






## RESEARCH ARTICLE

# Advancing a conceptual model to improve maternal health quality: The Person-Centered Care Framework for Reproductive Health Equity [version 1; peer review: 2 approved, 2 approved with reservations]

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## Abstract

**Background:** Globally, substantial health inequities exist with regard to maternal, newborn and reproductive health. Lack of access to good quality care—across its many dimensions—is a key factor driving these inequities. Significant global efforts have been made towards improving the quality of care within facilities for maternal and reproductive health. However, one critically overlooked aspect of quality improvement activities is person-centered care.

**Main body:** The objective of this paper is to review existing literature and theories related to person-centered reproductive health care to develop a framework for improving the quality of reproductive health, particularly in low and middle-income countries. This paper proposes the Person-Centered Care Framework for Reproductive Health Equity, which describes three levels of interdependent contexts for women's reproductive health: societal and community determinants of health equity, women's health-seeking behaviors, and the quality of care within the walls of the facility. It lays out eight domains of person-centered care for maternal and reproductive health.

**Conclusions:** Person-centered care has been shown to improve outcomes; yet, there is no consensus on definitions and measures in the area of women's reproductive health care. The proposed Framework reviews essential aspects of person-centered reproductive health care.



## Keywords

Maternal Health, Reproductive Health, Quality, Equity, Health Seeking Behavior, Quality of Care, Person-Centered Care, Patient Experience

## Open Peer Review

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## Introduction

Every day, 830 women die from preventable causes related to pregnancy and childbirth, with 99% of all deaths occurring in low and middle-income countries (LMICs)<sup>1</sup>. Poor quality care is a major factor in maternal deaths and a deterrent to women accessing health services. It has long-lasting effects beyond the walls of the facility, including psychological effects for women, higher risk of dissolution and violence for families<sup>2</sup>, and the potential impoverishment of households due to high costs of care<sup>3</sup>. Poor, less educated, younger, and minority women are less likely to receive good quality reproductive health care<sup>4</sup>. The quality of facilities may therefore be a catalyst for where health inequities are produced and reproduced, further exacerbating intergenerational inequalities in health<sup>5</sup>.

One aspect of quality that needs to be addressed is the person-centered dimension of quality, the most overt form of which is the mistreatment of women in health facilities. In many parts of the globe, women are hit, slapped, shouted at, and abandoned during childbirth<sup>6</sup>. The Universal Rights of Childbearing Women Charter denounces such acts through its declaration: “Every woman has a right to dignified, respectful, sexual and reproductive health, including during childbirth”<sup>7</sup>. Consequently, global movements have called for the need to focus on person-centered care (PCC)<sup>8</sup>: Engaging women and communities in health care to improve the quality of patient experience and patient-provider interactions.

Adapted from the definition by the Institute of Medicine, we define person-centered reproductive health care (PCRHC) as: “Providing reproductive health care that is respectful of and responsive to individual women and their families’ preferences, needs and values, and ensuring that their values guide all clinical decisions”<sup>9</sup>. PCRHC needs more emphasis, both as an indicator of human rights and a valued quality domain, and for its association with better health outcomes<sup>10</sup>. For example, PCC aspects of quality, such as information-sharing and interpersonal relations, are correlated with increased adoption and continuation of modern family planning methods<sup>11</sup>. Communication between women and their provider during prenatal and delivery care strongly determines women’s satisfaction and utilization of services<sup>12,13</sup>. Continuous support during labor and delivery from partners and providers, including companions of choice, is associated with shorter labor, better coping with pain, decreased incidence of operative birth, increased incidence of spontaneous vaginal delivery, increased maternal satisfaction, less anxiety, and increased rates of breastfeeding initiation<sup>13,14</sup>. Moreover, important predictors of women’s satisfaction with care during delivery in health facilities have been identified as respect, politeness, friendliness, emotional support by a birth companion, privacy, and cleanliness of facilities<sup>15</sup>. While global initiatives have begun to address PCC for women’s health<sup>16</sup>, there is a lack of consensus on how it relates to clinical aspects of quality, how to measure PCC, and how to apply these measures across different contexts.

