 2002).

Moving towards a wider PBF definition gives way to a more nuanced view on the ToC which needs to address three essential issues. Firstly, the payments are no longer seen as the sole drivers of change; the other aspects of the reform package (e.g. the community involvement) may all play an important role in changing the outcomes (positively and negatively) (Rusa *et al.* 2009; Kalk *et al.* 2010; Soeters *et al.* 2011; Witter *et al.* 2011; Bertone and Meessen 2013; Manongi *et al.* 2014; Matsuoka *et al.* 2014; Paul *et al.* 2014;). Some even state that the payments mainly function as facilitators (Peabody *et al.* 2011, 2014) or that the other elements may be more important than the payments (Paul *et al.* 2014). Secondly, the wider definition implies a more significant interaction between the PBF scheme and the context. Thus, the implementation of the PBF reform package creates a much more complex network of interlinkages than when using the narrow definition. Thirdly, if a multitude of elements influences the behaviour of the health workers and the organization of the facility, then a more complex view of human psychology and the management of health service delivery is warranted. Concepts and theories from disciplines such as economics (e.g. behavioural economics), psychology (e.g. cognitive evaluation theory), sociology (e.g. social learning), public health (e.g. patient-centred care), management sciences (e.g. new public management), educational sciences (e.g. transformative learning), political science (e.g. framing theory) will have to be brought into the ToC.

Because of this multitude of relevant factors at the global, national, district, facility, management and health worker levels, every PBF scheme and even every facility will have its own ToC: ‘the same is different’. We therefore propose to work with a modular ToC. This is a collection of possible mechanisms that occur in specific contexts and project settings, through which the payments based on performance run as a thread. Depending on the specific context and features of the PBF project certain mechanisms may or may not be triggered. By modulating a ToC with the relevant mechanisms it becomes possible to create a specific ToC for each PBF scheme.

For example, Figure 1a displays a part of a simplified, partial basic PBF ToC depicting the general elements described in the definition, which can be implemented in different ways. The two other ToC in Figure 1b and c are more specific with the former having accountability arrangements towards the community (B) while the latter one focusing on accountability towards the purchaser (C). It is clear that these two different arrangements will have two different pathways to the outcomes. Nyqvist *et al.* (2014) show that giving more specific information to the community increases the effectiveness of their participation. Hence, case B will lead to better results through the pathway of community involvement while this pathway will be less important in case C where the accountability to the purchasers will induce other pathways.

This example underscores three main issues: firstly, the modular ToC is derived from a more general ToC; secondly, it deconstructs the effect of the PBF reform package into smaller pathways and

