Making a case for Value-Based Care (VBC)

An introduction to Usha Lesizalo

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30 June 2023

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1. Executive summary

The maternity care pathway – including antenatal, birthing, postpartum and neonatal care – is a critical predictor for women, infant and child health. By implication, it also shapes the health and well-being of families, populations, and future generations. Yet, pregnancy and childbirth remain major drivers of morbidity, poor patient experience, and costs, both in South Africa and across the world.

To support the improvement of maternal and infant care, we need a standardised framework for determining ***value*** in the maternity care pathway. Value-based care (VBC) is a framework for transforming health systems that aligns resources and incentives in ways that improve quality of care and is responsive to patient priorities. This orientation is reflected in each of the three pillars of a value-based care solution: (1) the care delivery model, (2) payment and incentives, and (3) measurement.

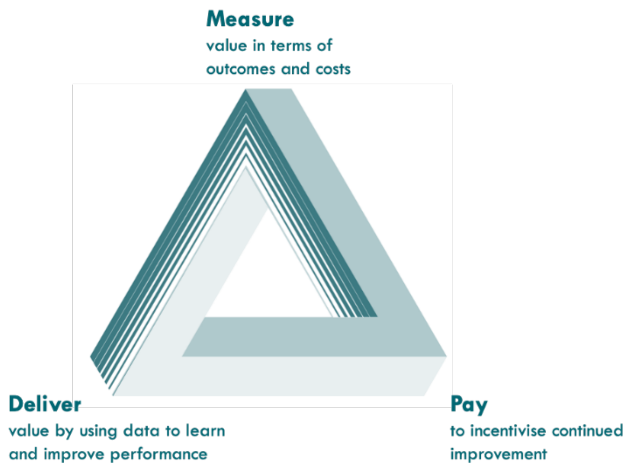
To shift a health system toward VBC, evidence-based clinical outcomes as well as outcomes that matter to pregnant women and mothers need to be measured. Percept has partnered with Leapfrog to Value *to help healthcare providers* design and implement value-based solution for maternity care in South Africa, from the first antenatal visit to one-year post-birth. A VBC experiment will explore and test the hypothesis that a more human-centred approach to maternal and infant care will not only improve health outcomes for women and children but will also amount to a better buy for healthcare systems.

We want you to imagine: how might we reorient maternity care to perform well on patient-centred, clinical outcomes and cost measures? How might value be unlocked for providers, payers, and patients?

2. What is VBC

Value-based care (VBC) is a framework for transforming health systems that aligns resources and incentives in ways that improve quality (rather than quantity) of care and are responsive to patient priorities. This orientation is reflected in each of the three pillars of a value-based care pathway (**Figure 1**): (1) the care delivery model, (2) payment and incentives, and (3) measurement. **A carefully designed measurement set is often the best starting point for any VBC solution, as it aligns the system to what matters to patients**.

Figure 1: Pillars of a VBC delivery framework



Once the right set of value-oriented outcome measures are in place, payers can structure incentives accordingly, and providers are motivated to re-organise care delivery to perform well on these measures. Building a context-appropriate set of measures is crucial, where context is not only about geographic but also social context.

3. Why VBC

VBC can be used as a systematic approach to ensuring maternity care becomes more human-centred. A human-centred system is focused on the perspectives, experiences, and needs of those *within* the health system (not just the user, nor the provider, nor the funder but all the humans that make up the system). Often, health systems are oriented to the provider and the funder, which leaves the user's needs unheard. VBC elevates the user's needs, perspectives, and preferences to the same level as the provider and funder. By prioritising all health system participants', value can be maximised.

Figure 2 highlights the value proposition for each stakeholder when adopting a human-centred approach to maternal care.

