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Title: Trajectories of women’s abortion-related care: a conceptual framework

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Abstract
We present a new conceptual framework for studying trajectories to obtaining abortion-related care. It assembles for the first time all of the known factors influencing a trajectory and encourages readers to consider the ways these macro- and micro-level factors operate in multiple and sometimes conflicting ways. Based on presentation to and feedback from abortion experts (researchers, providers, funders, policymakers and advisors, advocates) (n=325) between 03/06/2014 and 22/08/2015, and a systematic mapping of peer-reviewed literature (n=424) published between 01/01/2011 and 30/10/2017, our framework synthesises the factors shaping abortion trajectories, grouped into three domains: abortion-specific experiences, individual contexts, and (inter)national and sub-national contexts. Our framework includes time-dependent processes involved in an individual trajectory, starting with timing of pregnancy awareness. This framework can be used to guide testable hypotheses about enabling and inhibiting influences on care-seeking behaviour and consideration about how abortion trajectories might be influenced by policy or practice. Research based on understanding of trajectories has the potential to improve women’s experiences and outcomes of abortion-related care.
Keywords

Induced Abortion

Conceptual framework

Systematic mapping
1.0 Introduction

Abortion is a common feature of people’s reproductive lives. An estimated 56 million induced abortions occur annually (Sedgh et al., 2016), of which 54.9% (49.9%-59.4%, 90% C.I.) are unsafe (Ganatra et al., 2017). Unsafe abortion is a major public health problem, especially in contexts where access to legal abortion is highly restricted. An estimated 7.9% (4.7%-13.2%, 95% C.I.) of maternal deaths are due to unsafe abortion (Say et al., 2014); unsafe abortion is also a leading cause of maternal morbidity. While medical procedures for inducing safe abortion are straightforward, whether or not an abortion is available or safe or unsafe is influenced by a complex mix of politics, access, social attitudes and individual experiences. Up to 40% of women who experience abortion complications do not receive sufficient care (Singh et al., 2009). Understanding the complexity around obtaining abortion-related care is urgently needed, especially in light of the intense policy attention abortion receives. Abortion care is a landscape in flux, with rapid increases in access to and use of pharmaceuticals to induce abortion (Kapp et al., 2017), and shifting national and international laws, policies, treaties, protocols and funding provision (Barot, 2017a, b).

In recent years, research has helped elucidate abortion-related practices. There is increased recognition of the scale and consequences of unsafe abortion, including the costs for both women and health systems, in a range of legal settings (Singh et al., 2014). Inequalities in accessing abortion-related care have been identified in many settings, associated with multiple individual characteristics including, but not limited to, age (Shah & Ahman, 2012), marital status (Andersen et al., 2015), ethnicity (Dehlendorf & Weitz, 2011), geographic location (Jones & Jerman, 2013) and economic circumstances (Ostrach & Cheyney, 2014). Women experience multiple, intersecting inequalities in access to abortion-related care (Becker et al., 2011). The critical role of delays in abortion-related care-seeking (Foster et al., 2008; Sowmini, 2013) and of what happens when women are denied services are better understood (DePiñeres et al., 2017; Gerdts et
We know much more about attitudes and stigma around abortion (Faúndes et al., 2013; Hanschmidt et al., 2016). Making sense of this body of research so that it can inform effective policy and help identify salient gaps in knowledge is a substantial endeavour. We lack synthesis of the known time- and context-specific influences on trajectories to abortion-related care. Conceptual frameworks of abortion-related care have dealt only with discrete aspects of women’s experiences, such as determinants of use of a safe abortion programme (Benson, 2005) or decisions which lead women to experience post-abortion complications (Banerjee & Andersen, 2012).

The conceptual framework we propose considers all the factors influencing a woman’s trajectory to obtaining abortion-related care (safe abortion, unsafe abortion and/or post-abortion care). Obtaining abortion-related care can involve many steps and be non-linear (Marecek et al., 2017). We define an abortion trajectory as the processes and transitions occurring over time for a pregnancy that ends in abortion. We use ‘trajectory’ because it incorporates the concept of time – critical for understanding abortion-related care-seeking since safe abortion ceases to be an option as pregnancy progresses (the exact limit varies depending on context). We use the shorthand descriptor ‘women’ but acknowledge adolescents and transgender men within that.

