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

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

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

- **Only ~$100:** cost of delivery in our facilities
INVOLVING PATIENTS IN SERVICE DESIGN
No bank account but uses Mpesa on her mobile
Casual labor
Delivered last child in private facility
Believes quality of medical services in her area is poor
Pays 3,000 in rent
Saves for medical expenses
No bank account but uses Mpesa on her mobile
"PREMIUM" TOUCHES

Guaranteed bed

SMS hotline

Nurse phone hotline

Free

Paid
ENGAGING AND EMPOWERING FRONTLINE PROVIDERS
**Jacaranda Health Protocols and Standard Operating Procedures**

### 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

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

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

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

### Family Planning
- Barriers to Family Planning
- Emergency Contraception
- Family Planning Methods
- Suspected Pregnancy while using Family Planning
Tools for safety and quality

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 bartograph 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.
Client collects drugs from Pharmacy

Clients pulled into exam rooms

Go to Lab for tests

Pay bill
UNDERSTANDING COSTS

Variable costs by type
KES per normal delivery of an existing client

- Clinical staff time: 2,500 KES
- Consumables: 1,810 KES
- Medication: 260 KES
- Total variable costs: 4,570 KES

Variable costs by stage of care
KES per normal delivery of an existing client

- 1st stage labor: 970 KES
- 2nd stage of labor: 590 KES
- Immediate post partum care: 1,350 KES
- Post partum care: 1,660 KES
- Total variable costs: 4,570 KES

1 Clinical staff time includes the cost incurred associated with the specific time required to complete the client service;
2 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

Patient-Centered Care

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

Human Resources

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

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

GOVERNMENT PARTNERS

PROFESSIONAL ASSOCIATIONS

Division of Reproductive Health
District Health Management
County Level Health commissioners
DFID’s Private Sector Partnership for Health
Public Health Facilities in Kiambu County

National Nurses Association of Kenya
INNOVATIONS IN GROUP-BASED CARE

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

Women who took up family planning at 3 months postpartum

40% Inpatient group postpartum education associated with 40% reduction in reported post-discharge complications
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 and a **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.
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