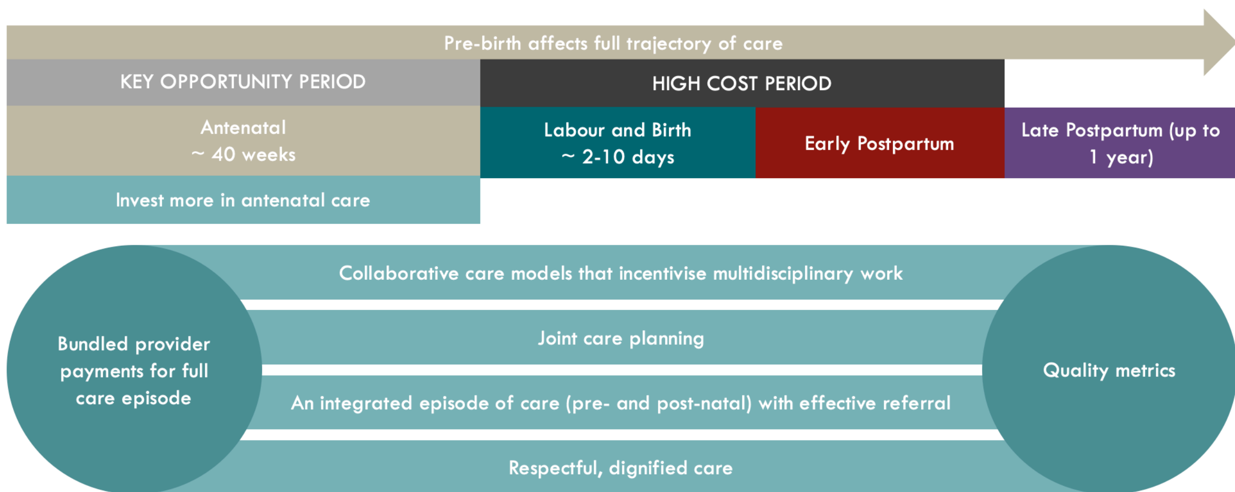
Figure 2: Value proposition of a human-centred maternal pathway

Patient	Provider	Payer
•Lower ceasareian rate •Improved MNCH outcomes •Greater continuity of care which gives a better experience of care •Improved long-term mental and physical well-being of mother and infant	•Autonomy to re-organise care = more integrated care delivery •Reduced adverse outcomes = reduced medical negligence risk •Improved allocation of hospital resources	•Using funding optimally for best outcomes •Reduce avoidable costly interactions with the health system through better patient care and management •Orientation to value supports South Africa's UHC ambitions

3.1 Levers for value

To achieve value for all stakeholders **Figure 3** shows levers for value along the maternity care episode and highlights the antenatal period as a key opportunity period, given its impacts on the full trajectory of care. Other levers identified: collaborative care models that incentivise multidisciplinary work, joint care planning, an integrated episode of care (pre- and post-natal) with effective referral, and respectful, dignified care, which we expand on more below.

Figure 3: Levers for value along the maternity care episode



3.1.1 Investing more in antenatal care

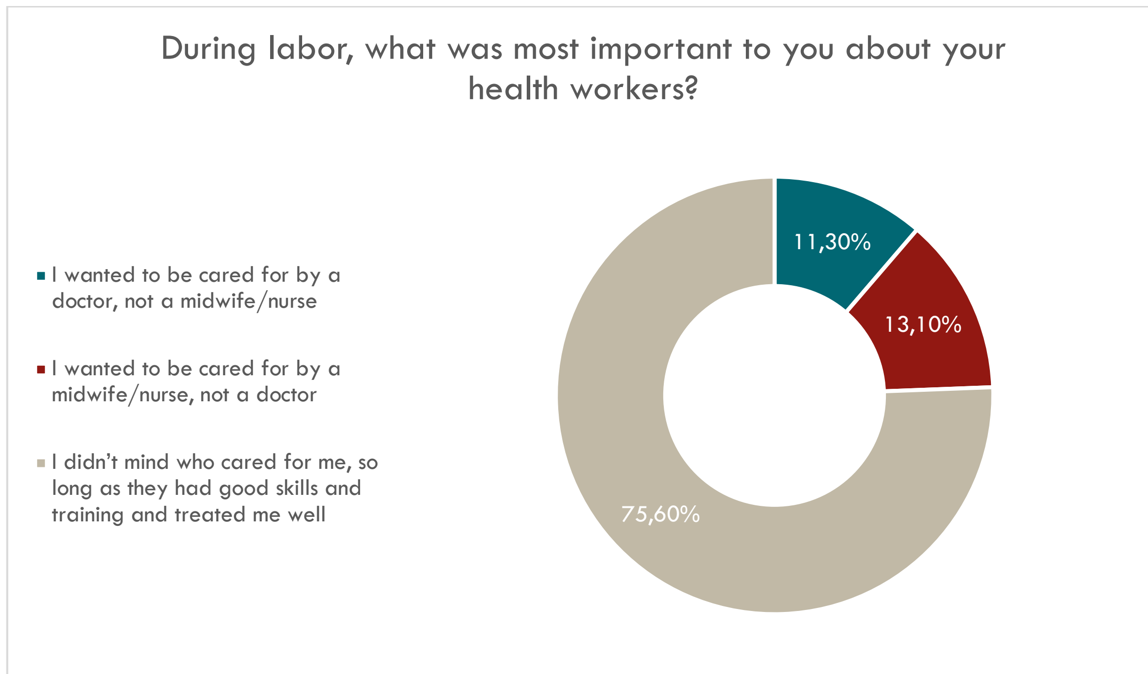
Investing more in antenatal care (i.e. first line of care) can effectively reduce costs down the line by *preventing* adverse outcomes. Evidence suggests that access to ANC significantly lowers the risk of poor maternal and child outcomes during labour and/or postpartum.[1] Importantly, the cost of ANC is low compared to delivery and postpartum complications. Studies show lower infant mortality rates in cohorts of women who access ANC with *earlier* and *quality* access associated with even better outcomes for mothers and children.[1–3]

