

TITLE PAGE

Title: “I was trying to get there, but I couldn’t”: Social Norms, Vulnerability and Lived-Experiences of Home Delivery in Mashonaland Central Province, Zimbabwe

Authors: Webb K, MSc^{1,2§}; Mavhu W, PhD^{3,4}; Langhaug L, PhD⁵; Chitiyo V, MPhil¹; Matyanga P, MSc¹; Charashika P, MSc¹; Patel D, MPhil¹; Prost A, PhD⁶; Ferrand RA, MD PhD^{2,7}; Bernays S, PhD^{2,8}; Cislighi B, PhD²; Neuman M, MS ScD²

Affiliations:

¹Organization for Public Health Interventions and Development (OPHID), Harare, Zimbabwe

²London School of Hygiene and Tropical Medicine (LSHTM), London, UK

³Centre for Sexual Health and HIV/AIDS Research (CeSHHAR), Harare, Zimbabwe

⁴Liverpool School of Tropical Medicine, Liverpool, UK

⁵Zvitambo Institute for Maternal and Child Health Research, Harare, Zimbabwe

⁶University College London, London, UK

⁷Biomedical Research and Training Institute (BRTI), Harare, Zimbabwe

⁸University of Sydney, Sydney, Australia

[§]**Corresponding author:** Karen A Webb

OPHID Zimbabwe

20 Cork Road

Belgravia

Harare

Zimbabwe

Phone: +263772141699

Email: Karen.Myllynen-Webb@lshtm.ac.uk or kwebb@ophid.co.zw

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Key Messages:

- Understanding the reasons for and experiences of home delivery from the perspective of women who deliver at home is critical for informing context-sensitive policy and programs.

- Rural women that delivered at home in Zimbabwe described multiple, intersecting vulnerabilities that resulted in home delivery.
- Social norms promoting facility-based delivery for all created perverse incentives which introduced consequences during and after home delivery that further increased women's vulnerability.
- Public health policies and programs promoting social change should actively identify and mitigate unintended consequences among the most vulnerable who are unable, or unwilling, to comply.

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ABSTRACT

Increasing facility-based delivery rates is pivotal to reach Sustainable Development Goals to improve skilled attendance at birth and reduce maternal and neonatal mortality in Low- and Middle-Income Countries (LMICs). The translation of global health initiatives into national policy and programs has increased facility-based deliveries in LMICs, but little is known about the impact of such policies on social norms from the perspective of women who continue to deliver at home. This qualitative study explores the reasons for and experiences of home delivery among women living in rural Zimbabwe. We analysed qualitative data from 30 semi-structured interviews and five focus group discussions with women who had delivered at home in the previous six months in Mashonaland Central Province. We found evidence of strong community-level social norms in favour of facility-based delivery. However, despite their expressed intention to deliver at a facility, women described how multiple, interacting vulnerabilities resulted in delivery outside of a health facility. While identified as having delivered 'at home', narratives of birth experiences revealed the majority of women in our study delivered 'on the road', en route to the health facility. Strong norms for facility-based delivery created punishments and stigmatisation for home delivery, which introduced additional risk to women at the time of delivery and in the postnatal period. These consequences for breaking social norms promoting facility-based delivery for all further increased the vulnerability of women who delivered at home or on the road. Our findings highlight that equitable public health policy and program design should include efforts to actively identify, mitigate and evaluate unintended consequences of social change created as a by-product of promoting positive health behaviours among those most vulnerable who are unable to comply.

1.0 INTRODUCTION

Over the past two decades, increasing skilled attendance at birth has been the fulcrum of global health efforts to reduce maternal and neonatal morbidity and mortality in Low- and Middle-Income Countries (LMICs) (Doctor et al., 2018). Given that almost all neonatal deaths occur in LMICs, two-thirds of these on the first day after birth (Sankar et al., 2016), skilled attendance at birth is a critical strategy for reaching Sustainable Development Goals (SDGs) goals to reduce the global neonatal mortality rate to ≤ 12 deaths per 1000 livebirths (UNGA, 2015).

Across sub-Saharan Africa (SSA), risk factors for non-institutional delivery include low maternal education, high parity, low household wealth, distance to the nearest health facility, and low number of antenatal care visits (Moyer & Mustafa, 2013). Social norms – unwritten rules of behaviours shared by members of the same network – are also known to affect women's preferences and choice of delivery location (Bohren et al., 2014).

Since 2010, births in SSA were 85% more likely to occur in facilities than those in the 1990s (Doctor et al., 2018). Global and national policy and program focus has increased skilled attendance at birth, expanding the normalization of facility-based delivery in both urban and rural LMIC settings (Montagu et al., 2017) and decreasing maternal and neonatal morbidity and mortality.

Despite such progress, coverage of skilled attendance in SSA in 2018 was only 59% (Sachs, 2019) and rates of non-institutional delivery remain unequal (Boerma et al., 2018). Understanding the reasons for and experiences of home delivery through an approach that purposively seeks to elevate women's voices is critical for informing context-sensitive policy and programs (Langlois et al., 2018). However, few qualitative studies have explored the influence of social norms upon the experience of home delivery among women who deliver at home.

We present findings of a qualitative study exploring the lived experiences of women who have had non-institutional, or 'home', deliveries in rural Zimbabwe. We aim to both provide empirical data on

women's experiences of home delivery and expand the conceptual literature, building upon existing frameworks to describe the influence of social norms on the reasons for, and consequences of home delivery among vulnerable rural women.

1.1 Theoretical Framework

Social norms govern appropriate action in a given situation, and can either constrain or motivate positive action and health behaviours in a dynamic fashion, shifting over time (Legros & Cislighi, 2020). Norms are fundamental when understanding health behaviours as they influence people's beliefs about what others do (descriptive norms) and what others approve or disapprove of, and expect of them (injunctive norms) (Cialdini et al., 1991).

Despite the abundance of social norms theories, few conceptual frameworks seek to operationalise social norms theory to support the design of health promotion policy and programs. Cislighi and Heise's Dynamic Framework for Social Change (2019), draws on Bronfenbrenner's (1979) ecological framework by stressing the overlapping and dynamic interaction of global, institutional, material, social and individual factors influencing health-related choices and actions. Social norms operate at intersection points of each ecological domain, where they exert their greatest influence (Cislighi & Heise, 2019). We draw from the Dynamic Framework as a conceptual scaffolding to explore how public health initiatives can create and reinforce social norms supporting facility-based delivery, but also result in negative consequences for women delivering at home.

