



Adaptive Design: The Key Ingredient for Successful Large-Scale Improvement Initiatives –

Project Fives Alive!

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4TH October 2022

Project Fives Alive!

AIM:

Assist and accelerate Ghana's efforts to achieve

Millennium Development Goal 4 (66% reduction in Under-5 mortality to 40/1000 live births by 2015)

through the application of **quality improvement methods**

- Ambitious Aims
- Systems View
- Core Metrics with Feedback
- Rapid Cycle Tests of local ideas

COLLABORATORS :



Institute for
Healthcare
Improvement



IN GOD IS OUR HELP
AND HEALTH



THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

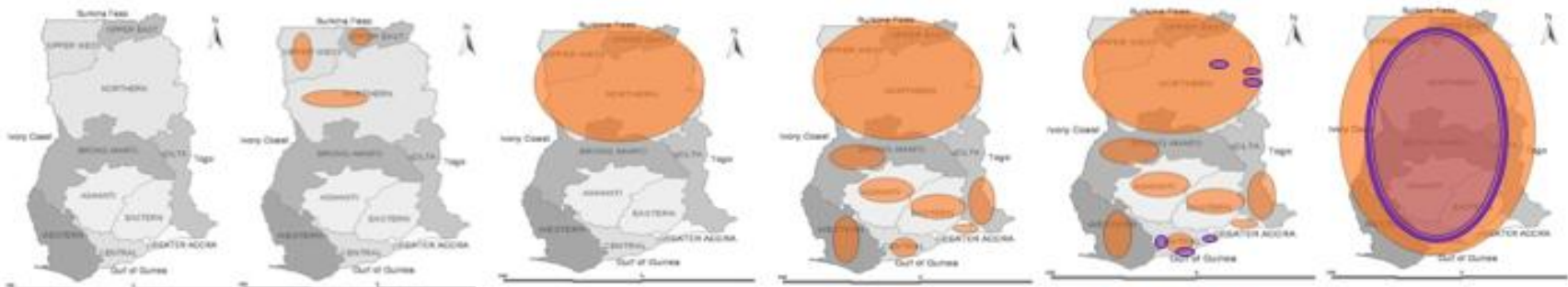
Funded by the Bill & Melinda Gates Foundation



Scale Up Design

Start Small, Scale up Rapidly with Change Package

Total Pop'n:	350,000	5 million	11 million	11 million	22 million
Under 5 Pop'n:	60,000	500,000	1.7 million	1.7 million	3.3 million



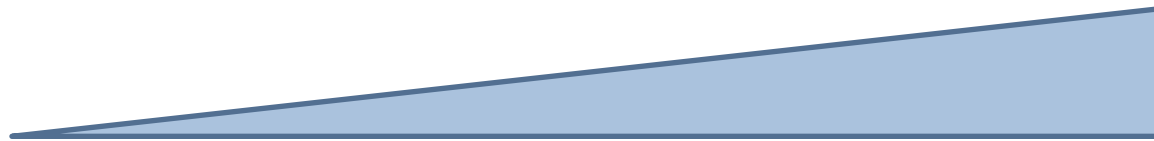
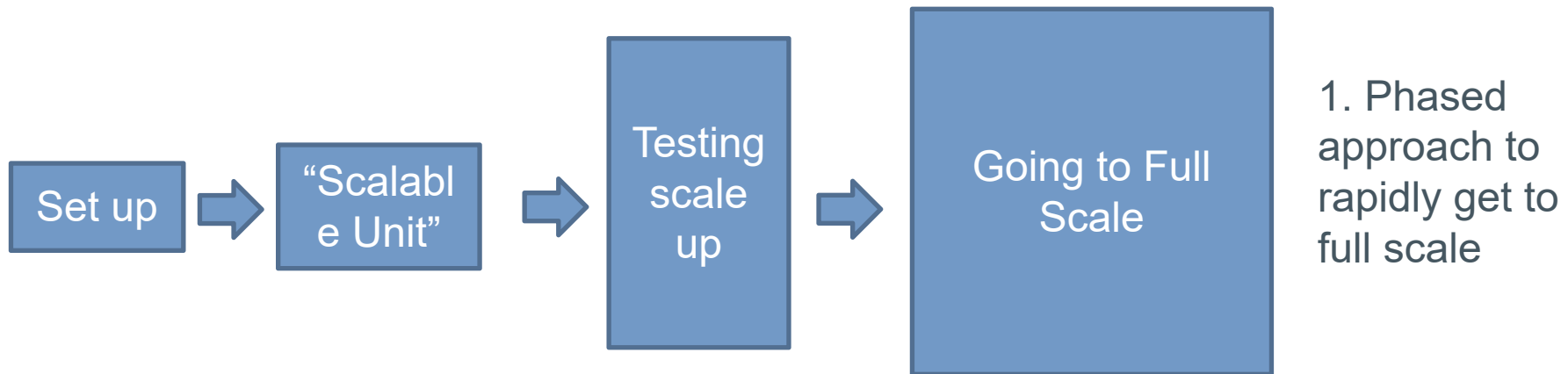
Nov 2007 **Jul 2008** **Sept 2009** **Oct 2009** **Aug 2012** **Jan 2013**