The objective of this paper is to review theories related to PCRHC, and to develop a framework as it relates to improving the quality of reproductive health, particularly in LMICs. This paper proposes a new framework called the “Person-Centered Care Framework

for Reproductive Health Equity” that lays out the dimensions of PCC and the ways in which it links with clinical quality of care in facilities and broader factors at the community and national level.

## Understanding person-centered reproductive health care: definitions and measures

While PCC has received increased attention in developed settings, there is no consensus on how to measure it for reproductive health outcomes. Thus, in order to define PCRHC and identify unifying measures for it, we assessed separate bodies of work that discuss overlapping issues related to PCC, identified from PubMed and other databases as part of a forthcoming systematic review on measures of maternal health person-centered care (unpublished study, Nicholas Rubashkin, Nadia Diamond-Smith, Ruby Warnock; UCSF). This includes literature from health system responsiveness<sup>17–19</sup>, perceived quality of care<sup>20,21</sup>, mistreatment of women during childbirth<sup>6,22,23</sup>, and the general literature on quality of care for maternal health<sup>24–28</sup> and family planning<sup>29,30</sup>. In addition, we examined the general literature on PCC, mostly from developed settings<sup>9,31–33</sup>. These separate bodies of work include important aspects of PCC, yet are framed differently.

The World Health Survey module on health system responsiveness (HSR) takes a broader focus on non-clinical measures of how individuals are treated and the environment in which treatment occurs in health facilities; however, it is not specific for reproductive health. Domains from the HSR include autonomy, dignity, confidentiality of personal information, quality of basic amenities, choice, prompt attention, clarity of communication, and social support<sup>17–19</sup>. The literature on mistreatment, on the other hand, tends to be specific to care during childbirth, but is framed in the negative—disrespect and abuse, which is described as treatments that make women feel humiliated or disrespected<sup>22</sup>. Bohren *et al.* identify the following typologies for mistreatment of women during childbirth: Physical abuse, sexual abuse, verbal abuse, stigma and discrimination, failure to meet professional standards of care, poor rapport between women and providers, health system conditions and constraints, and inappropriate demands for payment<sup>6</sup>. The literature on mistreatment of women has spurred a lot of work around respectful maternity care<sup>7</sup>. PCRHC, however, captures, and extends beyond, respectful maternity care.

We also explored previous measures of quality of care and PCC in the family planning literature, identified from PubMed, including (but not limited to) survey tools, such as the Service Provision Assessment, Balanced Counseling Strategy, and Quick Investigation of Quality, and measures used by individual studies<sup>11,34–36</sup>. Based on these literatures, we identified eight domains of PCRHC, described below. These domains when put into practice, would each encompass specific measures (see [Table 1](#)).

These domains are not mutually exclusive. For instance, autonomy depends on communication, while trust may depend on perceptions of supportive care as well as communication. Nonetheless, the domains provide a comprehensive map for developing measures that capture key aspects of PCRHC. While certain components of PCC are based in human rights and should be part of universal standards of practice, there are cultural differences