1.2 Context

Facility-based deliveries in Zimbabwe increased from 65% in 2010 to 77% in 2015 (ZIMSTAT, 2013; 2016). Over the same period, Zimbabwe's maternal mortality ratio decreased from 960 deaths to 651 deaths per 100,000 live births (2010-2015). Neonatal mortality, however, only declined from 31 deaths to 29 deaths per 1,000 live births.

Increases in access to facility-based delivery are linked to efforts to improve equity of access and quality of health care through national health policies and programs (MOHCW, 2009; MOHCC, 2016a). These have included making maternal health services free of charge, results-based financing initiatives, and public health campaigns discouraging traditional birth attendants (TBAs) from assisting with home deliveries. Despite gains, Zimbabwe’s maternal and neonatal mortality remain well above SDG targets.

Mashonaland Central Province, the study setting, has one of the lowest rates of institutional delivery in Zimbabwe, with only 68.5% of women delivering in a health facility (ZIMSTAT, 2016). Rural residents make up 92% of the population (ZIMSTAT, 2018). The province also has the highest rate of extreme poverty (41.2%) (ZIMSTAT, 2018) and long distances between many households and the closest health facility.

2.0 METHODS

2.1 Study setting

Our qualitative study was conducted from February to June 2016 in Mashonaland Central Province. We purposively selected five communities in five of eight districts, with health facilities serving as the focal point of our sampling strategy. All communities selected were rural, though purposively chosen to provide a relative diversity of rural communities within the province in relation to transportation access, existence of maternity waiting homes and community context (Table 1).

Table 1. Community Characteristics

District	Proximity to Main Road	Maternity Waiting Home	Community Context
Bindura	Road access	No	Farming community, limited transportation availability
Mazowe	Near main road	No	Farming community on periphery of Harare, some industry (brickmaking), mobile community
Mbire	Very Remote	Yes	Remote rural settlement, border community, high poverty

Mt. Darwin	Very Remote	No	Rural resettlement, seasonal access challenges (roads/bridges wash out)
Rushinga	Road access	Yes	Remote rural district close to Mozambican border/seasonal migration with active NGO maternal health program

2.2 Study design and participants

We sought to explore women’s experiences of home delivery, a term commonly used in context to refer to any delivery outside of a health facility, and the influence of social norms on these experiences. Our approach was influenced by the interpretive perspective of social constructivism, which acknowledges that meanings attributed to an experience are subjective and socially negotiated by both participants and researchers (Gergen, 2001). While we recognise non-institutional births may occur both at ‘home’ and ‘in another place’ (ZIMSTAT, 2016), in this study, the use of the term ‘home delivery’ denotes any birth outside of a health institution.

We planned 30 semi-structured in-depth interviews (IDIs) and five focus group discussions (FGDs) with rural women identified as having delivered at home in the previous six months; as to explore how both personal lived experiences and peer- and community-level norms may mediate reported reasons for and experiences of home delivery. Recognising that home deliveries among the most vulnerable and isolated may go unregistered (UNICEF, 2016), we utilised a multi-stage purposive sampling strategy using both community- and facility-based registries and peer referral. We selected women residing in the catchment of five rural health facilities through a three-stage sampling process: 1) Village Health Workers (VHWs) conducted community enumeration of women with home deliveries during the previous six months, cross-referenced against facility records.

Snowballing techniques were also used: women identified by VHWs were asked if they knew of any other women in their community who had experienced a recent home delivery; 2) women were purposively selected from this sampling-frame, with attempts made to prevent over-representation

of any characteristic among participant IDI or FGD groups; 3) selected women were asked by VHWs to participate in a study to discuss their recent home birth. Women consenting to participate were either requested to attend FGDs at a central community location, or interviewed individually. All chose to be interviewed at their homestead.

2.3 Data collection

The first author, designed the study protocol and tools. IDIs and FGDs were conducted by experienced and trained female research assistants in the local language (Shona). Interviews averaged 50 minutes in length (range 32-68 minutes). FGDs included an average of 8 women (range 7-10) and averaged 80 minutes in length (range 68-92 minutes).

Discussions were guided by pre-tested topic guides exploring women's reasons for delivering outside of a health facility; probing their experiences, reactions of others, and emotions during and after birth. Interviews and FGDs were audio-recorded, transcribed verbatim and later translated into English. Translated transcripts were proofread against Shona transcriptions and audio-recordings, with corrections made by consensus. In addition to audio-recording, notes were taken during each IDI/FGD to document key impressions, non-verbal behaviour and descriptive information about the environment and atmosphere in which the discussion was conducted. Daily and weekly debriefs with KW were conducted during fieldwork to discuss emergent themes and any required changes to the topic guides.

2.4 Data analysis

To minimize bias and encourage reflexivity throughout the research process, data generation and analysis began at the point of collection, following an iterative process. Contact summaries, field notes, and minutes from research team debriefs were included as data sources in analysis. Data were imported into NVivo 10 software (QSR International; Melbourne) and analysis conducted using a grounded analytic approach to thematic analysis (Corbin & Strauss, 2008).

Cognizant of implicit relationality and power dynamics in discourse, analysis focused on participant language and patterns, in terms of what participants said and how they said it, including moments of silence, nonverbal communication and events in the interview environment (Fairclough, 2003). First-level or open coding drew upon a combination of a priori themes reflected in the study interview guide and inductive or in vivo codes based on participant narratives (Charmaz, 2014). Investigators met to discuss initial codes and themes collaboratively, with an initial start-list combined from a selection of ten transcripts (n=5 IDIs; n=5 FGDs).

Inter-rater reliability was established using the full coding framework through a combined analysis of 6/30 (20%) randomly selected transcripts. Theoretical nodes were revised after a series of discussions between co-authors in which they were compared, contrasted and iteratively refined until consensus was reached, to avoid personal bias.

Additional analysis was conducted by the Principal Investigator, with the coding framework adapted as analysis progressed. Emerging linkages between codes were explored through iterative comparisons, and corroborated by exploring negative cases where responses by research context (IDI/FGD) and women's narratives differed or counteracted the emerging themes and explanations.