Start-up: months 1 – 8	Wave 1: months 9 – 22	Wave 2: months 23 – 63	Wave 3: months 24 – 89	Wave 1R: months 58 – 89	Wave 4: months 63 – 89
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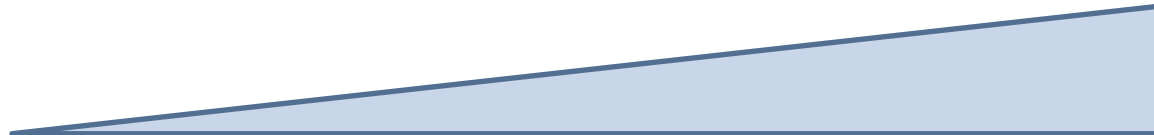
*Referral project launch
41 Referral Teams

No of. QI Teams:	30	228	330	430	709
# SUB DISTRICTS	25	195	222	265	544

The IHI Scale-up Framework



2. Building **will** for change and spread



3. Developing local implementation **ideas**



4. Building the **infrastructure and tools** for scale-up

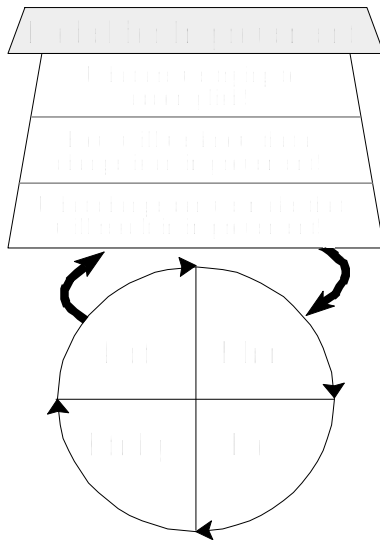
Will Building & Set Up

Alignment with Local Health Priorities

- **National Catholic Health Service**
 - *System transformation through QI was major strategic focus*

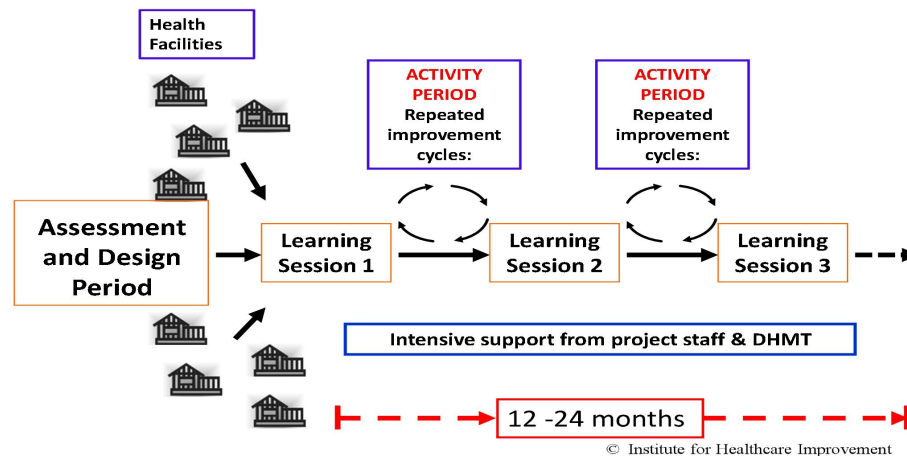
- **Ghana Health Service**
 - *MDG 4 & 5*
 - *Use of local data for improvement*
 - *QI potential to complement existing QA structure – Coaching, mentoring, learning networks, rapid cycle tests*