Abortion is distinct from other healthcare-seeking behaviour since: i) legality and understanding of legal rights overlay an individual’s pathway to care, ii) women’s abortion options are determined by the gestational age of the pregnancy, iii) abortion is episodic, not chronic, iv) abortion is stigmatised, and v) only women receive abortion-related care. Three main groups of health-related theories might be employed to understand and explain abortion-related care-seeking: determinant, socio-ecological, and pathway. These theories have rarely been used to frame research on obtaining abortion-related care. Theoretically-informed research on abortion has tended to employ explanatory frameworks related to
other domains including stigma (Lipp, 2011), policy (Aniteye & Mayhew, 2013), lifecourse (Edmeades et al., 2010), reproductive agency (Cleeve et al., 2017), reproductive justice (Katz, 2017), post-colonial feminism (Chiweshe et al., 2017) and social psychological frameworks (Cockrill & Nack, 2013).

Determinant health-related theories are models that elucidate a set of explanatory factors for the use of healthcare (Ajzen & Fishbein, 1980; Ajzen & Madden, 1986; Andersen, 1995; Bandura, 1977; Becker, 1974; Rosenstock, 1966). They remain influential in the framing of research on health care-seeking, health service use and health behaviour change (Babitsch et al., 2012; Ricketts & Goldsmith, 2005). Determinant theories have been criticised for their underlying individual rational actor orientation, focusing on characteristics of users versus non-users of care but providing little insight into dynamic care-seeking processes (Mackian et al., 2004; Pescosolido, 1992). Socio-ecological models (McLeroy et al., 1988; Stokols, 1996) consider multiple levels (e.g.: structural, community, individual) of influence on behaviour, and reciprocal causation between behaviour and social environments, unlike determinant models that largely conceptualise healthcare decision-making and use as an individual-level process. However, simple socio-ecological models are limited in their representation of time-dependent processes and events. Pathway-based models, which disaggregate healthcare decision-making into constituent steps, challenge frameworks that conceive each health care-seeking event in isolation (Mackian et al., 2004; Pescosolido, 1992). Understanding abortion-related care-seeking requires dynamic process-oriented perspectives; the circumstances of a pregnancy leading to an abortion unfold in the space of a few weeks and can be highly unpredictable. Abortion-related care-seeking cannot be understood only through a linear course of action; it is a process that responds to changing circumstances and experiences. The conceptual framework we present is a mechanism for showing interrelatedness across the various temporal and spatial dimensions that influence and shape abortion-related care-seeking for one pregnancy. In this paper we i) review all influences on obtaining abortion-related care, ii) organise these into a conceptual framework, and iii)
discuss how our framework can facilitate new research to better understand obtaining abortion-related care.

2.0 Methods

We used an inductive two-step approach to build this conceptual framework: initial drafting based on expert research and practice knowledge, and subsequent systematic evidence mapping of peer-reviewed literature.

We originally conceived the conceptual framework at an international seminar (IUSSP, 2014). Thematic analysis of issues reported in the papers presented at the seminar, which included studies from Africa, Asia, Latin America and Europe (n=24), along with authors’ practice knowledge, were used to draft a first iteration of the framework based on a thematic analysis of issues reported in the seminar papers. The first draft of the framework, which was also informed by the authors’ practice knowledge, was presented and discussed at the end of the seminar. Subsequent iterations of the framework were intensively discussed among the authors over several months and presented to specialist audiences at national and international meetings (Table 1) and continually revised following their feedback. This process introduced additional components to our framework, such as the importance of national policies not directly related to health (e.g. education and welfare policies), and elaborated specific components (e.g. relief as an impact of abortion on mental health; the addition of caste-based inequalities among those shaping social positions on fertility and abortion). In addition to individual components, presentation and feedback to specialist audiences shaped the structure of the conceptual framework, informing our distinction between this framework and socio-ecological models and our efforts to present the framework visually so as to maximise its utility.
To confirm that the conceptual framework comprehensively captured all documented influences on obtaining abortion care we conducted a systematic evidence mapping of English-language peer-reviewed literature. Evidence mapping is an evidence synthesis methodology that is a variant of the systematic review (Miake-Lye et al., 2016); it is a systematic search of a broad field that describes as widely as possible all of the literature relating to the topic without limiting to studies that assess the strength or direction of relationships. It methodically identifies and develops a map of the literature (Clapton et al., 2009) and is increasingly used in a range of social sciences (Miake-Lye et al., 2016). Evidence mapping can be much more inclusive than a systematic review: our only quality criterion was that the study should be published in a peer-reviewed journal. Multiple references based on the same sample were not excluded (as would be the case in a systematic review) since data generated from one study population might investigate different issues of relevance.

