Results-based Financing in Health
Definitions, Measures, and Global Experience

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Overview

• What is RBF? Why is it used and for what?
• Types of Measures
• Global examples
• Design considerations
“Hey! How about giving me some benchmarks?”
What is Results-Based Financing (RBF)?

- Supply-side *incentive* payments to facilities, teams of health workers *conditional* on increasing processes, health outputs or outcomes

- Demand-side *incentive* payments to individuals, households or communities, *conditional* on engaging in pre-agreed healthy behaviors or utilization of health services

- ‘Results Based Financing (RBF) and ‘Pay for Performance (P4P)’ often used interchangeably.
Concept

Payers
(Government, Health Programs, Insurers, Communities)

Results

Money, Goods, Other Rewards

Recipients
(Households, Service Providers (Facilities, Health Workers), Health Programs, Sub-National Levels of Government)

Source: Eichler, 2009
RBF can be used at any level but incentives must trickle down to provider-consumer level for maximum impact.
Why so much interest in RBF?

- Disenchantment with traditional financing of *inputs* w/o accountability for outputs (a ‘sinkhole’ issue)

- *Redirect attention of providers* to making greater headway on *priority diseases* and health problems of the poor

- *A way of motivating behavior change at household level* by providing cash transfers conditional on households attending health education, clinics, or adopting preventive behaviors

- Disenchantment with *pay levels* by workers and lack of incentives and *means* to innovate
Performance Incentives to Households and/or Providers

“Demand side”
- Conditional cash and in-kind transfers, vouchers to households or individuals
  - Health care behaviors
    - Preventive care services
    - Maternal care
    - Money and food to motivate TB/HIV patients to complete treatment
  - Healthy behaviors

“Supply side”
- Intergovernmental Transfers (results-based budgeting & management)
- Health Facilities
  - Service package
  - Institutional births
  - Primary care
  - Hospitals
Types of Approaches - quality

• Incentives targeted to providers
  – Pay for process (e.g., data reporting, assessments, use of protocols, patient tracking, disease management, system change, etc.)
  – Pay for micro-system improvement (balance scorecard; quality check lists)
  – Pay for accreditation
  – Pay for mistake prevention (e.g., control of adverse events)

• Incentives targeted to patients
  – Pay for healthy behaviors (e.g., program participation and retention; reduce rates of highly additive behaviors; smoking cessation)
  – Paying for health care behaviors (e.g., preventive visits, follow-up visits, blood pressure control, immunizations, etc.)
Types of Measures

• Basic Care
  – no. of new curative visits, institutional deliveries, TB treatment completion

• Preventive Services
  – Breast cancer screening (mammograms)
  – Cervical cancer screening (VIA/VILI)
  – Well-child exams + childhood immunizations
  – Ante-natal visits (>X); post-partum visits
  – Family planning services
  – Insecticide treated bed nets

• Institutional Capacity
  – Implementation of a financial management system
  – Implementation of reporting requirements (Pay-for-Data)

Source: Rena Eichler, WB, 2003
Types of Measures

• Effective management of chronic cases
  – Percentage of diabetics with controlled lipid levels (LDL levels less than 130mg/dL)

• Health education
  – % of smokers who participate in smoking cessation workshops

• Hospital quality
  – % decrease in infection rates
  – No. of accredited hospitals
  – % decrease in adverse events

• Control excessive utilization
  – Percentage of prescriptions that are generic
What about impact?

• Studies with robust methods and samples are far and few between
• Many experiments with embedded IEs underway
• Results so far -- Mixed bag for provider-targeted incentives
  – Some improvements
  – Providers do respond to incentives
  – Attribution problem; unclear causal linkage
  – Ad hoc interpretations
• More robust results for patient-targeted incentives
  – Addictive behaviors and care behaviors
Global Examples and Results

Demand side payments
Primary Care Packages
Hospitals
Inter-governmental Transfers
<table>
<thead>
<tr>
<th>Region or Donor Group</th>
<th>Country Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-saharan Africa</td>
<td>Rwanda, Burundi, DR Congo, CAR, Cameroun, Eritrea, Zambia, Ghana, Benin, Zimbabwe</td>
</tr>
<tr>
<td>Asia</td>
<td>Afghanistan, Bangladesh, Cambodia, Kyrgyz Republic, Nepal</td>
</tr>
<tr>
<td>Latin America</td>
<td>Haiti, Mexico, Honduras, Argentina, Brazil, Nicaragua</td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>Czech Republic</td>
</tr>
<tr>
<td>Rich countries</td>
<td>USA, UK, New Zealand, Belgium</td>
</tr>
<tr>
<td>Donors</td>
<td>GAVI, Global Fund, World Bank, EC, Host countries</td>
</tr>
</tbody>
</table>
Demand Side Examples
In-kind incentives for childhood immunization

Extended Package of Immunization

- Randomized control trial
  - A. Well-publicized health camps
  - B. 1 kg Lentils for each immunization + full set of plates when full regimen complete + well-publicized health camps
  - C. Control

- Rates of completely immunized children increased: (baseline <2%)
  - A. 17 %
  - B. 38%
  - C. 6.2%

Source: Banerjee, et al., forthcoming
Primary Care
Maternal Child Care
Chronic Care
Haiti (NGO contracting)

• Providers paid fixed fee plus bonus for achieving performance targets
  – Subcontracts clearly established targets, describe how performance will be measured, and determine the award fee associated with attainment of each target.