Methodology and Strategy

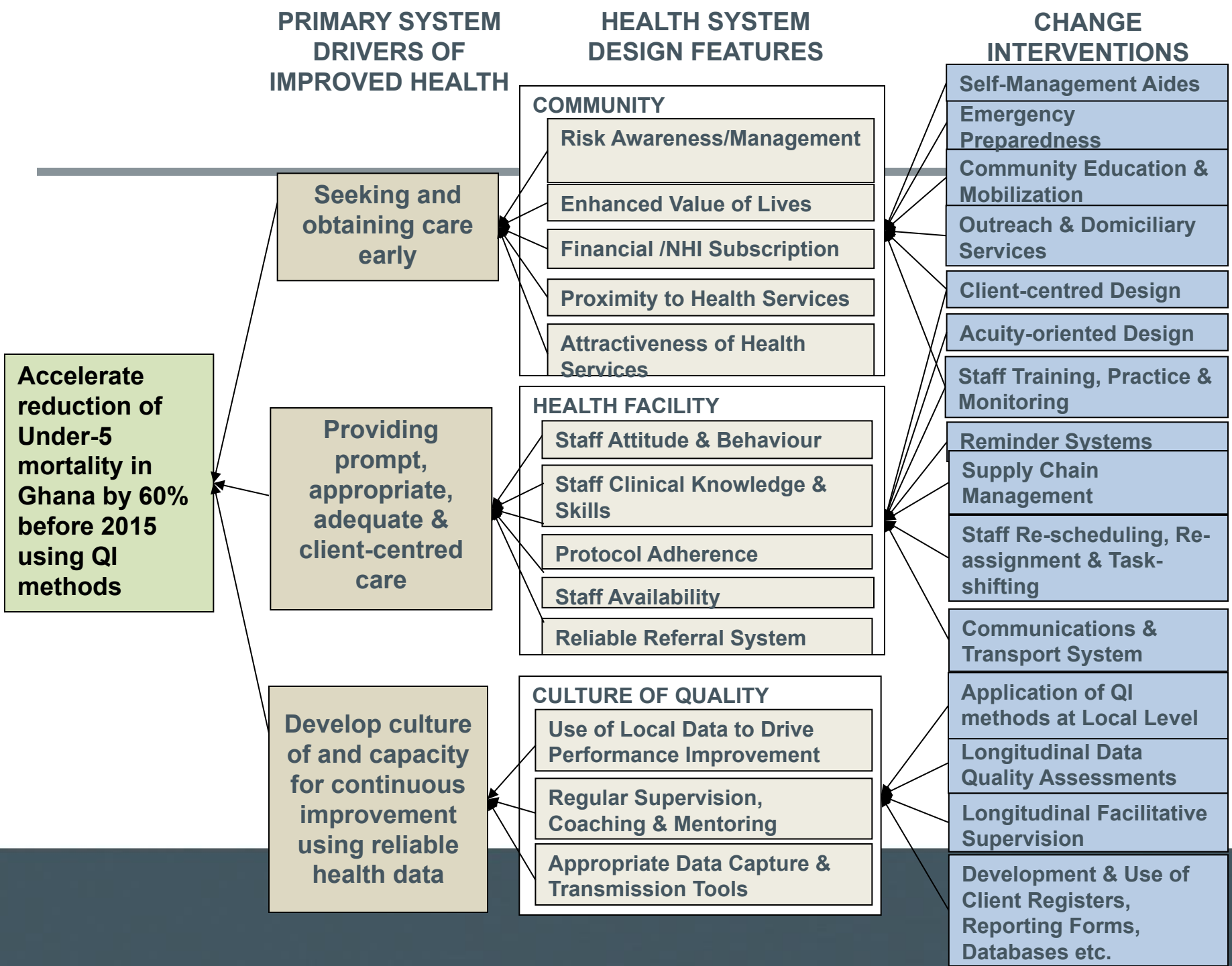


Source: Associates for Process Improvement

Improvement Collaborative Network



Change package of process improvements that had been shown to be effective in similar contexts