Three electronic databases [PubMed, ScienceDirect, JSTOR] of peer-reviewed literature were searched for items published in English between 01/01/2011 and 30/10/2017. These databases were selected for their coverage of biomedical and social science research. Combinations of relevant search terms were developed and tested for sensitivity. The final combinations of search terms were: (abortion* OR termination* OR (menstru* AND regul*)) AND (Deci* OR Pathw* OR Passage* OR Rout* OR Course* OR Traject* OR Trail* OR Track* OR Direction*). Figure 1 illustrates the process.

After removing duplicates, all items identified by the search were screened on their title and abstract to determine inclusion. Items were included if: published in full text in English in a peer-reviewed journal between 01/01/2011 and 30/10/2017, and the abstract included any factor that either influenced, or was mentioned as potentially influencing, obtaining abortion care. Non-peer-reviewed items (e.g. comment, book review, letters) were excluded. Where inclusion or exclusion could not be determined on the basis of
title and abstract, the full text was screened. Articles were included if they considered trajectories, or influences on trajectories, to abortion-related care. Details of included items are available [INSERT LINK TO ONLINE FILE A]. We compared the full text of each included item (n=424) to the draft conceptual framework. Components we identified to be inadequately captured by the draft framework were incorporated in subsequent iterations. These included both an additional component ‘quality of care’, which superseded a previous inclusion of ‘health workforce treatment of women’, as well as amendments to components, such as broadening ‘perception of provider care’ to ‘perception or experience of provider care’. All decisions about changes to framework components were made as a team, drawing on our reading, expertise and the discussions we had about the framework with experts during its development.

Our search methodology has limitations. Language and date restrictions mean that including additional languages or years might have yielded additional information; however, our search did yield evidence from all geographic regions, including research conducted in non-English languages but published in English. By focusing on more recently published evidence (post-2010), our framework reflects a contemporary summary of the field of abortion-related care-seeking evidence. We searched only three databases, selected for their range (biomedical and social science); additional databases might include additional evidence, although the number of duplicates (n=1027) yielded by our search suggests that our strategy is robust. Our search only included abortion-related terms (abortion, termination, menstrual regulation); our search will not have yielded articles that discuss pregnancy decision making without reference to abortion. Our mapping approach means that the relative weight and rigour of evidence on the factors identified remain unknown. The final conceptual framework represents all aspects of trajectories to abortion-related care as illuminated by expert researchers, practice knowledge, and in 424 articles.
A conceptual framework is a set of ideas, presented in a structured way to help understand a phenomenon (Reichel & Ramey, 1987). Our framework (Figure 2) represents “the main things to be studied” (Miles & Huberman, 1994 p.18) with regard to trajectories to obtaining abortion-related care. It synthesises influences shaping these trajectories, grouped in three domains to highlight the individual- and macro-contexts shaping abortion-related care:

1. Time-oriented abortion-specific experiences: beginning with pregnancy awareness, events that women may experience in seeking abortion-related care.

2. Individual contexts: characteristics that influence whether a woman obtains abortion-related care, including interpersonal networks.

3. (Inter)national and sub-national contexts: the context within which an individual – and her abortion – are situated.