2.5 Ethical considerations

Ethical approvals were received by the author's institute. Written informed consent, including for audio-recording, was obtained from all respondents prior to their participation in the study, with those aged 16-18 independently consenting as emancipated minors as they had children and were married and/or heads of household (MOHCC, 2016b). Names and other personal identifiers were removed from transcripts before analysis.

3.0 RESULTS

Seventy-one participants with a median age of 27 (range 16-44 years) and median parity of 3 (range 1–7 children) were interviewed (n=30) or participated in FGDs (n=41). Two women participating in FGDs did not know their exact date of birth and did not have identity documents. In addition to their recent home delivery (N=71), over half of women reported experiencing a home delivery in a previous pregnancy (n=39; 55%) (Table 2). Among women participating in IDIs for whom additional demographics were recorded (N=30), most (n=25; 83%) were married. One woman reported being in a polygamous marriage. All but two women reported using antenatal care (ANC) services in the recent pregnancy that ended with home delivery. Women with more than four children more frequently described having experienced a previous home delivery (9/11; 82%). Despite self-identifying as having experienced a home delivery, description of birth experiences revealed that more than half of women interviewed (n=17/30; 57%) delivered ‘on the road’, en route to the health facility (Table 3); the majority of whom delivered at home in a previous pregnancy (12/17; 72%). Nearly all participants 18 years and below delivered at home with assistance of a relative (4/5) with one delivering on the road.

Table 2. Participant Characteristics (N=71)

Characteristic		Interview	Focus Group
		N (%) n=30	N (%) n=41
Age	≤18 years	5 (17)	3 (7)
	19-29	14 (47)	19 (46)
	30-39	9 (30)	15 (37)
	40+	2 (6)	2 (5)
	Date of birth not known		2 (5)
Religion	Apostolic	21 (70)	25 (61)
	Pentecostal	3 (10)	5 (12)
	Other Christian	3 (10)	5 (12)
	None	3 (10)	6 (15)
Education	Secondary (any)	10 (33)	16 (39)
	Primary only	18 (60)	22 (54)
	None	2 (7)	3 (7)
Parity	1	6 (20)	5 (12)
	2-3	13 (43)	20 (49)
	4+	11 (36)	16 (39)
Previous Home Delivery	Yes	17 (57)	22 (54)
	No	7 (23)	14 (34)
	Not Applicable (first child born at home)	6 (20)	5 (12)

Home delivery – a discourse influenced by social norms, vulnerability, gender and power

An early reflective finding was that through their lived experiences of home delivery as well as subsequent interactions with health services and community members, women had already constructed narratives to rationalise and justify having ‘broken the rules’. Research participation not only represented a moment of self-formation and identity work between researchers and participants (Riessman, 2008), but the continuation of an ongoing social process to validate their social reality and limit damages (Rhodes et al., 2010).

Qualitative data analysis led to the identification of three emergent, interrelated themes: 1) social norms in favour of facility-based delivery; 2) overlapping vulnerabilities across ecological domains as the reason for home delivery; and 3) enforcement of social norms around facility-based delivery leading to consequences during and after home delivery which further increased vulnerability.

Additional illustrative quotes under each theme can be found in Supplementary Table S1.

3.1 Social Norms Regarding Place of Delivery

Respondents described a recent evolution of prevailing social norms on preferred place of delivery – a lived historical period when home delivery was accepted due to poverty, distance, user fees, and the existence of trained TBAs. The removal of user fees, building of maternity waiting homes, health education campaigns, and the ‘banning’ of TBAs were described as contributing to a shift in social norms regarding acceptability of home delivery in terms of ‘then’ and ‘now’:

‘Those older people are used to delivering at home and being assisted by people in the community...they never used to go to the clinic.’ (IDI 203, 20 years, parity of 1, recent birth at home assisted by mother)

Current social norms reinforced the expectation of facility-based delivery for all women. Women’s narratives provided examples of both descriptive (belief that the majority of women in their community deliver at health facilities) and injunctive norms (perception that others in their social

networks and community wanted them to deliver at a facility) regarding facility-based delivery. These social norms were so strong that they were frequently referred to in absolute, moralistic terms, with facility-based delivery described as ‘good’ and home delivery as ‘bad’, and in many instances, as ‘law’ (Table S1; Section 1.5).

All respondents expressed having had no intention to deliver at home, many citing their uptake of antenatal care services during pregnancy, or previous facility-based delivery as ‘proof’ of their intention for a facility birth. Women expressed valuing facility-based delivery, and many linked having a facility-based delivery with access to skilled help or emergency care, while home delivery was linked to being isolated and helpless in the event of complications:

‘Aah it is bad to deliver at home...if you deliver at home sometimes no one will come to help you. You can die - as well as the baby- because you may be alone.’ (IDI 102, 18 years, parity of 1, recent birth at home assisted by aunt)

3.2 Intersecting Vulnerability as Reason for Home Delivery

Women’s narratives identified three overlapping themes for their recent home delivery: 1) material vulnerability; 2) social vulnerability; and, 3) individual vulnerabilities related to lack of knowledge.

3.2.1 Material Vulnerability

A strong emergent theme from the narratives of women was how vulnerability begets vulnerability, or, ‘I couldn’t do because I didn’t have’. Women described how despite their intention to deliver at a facility, they were unable to plan for or reach the clinic during labour without the necessary resources. The influence of material vulnerability on women’s decision-making and agency was multi-faceted, compounding, and heightened at the time of delivery.

Among the most remote and vulnerable households, respondents described the need to prioritise resources for household survival as negating any opportunity to save or make preparations for facility-based delivery:

'I didn't have the money because the moment you get money you buy mealie meal for the family to eat.' (FGD 401, remote community on Mozambican border)

Lack of personal transportation or resources to hire transportation at the onset of labour was a dominant reason for home delivery during both interviews and focus groups. Women living near road networks described not having money to hire vehicles, whereas the most remote and vulnerable women described lack of livestock and/or scotch carts (oxen/donkey drawn carts) (Table S1; Section 2.1)

Despite describing how material vulnerability resulted in seemingly inevitable home delivery, few women described a belief that their own or another's vulnerability was an acceptable justification for their failure to deliver at a health facility.