3.1.2 Collaborative care models that incentivise multidisciplinary work

More collaborative and integrated care is a key lever for value that benefits *both patients and health providers*, while also saving insurers costs.[4] Obstetricians and midwives in the South African private sector acknowledge this fact.[4]

Task-shifting towards midwife-led care could both deliver higher value and assist in alleviating staff shortages across sectors. Midwife-led obstetrics is associated with less intervention and lower caesarean section rates,[5] translating to better outcomes (lower risk to the patient) and lower costs (i.e. higher value). In a context where obstetricians are in short supply, leveraging collaborative care could allow obstetricians to oversee more deliveries, while also focusing their attention on the most high-risk cases. Meanwhile, midwives would be given scope to lead on low-risk cases, which in turn, would lower the risk of unnecessary surgical interventions for birthing women. **75,6% of the 300 South African women we surveyed were agnostic about whether their birthing team was specialist led, so long as they had the right skills and orientation to care** (**Figure 4**).

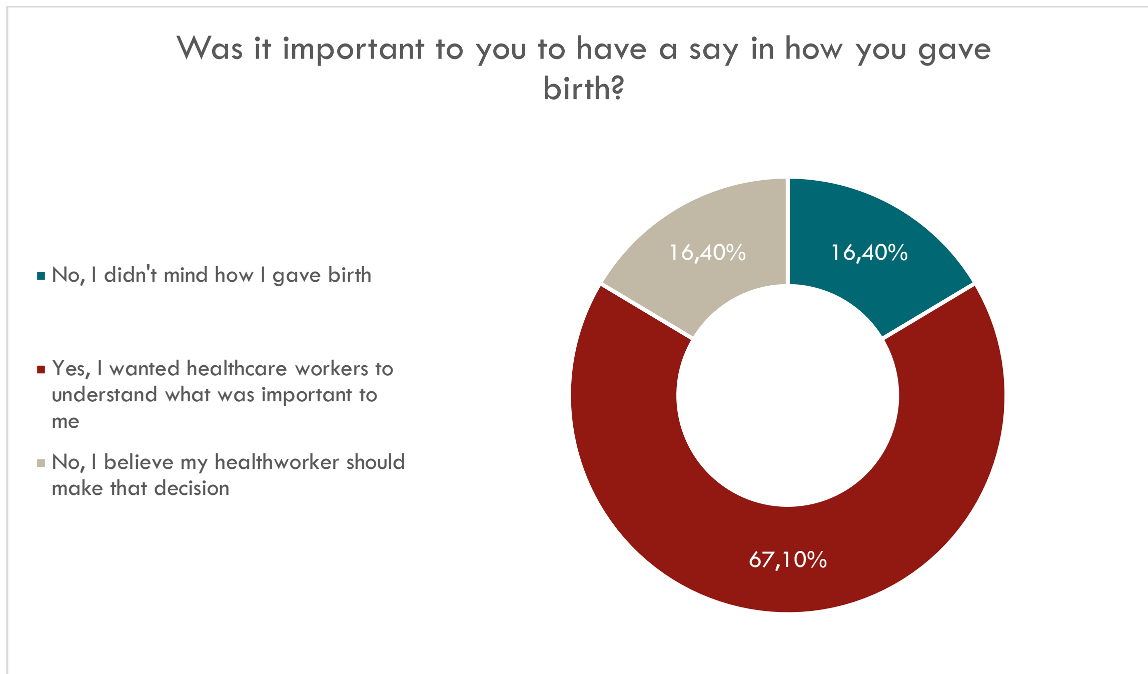
Figure 4: What matters to women about their healthcare provider during labour