To understand the trajectory of a pregnancy that ends in abortion, it must be situated within individual- and macro- contexts; all three domains are interrelated. For example, access to pregnancy testing (abortion-specific experiences) might be influenced by a woman’s wealth (individual context) and the health system (inter/national context). The framework is globally applicable, capturing concepts that are relevant across time and space. For readability, our framework includes brief phrases or single words for each component. This comprehensive visual overview is the primary contribution of our article. To illustrate its relevance across settings, in the following sections we explicate the framework’s components using examples.

We begin at the individual level – a woman’s abortion-specific experiences, her context and characteristics, and then discuss the macro-level influences on trajectories to obtaining abortion-related care. Unlike the conceptual framework itself (Figure 2), this requires us to present the three domains in some order. We
start with experiences of a specific abortion since a woman may have more than one abortion in her lifetime, and a single trajectory to obtaining care might be composed of more than one abortion attempt. Our evidence-based illustration of each component is presented along with a text box that provides further examples.

4.0 ABORTION-SPECIFIC EXPERIENCES

The actions women take on their trajectories to (attempt to) terminate a pregnancy are shaped by factors in their individual contexts and by their macro-environments. We consider in this section the multiple events that women may experience in obtaining an abortion. The trajectory begins with becoming aware of a pregnancy and ends with abortion-related care; in between there may be (non-) disclosure and negotiation about abortion, seeking resources to obtain the abortion, and more than one attempt to terminate the pregnancy, with sequelae of those attempts. These events may not be linear; for example, a woman may disclose to an individual who provides information that the woman acts upon; this information may not lead to an abortion, so the woman might disclose to a different person in order to seek different or additional information or resources to procure an abortion (Moore et al., 2011b). Emotions about pregnancy, abortion and parenting influence all steps of abortion-specific experience. Each step is embedded in contexts both micro (individual) and macro; we address the importance of these contexts in subsequent sections.

4.1 Awareness of pregnancy
Decision making around abortion-related care is highly time-sensitive. Abortion at earlier gestations is safer than later gestations and laws and guidelines vary about the maximum gestation at which abortion is permitted, under which conditions and with which method. Time between conception and awareness of pregnancy is inversely related to how much time a woman has to decide about abortion. In many settings, pregnancy tests are unavailable or unaffordable (Stanback et al., 2013) and women’s estimation of gestational age – particularly for younger and/or nulliparous women - can be incorrect (Foster & Kimport, 2013; Janiak et al., 2014).

The timing of action to confirm a pregnancy can be linked to the social risks of pregnancy. When a pregnancy is undesirable a woman may avoid acknowledging the pregnancy to herself (Sowmini, 2013). For example, young unmarried women in an Indian study were less likely to recognise (or acknowledge) their pregnancy than their married counterparts, and unmarried women had higher levels of second trimester abortions (Jejeebhoy et al., 2010). In addition, the gestational age at which diagnostic testing (if available or used) for foetal abnormality and/or sex - factors that may change whether the woman has an abortion - varies by context (Gawron et al., 2013).

4.2 Disclosure
Some women do not disclose their pregnancy and take abortion decisions alone (Bowes & Macleod, 2006). For women who do disclose their pregnancy, the person(s) to whom they disclose may influence abortion decisions, be a source of (mis-)information, and/or provide access to resources for abortion-related care. Disclosure may lead to negotiation about whether or how to abort. Decisions about disclosure are influenced by wider social norms and belief systems. For example, both the choice of confidant(s) and their influence are embedded in the woman’s larger context of relationships and ability to access resources (Nyanzi et al., 2005). In a study among young women in urban Cameroon, disclosure to male partners was influenced by the need for financial support for the abortion (Calvès, 2002). Disclosure discussions are enmeshed in the macro-context; more limited abortion options may necessitate more disclosure in order to seek information about care (Rossier, 2007), or disclosure may be enforced due to service providers’ partner or parental notification protocols. Disclosure may lead to emotional support around an abortion decision or pressure to abort or not abort (Schwandt et al., 2013). Disclosure of pregnancy may lead to a range of negative outcomes, including condemnation and abandonment (Tangmunkongvorakul et al., 2005) or punishment (Umuhoza et al., 2013). Fears about the implications of disclosure of the pregnancy