'Aah, every woman ..., rich or poor, all must deliver at the clinic.' (IDI 505, 33 years, parity of 4, all home births, recent birth on the road)

3.2.2 Social Vulnerability

Many women described how being alone in the homestead, working in the fields, collecting water/firewood, and/or being solely responsible for dependent household members (children and elders) contributed to delays which led to home delivery. Despite the majority of women self-identifying as married, few male partners were present at the onset of labour. Social isolation and household responsibility were particularly noteworthy for vulnerable women with high parity. The importance of social support at the time of delivery was described by a 24-year-old mother of three:

'I wanted to [deliver at the facility] but I don't have a father or mother so I didn't have anyone to look after my children while I was away...In the future my children will be grown up [sic] so I can go and stay at the hospital.' (IDI 506, 24 years, parity of 3, previous facility births, recent birth on the road)

Despite their desire to deliver at a health facility, at the onset of labour, women described a lack of agency to either access or control the resources required to uptake facility-based delivery. Within a community context of generalized poverty, participant narratives emphasized how vulnerability factors coalesce, and the sense of helplessness experienced by these most insecure households to 'achieve' facility delivery:

'Some of the transport owners demand a goat as payment, but you may not have the goat. He asks for a chicken and the only chickens you have are to sell [so that you can] buy soap for home use. Some people may offer you a scotch cart, but you don't have the cattle. The husband runs around looking for cattle, someone may offer him one only, [but] you need two to pull a scotch cart...He goes to the next house, [and] some say, "We don't have cattle." All this time, labour is progressing, so by the time he comes back home the wife has delivered already.' (FGD 401, remote community on Mozambican border)

Despite existing within poor communities, women described stigmatization and shaming experienced by the most vulnerable. This was most often referred to during FGDs as opposed to IDIs, and even then, most often in the third person as 'other women's' experience as opposed to their own. In remote areas with maternity waiting homes, these poorest women were described as rejecting maternity waiting home stays to avoid the social consequences of having their extreme poverty gossiped about by others:

'Some don't have baby preparation clothes and food so they can't stay at [a] mother's shelter because they are embarrassed [that] they don't have anything to cook. Some women want to show off what they have, so you feel out of place.' (FGD 501, remote community with high rates of poverty)

3.2.3 Individual Vulnerability

The third dominant theme from women's narratives regarding reasons for home delivery was related to individual-level vulnerability factors, specifically, knowledge and understanding of signs of labour and undue reliance on the exact nature of their expected delivery dates (EDD).

Women described interpreting their EDD as a fixed date, so were often not expecting to go into labour and dismissed symptoms at onset of labour. This led to delays in notifying others until labour had progressed so much it was too late to reach the facility (Table S1; Section 2.3):

3.3 Social Norms Mediate the Experience and Consequence of Home Delivery

The contradictory interplay between vulnerability and social norms (I couldn't get to the facility because I didn't have ... yet everyone must deliver at the facility) permeated respondents' descriptions of their experience of home delivery. Women expressed personal shame and discomfort for having broken widely-held community norms through silence, expressions indicating hesitation or discomfort ('aahh/eii'), as well as body language (looking down at the ground or their hands) when discussing their birth experiences. This was particularly poignant during IDIs, where women's narratives were concentrated upon their individual experience as opposed to FGDs which discussed a shared experience of home delivery. Many women expressed gratitude to research assistants for 'listening to their stories' without judgement.

3.3.1 Experience of Home Delivery

Women described home delivery as imbued with fear and worry by both themselves and others anticipating the negative repercussions for breaking widely accepted rules discouraging home delivery or seeking assistance from TBAs. This was a particularly strong narrative among women who gave birth at the home of a neighbour or relative. One woman described the reaction of her aunt during home delivery:

'Aah she was afraid. She said, "You should have gone to the clinic because here at my home people will scold me." She wanted these people with the bag [with baby items] to arrive so

that we [could] go to the clinic but I told her I couldn't get there now.' (IDI 406, 20 years, parity of 2, previous facility delivery, recent birth on the road)

Despite respondents described lack of agency to make decisions or access resources required to reach the health facility during labour, many women described the 'blame' for home delivery and onus to ensure safe delivery as falling onto them solely. One participant described how she was chastised by a relative for her failure to reach the health facility, even during the act of childbirth:

'She was standing there telling me that what I did is not allowed. I said, "What could I do, I didn't know I was in labour?" I pushed the baby alone.' (IDI 504, 24 years, parity of 2, previous facility delivery, recent birth on the road)

Norms promoting facility-based delivery and 'banning' of TBAs resulted in some women being refused assistance from friends, relatives, or elders, and delivering alone:

'People are now afraid. I gave birth by myself...They [TBAs] are afraid of being arrested because everyone now is aware that they have to go to the clinic.' (IDI 402, 33 years, parity of 7, no antenatal care, recent birth at home alone)

The majority of respondents described delivering their infants 'on the road', en route to the health facility (Table 3). Delivery at home without demonstrated attempts to reach the health facility incurred the risk of being accused of planning home delivery by health care workers or community members. Of note, women who delivered on the road described delays which made the perceived likelihood of reaching the facility unlikely, yet set out for the facility regardless. The dissonance between the desire/expectation to deliver at a health facility and structural reality of vulnerability was a common theme (Table S1; Section 3.1).

Table 3. Place of recent non-institutional delivery, interview participants (N=30)

Place of Delivery	At Own Home Unskilled Assistance (friend, relative)	7 (23%)
	At Home of Neighbour or Relative	2 (7%)
	At Own Home Alone	4 (13%)
	'On the road' - en route to health facility	17 (57%)

A number of respondents described a practice where, following delivery, they wrapped the baby with the umbilical cord still attached to the placenta and travelled to the clinic for the cord to be cut by a healthcare worker as demonstration of their intention to deliver at the health facility:

'When I delivered on the road I took everything (placenta with cord still attached to the infant), they [health care workers] cut the cord. I told them I had [a] short labour and I miscalculated my dates, they accepted me and said it was "not a problem at all; it happens. Let us prepare the baby."...they didn't scold me.' (IDI 405, 39 years, parity of 6, previous facility delivery, delivered on the road)

3.3.2 Consequence of Home Delivery

During interviews and focus groups, nearly all respondents described numerous explicit and implicit consequences for breaking community codes of conduct by having a non-institutional birth.