**Table 1. Domains and definitions for person-centered care.**

<b>Dignity</b>	Dignity refers to the ability of women to receive care in a respectful and caring setting. It captures the typologies of physical and verbal abuse from the literature on mistreatment of women during labor and delivery, as well as less subtle acts during patient-provider encounters that make women and their families feel disrespected.
<b>Autonomy</b>	Autonomy implies that providers of health services respect women's views of what is appropriate and support women, her family, and companion of choice to make informed choices. This includes providing consented care. An example of a measure for autonomy is whether women feel involved in decision-making about their care and whether their permission is sought before treatments.
<b>Privacy/Confidentiality</b>	This relates to privacy in the environment in which care is provided, and the concept of privileged communication and confidentiality of medical records. An example is whether women feel others who are not involved in their care could hear information about their care or could see them during physical examinations or during labor and delivery without physical examinations.
<b>Communication</b>	This domain refers to providers clearly explaining to women and family the nature of their condition, details of treatment, and available treatment options. An example is whether providers clearly explain to women their conditions and the purpose of treatments, any side effects of treatments, and whether women understand explanations.
<b>Social support</b>	This domain reflects the extent to which women have access to their companion of choice when receiving care. It also includes their right to receive food and other consumables from family where deemed appropriate. An example is whether family and friends are allowed to stay with them during care.
<b>Supportive care</b>	This refers to providers providing care in a timely, compassionate and caring manner, as well as integration of care in a way that is responsive to patient needs. It also captures abandonment or denial of care, protection from harm and unnecessary procedures, and patient safety. It includes women's perceptions of how providers respond to them when they need more help.
<b>Trust</b>	This captures how women assess their care with providers. Here, measures include whether women feel providers tell them the truth about their care, their health, their child, their situation, and whether they have confidence in the competence of their providers.
<b>Health facility environment</b>	This captures the quality of the facility and providing a fully enabled environment, including the commodities and equipment, but also referral system, communication and transportation, maternal and neonatal health team that can cover the full continuum of care, environment where staff are respected and valued and that is clean, and the extent to which a health facility offers a welcoming and pleasant environment. Examples include clean surroundings and enough space in waiting rooms and wards.

in terms of expectations of care. These domains may be used to develop measures that are culturally relevant and uphold basic human rights.

### Grounding person-centered care in existing frameworks and theory

To develop a framework for PCRHC, we started with the general PCC literature, which has been widely applied in nursing care<sup>37–39</sup>. In particular, McCormack and McCance's (2006) framework comprises four embedded constructs: 1) *Prerequisites*, which focuses on the attributes of the provider; 2) *The care environment*, including supportive systems, effective staff relationships, and organizational systems; 3) *Person-centered processes*, including working with patient's beliefs and values, engagement, having sympathetic presence, sharing decision-making and providing for physical needs. These activities influence the fourth construct, *person-centered outcomes*, such as satisfaction and involvement with care. In this framework, PCC is described both as a process and outcome<sup>38</sup>. However, this framework does not show how PCC relates to clinical care.

The World Health Organization (WHO)'s Quality of Care framework for maternal and newborn health helps to address this link, as it describes how person-centered outcomes relate to clinical quality. In addition, it illustrates how broader health systems lead to the quality of care in facilities, ultimately impacting individual and facility-level outcomes<sup>40</sup>. The framework describes quality of care in terms of provision of care and experiences of care, and posits a bidirectional process between provision of care and experiences of care, which ultimately leads to outcomes including person-centered outcomes and key maternal and newborn health outcomes. This framework conceptualizes PCC specifically as an outcome.

Addressing the social and cultural determinants of health is important in eliminating health inequities—the systematic differences in health status of different population groups that are avoidable or unnecessary<sup>41</sup>. While these frameworks are useful in understanding quality of care, they neglect how women may experience differential treatment based on their social status, influences of communities, and more distal factors, such as gender and violence

norms and women’s roles in society. Cultural Health Capital (CHC) theory fills this gap and has been used to explore how social status and communities may affect PCC<sup>42</sup>. Rooted in Bourdieu’s concepts of cultural capital<sup>43,44</sup>, CHC is defined as a “specialized set of cultural skills, behaviors and interactional styles that are valued and leveraged as assets by both patients and providers in clinical encounters”<sup>45</sup>. CHC is related to the concept of social capital, seen as a resource that patients are able to use to improve interactions in the healthcare setting. Importantly, CHC develops over time and is deeply embedded in patients’ past experiences with healthcare providers or perceptions of healthcare institutions—these are a learned set of skills based on practice and experience. Women in lower social standing groups, including the poor, unmarried, and less educated, may not have past experiences with healthcare settings in order to develop CHC. PCC, therefore, is more challenging in contexts where CHC is low<sup>42</sup>, further deepening health inequities.