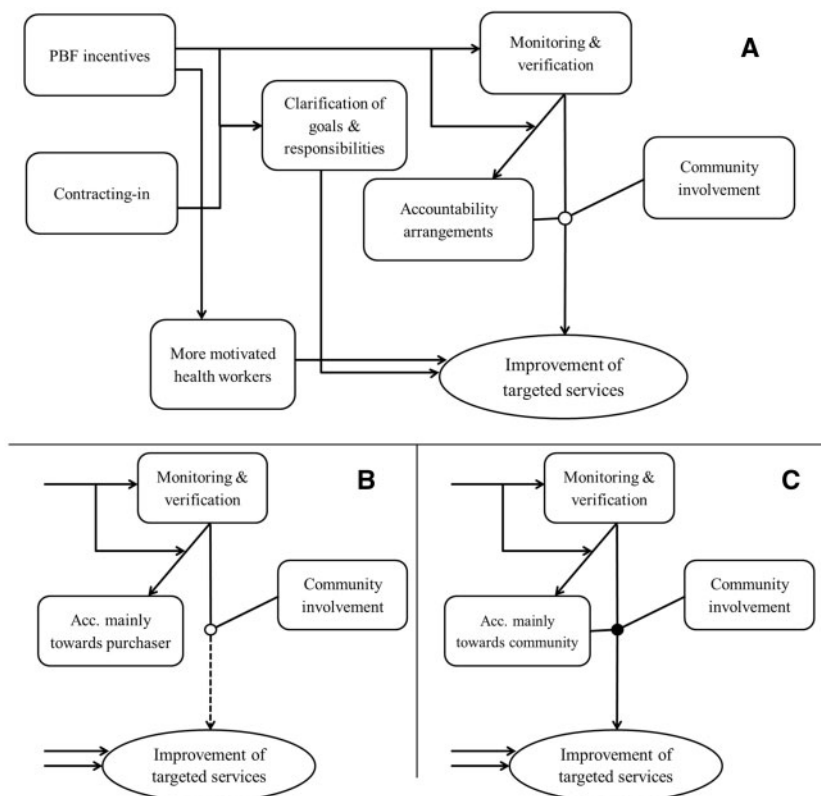


Figure 1. Simplified and partial ToC of PBF (a), and two modulated ToC of a PBF project with accountability focused towards the community (b) and towards the purchaser (c)

mechanisms (called tracks of transmission by *Nimpagaritse et al. 2016*), and thirdly, it uses theories and empirical findings from other fields of study (in this case social accountability studies).

However, rather than by such desk-based analyses, the search for the ToC of PBF should be guided by sound systematic empirical research that investigates the different hypotheses and claims. Clearly, the previously described complexity necessitates specific research designs. The combination of theory-based evaluation designs with process tracing can be a promising research approach in this respect (see *Bamanyaki and Holvoet 2016*).

Framing a PBF scheme or policy

Health sector reform is a highly debated terrain where ideological, political, philosophical, scientific and personal views collide and the PBF debate is no exception (see *Mayaka Manitu et al. 2015b*). Such polemics are unavoidable and probably even healthy (but mainly within the policy process). However, they have also polluted the debate and created a false dichotomy. Partly due to the focus on the performance-based financial incentives (narrow definition), PBF has been framed by opponents and proponents alike as a prototype of the market-based reform agenda. This framing strongly antagonized the debate between substantial parts of the proponents (glorifying the virtues of the market) and the opponents (lamenting the commodification of health).

Interestingly, the wider PBF definition leaves room for policy-makers to give their own interpretation of the constituting principles: ‘the same is different’. It makes a more nuanced view of the ideological framing of PBF possible and helps to overcome the dichotomization within the debate by creating the possibility that a PBF scheme need not be the epitome of a ‘neo-liberal’ reshaping of

the health care sector. For example, community involvement can be implemented in two different ways (*Gaventa and McGee 2013*): in a new public management-oriented way through satisfaction surveys, which better fits a ‘neo-liberal’ framework (*Simonet 2008; Antos 2015*), or in a ‘deep-democracy’ oriented way by giving a co-decision making role in the health facility to elected community representatives, which fits the communitarian framework (*Mooney 2012*). Thus, the wider definition may raise awareness among policymakers that the choice for PBF is only the beginning of the decision-making process and does not inevitably lead to a ‘neo-liberal’ turnaround of the health care sector. This is important because ideological, cultural, social and political values matter and, thus, politics matter.

This also indicates a third research pathway: to elaborate how ideological inclinations and cultural values influence the design of a specific PBF scheme, but also whether and, if so, how PBF can contribute to different kinds of policy objectives (e.g. a more ‘neo-liberal’ or a more communitarian organization of the health sector). The use of the political economy framework to look at PBF is an important tool in this respect (see *Chimhutu et al. 2015*).

Implications for research design

Our refocusing of the PBF definition also has some implications for the most appropriate research/evaluation designs. The recognition that PBF is a reform package with several elements implemented differently in different settings questions the utility of evaluations which only focus on project outcomes without investigating how the project was implemented, how it was perceived by the stakeholders and how it interacted with the context (called ‘black box’

evaluations). Such evaluations remain silent on the mechanisms that lead to the reported outcomes and give little information for reproducing the intervention elsewhere. This does not really pose major problems if the evaluated intervention is unidimensional and the main mechanism can easily be assumed (as with the narrow definition). However, the uncertainty about the main mechanisms increases together with the number of elements and the complexity of the intervention. Particularly if researchers and policymakers want to learn about what works when, where, how and why, opening the black box is a *conditio sine qua non*.

