The Kyrgyz Performance Based Payments (PBP) Project

- Kyrgyz Republic has had persistently high (for the region) maternal and neonatal mortality rates
  - Near-universal institutional deliveries (over 95%) and coverage of primary care services

Hypothesis that poor quality of care is limiting improvements

- Project aims to improve quality of care for Maternal and Neonatal Health (MNH)
  - 3 year pilot of Performance Based Payments (PBPs) focused on quality of MNH services at district hospitals
  - Quality to be assessed by peer evaluators every quarter using a Balanced Scorecard which includes structure, clinical care and process measures of quality (more on this later)
  - PBPs will be a dimension of Diagnosis Related Group (DRG) payments for MNH services; Hospital Directors have autonomy over use
  - In addition, hospitals expected to also receive performance feedback as part of the PBP intervention package
Objective of the Impact Evaluation of the Kyrgyz PBP Program

- The Impact Evaluation of the Kyrgyz Performance Based Payments (PBP) Program aims to:
  
  1. Build evidence on the impact and cost-effectiveness of the supply-side PBP models.
  2. Inform the MOH on the whether PBP should be scaled-up to additional hospitals, and potentially expanded to the PHC level.
  3. Inform the MOH on potential contribution of enhanced supervision as a low cost strategy to improve quality of care

- Therefore 63* eligible Rayon hospitals were randomized to one of three groups:
  
  1. Performance Based Payments package (including enhanced supervision)
  2. Enhanced supervision only, and
  3. Business-as-usual
Measuring QoC in the IE (1)

- The baseline survey was conducted in all 65 Rayon Territorial Hospitals in the Kyrgyz Republic.
  - The Family Medicine Center (primary care facilities) associated with each of these secondary hospitals was also included in the study.

- Instruments included:
  1. Health facility assessments: Hospital assessment and ANC checklist
  2. Interviews with health workers and their patients
  3. Health worker knowledge tests
  4. Simulated patients
  5. Direct observations of deliveries and antenatal care visits
  6. Clinical record audits

- All components used structured (quantitative) questionnaires or checklists to collect data, and all field workers were trained clinicians.

- Survey teams spent 7 days at each health facility
<table>
<thead>
<tr>
<th>Instrument</th>
<th>Target per hospital</th>
<th>Sampling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health worker interview</td>
<td>7</td>
<td>Type of health worker and ward/service delivery assignment</td>
</tr>
<tr>
<td>Patient ‘exit’</td>
<td>14</td>
<td>Women who delivered at the hospital (7 - delivery observed; 7 - delivery not observed)</td>
</tr>
<tr>
<td>DO: Labor &amp; Delivery</td>
<td>5 - 10</td>
<td>On-going deliveries</td>
</tr>
<tr>
<td>DO: Post-partum Care</td>
<td>5 - 10</td>
<td>Current post-partum cases</td>
</tr>
<tr>
<td>DO: Post-natal care (neonate)</td>
<td>5 - 10</td>
<td>Current neonatal post-natal cases</td>
</tr>
<tr>
<td>DO: <strong>ANC</strong></td>
<td>3</td>
<td>Current ANC cases</td>
</tr>
<tr>
<td>Instrument</td>
<td>Target per hospital</td>
<td>Sampling</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>---------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Simulated Patient: Mamanatalie- Post Partum Hemorrhage</td>
<td>3</td>
<td>By type of health worker- of those interviewed</td>
</tr>
<tr>
<td>Simulated Patient: Neonatalie- Neonatal asphyxia</td>
<td>3</td>
<td>By type of health worker- of those interviewed</td>
</tr>
<tr>
<td>Criterion Based Audit: Normal Deliveries</td>
<td>10</td>
<td>Patient records for normal deliveries</td>
</tr>
<tr>
<td>Criterion Based Audit: Complicated Deliveries</td>
<td>Up to 30</td>
<td>By type of complication: Patient records for Post Partum Hemorrhage, Eclampsia/ Pre-Eclampsia, Obstructed Labor &amp; Sepsis</td>
</tr>
</tbody>
</table>
Measuring QoC in the IE (4)

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Target per hospital</th>
<th>Sampling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criterion Based Audit: Neonatal Asphyxia</td>
<td>10</td>
<td>Patient records for neonatal asphyxia</td>
</tr>
<tr>
<td>Criterion Based Audit: Stroke</td>
<td>10</td>
<td>Patient records for neonatal asphyxia</td>
</tr>
<tr>
<td>Criterion Based Audit: Acute Myocardial Infarction</td>
<td>10</td>
<td>Patient records for Acute Myocardial Infarction</td>
</tr>
</tbody>
</table>
Challenges in the field