Women described feelings and experiences of shame and ridicule for being known in their community as someone who delivered at home. Women's narratives emphasized that as home delivery is no longer accepted, 'committing' the act of home delivery reflects poorly on the household, but especially on the mother.

'The one who delivers at home... many stories are told about her and the baby...if you hear what people say, it is better to go to the clinic.' (IDI 506, 24 years, parity of 3, previous facility birth, delivered on the road)

Another mother described her infant being labelled with a derogatory name after delivering on the road:

'When they came to see the baby, some said, "Hi chenzira" ("baby born on the street" - a derogatory term in Shona). Some were joking but it was annoying me because it was not my fault that I delivered on the road because I was going to the clinic...there was nothing else that I could have done.' (IDI 201, 28 years, parity of 3, first two home deliveries, delivered on the road)

Due to widely held community beliefs that home delivery threatens the health of mothers and infants, many women described social sanctioning by community members for having delivered outside of a health facility:

'When I delivered my child I was staying with my sister so when I saw people at the well fetching water, they were not happy that I delivered at home. They didn't see it as a good thing. They shouted at me saying, "You will kill the baby!". They didn't even ask if I [had] delivered safely or if I [had] encountered any problems.' (FGD 101, commercial farming area close to urban centre)

Due to continuous reinforcement of messages to deliver at the facility by health care providers, many women described being fearful or ashamed to present to the health facility after home delivery. Once at the clinic, while not formalized or uniformly applied, women described punishments imposed by health care workers, including being shouted at, separate queues and longer wait times for postnatal care, and being 'fined' to receive the infant's health information card.

"Those that deliver at home are punished at the hospital. They are made to sit for some time and explain why they chose to deliver their babies at home." (IDI 201 28 years, parity of 3, first two home deliveries, delivered on the road)

4.0 DISCUSSION

In this article, we have explored the reasons for and experiences of home delivery from the perspective of rural women who delivered at home in Zimbabwe. By elevating the voices of the

affected, we gained insights into how social norms influence the narratives and lived experiences of vulnerable women who deliver outside health facilities through three key findings. First, we found strong social norms in favour of facility delivery. Second, intersecting vulnerabilities coalesced across multiple ecological domains to result in seemingly inevitable home delivery among the most vulnerable. Finally, 'zero tolerance' for home deliveries resulted in consequences which further increased the vulnerability of women who deliver at home. Drawing on and extending Cislighi and Heise's Dynamic Framework for Social Change (2019), we explore implications of these findings for policy and practice.

First, we add to an existing body of literature documenting shifting social norms in favour of facility-based delivery across Africa (Montagu et al., 2017; Shifraw et al., 2016). Changes in social norms can be subtle and progressive, inculcated through socialization, or more overt and sudden, imposed by more powerful authorities (Cislighi & Heise, 2019). The potential of norms-based interventions for affecting widespread and lasting community-based health promotion and reducing harmful gender-related practices is being increasingly recognized (Cislighi & Heise, 2019).

In our study, women's narratives provide evidence of social norms on facility-based delivery being recently evolved and widely shared across their social networks. This is an important example of successful "organized diffusion" of public health messaging for achieving normative change for health promotion (Cislighi et al., 2019). Social norms in favour of facility-based delivery were pervasive, expressed both descriptively and injunctively, and the fear of sanctions for breaking them so strong that even TBAs were described as telling women 'everyone must deliver at the facility now'. Recent policy and programs effectively increased community support for facility-based deliveries. However, local interpretation and 'enforcement' of policy transitions such as those that once promoted training of TBAs and subsequently banned their involvement in community births, have been noted as creating punitive measures which disadvantage the poorest rural women (Choguya, 2014; Uny et al., 2019).

As proposed by our expanded theoretical framework, such evidence demonstrates how global policy commitments to reduce maternal and neonatal mortality have influenced national and local policy and programs, and in turn fundamentally altered social norms around such culturally entrenched practices as childbirth. We suggest the relationship between global health policy and social norms is bi-directional, with widely diffused social norms also acting to reinforce existing policy and programs, further establishing their value as priority public health actions over competing alternatives (such as training TBAs in safe deliveries, or distribution of safe delivery packs among women at high risk of home delivery).

The more women deliver at health facilities, the stronger the social norm becomes, behaviours are reinforced and, our study suggests, so are the consequences for non-compliance. This shift of social norms that stems from global health initiatives can be at least partly attributed to dramatic increases in facility-based delivery rates in many LMIC settings over the past decade (Montagu et al., 2017). An important caveat to the success story of increased facility-based delivery is the simultaneous need to ensure the availability of quality obstetric services to meet increasing demand. Increases in facility-based delivery have not always translated to improved maternal and neonatal survival, with differences within and across African countries, and by facility-type (Montoya et al., 2014; Moyer et al., 2013).

The second key finding was the role of intersecting vulnerabilities which aggregated and prevented reaching the 'tipping point' for being able to access facility-based delivery. Women's narratives captured how material (food insecurity, available household assets, access to transportation), social (isolation, distance, lack-of-agency for decision making) and individual-level (knowledge of signs of labour or EDD leading to delays) vulnerabilities coalesce at the time of labour to result in home delivery. This dynamic interaction of vulnerability as a reason for home delivery is consistent with literature on determinants of home delivery in Africa (Moyer & Mustafa, 2013). Our findings

highlight a dissonance between the pace of progress in transforming social norms promoting facility-based delivery, and improving structural conditions to ensure no one is left behind.

Differential vulnerability as a driver of poor health outcomes is a theme commonly explored by social epidemiologists as important for understanding and addressing health inequalities, stressing the importance of viewing vulnerability as a contextual phenomenon (Diderichsen et al., 2019). Importantly, women in our study live in a context where 82% of households live in generalized poverty (ZIMSTAT, 2019), and while they shared vulnerabilities, they were not all vulnerable in the *same way*.

This dynamic interaction where vulnerability factors limit individual capacity for maternal health service uptake has been described by others (Storeng et al., 2013), with a 'pro poor path' to universal coverage of safe delivery requiring identification and intensive outreach among the most vulnerable households (Kruk et al., 2015). Our findings underscore that identifying the most at risk in the context of generalized poverty will require community participation, and critically, the active involvement of the vulnerable and affected (Hargreaves et al., 2007). With a protracted socioeconomic crisis and severely constrained health system, most recently exacerbated by the COVID-19 pandemic which has further disrupted access to and availability of maternity services (Murewanhema et al., 2020), the importance of understanding contextual vulnerability and structural inequalities will remain a critical component in the design and implementation of public health interventions in Zimbabwe for the foreseeable future.

