



A business approach to improving quality of maternity care

# THE CHALLENGE: QUALITY OF CARE

More mothers than ever are delivering in hospitals, but better access to care often does not mean better health outcomes. Why? **Poor quality of facility-based care.**  
*This is the issue of the next generation in maternal health.*

In Kenya births in facilities have gone from 40 to 60% in the last 5 years. But maternal and infant mortality is still **100x higher than in Europe.**



# JACARANDA'S MISSION AND APPROACH



1

We design better systems for delivering quality maternity care

2

We test and improve them in our own centers of excellence

3

We spread these innovations at scale through public and private partners



# EVIDENCE OF IMPACT

Jacaranda's tools and systems have resulted in unprecedented outcomes among our patient population

**0.04%**  
stillborn rate

**57%**  
of women returned for family planning  
services, 60% higher than national  
average



**66%**  
fewer maternal  
complications than nearby  
public hospitals

**98%**  
of patients said they were  
willing to refer friends to our  
clinics



**90%**  
of clients still exclusively breastfeeding at  
6 months postpartum (40% higher than  
the national average in Kenya)

**Only ~\$100: cost of  
delivery in our facilities**





Clinical Excellence



Patient-Centered Care



Sustainability

# INVOLVING PATIENTS IN SERVICE DESIGN





Casual labor

Pays 3,000 in rent

Delivered last child  
in private facility

Saves for medical  
expenses

Believes quality of  
medical services in  
her area is poor

No bank account but  
uses mpesa on her  
mobile

# "PREMIUM" TOUCHES

• • • Guaranteed bed • •

• - SMS hotline / ~~free~~  
/ ~~paid~~

Nurse phone hotline

EXTRA CURRICULAR ACTIVITIES	
ACTIVITY	INCHARGE
BIBLE	OMINDI
DEBATE/MINDALA	OMINDI, CAROLINE
DRAMA	OMINDI, OPPI
FIRST AID	MUTHAMA
ENVIRONMENTAL	MUMBATI
GUIDANCE	MUGO, ADO
GALES	OMINDI, M
HEALTH	MUGO, ADO
LIFE SKILLS	MUGO, ADO
ART	MUGO, ADO