The role of expectations of care is reflected in various frameworks on health-seeking behavior. For example, Thaddeus and Maine’s model on the three delays that contribute to maternal mortality among women with complications<sup>46</sup>, as well as its expansion by Gabrysch and Campbell to include care-seeking for uncomplicated pregnancies, all include the role of perceptions of quality care as well as sociocultural factors, economic and physical

accessibility<sup>47</sup>. The Disparities in Skilled Birth Attendance framework further expands on previous work by highlighting that disparities in three important determinants: *Perceived need for care*, *perceived accessibility* (physical and financial) of the service, and *perceived quality of care* contribute to disparities in use of skilled birth attendants<sup>48</sup>. Finally, past frameworks have highlighted the importance of societal/national factors in understanding health equity and maternal healthcare. A framework developed by Freedman and Kruk (2014) for understanding respectful care during childbirth discussed how system level “deficiencies” that are seen as normal and accepted can lead to poor treatment of women<sup>49</sup>. Jewkes and Penn-Kekana conclude that violence against women in obstetric care settings is the result of broader gender inequality, which places women in subordinate positions and creates normative power differentials between providers and patients<sup>50</sup>. While most of the current evidence focuses on childbirth, we believe that the same factors apply more broadly to reproductive health issues, including family planning and safe abortion.

**Towards a conceptual framework: the person-centered care framework for reproductive health equity**

The Person-Centered Care Framework for Reproductive Health Equity builds on these existing frameworks, theories, and literature to situate the domains of PCC (Figure 1). The Framework has

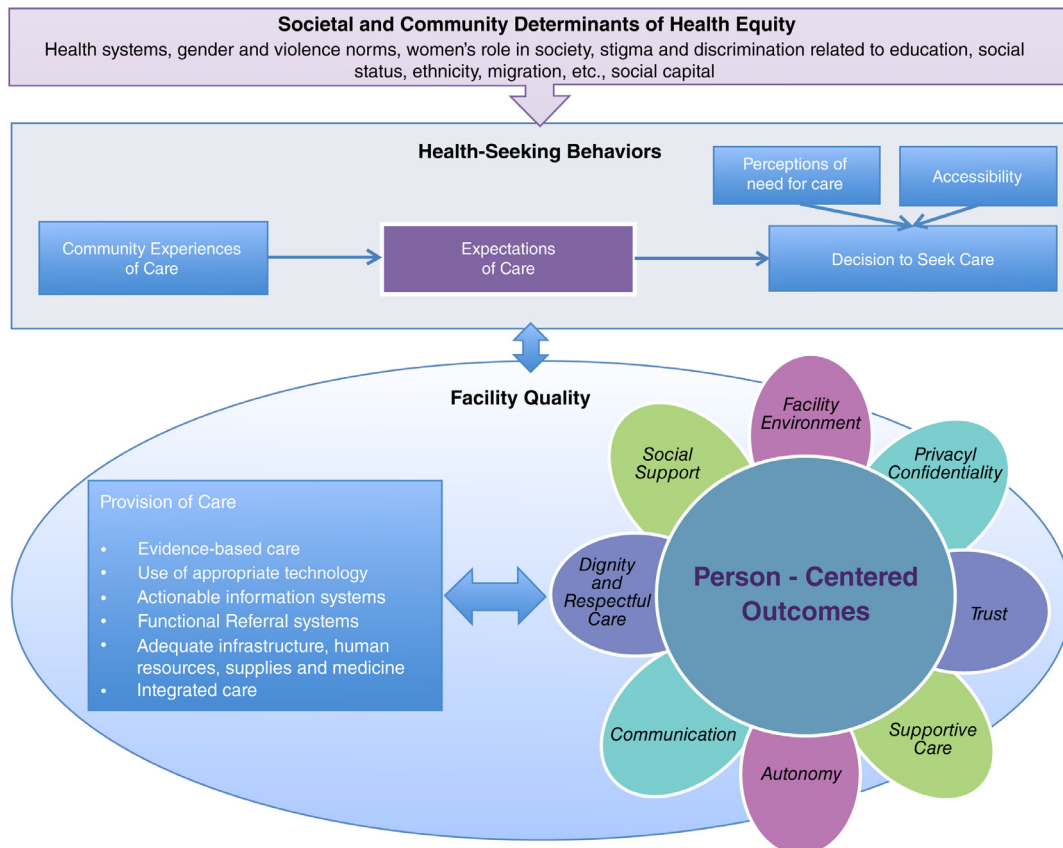


Figure 1. Person-Centered Care Framework for Reproductive Health Equity.