Our final key finding was that the enforcement of social norms related to place of delivery introduced both additional risk at the time of delivery and consequences after delivery that further increased women's vulnerability across all ecological domains. Strong social norms resulted in communities viewing home delivery on moralistic and even legal terms. To have or assist in home delivery was 'bad' or 'unlawful' and resulted in increased risk at the time of delivery. Many women delivered without assistance, on the road, and even carried their infants wrapped with the placenta

to the clinic after delivery, as evidence that the home delivery was not planned. While rates of non-institutional delivery in Mashonaland Central declined from 48.4% to 26.8% from 2010/11-2015, the proportion of women who delivered in places other than a health facility or home, rose from 1.1% to 4.8% (ZIMSTAT, 2012; 2016).

After 'committing' a home delivery, women described consequences including ridicule, shaming, fines, and reduced quality of care. This clash between maternal health policies and programs that promote universal uptake of skilled delivery against local realities to create contexts that may endanger the most vulnerable and further enhance inequities has been previously documented (Greeson et al., 2016; Rishworth et al., 2016; Sochas, 2019).

The contradictory impact of social norms which both promote community support and value for facility birth and simultaneously increase vulnerability among the most vulnerable through punishments for home delivery, provides a powerful example of perverse incentives, or 'cobra effects', of public health policy implementation. Described by Merton (1936) as the "unanticipated consequences of purposive social action", perverse incentives are unintended and undesirable consequences which are contrary to the intentions of policy makers and programmers. Such cobra effects have been noted as an unintended by-product of 'travelling models' of public health generated through global health initiatives, where the interaction between standardised interventions and implementation contexts may produce unexpected, invisible or perverse effects (de Sardan et al., 2017). Our findings support assertions that universal population measures may widen inequalities for some, and that such measures should be combined with strategies that target vulnerable groups (Frohlich & Potvin, 2008). We demonstrate that programs integrating social norms for positive health behaviours, such as skilled attendance at birth, should actively guard against dogmatic interpretation and implementation. Policies and programs seeking to create positive social change should equally embed and enculturate principles of compassion and empathy (Fotaki, 2015) for the vulnerable minority who may be unable, or unwilling to comply.

Too often, perverse incentives are identified as artefacts of public health policy and programs (or not at all). While certainly unintended and perhaps unavoidable by-products of public health policy-implementation, perverse incentives may be anticipated and mitigated in context. Evidence-informed decision making can involve intentional articulation of mechanisms for both positive change and harm from a single policy or intervention during the design phase (Oliver et al., 2019). The starting point of efforts to identify and mitigate perverse incentives should be the experiences, needs and preferences of the most vulnerable and affected to understand local context and lived realities (Larson et al., 2015). Qualitative research should be paired with robust quantitative investigations to understand who will bear the greatest risk from unintended consequences of appropriate public health policies. Mixed-method implementation science approaches are critical for bridging the gap between those who could potentially benefit from an evidence-based intervention and those who actually do benefit, and improve the equity of these benefits (Eccles & Mittman, 2006; Geng et al., 2017).

Our expanded framework (Cislaghi & Heise, 2019) provides a pragmatic tool to consider how mechanisms for achieving social change at local levels may adversely affect vulnerable members of a community who not adhere to the 'rules' (Figure 1).

5.0 STRENGTHS AND LIMITATIONS

Our methodology included multiple measures to minimize risk of bias and enhance quality and transferability of our findings to other rural settings and vulnerable populations. Limiting the reference time for retrospective questions to 6 months since delivery to minimize recall bias, use of purposive sampling of rural communities with different characteristics and a diverse group of women, researcher reflexivity at each stage of data collection and analysis, comparisons within and between cases and triangulation of data sources were intended to improve internal and external validity of our findings.

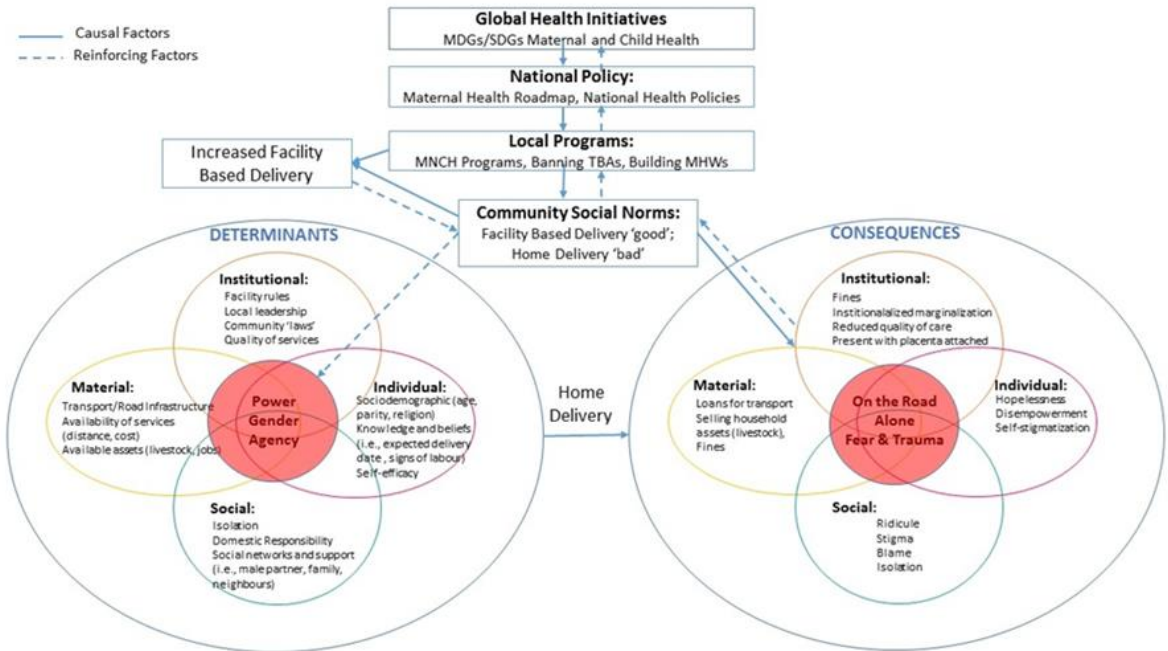
We however recognize the narratives of women in our study were socially constructed. The potential for social desirability bias to create an unwillingness to report a planned home delivery, or dissatisfaction with health facilities has been noted in other studies of home delivery in Africa (Hill et al., 2019). Despite this limitation, consistency of our findings with recent quantitative and qualitative evidence on home delivery in Africa gives us confidence that our key findings and expanded theoretical framework are transferrable to other settings, and capture important lessons regarding interaction of social norms, vulnerability and public health policy and programs.