- MamaNatalie and NeoNatalie simulations
- Anticipating patient load during field visit
- Survey team composition
- Identifying the right personnel for our sample
- Primary care templates developed for sub-Saharan Africa didn’t capture Kyrgyz constraints.
- Measuring structural versus process quality
ANC Clients Counseled

- Iron/folic acid counseling [1]: 81%
- TT counseling: 100%
- Pregnancy counseling [2]: 64%
- Birth preparation counseling [3]: 21%
- Postpartum family planning counseling: 28%

[1] Explain the purpose of the treatment, Explain how to take, Explain side effects
[2] Inform client of progress of pregnancy, If she has severe abdominal pain, Tell client to return if vaginal bleeding, Tell client to return if severe headache or blurred vision, If she has fever and is too weak to get out of bed, Tell client to return if she has convulsions
[3] Ask client where she will deliver, Advise client to prepare for delivery (e.g. set aside money, arrange for emergency transport), Mean percent score for birth preparation counseling, Advise client to use skilled health worker during delivery, Discuss with client what items to have on hand at home for emergencies (e.g. sterile blade), Use of visual aids
Essential obstetric practices during labor and delivery

<table>
<thead>
<tr>
<th>Task</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>General tasks for initial client assessment [1]</td>
<td>87%</td>
</tr>
<tr>
<td>Danger signs [2]</td>
<td>40%</td>
</tr>
<tr>
<td>Complications during previous pregnancies [3]</td>
<td>45%</td>
</tr>
<tr>
<td>Tasks for second and third stage of labor [4]</td>
<td>80%</td>
</tr>
<tr>
<td>Takes mother’s vital signs 15 minutes after birth</td>
<td>78%</td>
</tr>
<tr>
<td>Palpates uterus 15 minutes after delivery of placenta</td>
<td>92%</td>
</tr>
</tbody>
</table>

[1] Checks clients card or asks client her age, length of pregnancy, and parity, Takes temperature, Takes pulse, Asks/notes amount of urine output, Performs general examination (e.g. for anemia, edema), Performs abdominal examination: checks fundal height with measuring tape, Performs abdominal examination: checks fetal presentation by palpation of abdomen, Performs abdominal examination: checks fetal heart rate with fetoscope/ultrasound, Performs vaginal examination (cervical dilation, fetal descent, position, membranes, meconium)

[2] Fever, Foul smelling discharge, Headaches or blurred vision, Swollen Face or Hands, Convulsions or loss of consciousness, Shortness of breath, Vaginal bleeding

[3] High blood pressure, Convulsions, Heavy bleeding during or after delivery / hemorrhage, previous c-section, Prior stillbirth, Prolonged labor, Prior neonatal death, Abortion, Prior assisted delivery

[4] Supports perineum as baby’s head is delivered, Assesses completeness of the placenta and membranes, Assesses for perineal and vaginal lacerations
Pre-eclampsia/eclampsia Knowledge Test

Mean Examination Actions [1] 58%
Proper Diagnosis: Severe Pre-Eclampsia 68%
Action to take: stabilize with Magnesium Sulfate 92%
Action to take: stabilize with Anti-Hypertensives 74%

Mean Actions To Take If Presented With Convulsion [2] 62%
Wrong: Give Intravenous Diazepam 78%
Wrong: Actively Restrain 51%

[1] Time Of Onset Of Present Symptoms, Level Of Consciousness, Any Convulsions, Check Vital Signs (Temp, Bp, Pulse, Respirations), Listen To / Assess Fetal Heart Tones, Fetal Movement, Check Urine Protein
[2] Administer Oxygen At 4-6 L Per Minute If Available, Place In Side Lying Position, Protect From Injury, Give Magnesium Sulfate, Provide Anti-Hypertensives (Nifedipine Or Apresoline), Actions To Take If Presented With Convulsion: Mean
Comparing Patient Exit Interviews with Direct Observations

- HIV status
- Blood pressure
- Urine test
- Augment
- Episiotomy
- Timing of Meds
- Dry
- Skin-to-skin
- Covered

Initial Client Assessment
- Intermittent Observation of First Stage Labor
- Continuous Observation of Second and Third Stage

Exit Interview: Unobserved
- Exit Interview: Observed
- Direct Observation