• Measures:
  – increase in % of children < 1 who are fully immunized
  – increase in % of pregnant women who receive at least 3 prenatal care visits
  – Institutional deliveries

• Results
  – Increased immunizations by 24%
  – more than 19 percentage point increase in skilled deliveries over NGOs paid for inputs.

Source: Eichler, 2009
Rwanda

RBF for Basic Health services

• Bonus payments paid on fee-for-service basis, conditioned on quality, to public facilities which are distributed to personnel

• Purchase contract/agreement (between the Health Management Committee and a higher level authority, e.g. decentralized government). 

*Purpose*: this defines the rules of the game/responsibilities of the PBF system

• Measures: Institutional births, prenatal care, quality of pre-natal care, child preventive visit

• Source: Basinga, Paulin and Christel Vermeersch. “Pay-for-Performance (P4P) for Health Services in Rwanda”, PPT presentation at CEDES conference, December 2009.
## Rwanda: Results

<table>
<thead>
<tr>
<th>Indicator</th>
<th>% increase over baseline</th>
<th>% increase due to P4P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional deliveries</td>
<td>21.1</td>
<td>7.4</td>
</tr>
<tr>
<td>Tetanus vaccine - prenatal visit</td>
<td>7.6</td>
<td>5.4</td>
</tr>
<tr>
<td>Well baby visit 0-23 mos.</td>
<td>63.8</td>
<td>13.4</td>
</tr>
<tr>
<td>Well baby visit 24-59 months</td>
<td>132.5</td>
<td>10.6</td>
</tr>
</tbody>
</table>
Rwanda: Results on the Quality of Services

Quality Improvements in HC Services 2008-A

<table>
<thead>
<tr>
<th>Absolute Quality %</th>
<th>1Q08</th>
<th>2Q08</th>
<th>3Q08</th>
<th>4Q08</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General Organization</td>
<td>0.58</td>
<td>0.73</td>
<td>0.75</td>
<td>0.77</td>
</tr>
<tr>
<td>2. Hygiene</td>
<td>0.77</td>
<td>0.80</td>
<td>0.83</td>
<td>0.83</td>
</tr>
<tr>
<td>3. Ext Consult &amp; Inpatient</td>
<td>0.69</td>
<td>0.75</td>
<td>0.77</td>
<td>0.80</td>
</tr>
<tr>
<td>4. Delivery room</td>
<td>0.70</td>
<td>0.77</td>
<td>0.80</td>
<td>0.84</td>
</tr>
<tr>
<td>5. ANC</td>
<td>0.78</td>
<td>0.82</td>
<td>0.86</td>
<td>0.88</td>
</tr>
<tr>
<td>6. FP</td>
<td>0.80</td>
<td>0.86</td>
<td>0.84</td>
<td>0.89</td>
</tr>
</tbody>
</table>
# Brazil: Chronic disease management: program goals, targets and incentives

<table>
<thead>
<tr>
<th>Programs</th>
<th>Goals</th>
<th>Targets</th>
<th>Incentives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular health</td>
<td>• Referral to the tobacco use cessation groups</td>
<td>• Patient enrollment</td>
<td>US$ 7.5 for each measure</td>
</tr>
<tr>
<td></td>
<td>• BP &lt; 140/90</td>
<td>• 75%</td>
<td></td>
</tr>
<tr>
<td>Diabetes</td>
<td>• Annual eye examination</td>
<td>• Patient enrollment</td>
<td>US$ 7.5 per achievement</td>
</tr>
<tr>
<td></td>
<td>• BP &lt; 130/80</td>
<td>• 25%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Glycated Hb &lt; 7%</td>
<td>• 40%</td>
<td></td>
</tr>
<tr>
<td>Childhood asthma</td>
<td>• Absence of hospitalization due to asthma during the program</td>
<td>• No hospital admission per semester</td>
<td>• US$ 20 per patient enrolled/semester</td>
</tr>
</tbody>
</table>

Source: Borem, 2009
Childhood asthma program: results for the client

Clients following the program (n=601)

<table>
<thead>
<tr>
<th></th>
<th>Before enrollment</th>
<th>After 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency room visits</td>
<td>246</td>
<td>111</td>
</tr>
<tr>
<td>Hospitalizations due to asthma</td>
<td>22</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: Borem, 2009
USA: California - Kaiser Permanente
The Effect of Removing Incentives for Quality

- 1999-2007
- Financial incentives to 35 facilities but staff received share of extra revenues
- KP introduced and removed incentives for diabetic retinopathy screening
- FP introduced, removed and reintroduced incentives for screening cervical cancer

ON AGAIN AND OFF AGAIN?