In order to look into the black box research designs will have to put on a (health) systems thinking (de Savigny and Taghreed 2009) or complexity (Bossyns and Verlé 2016) lens to match the intervention's multi-dimensional character and system-wide effects or target specific theorized mechanisms as in theory-based evaluations (Van Belle *et al.* 2010). Many qualitative methods can be instructive in evaluating and researching this re-established complexity of PBF: e.g. process evaluations (Oakley *et al.* 2006), process tracing (Bamanyaki and Holvoet 2016), realistic evaluations (Pawson and Tilley 1997), outcome mapping (Earl *et al.* 2001) and qualitative comparative analysis (Schneider and Wagemann 2012). This is not to say that randomized controlled trials using quantitative methods are useless, especially its randomization approach can be helpful to rule out certain confounders. No research design is, however, at the top of the hierarchy. Each research question needs to be researched by making use of the most appropriate methodology (Sansón-Fisher *et al.* 2007). In many cases this will be a mix of qualitative and quantitative methods (Brenner *et al.* 2014; Nimpagaritse *et al.* 2016).

Conclusion

This article highlights the importance of moving away from the explicit and implicit use of the narrow PBF definition towards a much broader view of PBF. We proposed a preliminary wider definition, yet we invite researchers (opponents and proponents), policymakers, implementers, providers and affected agents and organizations to join the debate and help to improve it further. The adoption of this wider definition opens up three new and interesting research pathways: describing, understanding and framing PBF. Underlying these three pathways is the observation that in PBF 'the same is different'; every PBF scheme has its own peculiarities, its own features and is embedded in a specific context. Only by making progress on the definition and the three research pathways can we substantially improve our knowledge of PBF, which is the necessary basis for better designed PBF schemes and a more substantive debate on PBF.

Funding

This study was supported by a PhD grant of the Flemish Interuniversity Council (VLIR) [VLADOC2014PR008].

Conflict of interest statement. None declared.

Notes

1. Although the tides are slowly changing: see for example Bhatnagar and George (2016) or Lohmann *et al.* (2016).
2. As often is the case, the distinction is not always clear-cut.
3. <http://groups.google.com/group/performance-based-financing>
4. "... a system approach with an orientation on results defined as quantity & quality of service outputs and

inclusion of vulnerable persons. ... making facilities autonomous agencies that work for the benefit of health ... related goals and their staff. ... characterized by multiple performance frameworks for the regulatory functions, the contract development & verification agency and community empowerment. ... applies market forces but seeks to correct market failures to attain health ... gains. ... aims at cost-containment and a sustainable mix of revenues from cost-recovery, government and international contributions. ... a flexible approach that continuously seeks to improve through empirical research and rigorous impact evaluations, which lead to best practices." (SINA Health 2015).

5. For example, 'strict monitoring and verification' can be done by using the recordkeeping books or through increased digitalization.