Strengthening Community Linkages

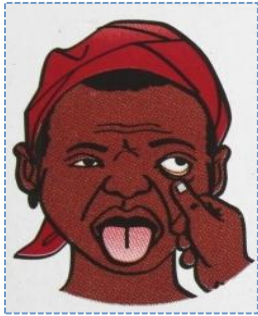
Community Health Nurse

Community Health Volunteer

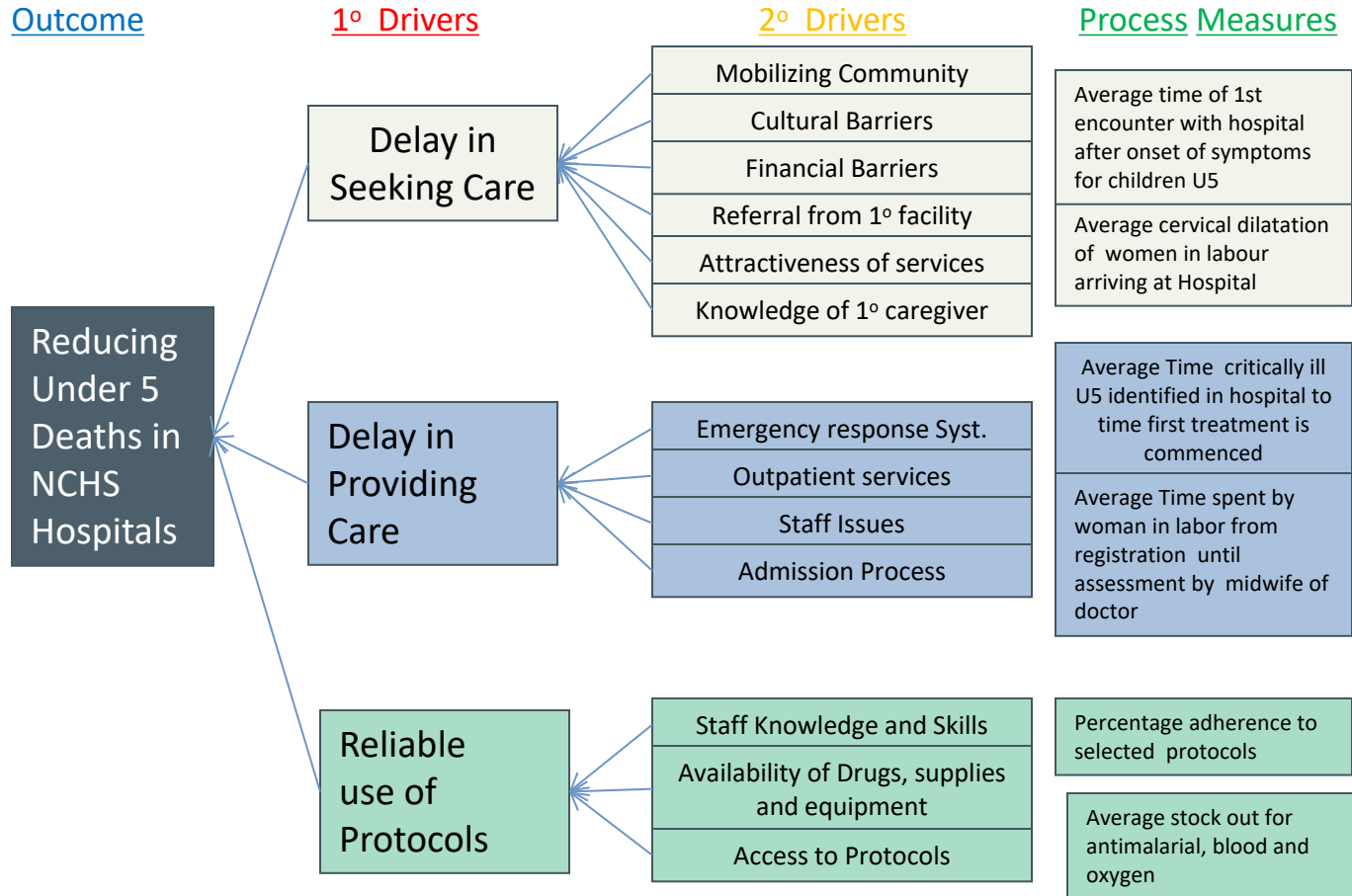
Traditional Birth Attendant



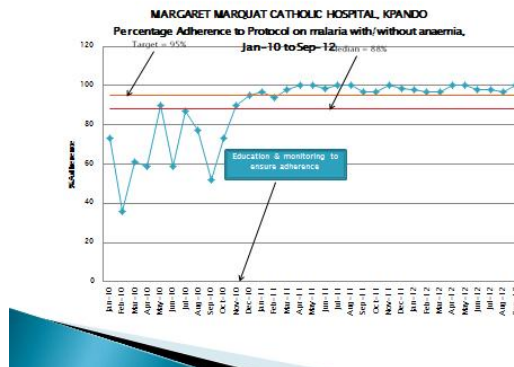
Innovative Changes



Content Theory: U5 deaths in hospitals



Making Care Processes More Reliable



Driver 3 – Better Protocol Adherence

Using Bedside Teaching to Improve Protocol Adherence

Moving to Test of Scale



Hospital Change Package

Driver	Area of Clinical/Community Care	Change Concept	Package #	Description of Successful Change Ideas
Delay in Seeking Care	Care-seeking behaviour	Targeted health education	1A	<ul style="list-style-type: none"> Targeted health education on early care-seeking using interactive platforms
			1B	<ul style="list-style-type: none"> Community engagement and education via durbar or place of worship
	Referral	Engaging primary providers	1C	<ul style="list-style-type: none"> Engagement with health providers (both traditional and allopathic)
Delay in Providing Care	Prompt Diagnosis and Treatment	Triage	2A	<ul style="list-style-type: none"> Triage system for screening and emergency treatment of critically ill children Separate U5 OPD services from adult OPD service Prioritize U5 outpatient care Prioritize U5 inpatient care