3.1.3 Joint care planning

Joint care planning can enable women to make informed, shared decisions about their own care. This is crucial in a human-centred approach to care that emphasises dignity and empowerment. Given the importance of continuity of care, and the current lack-thereof across the healthcare sector in South Africa, joint care planning provides care that matches the need, while ensuring relationships and referral pathways to higher order care, if and when the need arises. This reduces unnecessary interventions and ensures multi-disciplinary oversight. This then becomes a key value lever because it improves outcomes (and specifically, outcomes that matter to the patient), and drives down costs. Joint care planning ties in well with investing more in antenatal care, given that care planning should happen as early as possible along the maternity episode of care. **67% of the 300 South African women we surveyed wanted to have a voice in their birth planning.** (**Figure 5**)

Figure 5: How women felt about their preferences for birth being heard



3.1.4 An integrated episode of care (pre- and post-natal)

Having an integrated episode of care from the pre- to post-natal stages unlocks smooth continuity of care which can successfully mitigate high-risk and high-cost events through a focus on holistic, preventative, and human-centred intervention across the care pathway. This can potentially have positive knock-on effects for care utilisation overall, at-home care, and birthing decisions.

4. Maternity care in South Africa

Maternal, newborn and child health (MNCH) are often used as barometers for health system functioning. Despite increases in access to maternity-related services,[6] South Africa has surprisingly high levels of maternal and child mortality when compared to other countries with similar GDP and public health spend per capita.[7]

4.1 Maternity care delivery challenges in South Africa

The maternity care episode is split into four phases: antenatal care; labour, birth and early postpartum; late postpartum. **Figure 6** outlines the drivers of poor outcomes, by phase and by sector. Labour, birth, and early postpartum have the highest risk for mothers and infants. While some drivers are unique to the sector due to the socio-economic status (SES) of the mothers and resource availability, others are irrespective of sector. The orange box along the left-hand side describes risks that are present across the care episode. **Figure 6** differentiates the drivers of poor outcomes by care-delivery platform and the subsequent clinical risks, highlighting the interplay between the service-delivery platform and the clinical risks, by phase and sector.

Figure 6: Drivers of poor health outcomes

Other care-related drivers of poor quality

Public sector
- Poor access to timely transport
- Poor referral systems
- Disrespectful or abusive care
- HRH or equipment shortages
- Disparities in distribution of resources
- Lack of focus on quality

Private sector
- Poor continuity of care
- Specialist shortages
- Systematic deskilling of midwives
- Lack of focus on quality

Antenatal care (ANC) period (~40 weeks)

Public and private sector care-related drivers
- Late presentation for ANC
- Poor initial assessment and diagnosis
- Poor identification of high-risk patients

Private sector care-related drivers
- Specialist-led care
- High cost of medical scheme membership translates to high OOP
- Fragmented service delivery
- Minimal collaborative planning

Public sector clinical risks
- High levels of maternal psychosocial distress
- Non-pregnancy related infections
- Hypertensive disorders
- Maternal malnutrition

Private sector clinical risks
- Non-pregnancy related infections
- Hypertensive disorders
- Maternal mental illness
- Obstetric history
- Maternal age

High risk period

Labour and birth (~2-10 days)

Public and private sector care-related drivers
- Obstetric heamorrhage

Private sector care-related drivers
- High caesarean section rate
- Deskilling of midwives

Public sector care-related drivers
- Poorly coordinated pre and post birth care

Early postpartum

Public and private sector care-related drivers
- Intrapartum birth asphyxia and prematurity
- Inadequate monitoring of baby's condition
- Limited neonatal management plans

Public sector care-related drivers
- Intrapartum birth

Late postpartum (up to 1 year)

Public and private sector care-related drivers
- Limited psychosocial and informational support for mothers

Public sector clinical risks
- Preterm birth
- Maternal malnutrition
- Low birthweight

Private sector clinical risks
- Low birthweight
- Maternal mental illness

Vast inequities between the public and private sectors, and the very different incentives driving healthcare delivery in each; the obstacles to value-based care differ significantly (see **Table 1**). However, in terms of the proposals for South Africa's shift to universal health coverage through the National Health Insurance (NHI) draft policy, both public and private providers will be contracted to deliver services, which means that questions of what matters to patients, and how to deliver value for patients and health systems has relevance across sectors. While **Figure 6** identifies all areas of weakness in the entire maternity journey, **Table 1** summarises some of the challenges facing the public and private health sectors individually – focusing on those that most significantly contribute to suboptimal maternal and child health in the country.