References

- Antos J. 2015. A market approach to better care at lower cost. *Academic Medicine* 90: 1434–7.
- Bamanyaki PA, Holvoet N. 2016. Integrating theory-based evaluation and process tracing in the evaluation of civil society gender budget initiatives. *Evaluation* 22: 72–90.
- Bertone MP, Meessen B. 2013. Studying the link between institutions and health system performance: a framework and an illustration with the analysis of two performance-based financing schemes in Burundi. *Health Policy and Planning* 28: 847–57.
- Bhatnagar A, George AS. 2016. Motivating health workers up to a limit: partial effects of performance-based financing on working environments in Nigeria. *Health Policy and Planning* 31: 868–77.
- Bhushan I, Keller S, Schwartz B. 2002. Achieving the twin objectives of efficiency and equity: contracting health services in Cambodia. *ERD Policy Brief Series* 6: 1–10.
- Binagwaho A, Condo J, Wagner C *et al.* 2014. Impact of implementing performance-based financing on childhood malnutrition in Rwanda. *BMC Public Health* 14: 1132.
- Bjorkman Nyqvist BM, De Walque D, Svensson J. 2014. Information is power: experimental evidence on the long-run impact of community based monitoring. *World Bank Policy Research Working Paper* 7015: 1–25.
- Bonfrer I, Soeters R, Van de Poel E *et al.* 2014. Introduction of performance-based financing in Burundi was associated with improvements in care and quality. *Health Affairs* 33: 2179–87.
- Borghi J, Little R, Binyaruka P, Patouillard E, Kuwawenaruwa A. 2015. In Tanzania, the many costs of pay-for-performance leave open to debate whether the strategy is cost-effective. *Health Affairs* 34: 406–14.
- Bossyns P, Verlé P (Eds.). 2016. *Development Cooperation as Learning in Progress: Dealing with the Urge for the Fast and Easy*, Vol. 33. Antwerp: ITG Press.
- Brenner S, Muula AS, Robyn PJ *et al.* 2014. Design of an impact evaluation using a mixed methods model—an explanatory assessment of the effects of results-based financing mechanisms on maternal healthcare services in Malawi. *BMC Health Services Research* 14: 180.
- Chimhutu V, Tjomsland M, Songstad NG, Mrisho M, Moland KM. 2015. Introducing payment for performance in the health sector of Tanzania—the policy process. *Globalization and Health* 11 52.
- Consortium AEDES/IRESO. 2012. *Performance Based Financing Implementation Procedures Manual: North-West Region of Cameroon*. Yaoundé: Ministry of Health, Cameroon.
- de Savigny D, Taghreed A (Eds.). 2009. *Systems Thinking for Health Systems Strengthening*. Geneva: Alliance for Health Policy and Systems Research, WHO.
- de Walque D, Gertler PJ, Bautista-Arredondo S *et al.* 2015. Using provider performance incentives to increase HIV testing and counseling services in Rwanda. *Journal of Health Economics* 40: 1–9.