		Fast Track		
Non-Adherence to Protocols	Adherence to Protocols	Training/ Coaching/ Mentoring	3A	<ul style="list-style-type: none"> Training staff on protocols followed by regular coaching and mentoring which include ad hoc testing on site with immediate feedback.
			3B	<ul style="list-style-type: none"> Training postpartum women and other care givers on hygienic cord care through demonstration, practice and immediate feedback. Midwives and nurses teach,
			3C	<ul style="list-style-type: none"> Mother-to-mother support group on food choices and frequency of feeding while on admission under mentoring of nurses.
		Task-shifting	3D	<ul style="list-style-type: none"> Empowering nurses to start acting on standard treatment protocols before doctor arrives

National Scale Up of Hospital Change Package



202H

68H

32H

9H

Hospital Change Package Adoption as at Oct. 2014

Drivers of Hospital Based Deaths	% of QI Teams Adopting at least one Change Idea (N=134)		Comments					
Early Care Seeking	84.3		Three Change Ideas (H-1A, 1B, 1C)					
Prompt Provision of Care	69.4		A Change bundle (H-2A)					
Adherence to treatment protocols	69.4		Four Change Ideas (H-3A to 3D)					
Change Idea	H -1A	H- 1B	H- 1C	H- 2A	H- 3A	H- 3B	H- 3C	H- 3D
Proportion of teams testing this change Idea	58.2	23.1	3.0	69.4	43.3	1.5	2.2	22.4