Finally, the appreciation expressed by women for being able to share their experiences indicates the potential transformative impact of storytelling as both a research tool and intervention (McCall, 2019). Our research not only allowed us to better understand the dissonance between social norms promoting health-seeking and reality of structural inequality, but also provided women 'left behind' with an opportunity to re-engage with the system in a way that promoted empathy and appreciated theirs as part of a valuable landscape of birth experiences in their community. Programs seeking transformational change in public health should continue to reach out to and learn from 'non-adherers' of promoted health practice.

6.0 CONCLUSION

By exploring reasons for and experience of home delivery among women in rural Zimbabwe, we found that the translation of global and national health initiatives to attain universal access to facility-based delivery influenced and interacted with social norms at community level. Social norms created perverse incentives through which the most vulnerable women who delivered outside of a health facility were made more vulnerable. We propose policy and program processes that purposefully identify and mitigate unintended consequences, to strengthen evidence-informed decision-making in context and safeguard the most vulnerable.

Figure 1. Conceptual Framework of generation and impact of social norms upon determinants and consequences of home delivery. Adapted from Cislighi and Heise (2019).



REFERENCES

- Boerma, T., Requejo, J., Victora, C.G., Amouzou, A., George, A., Agyepong, I., et al. 2018. Countdown to 2030: tracking progress towards universal coverage for reproductive, maternal, newborn, and child health. *The Lancet* 391: 1538-1548.
- Bohren, M.A., Hunter, E.C., Munthe-Kaas, H.M., Souza, J.P., Vogel, J.P., & Gulmezoglu, A.M. 2014. Facilitators and barriers to facility-based delivery in low- and middle-income countries: a qualitative evidence synthesis. *Reprod Health*, 11: 1742-4755.
- Bronfenbrenner, U. 1979. *The ecology of human development : experiments by nature and design*. Cambridge, Mass.: Harvard University Press.
- Charmaz, K. 2014. *Constructing Grounded Theory*. Los Angeles: Sage.
- Choguya, N.Z. 2014. Traditional Birth Attendants and Policy Ambivalence in Zimbabwe. *Journal of Anthropology*, 2014: 750240.
- Cialdini, R.B., Kallgren, C.A., & Reno, R.R. 1991. A Focus Theory of Normative Conduct: A Theoretical Refinement and Reevaluation of the Role of Norms in Human Behavior. In M.P. Zanna (Ed.), *Advances in Experimental Social Psychology* pp. 201-234): Academic Press.
- Cislaghi, B., Denny, E. K., Cisse, M., Gueye, P., Shrestha, B., Shrestha, P. N., et al. 2019. Changing Social Norms: the Importance of "Organized Diffusion" for Scaling Up Community Health Promotion and Women Empowerment Interventions. *Prev Sci* 20: 936-946.
- Cislaghi, B., & Heise, L. 2019. Using social norms theory for health promotion in low-income countries. *Health Promot Int* 34: 616-623.
- Corbin, J.M., & Strauss, A.L. 2008. *Basics of qualitative research : techniques and procedures for developing grounded theory*. Los Angeles, Calif.: Sage Publications, Inc.
- de Sardan, O., J.-P., Diarra, A., & Moha, M. 2017. Travelling models and the challenge of pragmatic contexts and practical norms: the case of maternal health. *Health Research Policy and Systems* 15: 60.

- Diderichsen, F., Hallqvist, J., & Whitehead, M. 2019. Differential vulnerability and susceptibility: how to make use of recent development in our understanding of mediation and interaction to tackle health inequalities. *Int J Epidemiol* 48: 268-274.
- Doctor, H.V., Nkhana-Salimu, S., & Abdulsalam-Anibilowo, M. 2018. Health facility delivery in sub-Saharan Africa: successes, challenges, and implications for the 2030 development agenda. *BMC Public Health* 18: 765.
- Eccles, M.P., & Mittman, B.S. 2006. Welcome to Implementation Science. *Implementation Science* 1: 1.
- Fairclough, N. 2003. *Analysing discourse : textual analysis for social research*. London ; New York: Routledge.
- Fotaki, M. 2015. Why and how is compassion necessary to provide good quality healthcare? *Int J Health Policy Manag* 4: 199-201.
- Frohlich, K.L., & Potvin, L. 2008. Transcending the known in public health practice: the inequality paradox: the population approach and vulnerable populations. *Am J Public Health* 98: 216-221.
- Geng, E.H., Peiris, D., & Kruk, M.E. 2017. Implementation science: Relevance in the real world without sacrificing rigor. *PLoS Med* 14: e1002288.
- Gergen, K. J. 2001. *Social construction in context*. London: Sage.
- Greenson, D., Sacks, E., Masvawure, T.B., Austin-Evelyn, K., Kruk, M.E., Macwan'gi, M., et al. 2016. Local adaptations to a global health initiative: penalties for home births in Zambia. *Health Policy Plan* 31: 1262-1269.
- Hargreaves, J., Morison, L., Gear, J., Makhubele, M.B., Porter, J., Busza, J., et al. 2007. "Hearing the Voices of the Poor": Assigning Poverty Lines on the Basis of Local Perceptions of Poverty. A Quantitative Analysis of Qualitative Data from Participatory Wealth Ranking in Rural South Africa. *World Development* 35: 212-229.