a number of assumptions. First, there are three levels of interacting contexts at play in achieving reproductive health equity. The three levels include: 1) Societal and community determinants of health equity; 2) women's health-seeking behaviors; and 3) facility-level factors, including the provision of technical care and the person-centered dimensions of care. Second, there is a bidirectional influence between health-seeking behaviors and quality of care women experience in facilities. We assume that not only does the decision to seek care influence women's experiences in the facility, but that the quality of care in the facility will also influence communities' and individuals' perceptions of care, needs for care, expectations of care, and ultimately seeking care. Lastly, building off WHO's quality of care framework<sup>40</sup>, the Framework also assumes that there is a bidirectional relationship between provision of care and PCC.

Determinants of health equity include broader health systems, gender and violence norms, women's role in society, stigma and discrimination related to education, social status, ethnicity, and social capital. The way in which women are treated in healthcare settings and in communities in general is oftentimes a reflection of much broader, societal level norms, policies, and behaviors. In settings where women have low status in the household or community, or there is societal acceptance of differential treatment or discrimination based on socio-economic status, such as racial/ethnic minority groups or social statuses, it is possible that there is more normative acceptance of poor treatment of women in the health facility.

These determinants of health equity influence women's health-seeking behaviors, including expectations of and decision to seek care. In line with CHC theory, if women have never been to a healthcare facility prior to their delivery, as is common in India, where less than a third of women go to three or more antenatal care visits<sup>51</sup>, their expectations are likely to differ significantly from a woman who has had past experiences with formal healthcare. Low levels of awareness and realization of deficiencies in services due to illiteracy often leads to lower expectation of the health system<sup>52</sup>. It is likely that women living in high poverty communities are influenced by their first experience of institutional care, and that their expectations diminish or change with increasing familiarity with the system. Importantly, the experience of care at the facility shapes community's perception, expectations of care, and ultimately, whether a woman chooses to go to a facility or not<sup>53</sup>. In developing countries, women with complications delay or avoid seeking care in the same facility if they had a previous negative experience with a provider<sup>52,54</sup>. Thus, women may be less likely to: 1) Seek care; 2) have high expectations of care; and 3) have skills and resources to navigate the system and demand better care.

At the facility level, we build on the WHO's Quality of Care framework by expanding on experiences of care and specifying the domains of PCC. While under-developed in the literature, providers also have constraints in providing quality maternity care, including low salary, lack of recognition, restrictions on clinical practice, lack of supplies and equipment, moral distress and burn out<sup>55</sup>. In addition, there is a feedback loop from the facility-level

to community perceptions. For example, women's experiences of care, whether positive or negative, will be fed back to their sisters, neighbors, daughters, and friends, thus influencing community perceptions of facilities, expectations of care, and ultimately, whether a woman chooses to go to a facility or not<sup>53</sup>.

## Conclusion

Given the interconnectedness of women's health to the broader Sustainable Development Goal (SDG) agenda, new frameworks are needed to achieve health equity in quality of care. For example, of the 17 SDGs, only one is health related (SDG 3); however, many argue that progress against any and all of the SDGs will be delayed without advancements in related goals, including women's empowerment, poverty, water and sanitation, and quality education<sup>56-58</sup>. The framework proposed in this paper integrates mutually interdependent factors at three levels to explain potential sources of health inequity in quality of care, and can also be used to find solutions and next steps. Overarching determinants of health equity influence health-seeking behaviors, such as community's experiences of care, expectations and decision to seek care, but also further determine the provision of care within the facility. We propose domains of PCC, and situate PCC not only as a result of provision of care (primarily the structural and clinical aspect in facility environment), but also the process of care that can further enhance the service provision.