Results

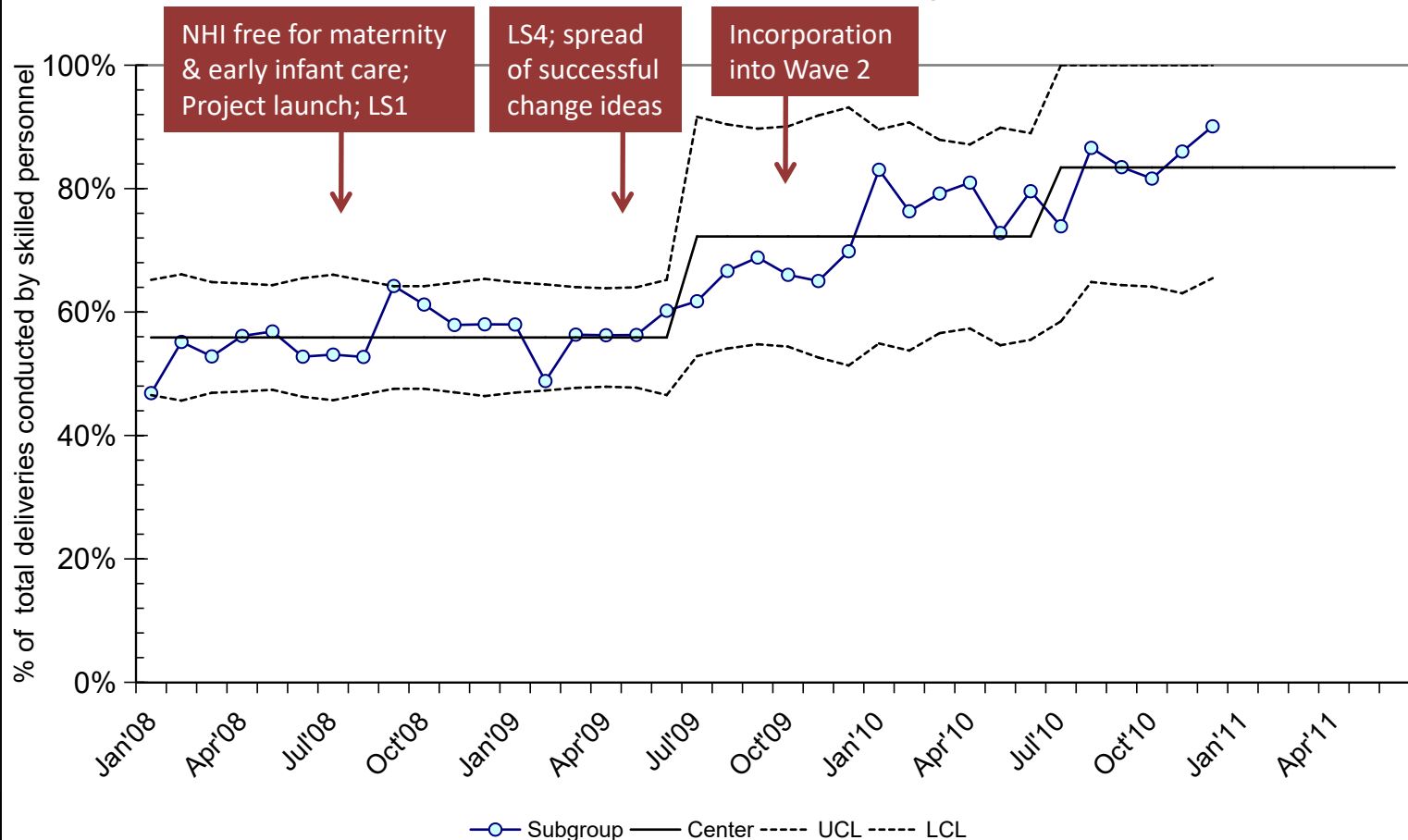


Wave 1 – Aggregated Results

Skilled Delivery Coverage

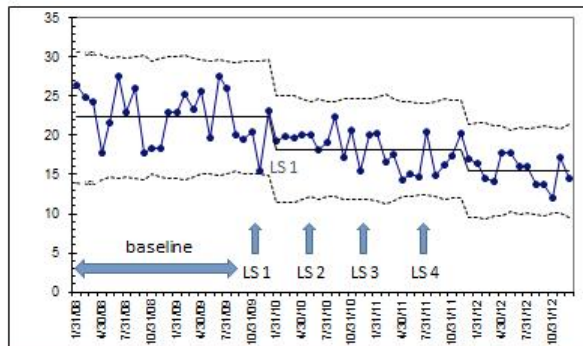
Wave 1 Collaborative - Skilled Delivery Coverage

Aim: $\geq 75\%$ of deliveries conducted by skilled personnel



Wave 3: Nine Innovation Hospitals

Under 5 Mortality in 9 innovation hospitals
(deaths/1000 admissions)