- Earl S, Carden F, Smutylo T. 2001. *Outcome Mapping: Building Learning and Reflection Into Development Programs*. Ottawa: International Development Research Centre.
- Eichler R, Auxila P, Pollock J. 2001. Performance-based payment to improve the impact of health services: evidence from Haiti. *World Bank Institute Online Journal* 1–11.
- Engineer CY, Dale E, Agarwal A *et al.* 2016. Effectiveness of a pay-for-performance intervention to improve maternal and child health services in Afghanistan: a cluster-randomized trial. *International Journal of Epidemiology* 45: 451–9.
- Fritsche GB, Soeters R, Meessen B. 2014. *Performance-Based Financing Toolkit*. Washington, DC: The World Bank.
- Gaventa J, McGee R. 2013. The impact of transparency and accountability initiatives. *Development Policy Review* 31: s3–s28.
- Gertler PJ, Vermeersch C. 2012. Using performance incentives to improve health outcomes. *World Bank Policy Research Working Paper* 6100: 1–39.
- Holmström B, Milgrom P. 1991. Multitask principal-agent analyses: incentive contracts, asset ownership, and job design. *Journal of Law, Economics, & Organization* 7: 24–52.
- Janssen W, Ngirabega Jde D, Matungwa M, Van Bastelaere S. 2015. Improving quality through performance-based financing in district hospitals in Rwanda between 2006 and 2010: a 5-year experience. *Tropical Doctor* 45: 27–35.
- Jensen MC, Meckling WH. 1976. Theory of the firm: managerial behavior, agency costs and ownership structure. *Journal of Financial Economics* 3: 305–60.
- Kalk A, Paul FA, Grabosch E. 2010. 'Paying for performance' in Rwanda: does it pay off?. *Tropical Medicine & International Health* 15: 182–90.
- Khim K. 2016. Are health workers motivated by income? Job motivation of Cambodian primary health workers implementing performance-based financing. *Global Health Action* 9: 31068.
- Laffont J-J, Martimort D. 2002. *The Theory of Incentives: The Principal-Agent Model*. Princeton, NJ: Princeton University Press.
- Loevinsohn B, Harding A. 2005. Buying results? Contracting for health service delivery in developing countries. *The Lancet* 366: 676–81.
- Lohmann J, Houffort N, De Allegri M. 2016. Crowding out or no crowding out? A Self-Determination Theory approach to health worker motivation in performance-based financing. *Social Science and Medicine* 169: 1–8.
- Manongi R, Mushi D, Kessy J, Salome S, Njau B. 2014. Does training on performance based financing make a difference in performance and quality of health care delivery? Health care provider's perspective in Rungwe Tanzania. *BMC Health Services Research* 14: 154.
- Matsuoka S, Obara H, Nagai M, Murakami H, Chan Lon R. 2014. Performance-based financing with GAVI health system strengthening funding in rural Cambodia: a brief assessment of the impact. *Health Policy and Planning* 29: 456–65.
- Mayaka Manitu S, Lushimba MM, Macq J, Meessen B. 2015a. Arbitrage d'une controverse de politique de santé: application d'une démarche délibérative au Financement basé sur la Performance en Afrique subsaharienne. *Santé Publique* 27: 425–34.
- Mayaka Manitu S, Meessen B, Lushimba MM, Macq J. 2015b. Le débat autour du financement basé sur la performance en Afrique subsaharienne: analyse de la nature des tensions. *Santé Publique* 27: 117–28.
- Meessen B. 2009. *An institutional economic analysis of public health care organisations in low-income countries*. Université catholique de Louvain (UCL). Retrieved from Handle: <http://hdl.handle.net/2078.1/22763>.
- Meessen B, Musango L, Kashala JP, Lemlin J. 2006. Reviewing institutions of rural health centres: the Performance Initiative in Butare, Rwanda. *Tropical Medicine & International Health* 11: 1303–17.
- Meessen B, Soucat ALB, Sekabaraga C. 2011. Performance-based financing: just a donor fad or a catalyst towards comprehensive health-care reform?. *Bulletin of the World Health Organization* 89: 153–6.
- Menya D, Platt A, Manji I *et al.* 2015. Using pay for performance incentives (P4P) to improve management of suspected malaria fevers in rural Kenya: a cluster randomized controlled trial. *BMC Medicine* 13: 268.
- Mooney G. 2012. *The Health of Nations: Towards a New Political Economy*. London: Zed Books.
- Musgrove P. 2011. *Rewards for Good Performance or Results: A Short Glossary*. Washington, DC: The World Bank. <http://www.rbfhealth.org/sites/rbf/files/documents/Rewards%20for%20Good%20Performance%20or%20Results%20-%20Short%20Glossary.pdf>.
- Nimpagaritse M, Korachais C, Roberfroid D *et al.* 2016. Measuring and understanding the effects of a performance based financing scheme applied to nutrition services in Burundi—a mixed method impact evaluation design. *International Journal for Equity in Health* 15: 93.