- Hill, Z., Amare, Y., Scheelbeek, P., & Schellenberg, J. 2019. 'People have started to deliver in the facility these days': a qualitative exploration of factors affecting facility delivery in Ethiopia. *BMJ Open* 9: e025516.
- Kruk, M.E., Hermsilla, S., Larson, E., Vail, D., Chen, Q., Mazuguni, F., et al. 2015. Who is left behind on the road to universal facility delivery? A cross-sectional multilevel analysis in rural Tanzania. *Trop Med Int Health* 20: 1057-1066.
- Langlois, E.V., Tuncalp, O., Norris, S.L., Askew, I., & Ghaffar, A. 2018. Qualitative evidence to improve guidelines and health decision-making. *Bull World Health Organ* 96: 79-79A.
- Larson, E., Vail, D., Mbaruku, G.M., Kimweri, A., Freedman, L.P., & Kruk, M.E. 2015. Moving Toward Patient-Centered Care in Africa: A Discrete Choice Experiment of Preferences for Delivery Care among 3,003 Tanzanian Women. *PLoS One* 10: e0135621.
- Legros, S., & Cislighi, B. 2020. Mapping the Social-Norms Literature: An Overview of Reviews. *Perspect Psychol Sci* 15: 62-80.
- Murewanhema, G., Nyakanda, M. & Madziyire, M. 2020. Restoring and maintaining robust maternity services in the COVID-19 era: a public health dilemma in Zimbabwe. *Pan African Medical Journal*: 37, 32.
- McCall, B., Shallcross, L., Wilson, M., Fuller, C., & Hayward, A. 2019. Storytelling as a research tool and intervention around public health perceptions and behaviour: a protocol for a systematic narrative review. *BMJ Open* 9: e030597.
- Merton, R.K. 1936. The Unanticipated Consequences of Purposeful Social Action. *Am Sociol Rev.* 1: 894-904.
- Montagu, D., Sudhinaraset, M., Diamond-Smith, N., Campbell, O., Gabrysch, S., Freedman, L., et al. 2017. Where women go to deliver: understanding the changing landscape of childbirth in Africa and Asia. *Health Policy Plan* 32: 1146-1152.

- Montoya, A., Calvert, C., & Filippi, V. 2014. Explaining differences in maternal mortality levels in sub-Saharan African hospitals: a systematic review and meta-analysis. *Int Health* 6: 12-22.
- Moyer, C.A., Adanu, R.M., & Engmann, C.M. 2013. The relationship between facility-based delivery and maternal and neonatal mortality in Sub-Saharan Africa. *Int J Gynaecol Obstet* 122: 263-265.
- Moyer, C.A., & Mustafa, A. 2013. Drivers and deterrents of facility delivery in sub-Saharan Africa: a systematic review. *Reprod Health* 10: 40.
- Oliver, K., Lorenc, T., Tinkler, J., & Bonell, C. 2019. Understanding the unintended consequences of public health policies: the views of policymakers and evaluators. *BMC Public Health* 19: 1057.
- Rhodes, T., Bernays, S., & Houmoller, K. 2010. Parents who use drugs: accounting for damage and its limitation. *Soc Sci Med* 71: 1489-1497.
- Riessman, C.K. 2008. *Narrative methods for the human sciences*. Los Angeles: Sage Publications.
- Rishworth, A., Dixon, J., Luginaah, I., Mkandawire, P., & Tampah Prince, C. 2016. "I was on the way to the hospital but delivered in the bush": Maternal health in Ghana's Upper West Region in the context of a traditional birth attendants' ban. *Soc Sci Med* 148: 8-17.
- Sachs, J., Schmidt-Traub, G., Kroll, C., Lafortune, G., Fuller, G. 2019. Sustainable Development Report 2019. New York: Bertelsmann Stiftung and Sustainable Development Solutions Network (SDSN).
- Sankar, M.J., Natarajan, C.K., Das, R.R., Agarwal, R., Chandrasekaran, A., & Paul, V.K. 2016. When do newborns die? A systematic review of timing of overall and cause-specific neonatal deaths in developing countries. *J Perinatol* 36 Suppl 1: S1-S11.
- Shifraw, T., Berhane, Y., Gulema, H., Kendall, T., & Austin, A. 2016. A qualitative study on factors that influence women's choice of delivery in health facilities in Addis Ababa, Ethiopia. *BMC Pregnancy Childbirth* 16: 307.

- Sochas, L. 2019. Women who break the rules: Social exclusion and inequities in pregnancy and childbirth experiences in Zambia. *Soc Sci Med* 232: 278-288.
- Storeng, K.T., Drabo, S., & Filippi, V. 2013. Too poor to live? A case study of vulnerability and maternal mortality in Burkina Faso. *Glob Health Promot* 20: 33-38.
- United Nations Children's Fund (UNICEF). 2016. Every Child's Birth Right: Inequities and trends in birth registration. New York: UNICEF.
- United Nations General Assembly (UNGA). 2015. Transforming our world: the 2030 Agenda for Sustainable Development New York: United Nations.
- Uny, I., de Kok, B., & Fustukian, S. 2019. Weighing the options for delivery care in rural Malawi: community perceptions of a policy promoting exclusive skilled birth attendance and banning traditional birth attendants. *Health Policy Plan* 34: 161-169.
- Zimbabwe Ministry of Health and Child Welfare (MOHCW). 2009. National Health Strategy (2009-2013). Harare: MOHCW.
- Zimbabwe MOHCC (2016). The National Health Strategy for Zimbabwe 2016-2020. Harare, Zimbabwe: MOHCC
- Zimbabwe MOHCC. 2016. National Adolescent and Youth Sexual and Reproductive Health Strategy II (2016-2020). Harare, Zimbabwe: MOHCC.
- Zimbabwe National Statistics Agency (ZIMSTAT). 2018. Inter-Censal Demographic Survey (ICDS) Report, 2017. ZIMSTAT.
- ZIMSTAT. 2019. Zimbabwe Poverty Report 2017. Harare, Zimbabwe: ZIMSTAT.
- ZIMSTAT and ICF International. 2012. Zimbabwe Demographic and Health Survey 2010-11. Calverton, Maryland: ZIMSTAT and ICF International Inc.
- ZIMSTAT and ICF International. 2016. Zimbabwe Demographic and Health Survey 2015: Final Report. Rockville, Maryland, USA: Zimbabwe National Statistics Agency (ZIMSTAT) and ICF.

ZIMSTAT. 2013. Zimbabwe Census 2012: Provincial Report Mashonaland Central. Population Census
Office, Harare: Zimbabwe National Statistics Agency.