Table 1: Challenges faced by South Africa along the maternal care pathway

Public sector	Private sector
Shortage of clinical skills (only 303 obstetrician-gynaecologists)	Obstetric-led maternity care and an absence of multi-disciplinary teamwork
Poor referral systems (often leading to late or no referrals)	Poor oversight over the sector generally and lack of accountability for individual private practitioners
'Opting out' due to poor quality and/or abusive	Excessively high caesarean rate

care which delays necessary care	
Budget-based model of payment which disincentivises performance	Fee-for-service model which is costly and disincentivises teamwork
Lack of quality measures and data systems which means it is difficult to track performance	Measures oriented to 'process' over patient-centred outcomes
Medical negligence claims have skyrocketed and with the greatest alleged negligence burden occurring in obstetric cases	Medical negligence claims have increased in quantum and volume, which has then increased the cost of insurance premiums for private obstetrician-gynaecologists

The combination of these challenges and the levers for value which have the potential to effectively address them makes maternity care the ideal starting point for VBC implementation.

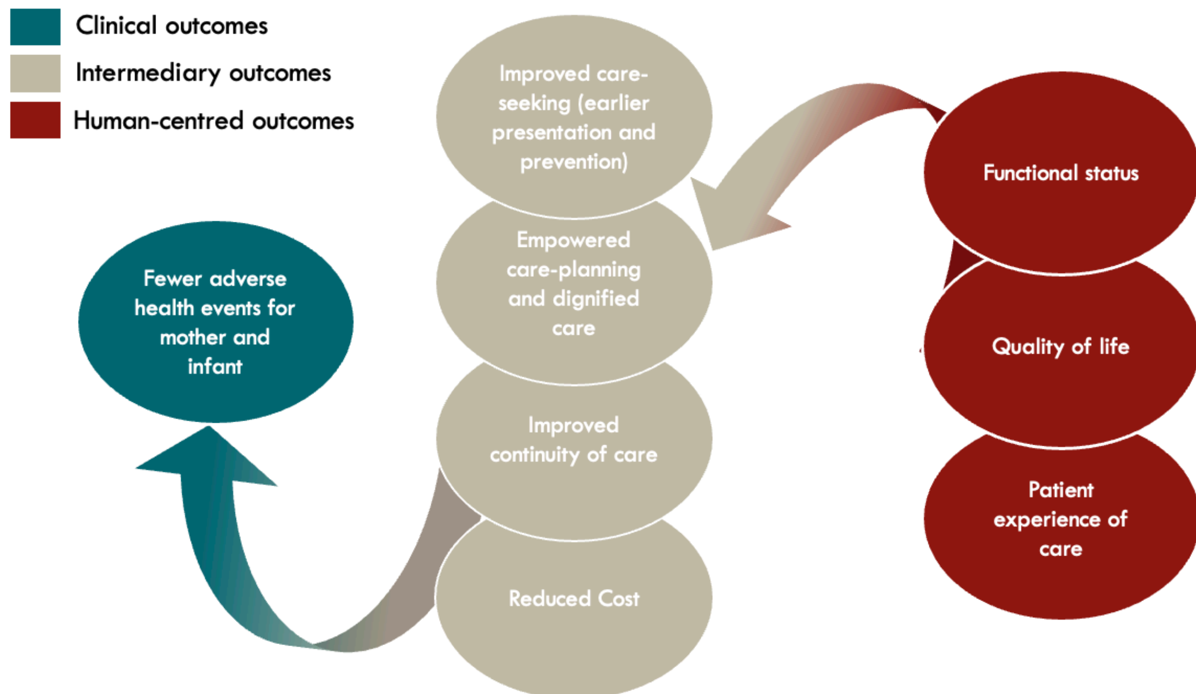
Percept has partnered with Leapfrog to Value *to help healthcare providers* design and implement a value-based solution for maternity care in South Africa, from the first antenatal visit to one-year post-birth. This VBC experiment will explore and test the hypothesis that a more human-centred approach to maternal and infant care will not only improve health outcomes for women and children but will also amount to a better buy for healthcare systems.

5. Testing human-centred VBC in South Africa

We propose that a human-centred VBC approach to maternity care will have a positive impact on (a) clinical health outcomes (b) the outcomes that matter to patients (patient-centred outcomes) and (c) the cost of delivering care (bringing costs down).

Figure 7 shows the mutually reinforcing relationship between human-centred care as positively impacting intermediary outcomes that in turn improve clinical health outcomes. The iterative effect of these three categories of outcomes ultimately improves health systems functioning and vice versa.

Figure 7: Map of how human-centred outcomes affect clinical outcomes in maternity care



Human-centred outcomes cluster around functional status, quality of life, and experiences of care. **Functional status** includes physical and psychological symptoms that might facilitate or impair daily functioning. Related to functional status, **quality of life** encompasses women and mothers' social participation, subjective experience of wellness, as well as relational and psychosocial wellbeing. **Patient experiences of care** refer to how women and mothers experience their healthcare workers, how empowered and informed they feel throughout the care pathway, as well as the acceptability and accessibility of services.

