Performance-based Financing:

Benefits, Risks, and Potential for Improving Health Outcomes

Amanda Makulec

25 March 2009

Introduction

Performance based financing (PBF) has been employed over the last decade as a powerful tool to improve health outcomes overseas, but has also been heavily criticized. While numerous countries, including Afghanistan, Haiti, Rwanda, and others, have successfully improved health outcomes with PBF[1], other high-profile programs, including the Global Alliance for Vaccines and Immunizations (GAVI), have experienced problems[2]. I aim to evaluate the benefits and risks of using a PBF system, paying specific attention to the recent criticisms of GAVI and the ways in which these criticisms can be countered to encourage the continued development and expansion of PBF as a strategy in international health work.

Performance-based Financing

The successful use of financial incentives to achieve a particular outcome in international development has exploded over the past decade. With a push for results-oriented programs to achieve the MDGs, and the need to report tangible results from programs financed through overseas aid dollars, programs that made renewal of funding contingent on producing specific outcomes began to blossom[3].

PBF took this idea a step further. At the core of a comprehensive PBF program are financial incentives distributed at multiple levels for meeting specific indicator targets[4]. Health workers, for example, may receive a percent of their salaries as bonuses at the end of particular quarters, and health centers may earn set monetary bonuses for meeting those same targets. Workers have an added stake in the outcomes at their facilities, as they receive money to take home as a result of positive outcomes, and health centers receive needed funds to strengthen infrastructure and expand services[5].

Case Study: GAVI

Funded primarily by a seed grant from the Bill and Melinda Gates Foundation in 1999, GAVI aims to improve immunization coverage in countries with an annual per capita GNP of less than US$1,000. GAVI designed an outcome-based funding system in order to create financial incentives for countries to improve basic vaccination coverage, calling their iteration of the PBF method Immunization Service Support (ISS) [6]. Under this system, funds are disbursed in proportion to the number of additional children less than 1 year of age targeted or reported to receive diphtheria, tetanus, pertussis vaccine (DTP3). The design of ISS, requiring establishment of a baseline number of children vaccinated, investment of seed money ($20 per child targeted) to support developing new initiatives, and a separate reward phase for those areas meeting or exceeding their targets at the three-year benchmark. In the reward phase, countries that have met their target at the three year evaluation point receive US$20 per additional child reported to have received DTP3 above either the target set during the investment phase or the number of children receiving DTP3 in the previous year, whichever is higher. Countries must pass a data quality audit (DQA) of their administrative data collection system to be eligible to enter into the reward phase[7]. The audit consists of a comparison of data reports with hospital paper records, and is necessary because of the risk of over-reporting that accompanies financial incentive schemes.

Results from a study conducted by the Institute for Health Metrics and Evaluation (IHME) were published in *The Lancet* in December 2008, levying criticism of the accuracy of the data used in GAVI's ISS scheme. The study criticized the quality of the data used to determine how much countries received in reward payments, leading to attacks on GAVI and the PBF approach as a whole[7]. Because payments are directly proportional to the number of children immunized, there are strong incentives to over-report the number of subjects treated. The study

outlined stark disparities between the immunization coverage rates reported by GAVI, the WHO/UNICEF, and through household surveys[7], though challenges with vaccination data accuracy have been a recurring challenge in international health[8]. In total, the research team accused the Alliance of paying nearly $140 million in reward payments that were unwarranted[7].

Benefits and Drawbacks of PBF

Past PBF programs, like GAVI, illustrate the strong motivating power of money; they also illustrate the corruptive and coercive tendencies often accompanying opportunities for financial gain. PBF has been shown to increase health worker motivation and decrease absenteeism; a more present and motivated workforce has translated into improved health outcomes[1]. For example, in the USAID flagship PBF program in Rwanda, PBF pilot districts saw a 43.5% increase in consultations, and an 85% increase in family planning subscribers in the first year of the program[9]. PBF also fits well within the results-oriented paradigm of current international aid, as the underlying principle of PBF is selecting achievable targets to be reached in a given time period. Norad, specifically, has made a strong push for the use of results-oriented financing strategies[10].

Notably, PBF has been demonstrated to be sustainable over time in select country programs, though the limited number of case studies makes broad generalizations difficult[10]. The first USAID program focused on PBF, in Rwanda, provides an excellent example of the transfer of ownership over time. The project began with financial incentives administered by local NGOs in specific pilot sites, and eventually expanded across the country under the same leadership. In 2006, the Minster of Health chose to bundle PBF into the national health plan due to its positive outcomes[5]. Though the Rwanda program is viewed as a model for other nations, the size of the

country and support of the political will were key to the program's success; this is not always recognized by other larger nations hoping to copy the Rwandan model.