AFRICAN  
ITAL

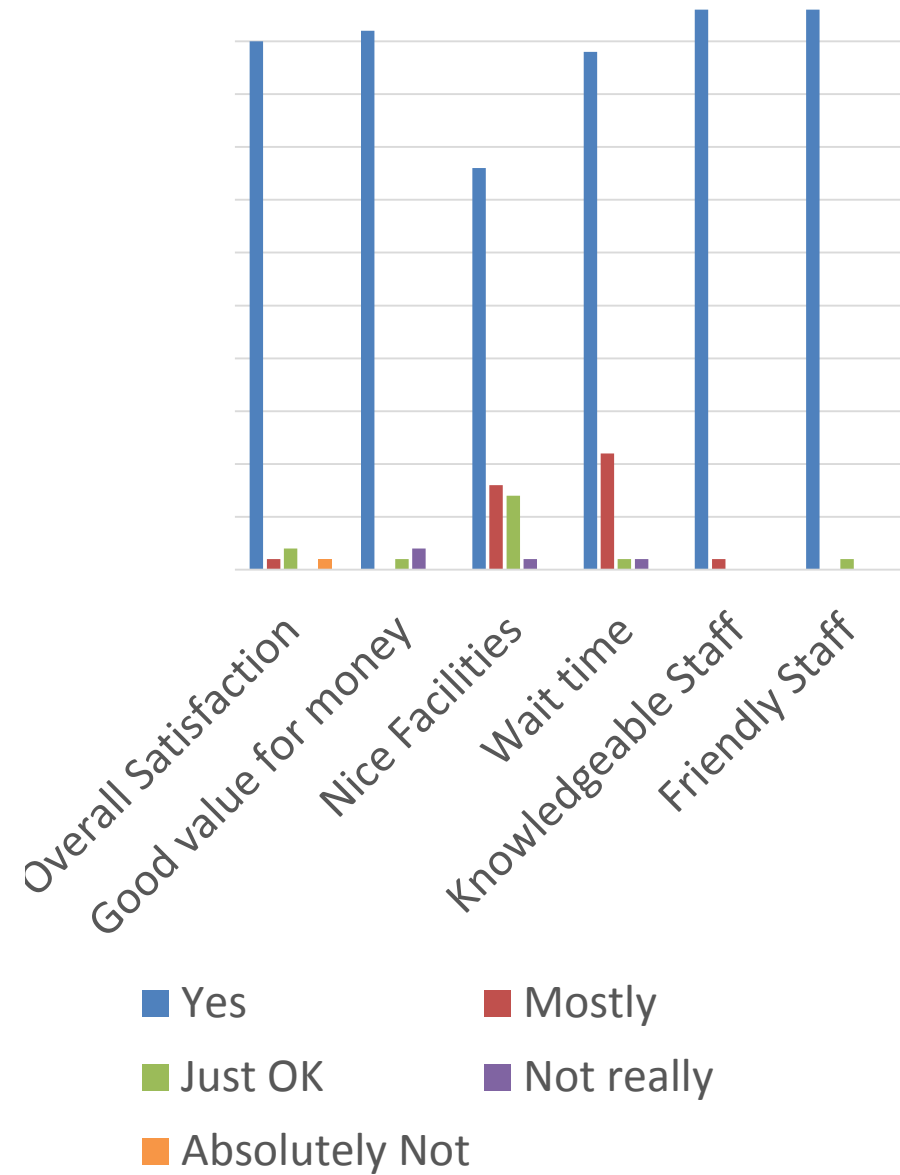
INVIGILADO



## ENGAGING HUSBANDS AND PARTNERS







# ENGAGING AND EMPOWERING FRONTLINE PROVIDERS



- 6. Paying attention to detail
- 7. Upholding customer service - Everyone's responsibility
- 8. Personal Hygiene - neat, clean etc
- 9. Upholding standards (uniform standards - same way, uniform - etc)
- 10. Maintain open lines of communication / Being flexible / Helping each other out
- 11. An Environment that is open to suggestions and ideas
- 12. Being open to constructive criticism

A woman with short, dark, curly hair is standing in a doorway, smiling broadly. She is wearing a short-sleeved, knee-length dress with a busy floral pattern in shades of red, blue, and green. Her hands are raised and open, palms facing forward, in a gesture of surprise or excitement. The doorway has a dark blue frame. To the left, a white wall has some faint, illegible text. To the right, a white wall has a light switch. The top of a purple plastic chair is visible in the bottom right corner.

# HOSPITAL SYSTEMS AND PROCESSES

### ORGANISATIONAL



Documentation  
Standards



Patient  
Identification  
Policy



Emergency  
Response  
and Referral



Visitation  
Policy



Handover  
of care



Infection  
Control &  
Waste Disposal



Incident  
Reporting

### ANTENATAL

- Routine Antenatal Care
- Management of medical conditions in pregnancy
- Management of Obstetric Complications in Pregnancy
- Birth Planning
- Emergency Planning
- Management of Shock



### INTRAPARTUM

- Triage of Suspected Labour
- Management, Induction and Augmentation of Labour
- Episiotomy and Repair
- Management of Obstetric Complications

### SURGICAL

- Consent for Caesarean Section
- Urgency of Caesarean Section and Decision to Delivery Time
- Pre-operative Care for Caesarean Section
- Standard Surgical Procedure for Caesarean Section
- Clinical Roles and Responsibilities in the Operating Theatre

### NEWBORN

- Immediate Care of the Newborn
- Neonatal Resuscitation
- Routine Examination of a Newborn
- Management of Newborn Complications

### POSTNATAL

- Routine Postnatal Care
- Post-operative Care
- Wound Care (Surgical incisions)
- Discharge Planning
- Management of Intrauterine Death, Still Birth and Neonatal Mortality



### CHILD WELLNESS

- Routine Examination of a Child
- Standard Immunization and Vaccination Schedule
- Growth Monitoring
- Management of Medical Conditions in Childhood



### FAMILY PLANNING

- Barriers to Family Planning
- Emergency Contraception
- Family Planning Methods
- Suspected Pregnancy while using Family Planning



Patient safety is at the core of clinical practice at Jacaranda Health. This requires standardising practice, creating a culture of quality, empowering nurses, and regular review of our charts and cases.

At Jacaranda, we use a variety of tools to ensure that our clinicians deliver safe, high-quality, patient-centered care:

## STANDARDIZING PRACTICE

### Clinical protocols and standard operating procedures

We adapt evidence-based clinical protocols to our setting with the input of our expert advisors internationally and in Kenya.

### Forms and documentation

We designed our medical records to capture every clinical touch point, and have updated them for usability, protocol adherence, and speed. They incorporate protocols by highlighting abnormal or worrying clinical features that require further investigation or management.



## AUDITS AND REVIEW

### Weekly case reviews

Cases involving near misses, adverse events or positive outcomes are presented by clinical staff. The reviews assess adherence to protocol, areas for further work, and the impact on clinical outcomes.