5.1 Measuring value

The International Consortium for Health Outcome Measurements (ICHOM) works to unlock the potential of value-based healthcare. ICHOM has produced a set of measures for Pregnancy and Childbirth. The set includes clinical measures related to survival and morbidity (five indices); patient-reported health and well-being (six indices); and patient satisfaction with the results of care (three indices). The ICHOM set operates as a meta-set, with each of its 14 indices measured based on other validated scales. For example, the ICHOM set already includes key maternal and infant morbidity and mortality indices that have been internationally bench-marched to meet clinical best practice.

The strength of the ICHOM set for Pregnancy and Childbirth is its multi-dimensionality, its comprehensiveness, and its people-centred orientation. The ICHOM set was developed as a set of measures to be used in a variety of contexts, so a review was conducted to assess whether it was ideal in a sub-Saharan African, and low- and middle- income context, and if any measures had to be adapted.

This process involved:

1. Reviewing Sub-Saharan and South African **literature** on the development and implementation of Patient-Preported Outcome Measures (PROMS) & Patient-Reported Experience Measures (PREMS) for maternity and women's experiences of care
2. Conducted a **survey of 360 women** who had given birth in the South African public and private sector
3. Undertaking **stakeholder engagements** with implementers and providers

The full results of this survey are available in Percept's 'What Matters to Mothers' report. The results of this

research were combined to create a set of guiding principles and indices to help format future measures.

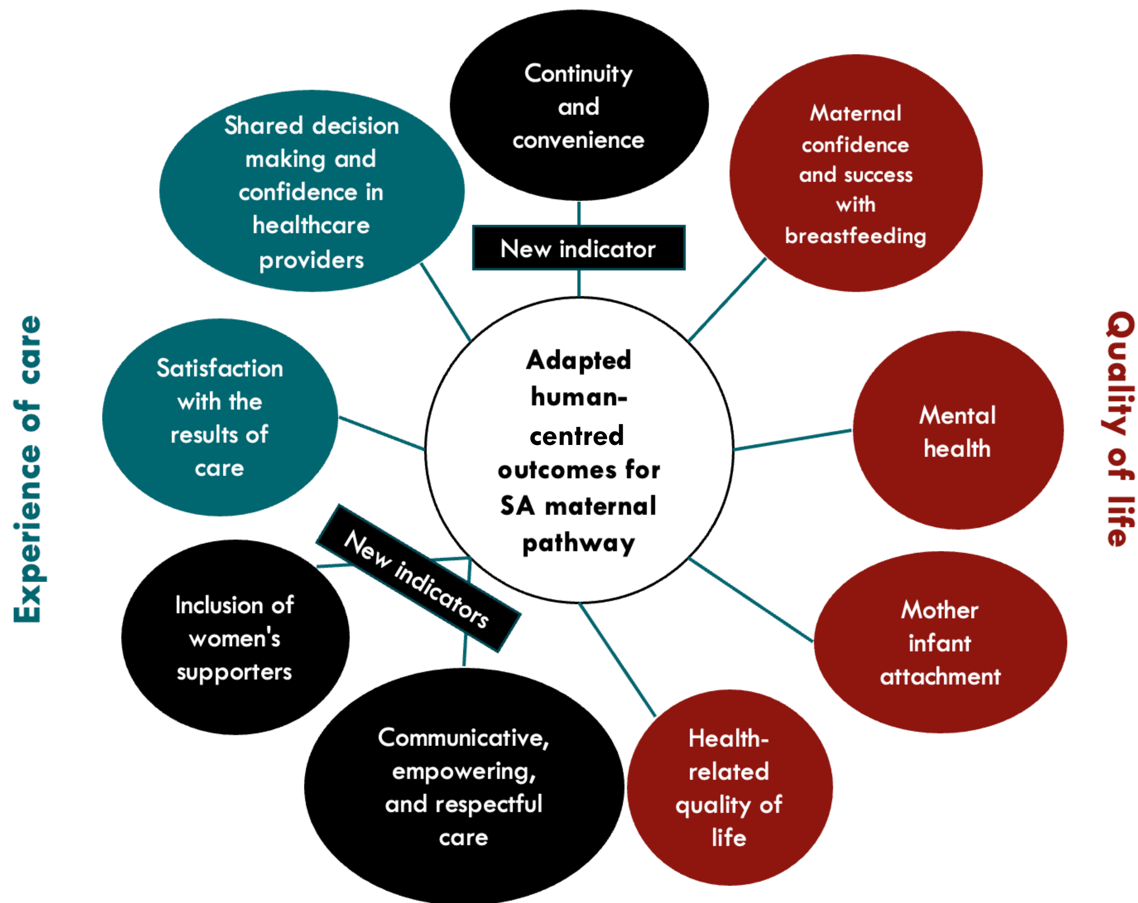
The review of the ICHOM measures showed the following:

1. The measures are not context-specific or sensitive to cultural or linguistic variation
2. The set is lengthy which makes it burdensome for implementers and patients
3. The set only extends to 6-months post-partum whereas literature shows value in extending to 1-year postpartum.