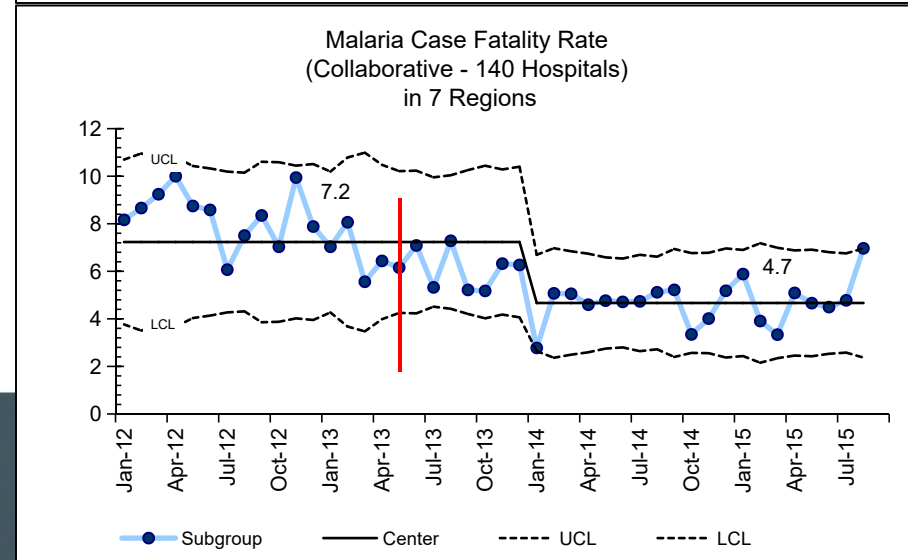
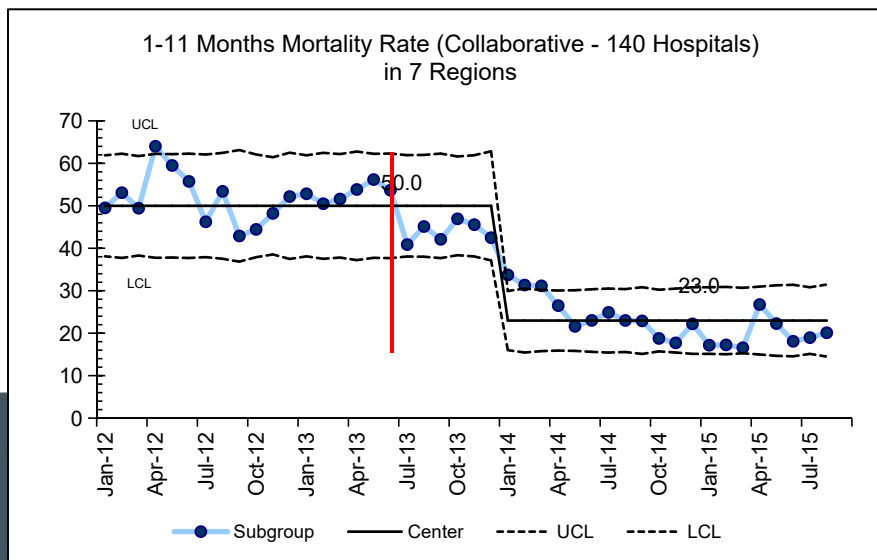
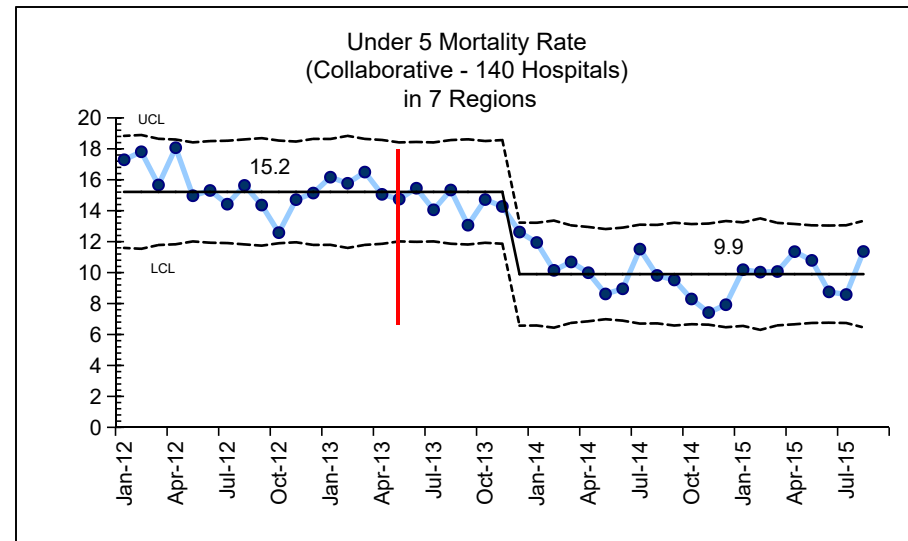
- Weak management support
- Poor team dynamics
- High Attrition of core QI team members
- Challenged reporting of process measures