### Documentation audit

Weekly check completeness of documentation and adherence to protocol. Key metrics are reported to staff on a weekly basis. Routine auditing and feedback have seen an improvement in partograph completion from 26% in September 2013 to 100% in February 2014!



## EMPOWERING NURSES

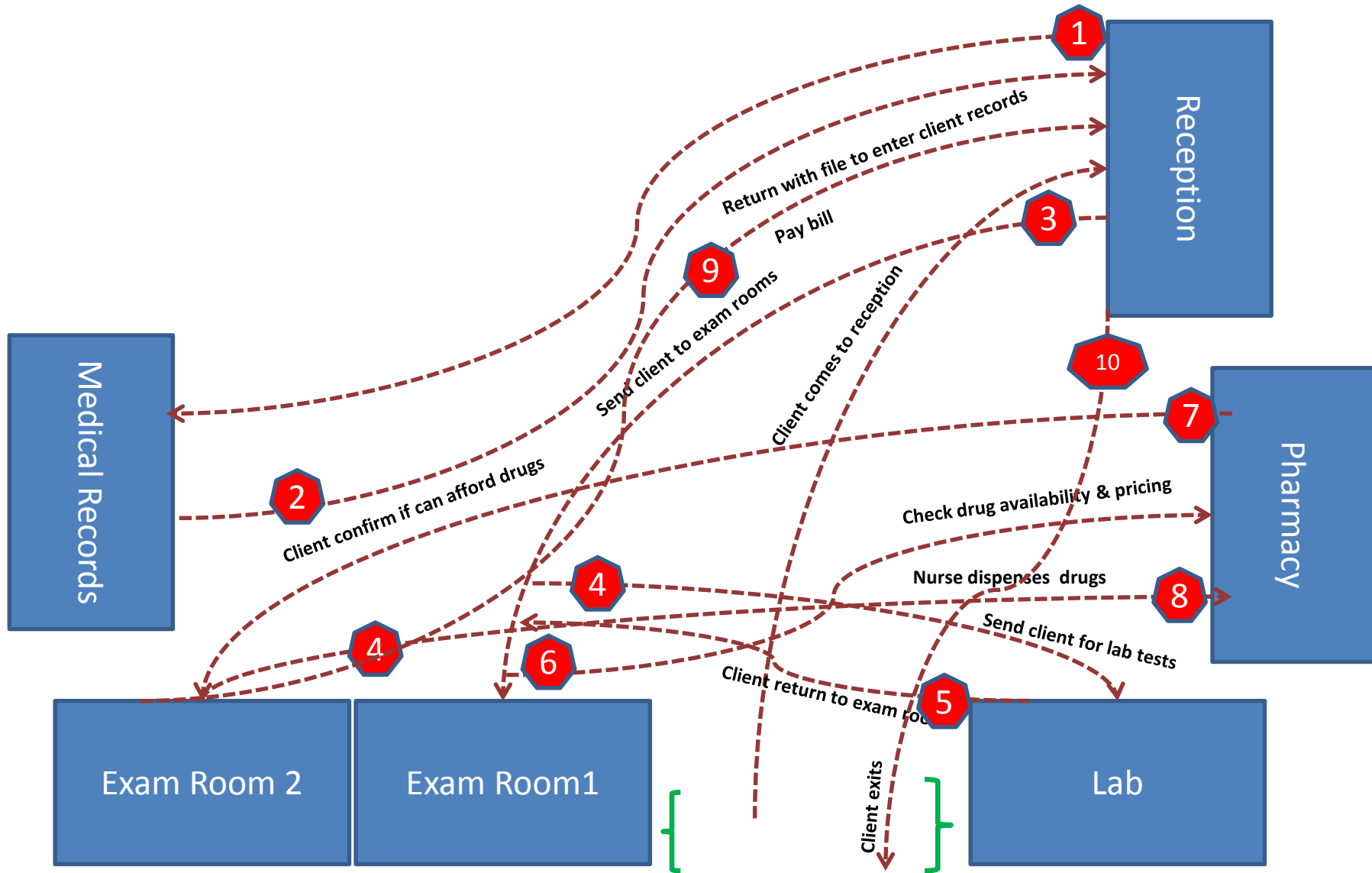
### Skills and Drills

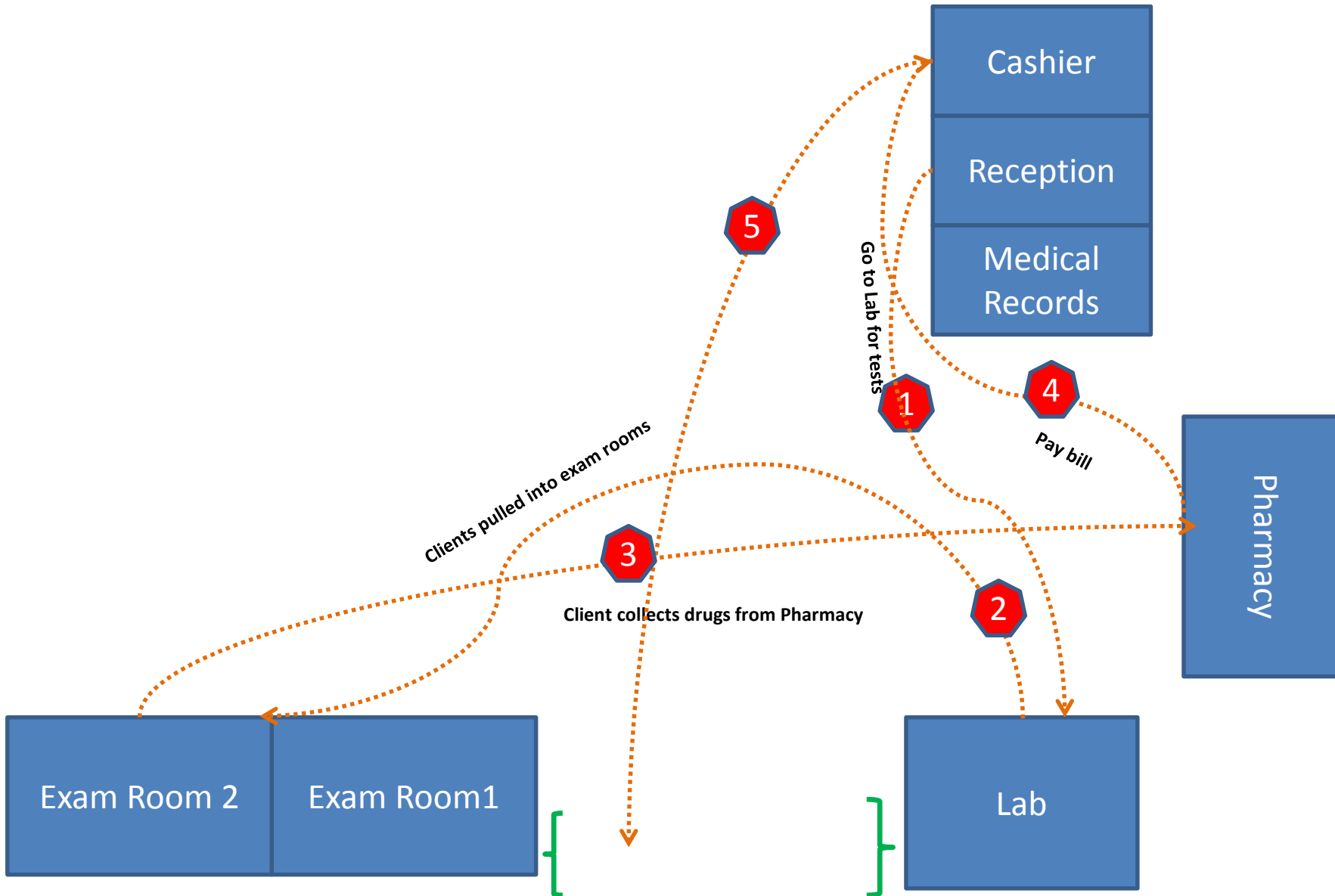
We use simulation training to improve management of obstetric & newborn emergencies. Simulations currently being trialled include: Neonatal & Adult Resuscitation, Shoulder Dystocia Management & Management of Postpartum Haemorrhage.

### Clinical Champions

We training clinical staff to be champions in areas of paediatric care, family planning, quality, and obstetric simulations. These nurses will be experts in their designated clinical area, and will be responsible for training and education of their peers.