The primary purpose in revisiting the ICHOM set was to facilitate higher value in the maternal episode, as defined by pregnant women and mothers in South Africa.

Figure 8 displays Percept's proposed human-centred outcomes to focus on (excluding clinical measures, process measures and case mix variables). For each of the indicators below, a set of only 1-2 questions need be asked, keeping the measures succinct and easy to administer by healthcare providers. The formulation and adaptation of the questions remains flexible and in the hands of the healthcare provider, and funders. This flexibility allows for the indicators to be used as a starting point for the development of measurement sets and VBC solutions in other low to middle income countries as well.

Figure 8: Proposed human-centred outcomes set to measure value



These proposed outcome measures reflect a synthesis of a mixed-methods survey with close to 360 mothers, stakeholder engagements with maternity care providers and ICHOM implementers, and a review of the Southern African literature on patient-reported outcome and experience measures for maternity. To develop an implementable set, we had to keep the draft set of human-centred outcomes contained. Outcomes were included or excluded based on a) robust evidence on **what mattered most to women and mothers,** b) **amenability to change** should care delivery change, c) **impact** on the care trajectory and overall health, d) **feasibility** of implementation.

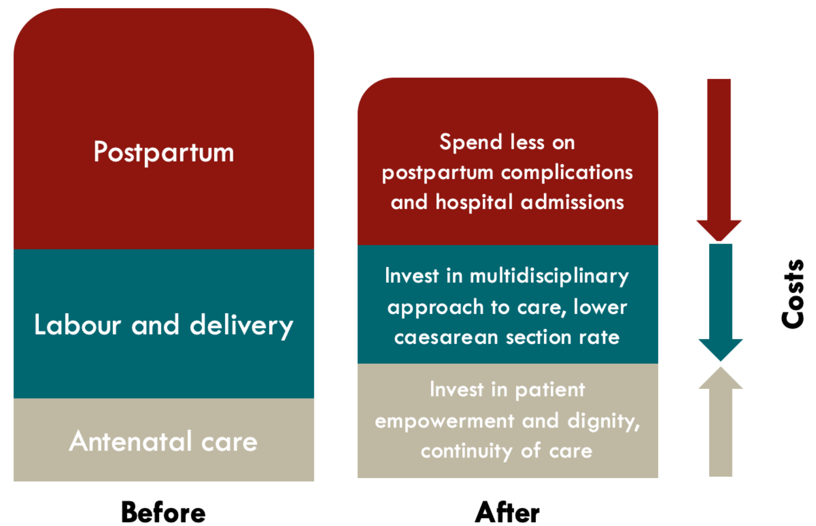
To determine value, these measures must be complemented by a set of cost metrics to evaluate human-centred outcomes relative to cost. The central aim of VBC is to achieve the "best health and well-being for the resources invested".[8] **Therefore, in order to understand where value can and has been achieved, both health/well-being and resource use need to be measured.**

Resources are finite, which means that costs often act as a constraint in the delivery of healthcare. The viability of VBC pathways rests on the assumption that increased investment in antenatal care will reduce costs further down the line during labour and delivery and postpartum. **Figure 9** depicts this graphically, with cost drivers at various stages of the maternity episode shown both before and after a VBC intervention.

We identified aspects of the maternity care episode where additional value can be delivered, with potential mitigation strategies that reduce the likelihood of high-cost events. Key mitigation strategies that have cross-cutting impacts include:

Figure 9: Costs across the maternity episode before and after VBC interventions

- **Incentivising multidisciplinary** care for better outcomes and lower costs;
- **Facilitating integrated and holistic treatment of patients** to improve risk assessment and most appropriate level of care that matched patient needs;
- **Investing more in antenatal care** to save costs down the line; and
- **Ensuring respectful and dignified care** to build trust in the health system



As a multi-stakeholder initiative, partners with a shared vision will strategically collaborate to provide expertise and resources to drive locally owned projects that reach impact at scale. These proof points will model the way deliver, pay, and measure work holistically in localised, context specific projects. **A VBC model for maternity will facilitate increased provider satisfaction, better quality and more compassionate patient experiences, improved clinical outcomes, and savings for the health system.**

6. What comes next?

The shift to VBC requires us to go through these four stages: bring partners together (patient, provider, payer, and other experts), **co-design a model**, create a value-based contract, implement the designed model and scale. Targeted impact evaluation of locally owned projects ensures implementation support that gives evidence of what works to inform decision-makers.