The effect of incentives on screening for diabetic retinopathy and cervical cancer

Percentage of adults aged >=31 screened for diabetic retinopathy in relation to financial incentives

Percentage of women aged 21-64 screened for cervical cancer in relation to financial incentives

Hospitals
Brazil: Pay for Hospital Accreditation

Additional “quality” fee tacked on the per diem amount.

Advance of the 7% rate at the beginning of the program

ONA 1: 7%
ONA 2: 9%
ONA 3: 15%

Half of the costs associated with inspection

Source: Borem, 2009
# Brazil: Pay for Hospital Accreditation

<table>
<thead>
<tr>
<th>Index</th>
<th>Goal</th>
<th>Incentive</th>
<th>Validation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accreditation process</strong></td>
<td>Start</td>
<td>7% increase in per diem amount</td>
<td>UBH’s auditors</td>
</tr>
<tr>
<td></td>
<td>Being within the deadline</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Accreditation status</strong></td>
<td>Certification</td>
<td>7% level I, 9% level II, 15% level III</td>
<td>ONA hired independent auditors</td>
</tr>
<tr>
<td></td>
<td>Maintain the certification</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Borem, 2009
Inter-govermental Transfers
Argentina: Plan Nacer

- Introduced financial incentives between the federal government and provinces (states) and between the states and public and private providers, linking financing with results (output and intermediary outcomes).
- Established MCH package of services (fee-for-service)
- Created capitation-based grant transfer based on cost of MCH package
  - 60% of the capitation payment released upon monthly certification of enrolment of eligible population, and
  - 40% of the capitation payment released for each of the 10 Tracers goals achieved (quarterly, ex-post audited by a concurrent auditor)
Funding flows

Federal Health Ministry

60% on verified enrollment
Per capita – Based Transfers
40% on verified Tracer indicators

State Health Authorities

Fee-for service
Provision of service package

Public providers
Private providers

Provision of documentation on enrollment and services

Auditon

Fund releases triggered by verification of outputs
TRACERS

• Timely inclusion of eligible pregnant women in prenatal care services
• Effectiveness of neonatal and delivery care (Apgar Score)
• Effectiveness of pre-natal care and prevention of premature birth (weight above 2.5 kilos)
• Quality of pre-natal and delivery care (number of mothers immunized and tested for STDs)
• Medical Auditing of Maternal and Infant deaths
• Immunization Coverage (measles vaccine)
• Sexual and Reproductive Healthcare
• Well child care (1 year or younger)
• Well child care (1-6 years old)
• Inclusion of Indigenous Populations
Design Elements

• Certification by Independent Concurrent Auditor

  – Certification of beneficiary eligibility is done by the Concurrent Auditor through monthly cross-checking of beneficiary databases and enrolment registers.

  – Certification of *Tracers* is done by the Concurrent Auditor through both, certifying surveillance and monitoring systems at provincial and provider levels as well as through sample auditing of medical records at provider level.

  – Penalties for erroneous billing (125% of capitation is discounted)
Results

APL-1 Tracer Accomplishments:
Goal vs. Outcome

Percent Accomplished

Tracers

Goal
Outcome

0.00%
10.00%
20.00%
30.00%
40.00%
50.00%
60.00%
70.00%
80.00%
90.00%
100.00%
Design Dimensions and Lessons Learned from RBF Implementation
Design Dimensions

• **Stakeholder involvement**
  – Overcoming provider/physician resistance
  – Securing buy-in

• **Selection of performance areas**
  – Clear opportunities for improvement
  – Relevance to purchaser’s priorities

• **Individual vs. group incentives**

• **Paying the right amount**

• **Payment strategy**
  – Target attainment
  – Relative rank (high performers only)
  – % improvement
  – Use of penalties?
Design Dimensions

• **Selection of performance measures**
  – Availability and frequency of availability
  – Ease of collection
  – Standardization
  – Measurement culture of providers
  – Verification

• **Time frame**
  – How long is needed to show sustained improvement?
  – Allow for experimentation – one size does not fit all
Design Dimensions

• Financing the incentives
  – New money vs. budget neutral
  – Link to inflation increases
  – Withhold portion of provider payment and pay it back later continent on performance

• Institutional readiness
  – Financial payment and management
  – Contract specification and management
  – Monitoring and validation of measures
  – Managerial autonomy and capacity

• Impact evaluation
  – Incorporate into design
Lessons Learned: Implementation

• In-flight adjustments are common as scheme matures
• RBF costs!
  – Finding resources to sustain program
• Institutional readiness and architecture is critical
  – Can involve substantial TA investments
• Plateau effect
  – How to incentivize continuous improvements?
• Burden/cost of data collection
  – Ensuring data validity
• Perverse effects
  – Lower quality for activities not incentivized
  – Decline in performance if remove incentives
Improving Performance Is a System-wide Concern

“It would be a great honor for me to be counted as one of your successes.”
Thanks