- Oakley A, Strange V, Bonell C, Allen E, Stephenson J. 2006. Process evaluation in randomised controlled trials of complex interventions. *BMJ Clinical Research* 332: 413–6.
- Ogundeji YK, Jackson C, Sheldon T, Olubajo O, Ihebuzor N. 2016. Pay for performance in Nigeria: the influence of context and implementation on results. *Health Policy and Planning* 31: 955–63.
- Paina L, Peters DH. 2012. Understanding pathways for scaling up health services through the lens of complex adaptive systems. *Health Policy and Planning* 27: 365–73.
- Paul E, Sossouhounto N, Eclou DS. 2014. Local stakeholders' perceptions about the introduction of performance-based financing in Benin: a case study in two health districts. *International Journal of Health Policy and Management* 3: 207–14.
- Pawson R, Tilley N. 1997. *Realistic Evaluation*. London: Sage.
- Peabody J, Shimkhada R, Quimbo S *et al.* 2011. Financial incentives and measurement improved physicians' quality of care in the Philippines. *Health Affairs* 30: 773–81.
- Peabody J, Shimkhada R, Quimbo S *et al.* 2014. The impact of performance incentives on child health outcomes: results from a cluster randomized controlled trial in the Philippines. *Health Policy and Planning* 29: 615–21.
- Renmans D, Holvoet N, Orach CG, Criel B. 2016. Opening the 'black box' of performance-based financing in low- and lower middle-income countries: a review of the literature. *Health Policy and Planning* 31: 1297–309.
- République du Tchad. 2011. *Manuel de procédures pour la mise en oeuvre du financement base sur les resultats au Tchad*. N'djamena: Ministère de la santé publique.
- Rudasingwa M, Soeters R, Bossuyt M. 2015. The effect of performance-based financial incentives on improving health care provision in Burundi: a controlled cohort study. *Global Journal of Health Sciences* 7: 39854.
- Rusa L, Ngirabega Jde D, Janssen W *et al.* 2009. Performance-based financing for better quality of services in Rwandan health centres: 3-year experience. *Tropical Medicine & International Health* 14: 830–7.
- Sanson-Fisher RW, Bonevski B, Green LW, D'Este C. 2007. Limitations of the randomized controlled trial in evaluating population-based health interventions. *American Journal of Preventive Medicine* 33: 155–61.
- Schneider CQ, Wagemann C. 2012. *Set-Theoretic Methods for the Social Sciences: A Guide to Qualitative Comparative Analysis*. Cambridge: Cambridge University Press.
- Shadish WR, Cook TD, Campbell DT. 2002. *Experimental and Quasi-experimental Designs for Generalized Causal Inference*. Boston, MA: Houghton Mifflin.
- Simonet D. 2008. The new public management theory and European health-care reforms. *Canadian Public Administration* 51: 617–35.
- SINA Health. 2015. *Performance-Based Financing in action: Theory and instruments (Version April 20th 2015)*. The Hague: SINA Health.
- Soeters R, Peerenboom PB, Mushagalusa P, Kimanuka C. 2011. Performance-based financing experiment improved health care in the Democratic Republic of Congo. *Health Affairs* 30: 1518–27.
- The AIDSTAR-Two project. 2011. *The PBF Handbook: Designing and Implementing Effective Performance-Based Financing Programs Version 1.0*. Cambridge: Management Sciences for Health.
- Toonen J, van der Wal B (Eds.). 2012. *Results-Based Financing in Healthcare. Developing an RBF Approach for Healthcare in Different Contexts: The Cases of Mali and Ghana*. Amsterdam: KIT Publishers.
- Van Belle S, Marchal B, Dubourg D, Kegels G. 2010. How to develop a theory-driven evaluation design? Lessons learned from an adolescent sexual and reproductive health programme in West Africa. *BMC Public Health* 10: 741.
- Van Olmen J, Criel B, Bhojani U *et al.* 2012. The health system dynamics framework: the introduction of an analytical model for health system analysis and its application to two case-studies. *Health Culture and Society* 2: 1–21.

- Witter S. 2015. Growing pains (and gains): reflections on the current state of play and future agenda for performance based financing. Retrieved from <http://www.healthfinancingafrica.org/home/growing-pains-and-gains-reflections-on-the-current-state-of-play-and-future-agenda-for-performance-based-financing>
- Witter S, Fretheim A, Kessy FL, Lindahl AK. 2012. Paying for performance to improve the delivery of health interventions in low- and middle-income countries. *Cochrane Database of Systematic Reviews* 2: Cd007899.
- Witter S, Toonen J, Meessen B *et al.* 2013. Performance-based financing as a health system reform: mapping the key dimensions for monitoring and evaluation. *BMC Health Services Research* 13: 1–10.
- Witter S, Zulfikar T, Javeed S, Khan A, Bari A. 2011. Paying health workers for performance in Battagram district, Pakistan. *Human Resources for Health* 9: 1–12.