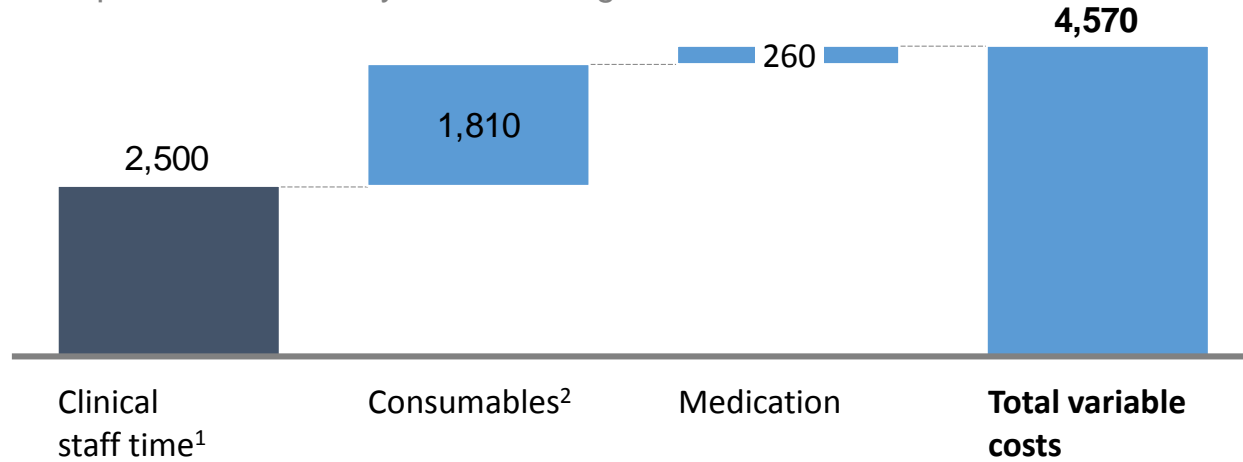




# UNDERSTANDING COSTS

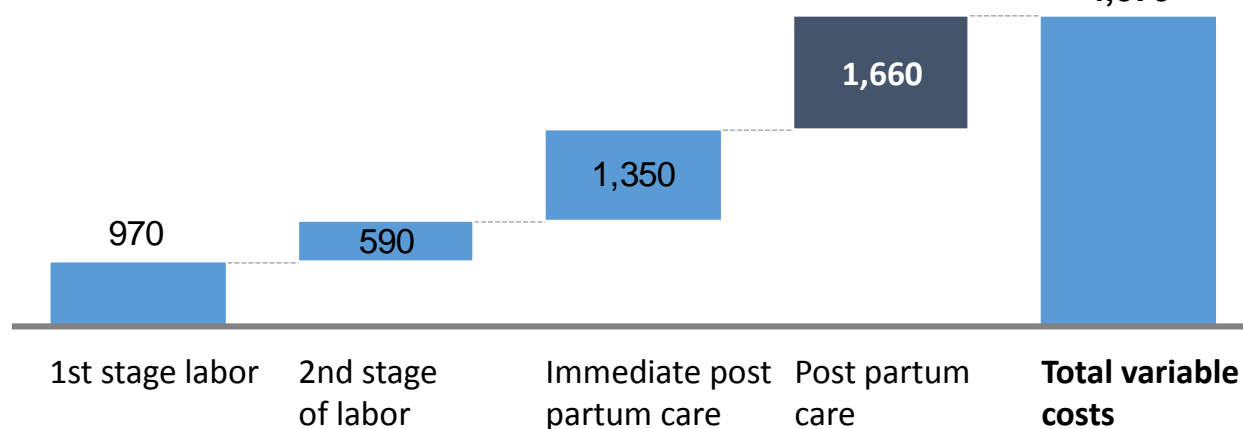
## Variable costs by type

KES per normal delivery of an existing client



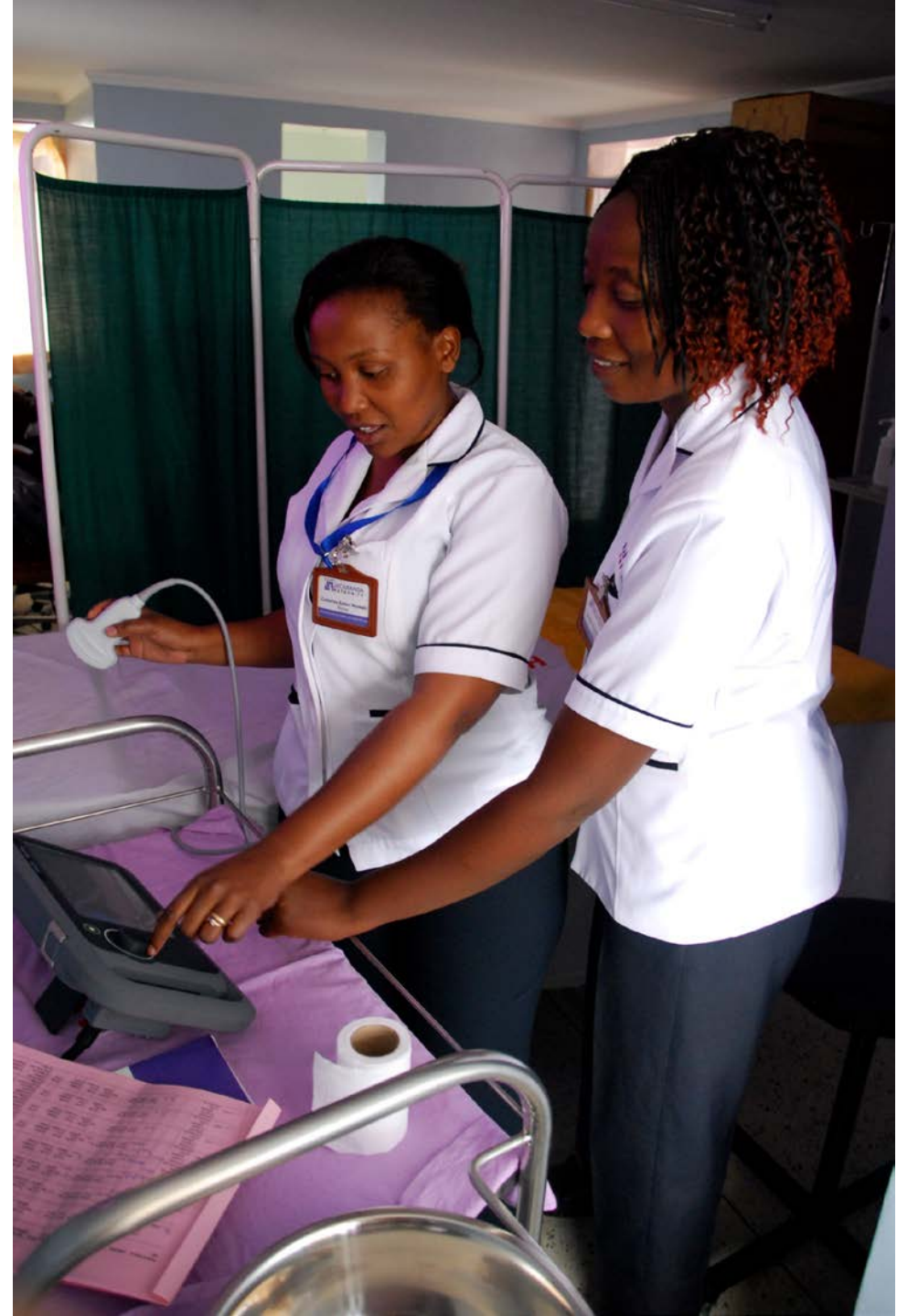
## Variable costs by stage of care

KES per normal delivery of an existing client



<sup>1</sup> Clinical staff time includes the cost incurred associated with the specific time required to complete the client service;

<sup>2</sup> Consumables include all non-reusable materials required to deliver the service (e.g., syringes, needles, etc)



# JACARANDA'S PORTFOLIO OF SCALABLE TOOLS / PRODUCTS

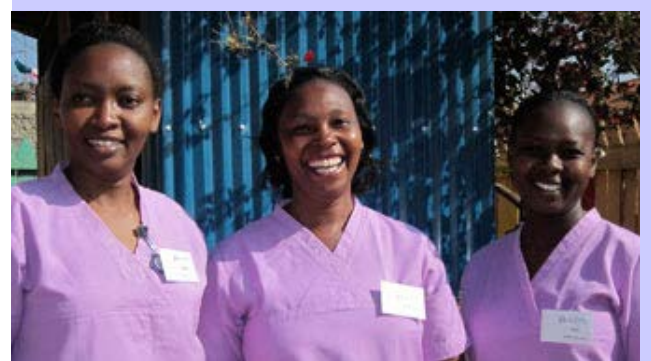
## New Technology

**SMS “nudge”**  
innovations  
improve uptake of  
care – messages  
result in 60% return  
visits and higher FP  
rates



## Human Resources

Our HR package  
includes tools this  
provides support  
for midwives,  
improving their  
skills and patient  
outcomes.



## Patient-Centered Care

We develop tools with  
clients to facilitate patient  
respect and satisfaction:  
**Home visits, Health  
education, Partner/family  
engagement**



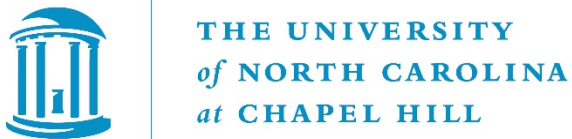
## Quality Improvement

Tools to improve clinical quality  
include: **Postpartum checklist,  
Clinical protocols & SOPs,  
Decision support tools, c-  
section toolkit**



A teachable **Lean Six Sigma QI process** empowers “quality champions” to improve pregnancy and newborn outcomes in their own facilities.