The Framework can be used to inform future strategies and interventions to improve PCC for women, families, and communities. First, it describes how the facility can be a context in which health inequities can be mitigated, particularly through improving PCC. Specifically, health facilities should deliver care that engages women and family caregivers at all levels of care. There are challenges to engaging certain subgroups of women, including those who are poor and less educated, because of provider-patient power dynamics<sup>59</sup>, language barriers, and low cultural health capital in the health care setting<sup>42</sup>. Efforts to address these barriers are essential to mitigating health inequities. The domains in the Framework may be used as guiding principles for facilities or policies aiming to improve PCC, focusing on dignity and respectful care, autonomy, privacy and confidentiality, improving patient-provider communication, social support throughout care, timely and compassionate care, and ensuring that women are treated equally regardless of social status and socioeconomic background. While the Framework is currently based on women's experiences during childbirth and receiving family planning services, its domains and guiding principals are likely applicable to other components of reproductive and maternal health care, including, but not limited to, preconception, antenatal, abortion, and sexually transmitted infections (STIs) care.

It is important to note that providers in facilities also need support from policy-makers and health systems to provide high quality maternity care. Providers are also reflective of larger social and economic factors, oftentimes themselves disrespected for being single and/or working, experiencing lack of safety and security in communities, and absent from policy dialogue<sup>55</sup>. All of these factors combined are significant barriers in providing high quality PCC during maternity and reproductive health care<sup>55</sup>. Reorienting health

systems to better respond to women's, as well as providers', needs and preferences through service delivery points in the community could improve mortality and health outcomes<sup>60</sup>.

Future research should test this Framework in multiple settings in order to better understand women's experiences of care in different contexts. Importantly, further research is also needed to develop culturally appropriate, context-relevant measures that not only address women's values and backgrounds, but also reflect international guidelines and basic human rights. Additionally, future interventions need to address how gender and economic inequities at the national level may play out in the facility and how health systems may better support not only women, but health workers who are also operating under contexts of social inequities<sup>59</sup>.

Across the world, women seek dignity and respect for reproductive health care. Women's experiences during care need to be visualized in a holistic way, where the parameters to assess and improve the quality of services should not only be restricted to within the facility, but also in broader communities. Adopting a PCC framework directly places women's values, decision-making, and cultural backgrounds in the center of care. The Framework will be

of value in the design and strengthening of service improvements that are responsive to women's needs and experience. Integrating the components of this Framework with quality improvement processes in LMICs, and also for poor and vulnerable women living in or migrating to high-income countries, has the potential to lead to improved access to and utilization of safe and humane reproductive health services for women.

### Competing interests

No competing interests were disclosed.

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## Open Peer Review

Current Peer Review Status:



### Version 1

Reviewer Report 10 January 2018

<https://doi.org/10.21956/gatesopenres.13816.r26134>

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**Charlotte E. Warren** 

Population Council, Washington, DC, USA

Thank you for the opportunity to review this paper. A very interesting concept and very timely given the increased focus on equity and women's experience and perceptions of quality of care. The framework definitely does require testing. The domains described are challenging to measure. This was one of the biggest challenges in the initial studies measuring the prevalence of disrespect and abuse during childbirth... moving from a description to a definition that can be measured. See Freedman et al.<sup>1</sup>

I have a few minor comments that should not hold the paper from being indexed.

- **Introduction third paragraph:** The authors write: "Communication between women and their provider during prenatal and delivery care strongly determines women's satisfaction and utilization of services" - What about satisfaction and use of PNC? Although not so common women do access PNC.
- **Introduction 7<sup>th</sup> paragraph** – the Balanced Counseling Strategy is not a survey tool it is a counseling tool for FP providers.
- **Table 1:** Domains and definitions for person-centered care. It would be helpful to use the same language /format for each domain - i.e. "examples include...". Most of the domains have explicit examples of how they are measured – but for three (dignity, trust and supportive care) are not so clear.