Those looking to implement PBF programs should also be conscious of potential drawbacks. The most obvious problem, which GAVI was criticized for, is the over-reporting of outcomes. Estimates made by the IHME of the actual number of children vaccinated were nearly 10% less than WHO estimates, and 20% less than GAVI's data estimates[7]. Excess reward payments could have bolstered other health programs and been used more efficiently. Even if PBF continues to improve health outcomes, repeated problems with excessive overpayments may limit the effectiveness of PBF in comparison to other program options. A final concern is the potential for health workers to coerce patients into having specific treatments done purely to augment the number of outputs and, consequentially, the size of the financial payout to the health workers and/or the health center[10].

Lessons and Recommendations

Despite mistakes made, past PBF success within multiple countries should not be overlooked, nor should the tactic be dismissed from the toolbox of the international aid community. The GAVI experience underscores the necessity for strong monitoring frameworks designed as part of the system, and the need for regular, consistent evaluation by impartial sources. This may be accomplished through external checks and balances, but should also be more intertwined with the design of the program. Using coalitions made up of representatives from all of the hospitals in a given area, who can visit and validate data and practices, may be one way of accomplishing constant monitoring without incurring too large an additional expense.

A strong health information system (HIS) that accurately reports outcomes is also part of the foundation of a successful PBF program. Holding health centers accountable for their data is

impossible if there is not data to be had, or if one cannot determine an appropriate baseline. As such, PBF programs should aspire to strengthen existing HIS mechanisms to ensure accurate reporting. GAVI's ISS included conditions to address data concerns, and aimed to strengthen existing data reporting systems over time, rather than to create a parallel system that would be removed once the program was complete[11]. These safeguards were not absolute, illustrating that even in the best planning can have unanticipated consequences. Enhancing the existing HIS so it can serve future needs, beyond what was collected by GAVI, illustrates a comprehensive systems approach to planning a PBF program. Such programs should be designed to fit within and complement existing successful structures within the health system, rather than operating as independent entities[10].

Conclusions

The shift to a results-oriented approach, where emphasis is placed on reportable outcomes, has been a positive one for international aid; in this context, PBF should continue to be explored and expanded. To better establish the validity of the method, additional research and pilot studies must be conducted to determine which PBF methodologies are most effective in achieving targets. Each plan created by experts to have some sort of health impact overseas will have its benefits and drawbacks; the encouraging successes of performance-based financing should not be overlooked in favor of focusing exclusively on problems in high profile programs like GAVI.

Works Cited

1. Management Sciences for Health. Using Performance-Based Payments to Improve Health Programs. *The Manager*. 2001, v. 10, n. 2.
2. Lydon P, Levine R, Makinen M, Brenzel L, Mitchell V, Milstien JB, Kamara L, Landry S. Introducing new vaccines in the poorest countries: What did we learn from the GAVI experience with financial sustainability?. *Vaccine* 2008: 26: 6706-6716.
3. Loevinsohn B, Harding A. Buying results? Contracting for health service delivery in developing countries. *Lancet* 2005: 366: 676-81
4. Hecht R, Batson A, and Brenzel L. Making Health Care Accountable: Why performance-based funding of health services in developing countries is getting more attention. *Finance and Development*. March 2004: 16-19.
5. Soeters R, Habineza C, Peerenboom PB. Performance based financing and changing the district health system: Experience from Rwanda. *Bulletin of the World Health Organization* November 2006: 84(11).
6. Martin JF, Marshall J. New tendencies and strategies in international immunization: GAVI and the Vaccine Fund. *Vaccine* 2003; 21: 587-592.
7. Lim SS, Stein DB, Charrow A, Murray CJL. Tracking progress towards universal childhood immunisation and the impact of global initiatives: a systematic analysis of three-dose diphtheria, tetanus, and pertussis immunization coverage. *Lancet* 2008: 372: 2031-46.
8. Murray CJL, Shengelia B, Gupta N, Moussavi S, Tandon A, Theiren M. Validity of reported vaccine coverage in 45 countries. *Lancet* 2003: 363: 1022-27.
9. Eichler R. Can P4P Increase Utilization by the Poor and Improve the Quality of Health Services?. Discussion paper for Center for Global Development Working Group on Performance-based Initiatives. 7 February 2006.
10. Oxman AD, Fretheim A. An overview of research on the effects of results-based financing. Norwegian Knowledge Centre for Health Services. Nr 16-2008.
11. Lob-Levyt J. Vaccine coverage and the GAVI Alliance Immunization Services Support Initiative. *Lancet*, online, December 18, 2008.