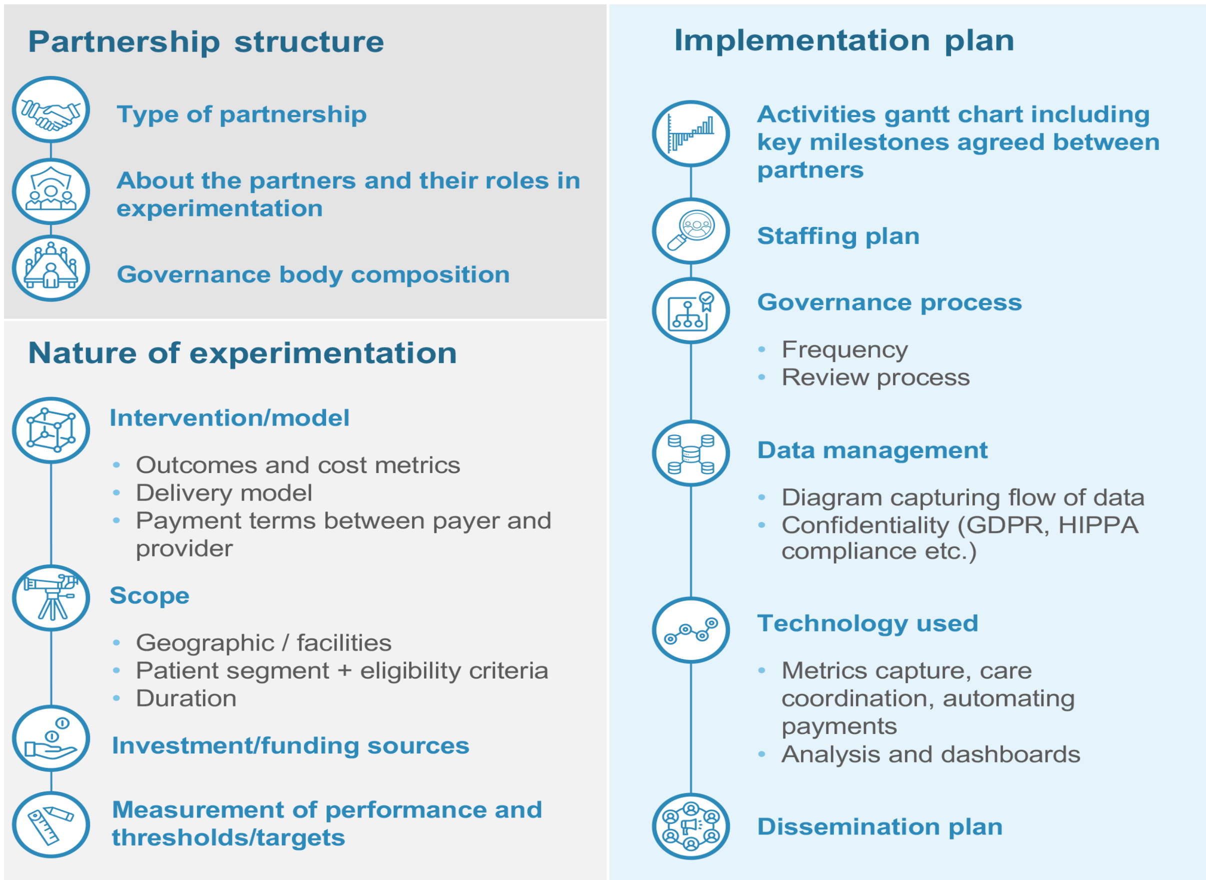
Why design? To demonstrate the value of human-centre model, we need a demonstration project. For a good demonstration project, a great design is critical to ensuring transformative and sustainable impact.

Our approach to design?

The design must be:

- *Multidisciplinary* – involving epidemiologists, clinicians, human-centred designers, economists and actuaries, VBC expertise
- *Inclusive* – local participants involving patients, providers, and payers
- *Contextualised* – tailored to local culture and resources

At the end of such a design process, we have a newly defined VBC model and a partnership commitment as documented below:



This is a call to action: we invite innovative providers and payers to participate in a process that we will facilitate with you so as to co-design a VBC intervention in maternity.

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