Rationale for improving integrated service delivery: Reduced cost and improved care in Georgia

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Problem Description

- Non-communicable diseases (NCDs) constitute about 60% of total morbidity and mortality in the adult population in Georgia
- Acute respiratory tract infections (RTIs) are the most frequent reasons for seeking medical care among children
- Effective interventions can prevent and treat NCDs and RTIs, but appropriate care remains very low in Georgia due to:
  - Fragmented and inefficient health service delivery
  - Poor provider knowledge and competencies
  - Weak performance of basic supporting health system functions

Intervention

To improve prevention and care of NCDs and pediatric RTIs, the USAID ASSIST Project supported a collaborative improvement intervention in 17 ambulatory clinics and village practices and 3 hospitals in Imereti Region of Georgia from June 2012 through January 2015. Key elements of the intervention were:

- Formation of quality improvement (QI) teams comprised of facility managers and medical personnel in each facility
- Intensive clinical and improvement trainings and on-the-job coaching
- Development and distribution of job aids and other tools to reinforce evidence-based (EB) case management for NCDs and RTIs
- Baseline assessment that identified quality gaps and guided improvement design
- Teams at the facilities made changes in their local health care processes using plan-do-study-act (PDSA) cycles
- Improvement progress was monitored though monthly review of medical charts
- QI teams focused on improving integrated prevention and management of cardiovascular disease (CVD), hospital management of acute coronary syndrome (ACS), chronic obstructive pulmonary disease (COPD), and asthma and their cross-cutting risk factors in adult patients and on care of RTIs and asthma in children; teams placed particular emphasis on improving diagnosis, severity assessment, case-management, and coordination of care

Measurement of Improvement

- With project support, QI teams monitored the progress of QI interventions monthly and analyzed them during the team meetings.
- In addition to routine monitoring, the project conducted a prospective, non-randomized assessment of the cost and effectiveness of QI interventions in intervention and control facilities before and after 18 months of the project interventions.
- Control facilities were 17 ambulatory clinics and village practices and 3 hospitals in Achara Region and Tbilisi, similar in size and population covered as the intervention facilities.

Results

Effectiveness of QI interventions

- Routine monitoring results after 34 months of project interventions showed that average compliance with evidence-based bundles of best practices in each priority clinical area ranged from 20-45% in May 2012 but improved by 55-80 percentage points, reaching compliance of over 89% by January 2015 (Figure 1)
- A prospective, non-randomized controlled assessment of the cost-effectiveness of the QI interventions demonstrated statistically significant attributable improvement in care processes and proximal outcomes in all priority clinical area after 18 months of intervention in participant ambulatories and hospitals compared to control sites. Specifically:
  - Improved CVD prevention and treatment (Figure 2)
  - Improved compliance with ACS management best practices and improved rational medication use (Figure 3)
  - Improved rational antibiotic use to treat pediatric RTIs (Figure 4)
  - Improved compliance with asthma and COPD management best practices and reduced use of unnecessary medications (Figure 5)
  - Reduced prescription of non-evidence-based medications and improved EB treatment practices in all clinical areas, including asthma/COPD (Figure 5)

Economic evaluation of QI interventions

- Economic evaluation focused on incremental cost savings from decreased use of non-evidence-based diagnostic tests and medications after the QI interventions.
- For each clinical area, except hospital management of asthma/COPD, the incremental cost-effectiveness analysis indicated the intervention resulted in better quality of care for all priority diseases at both ambulatory and hospital level *and* a decrease in the cost of providing services.
- The study demonstrated that an intervention directed at improving integrated care delivery of high-burden diseases is more efficient than a traditional single-disease improvement strategy.
- Economic evaluation of the project found that while the total cost of the QI intervention was US$ 155,921 over 18 months, the intervention in 20 facilities saved 4 times more (US$ 618,221) through decreased prescription/administration of non-evidence-based medications and diagnostic tests. Scale-up of QI interventions countrywide would save millions by reducing non-evidence based practice.

Conclusions

- Effective QI strategies promote measurement and accountability, strengthen care integration, and optimize care processes and clinical content for high-burden diseases to reduce inefficiencies.
- Scale-up and institutionalization of these strategies would improve care outcomes and reduce cost of care for payers and society.