## ACADEMIC PARTNERS



## PROFESSIONAL ASSOCIATIONS



National Nurses Association of Kenya

## GOVERNMENT PARTNERS

Division of Reproductive Health

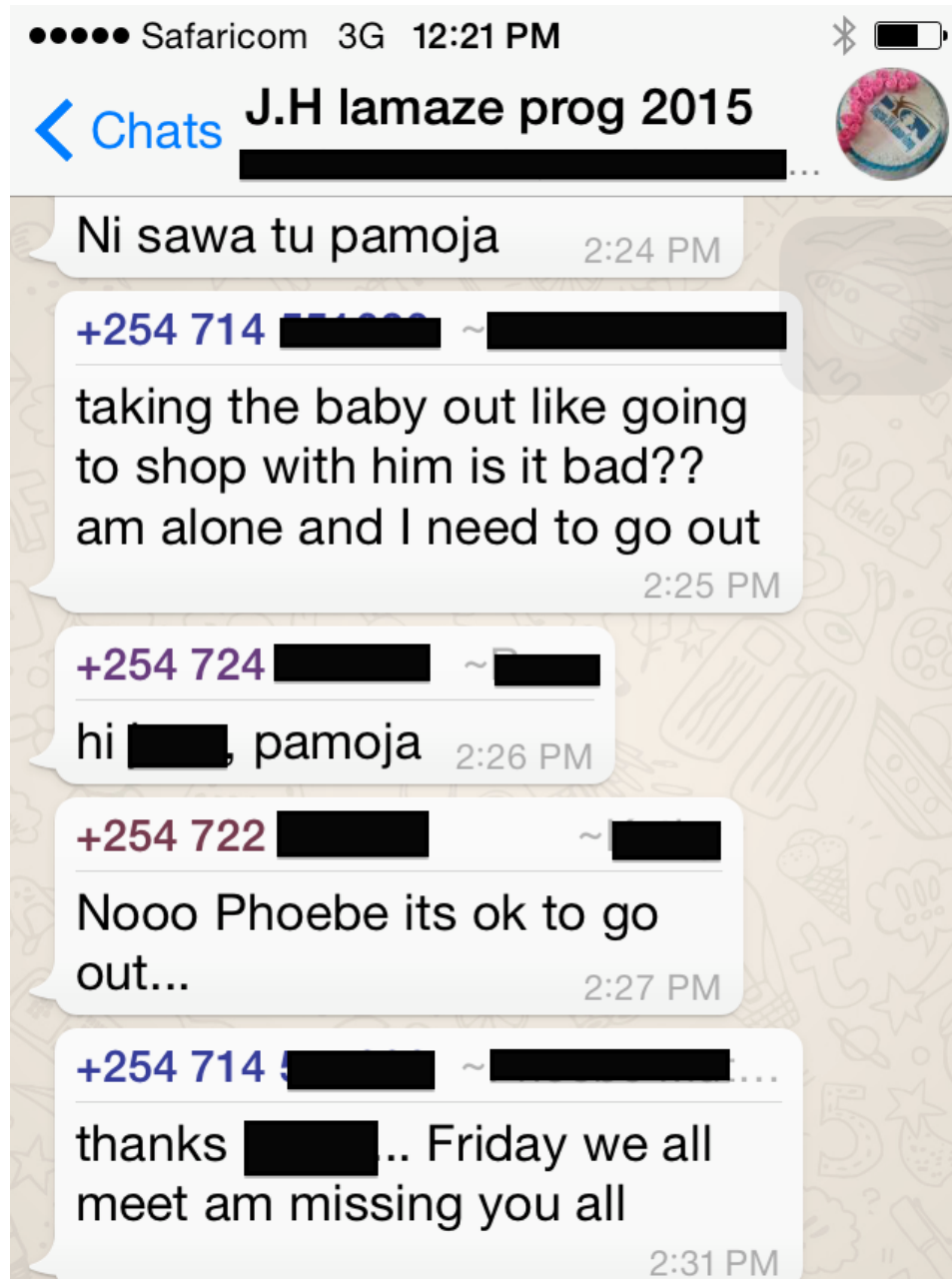
District Health Management

County Level Health  
commissioners

DFID's Private Sector  
Partnership for Health

Public Health Facilities in  
Kiambu County

# INNOVATIONS IN GROUP-BASED CARE



- Group antenatal and postnatal care
- Group pre-discharge counselling
- Social media-based support networks