### References

1. Freedman LP, Ramsey K, Abuya T, Bellows B, Ndwiga C, Warren CE, Kujawski S, Moyo W, Kruk ME, Mbaruku G: Defining disrespect and abuse of women in childbirth: a research, policy and rights agenda. *Bull World Health Organ.* 2014; **92** (12): 915-7 [PubMed Abstract](#) | [Publisher Full Text](#)

**Is the work clearly and accurately presented and does it cite the current literature?**

Yes

**Is the study design appropriate and is the work technically sound?**

Yes

**Are sufficient details of methods and analysis provided to allow replication by others?**

Yes

**If applicable, is the statistical analysis and its interpretation appropriate?**

Not applicable

**Are all the source data underlying the results available to ensure full reproducibility?**

No source data required

**Are the conclusions drawn adequately supported by the results?**

Yes

**Competing Interests:** No competing interests were disclosed.

**Reviewer Expertise:** Maternal and newborn health, measurement learning and evaluation, community health, frontline healthworkers, health systems strengthening

**I have read this submission. I believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.**

Reviewer Report 10 January 2018

<https://doi.org/10.21956/gatesopenres.13816.r26135>

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**Kelsey Holt** 

Women and Health Initiative, Department of Global Health and Population, Harvard T.H. Chan School of Public Health, Boston, MA, USA

Many thanks for the opportunity to review this exciting commentary. I have detailed below a number of revisions that I feel would strengthen the paper. I am happy to discuss further with the authors if they are interested.

1. Introduction:

1. The article rightfully makes the case for a framework that focuses on reproductive health broadly, not just maternal health, while acknowledging that the framework is based primarily on the MH and FP literature due to the dearth of PCC concepts/frameworks originating in other areas of RH. However, the introduction (and title) still primarily focuses on maternal health. I recommend broadening the intro and justification for the piece by engaging with other areas beyond obstetric care – e.g., a complementary case to the examples from maternal health could be made that person-centered care is particularly important in family planning care given a history of coercive policies and practices that have led to distrust among many communities.

2. Human rights are alluded to in multiple places throughout the article, but a more explicit justification in the Intro section for a focus on PCC from a rights-based standpoint, and not just because of a link to health outcomes or other downstream effects—would strengthen the case.
3. The sentence in the final paragraph of the Intro that states the objective of the framework is a critical sentence and could be more clearly stated; as it stands, “to develop a framework as it [PCC] relates to improving the quality of RH” is too vague and also doesn’t convey the unique focus on equity

## 2. Framework:

1. The unique contribution of this framework lies in layering the concept of social/economic drivers of health inequities onto person-centered care concepts. However, despite the focus on equity, the framework itself does not depict the processes described in the text whereby these social/economic factors influence patient experience of care. I recommend more “real estate” in the framework be given to depicting these processes (which are described in the text but not clear in the framework as a standalone reference). This could be done first by fleshing out the influence of the social/economic components not only on health seeking behavior but on the way individuals experience care (e.g., if a person experiences ethnic or class-based discrimination, that would affect not only their likelihood of seeking care—which is already well depicted—but also what type of care they receive when they get there, independent of their health seeking behaviors. Right?). The paragraph on CHC in the article is very strong and it would be great to translate the CHC constructs discussed into the actual framework. Second, it seems that the main outcome of interest that I think the framework is trying to convey, unjust differences in experiences of reproductive healthcare, should be explicitly represented in the framework. These modifications would make the framework an extremely important contribution to the literature.
2. Optionally, two excellent points made in the text could be worked into the framework as well: 1) intergenerational nature of health inequities and 2) the fact that provider constraints in provision of PCC are also impacted by the social/economic determinants (e.g., underpaid/lower class providers are overworked and this influences the care they provide), with a possible citation to the Lancet Commission on Women and Health which also makes this point.

## 3. Table 1

1. Table 1 is a helpful addition to the literature and could be further strengthened by adding citations to connect each construct with the literature authors reviewed and summarized in the text of the paper
2. Along the lines of making the paper less MH-specific, a nod to the seminal Bruce quality framework from FP could be added at some point in the Table (perhaps in the communication construct) to diversify the examples
3. Trust construct: “assess their care with providers” feels somewhat too general – consider rewording to be more specific to trust

## 4. Other comments/suggestions:

1. On page 4, a clearer transition could be made at the beginning of the “Grounding person-centered care in existing frameworks and theory” section to link it with the prior and make clear how the resources described in this section differ from the ones reviewed in the prior section

2. The first paragraph of the Conclusion section could use work to make a stronger case for the importance of the framework. The connection with the SDGs is unclear, and the final sentence describing the framework is also unclear to me.