- Ability to disclose, to whom (e.g. family, friend, partner, health professional, provider, acquaintance) and the implications of that (e.g. the confidant’s knowledge, experience, advice, reaction)
- Negotiation around abortion with (any) others involved in the decision (e.g. partner, relatives, (potential) abortion providers)
- Reasons for disclosure or non-disclosure (e.g. policies around partner or parental notification)
- Timing of (any) disclosure(s)
- Emotions about disclosure (e.g. fear of reactions, shame, stigma, relief)
or the desire to abort may delay initiating the abortion (Labandera et al., 2016) or compel a woman to seek a less safe abortion (Schuster, 2005).

4.3 Ability to access resources for abortion

- Social/emotional support for/against abortion (e.g. from partners, relatives, friends, providers, doula)
- Material/physical resources (e.g. transport, money, childcare, ability to miss education or employment, insurance, commodities, information)
- Access to abortion provider/method (e.g. border crossing, journey time, face-to-face versus web-based provider)

Women’s ability to access resources to procure an abortion is important in every setting. Social and emotional support for or against abortion-related care is linked to whether, and to whom, the pregnancy is disclosed. A friend or partner providing support may influence the location and type of abortion (Conkling et al., 2015). Access to financial resources, frequently linked to social support, may be critical to a woman’s ability to access abortion information and services. In Latin American countries where abortion is illegal, access to economic resources and emotional support were critical for accessing a medically supervised medical abortion in a clandestine clinic (Zamberlin et al., 2012). One quarter of urban Mozambican women who sought a first trimester termination at a public hospital delayed care in order to have sufficient funds to pay user fees (Mitchell et al., 2010). Women’s sources of information extend beyond their social networks to include advertising, agents, the internet and other clients of abortion providers (Gerdts et al., 2017; Osur et al., 2015). The difference between a safe or unsafe abortion may be whether someone can pay for a safer procedure (Moore et al., 2011b) or whether she can travel to avoid more restrictive laws to locations with more permissive laws (Foster et al., 2012). Accessibility of abortion
services is multidimensional and closely linked to macro-environmental factors including legality, distance and cost (Sethna & Doull, 2013) and individual contextual factors such as mobility (Azmat et al., 2012).

### 4.4 Abortion attempt(s)

- Gestational age
- Counseling (e.g. (non-)directed, (un)supportive, waiting period, referrals)
- Location abortion sought or conducted (e.g. home, (un)regulated facility)
- Type of abortion (e.g. (un)safe, (il)legal, medical, surgical, self- or provider-initiated)
- Perception or experience of provider care (e.g. (dis)respectful, judgmental, confidentiality, privacy, pain management, exposure to protests/harassment)

The complexity and length of abortion trajectories is heterogeneous, influenced not only by a woman’s context, but also her experiences relating to that specific pregnancy, and may range from a legal, straightforwardly-accessed safe process, to multiple unsafe attempts (Coast & Murray, 2016). In some settings, women may have options about what kind of abortion to access; in others, women may not (perceive themselves to) have any choices (Banerjee & Andersen, 2012). Gestational age at the time of the abortion may have implications for the woman’s health and affect the type of abortion provided; if women present beyond a gestational limit, they can be denied a legal abortion (Harries et al., 2015). Especially, but not only, in contexts where abortion is stigmatised and/or illegal (or perceived to be illegal) in general or at advanced gestational age, women self-induce using household objects, traditional methods, and abortion medications (Rasch et al., 2014; Vallely et al., 2015).

Abortion trajectories may also be influenced by professional advice. Provision of counselling may differ depending upon a woman’s circumstances (Ramachandar & Pelto, 2002), policies including mandated
waiting periods, and the socio-legal (Gerdts & Hudaya, 2016) and funding (discussed below) context of abortion. Although good counselling should be non-directive, this does not necessarily happen (Vincent, 2011). Counselling may play an important role in women’s choice of abortion method (Tamang et al., 2012), however not all women who seek abortion want counselling (Cameron & Glasier, 2013) or the counselling that is provided (Moore et al., 2011a). A woman who expects judgemental or disrespectful advice or counselling from one provider may seek care elsewhere. The perception and experience of negative responses from health practitioners against women seeking abortion are widely reported (e.g. Ghana (Schwandt et al., 2013), Brazil (Diniz et al., 2012), Vietnam (Nguyễn et al., 2007)).