Figure 1: Average compliance with all process indicators per clinical focus area, Imereti Region (April 2012 – January 2015), based on review of average 343 charts per month

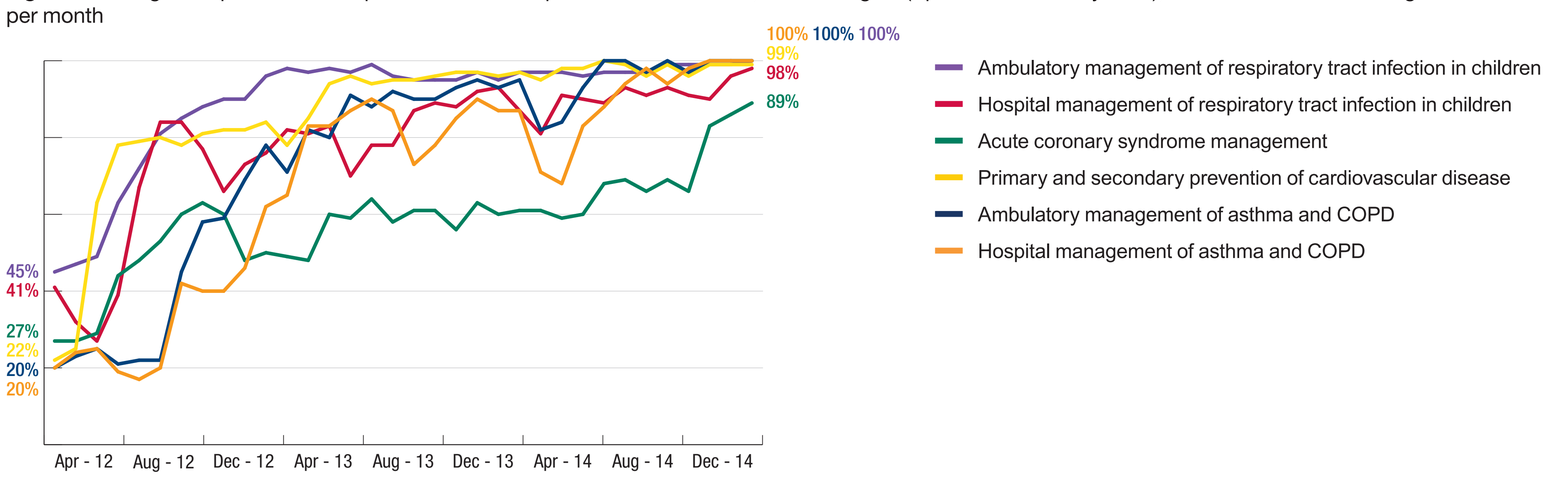


Figure 2: Comparison of results of routine monitoring with the cost-effectiveness evaluation: CVD risk factor screening & treatment % patient charts with best practices, ambulatory sites, Imereti Region