92%

Women who took up family planning at 3 months postpartum

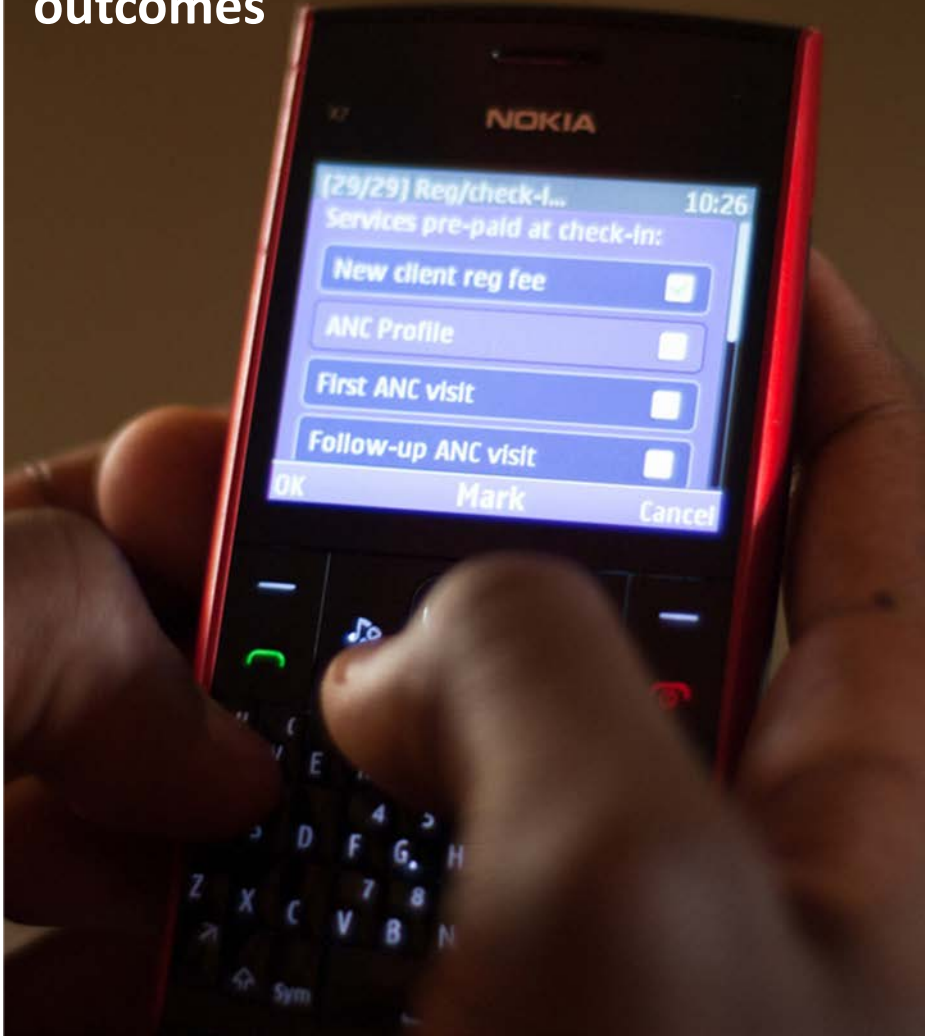
40%

Inpatient group postpartum education associated with 40% reduction in reported post-discharge complications



# MHEALTH: INFLUENCING CARE SEEKING AND FAMILY PLANNING

Johnson & Johnson support enabled Jacaranda to test mHealth innovations to improve postpartum outcomes



## 2016

We messaged over **2,000 women who delivered at Kiambu District Hospital** to provide information on postpartum complications, newborn care, and family planning.

### Key Outcomes

Compared to those who did not receive text, women who received the SMS-based postpartum checklists showed a

**2.3x** fold increase in postpartum care-seeking

**1.6x** fold increase in family planning uptake

## 2017

- We are conducting an RCT in 3 Facilities in Kiambu County for the postpartum checklist
- We are also measuring the impact of chat groups for building social support of 150 pregnant women
- Exploring opportunities to 'package' the content of message for use in other contexts

# EXTENDING INFLUENCE THROUGH QUALITY IMPROVEMENT (QI)



Partnership with UCSF helped Jacaranda to equip facility-based QI teams to identify challenges, lead improvement activities and secure significant and sustainable improvements in care

## 2016

Applied QI methods at **5 public facilities, with over 50 frontline providers.**

### Key Outcomes

69%

Reduction in maternal infection rates at one facility

0%

Reported complications in breastfeeding, from a baseline of **33%**

## 2017

- Scaling the program to **5 more facilities.**
- Developing a change package to improve Person-Centered-Care
- Support a Ministry of Health priority: Influence **sustainable approaches to QI implementation** by establishing strategic partnerships with QI practitioners



# JACARANDA MATERNITY