Overall Under 5 Deaths

Inhibiting factors

140 Hospitals as of August 2015 (Wave 4)

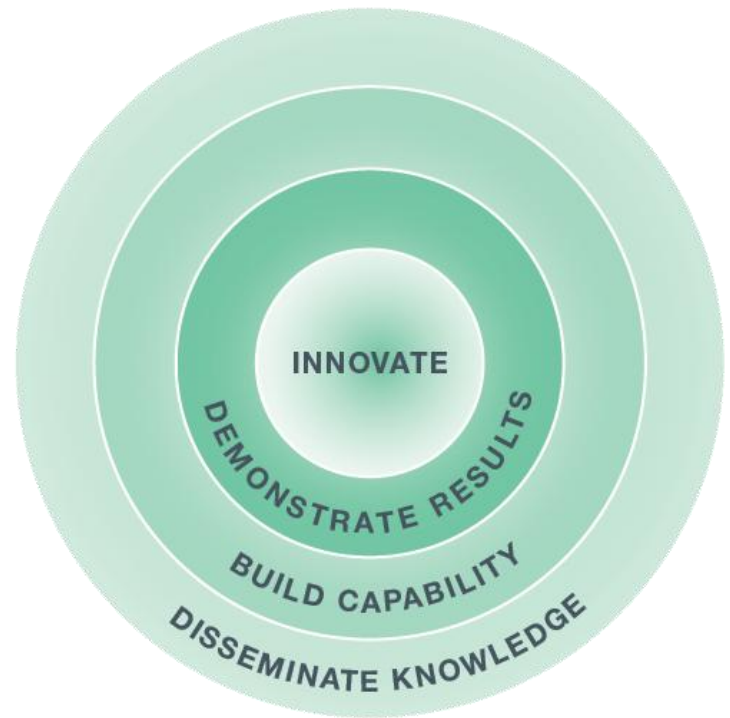
- 35% reduction in under-5 mortality
- 54% reduction in post-neonatal infant mortality
- 38% reduction in under-5 malaria case fatality



Demographic Health Survey Results (2015)

The Demographic Health Survey of Ghana coincided with the start (2008) and end (2015) of the Project. Current results show:

- Under-5 mortality in Ghana reducing from **80 to 60 per 1,000 live births**
- Child mortality (1 -4 years) reducing from **31 to 19 per 1,000 live births**
- Infant mor-tality reducing from **50 to 41 per 1,000 live births**
- Neonatal mortality reducing from **33 to 29 per 1,000 live births**



Building Infrastructure for Scale



A Good Policy Environment Enables Improvement



Dr. Afisah Zakariah, Chief Director,
Ministry of Health, Ghana



IHI, AFRICA

Was PFA! Cost Effective?

- *“... the large expenditures in the pilot phase paid off, not only in the pilot phase itself, but also in the scale-up phases as demonstrated by the reductions in under-five mortality that were significant in the Wave 2 and 4 impact analyses”*
- *UNC Independent Evaluation*



Strategies for Data Quality Improvement

- Developed Protocol for Data Quality Improvement
 - Initially Project Based
 - Later Standardized by GHS-PPME and other Partners (MalariaCare/USAID, PATH, PFA!)
 - Selected 14 Priority Indicators in MNCH
- Created a Data Learning Network of Health Information Officers
 - In Person Meetings with Facility –Based Coaching & Mentoring Follow Up Visits
 - DHIOs left with various PDSAs to improve data quality
 - Visits Led by National/Regional Data Validation Teams with Partner Support
 - Checked for Completeness, Accuracy & Timeliness



Capability Building to Support Scale up: ~ 350 Improvement Coaches Trained

10 Regional
Quality Advisors

~ 3000 Site
Visits

~ 4000
frontline
workers
trained in LSs



Africa –based Quality Institute Formed



The Science of Quality Improvement

- Centre of QI Excellence for regional support
- Partnership with IHI
- Set global standards for development and implementation of large-scale QI initiatives
- Deliver QI educational content, spur innovation in QI, and challenge conventional thinking
- Facilitate learning opportunities for organizations, professionals, and students keen to learn about QI implementation
- Offer basic and advanced online education learning options, and sponsor periodic benchmarking visits

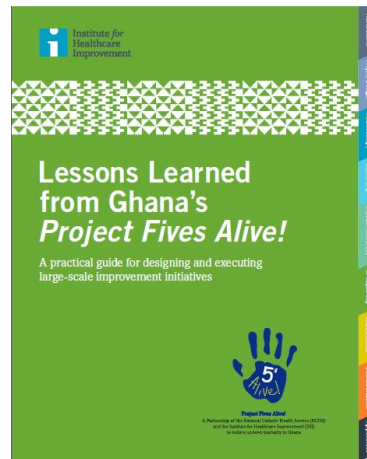
Uborá Institute - Ghana

Objectives

PFA! Lessons Learned Guide

- This practical guide will serve as a roadmap for those also striving to design and execute improvement initiatives to achieve results at scale— sharing what worked, what challenges exist, and recommendations for success.

- Project Design
- Relationships
- Leadership



- Human Resources
- QI Capability
- Measurement
- Communication

Lessons Learned

- Need to embrace a broad approach – QP, QA, & QI
- Need to define mechanism for ongoing nourishment of health system capacity
- Emphasize co-ownership, co-design and co-implementation from the very beginning for sustainability
- Invest in the quality of national data systems
- A design that leverages existing structures is cost effective, more sustainable but more operationally challenging

Thank You

Questions