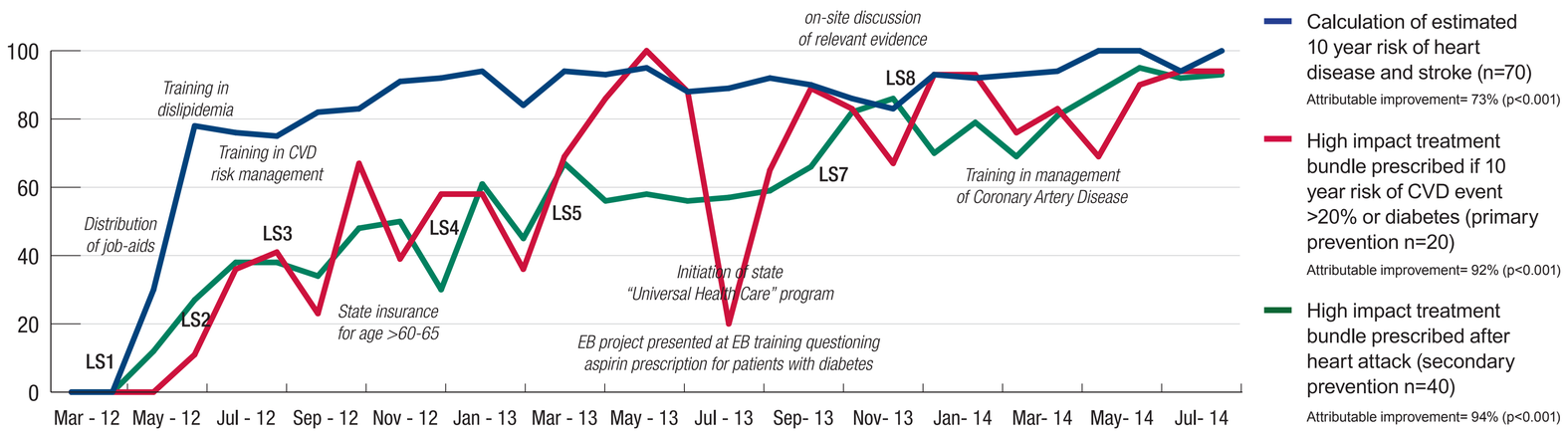


Figure 5: Prescription/administration of medications during ambulatory and hospital management of asthma and COPD per patient medical chart review (April 2012- Aug 2014) (average n=20 charts reviewed monthly)

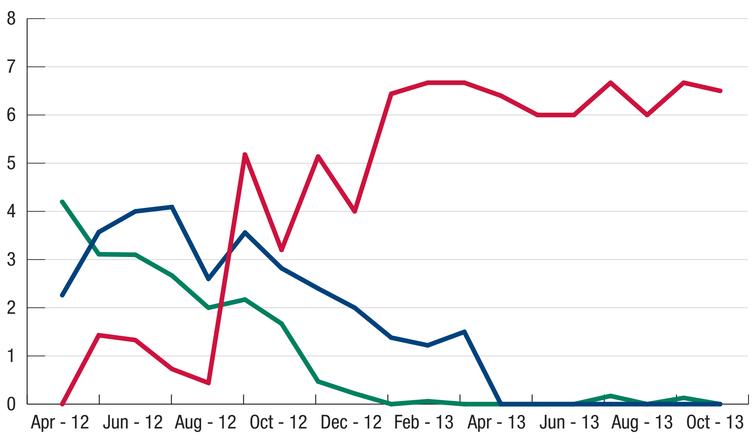


Figure 3: Compliance with EB practice for ACS medication treatment and discharge medication prescription, baseline (n=264) versus post-intervention (n=217)

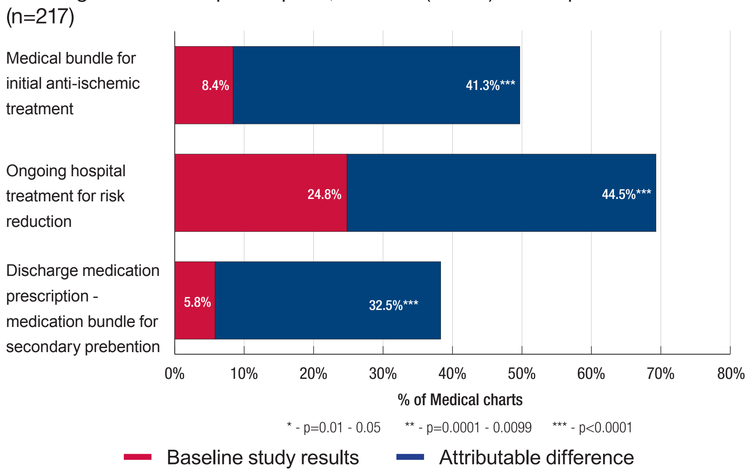
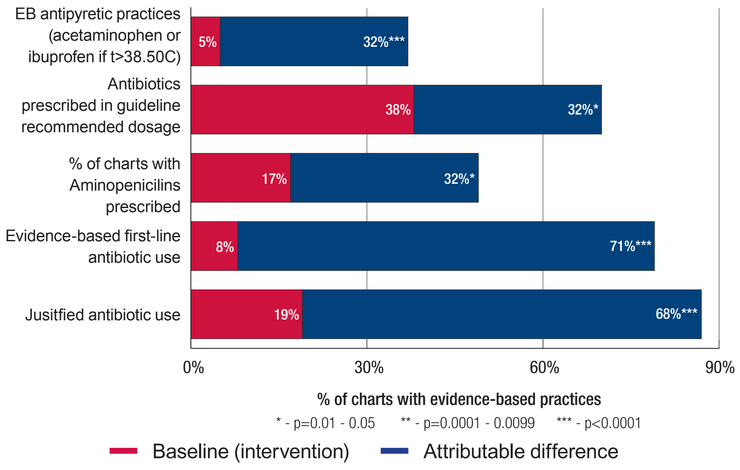


Figure 4: Baseline and attributable improvement in compliance with EB practice to treat pediatric respiratory infections at ambulatory clinics (n=212)



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