5. Additional resources that could be engaged with/cited in the paper:

1. Dennis, A., Blanchard, K., & Bessenaar, T. (2017)<sup>1</sup>
2. Harris S, et al. (2016)<sup>2</sup>

### References

1. Dennis A, Blanchard K, Bessenaar T: Identifying indicators for quality abortion care: a systematic literature review. *J Fam Plann Reprod Health Care*. 2017; **43** (1): 7-15 [PubMed Abstract](#) | [Publisher Full Text](#)
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**Is the work clearly and accurately presented and does it cite the current literature?**

Partly

**Is the study design appropriate and is the work technically sound?**

Yes

**Are sufficient details of methods and analysis provided to allow replication by others?**

Yes

**If applicable, is the statistical analysis and its interpretation appropriate?**

Not applicable

**Are all the source data underlying the results available to ensure full reproducibility?**

No source data required

**Are the conclusions drawn adequately supported by the results?**

Yes

**Competing Interests:** No competing interests were disclosed.

**Reviewer Expertise:** Quality of reproductive health care

**I have read this submission. I believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.**

Reviewer Report 14 December 2017

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## Sarika Chaturvedi

Centre for Complementary and Integrative Health, Interdisciplinary School of Health Sciences, Savitribai Phule Pune University, Pune, India

This is an interesting and relevant work.

The proposed framework is comprehensive and appropriately builds on existing literature.

I have the following comments on the manuscript:

- Although the authors present several determinants of equity, I find that the framework misses affordability aspect. Affordability of care strongly impacts decisions to seek care and also the type or level of care sought. It would be more appropriate to include this aspect more explicitly in the proposed framework.
- Accountability is another important determinant that does not appear in the proposed framework. Accountability to users can influence experience of care as well as provision of care, including functional quality of care. In my view, a framework for equity would be incomplete without alluding to accountability to users.
- The authors switch between quality of reproductive care and maternity care. It would be useful to be specific and consistent.
- It is not clear what the authors mean by 'integrated care'. It would be useful to clarify this.

**Is the work clearly and accurately presented and does it cite the current literature?**

Yes

**Is the study design appropriate and is the work technically sound?**

Yes

**Are sufficient details of methods and analysis provided to allow replication by others?**

Yes

**If applicable, is the statistical analysis and its interpretation appropriate?**

Not applicable

**Are all the source data underlying the results available to ensure full reproducibility?**

Yes

**Are the conclusions drawn adequately supported by the results?**

Yes

**Competing Interests:** No competing interests were disclosed.

**I have read this submission. I believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.**

Reviewer Report 27 November 2017

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**Petra ten Hoop-Bender**

Technical Adviser Sexual and Reproductive Health and Rights, United Nations Population Fund (UNFPA), Geneva, Switzerland

Very interesting and timely article. Would suggest a few clarifications and inclusion of some aspects of compassion and empowerment, just to open space for a fuller discussion in a next paper. The touch upon Cultural Health Capital is both interesting and promising for a deeper delve in a possible future article. The PCC Framework makes sense, but needs to be tried and tested to show it really addresses and captures all the important aspects of PCC. In addition, a health system 'return on investment' case study for PCC would make a big difference in helping countries use the Framework as a guiding tool for service improvement or development.

Please [click here](#) to download a PDF of the article with my detailed comments.

**Is the work clearly and accurately presented and does it cite the current literature?**

Yes

**Is the study design appropriate and is the work technically sound?**

Yes

**Are sufficient details of methods and analysis provided to allow replication by others?**

Yes

**If applicable, is the statistical analysis and its interpretation appropriate?**

Not applicable

**Are all the source data underlying the results available to ensure full reproducibility?**

No source data required

**Are the conclusions drawn adequately supported by the results?**

Yes

**Competing Interests:** No competing interests were disclosed.

**Reviewer Expertise:** Sexual and reproductive health and rights, maternal and newborn health and its workforce

**I have read this submission. I believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.**

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