

sector sanitario. Nos oponemos a dicha noción, basándonos en que las intervenciones basadas en los resultados y motivadas por la economía no responden adecuadamente, por sí mismas, a las necesidades de los pacientes y la comunidad, que es en lo que se debería basar la reforma del sistema sanitario. También opinamos que el debate sobre la financiación

basada en el rendimiento está sesgado por la falta de evidencias y por fundamentos que no tienen en cuenta el contexto adecuadamente y que no esclarecen los diversos elementos incluidos en el paquete de financiación basada en el rendimiento.

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Round table discussion

Performance-based financing: the need for more research

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While several developing countries have been implementing PBF as a strategy to finance health services, a polarized debate between the “proponents” and “opponents” of this approach is gaining prominence.^{1–4} Ireland et al.⁵ provide a critical view on the paper by Meessen et al.,⁶ mainly opposing the argument that PBF, on its own, can be considered as a strategy to reform health systems in developing countries. One of their main criticisms is the lack of evidence. Evidence, of course, should ideally be central to any health sector reform but applying this rule rigorously can lead to inertia. Looking back on the history of public health, we note that many important health reforms implemented in Africa – such as selective primary care for child survival or the health district strategy – were not developed based on recommendations from rigorous experimental studies.⁷ Health reformers should care-

fully consider different opportunities based on their potential to maximize the delivery and uptake of proven maternal and child health interventions.⁸

As African public health experts, we believe that PBF is interesting due to its potential. Having said this, we agree that implementing health reforms based on evidence is crucial. For example, some components of selective primary health care, such as growth monitoring, were implemented even though little was known about their cost-effectiveness.⁷ However, a recent evaluation of the primary-care approach has shown interesting results⁹ and the global public health community has since gained important knowledge on successful interventions in primary health care.

We think that Ireland et al. minimize the growing body of evidence on PBF implementation produced in recent years. Many studies have been published providing details on how to implement PBF and one experimental study has been published on the impact of the approach.¹⁰ Clearly, rigorous research is still needed, especially more theoretical and qualitative studies that address the “how and why” and test hypotheses of potential adverse effects of PBF. Continuous checking and integration of the PBF approach is needed during implementation and this should be informed by operational research aimed at aligning PBF with the existing health system.

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The World Bank, through a grant from the Government of Norway, has launched several PBF initiatives in developing countries, systematically accompanied with an impact evaluation strategy using different innovative research designs.¹¹ These initiatives should include formative research to address the rapidly changing social and political context that may influence policy implementation.¹²

The debate around PBF should be evidence-based with critical appraisal. Both proponents and opponents should avoid taking a dogmatic position. Both parties have agreed that PBF is not a panacea. The provision of input items and other key interventions, such as provider training, supervision and health-system strengthening, should continue with the aim of producing results. A research agenda and an effective community of practice embracing all views on PBF is critical to understanding more about its potential for helping developing countries to reach some of the United Nations Millennium Development Goals. ■

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Looking at the effects of performance-based financing through a complex adaptive systems lens

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The debate on PBF is misdirected. As is too often the case in international aid financing, agencies try to prove the effectiveness of their contribution by isolating it as the main reason for success.¹ In reaction, opponents will often use the same approach in an attempt to prove that another factor is actually the cause of an observed change. We argue that this endless and futile debate, often present among experts in health systems strengthening, will not contribute to improving public health in low-income countries.

Rather than searching for the impossible proof of whether PBF works or not, we should instead try to learn useful lessons from experiences. We agree with Ireland et al. that the focus of PBF assessment should be on "why" and "how" the intervention works.² Comprehensive evaluation of PBF is needed as part of complete health system reform.

We think that, to respond to some of these key questions, health systems should be analysed using a complex adaptive systems lens, as others have advocated in the past.^{3,4} A complex adaptive system is a collection of interacting components, each of which has its own rules and responsibilities. The behaviour of this kind of system is different to the sum of the behaviour of each of its components. Examples of complex adaptive systems include the human brain, ecosystems and manufacturing businesses.

Health system "behaviour" and particularly counterintuitive behaviour (unexpected changes or lack of change) can be analysed using a complex adaptive systems lens when PBF is introduced, often with a mix of other interventions such as in a context of system reform. The purpose of this analysis is not to isolate causal factors but rather to identify "macro" characteristics of the system that may explain behaviour change.

Although it has often been ignored in health system evaluation, social simulation can be useful for this approach. The most frequently used technique, agent-based modelling, uses computer simulation centred on a collection of autonomous agents whose interactions are based on a set of rules. These simulations can integrate empirical data or existing knowledge or opinions.⁵ One of the powerful features of agent-based modelling lies in its capacity to study complex phenomena in a simple and flexible way. Indeed, this approach does not require a high level of mathematical or programming skills, making it accessible to many researchers. Furthermore, it allows for an iterative learning process that is easy to set up compared to long and costly data collection processes.

While this methodological approach may not "prove" the effectiveness of an intervention, it could provide insight into the reason a health system behaves in a given way (whether it changes or remains in a steady-state) when PBF is introduced. We believe that this type of information, although maybe less appealing to the usual stakeholders in development aid debates, is much more useful in evaluating PBF. ■

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