When women have a choice about abortion type, their decision may be informed by their understandings of abortion-related care and its quality, including comfort, pain (Allen et al., 2012), flexibility of when the abortion can occur, (perceived) confidentiality, provider attitudes towards privacy, and stigmatising provider behaviours (Labandera et al., 2016). In some settings, anti-abortion protests outside abortion providers may affect abortion care-seeking by encouraging women to avoid providers where they may have to confront them (Kimport et al., 2012a).
4.5 Perceived and experienced outcomes from (attempted) abortion

- Physical health (e.g. pain, side effects, future fertility, resulting or avoidance of morbidity or mortality)
- Mental health (e.g. depression, relief, guilt, shame)
- Socio-economic effects (e.g. out of pocket payments, legal/penal consequences, maintaining a relationship, education or occupation)

Once a woman has obtained or attempted an abortion, she may require treatment for abortion complications. Physical health consequences of abortion are almost entirely confined to events following unsafe abortion (Gerdts et al., 2015). Whether and how a woman who needs post-abortion care seeks it has parallels to those factors that influenced obtaining the abortion: recognition of the need for care (post-abortion complications) (Ngoc et al., 2014), availability or cost of post-abortion care (Leone et al., 2016), and social support for managing complications (Lubinga et al., 2013). Delays in initiating or receiving post-abortion care, which might be due to practitioners withholding care or women withholding information or both, are an established cause of maternal morbidity and mortality. A woman may experience a range of emotional sequelae after an abortion, including relief, regret, ambivalence, shame and guilt (Andersson et al., 2014; Subramaney et al., 2015) that may change over time (Rocca et al., 2015). In many settings, women worry about their future fertility following a termination (Moore et al., 2011c).
Women may have conflicting and changing emotions about being pregnant, childbearing, and abortion (Aiken & Potter, 2013; Andersson et al., 2014), which may be influenced by reactions received or anticipated from disclosure. A pregnancy has short- and long-term economic and opportunity costs for women; these may be exacerbated when the pregnancy is unintended (Gipson et al., 2008). Individual circumstances influence whether abortion provides a better outcome for a woman than bearing a child at that time, and women give many reasons for having an abortion. For example, in Bangladesh, women and their husbands described challenging life circumstances (poor health, poverty) that influenced their decisions to terminate (Gipson & Hindin, 2008). In some contexts, a pregnancy with close birth spacing may be unacceptable; evidence from Ghana suggests that child spacing played an important role in some women’s abortion trajectories (Oduro & Otsin, 2014). These intersecting realities (social, cultural, economic, health) may influence women’s feelings about abortion (Biggs et al., 2013), and their self-efficacy to achieve one (Kavanagh et al., 2012). For abortions due to foetal abnormality, emotions may be additionally complex (Lafarge et al., 2013).

5.0 INDIVIDUAL CONTEXT

The individual level domain focuses on the characteristics of an individual that influence if, where and how she obtains abortion-related care, including her interpersonal networks. The experiences related to
abortion-related care for a pregnancy (a woman may have more than one abortion in her lifetime) are shaped by a woman’s context at that point in time: her knowledge and beliefs about abortion (which may change over time) and her characteristics at the time of the pregnancy. This next framework domain considers how factors associated with a woman’s individual context combine, and are affected by other domains, to influence an abortion trajectory.

5.1 Knowledge & beliefs about abortion

- Awareness of possibility and sourcing of abortion care (e.g. pre-existing knowledge / knowledge sought as a result of pregnancy)
- Ability to seek accurate information about safe abortion-related care
- Knowledge about abortion (e.g. methods, legality)
- Perceptions and knowledge of abortion consequences (e.g. risks [health, social, penal], benefits, side effects, social, economic, legal, relationship, health)
- Beliefs about morality of abortion (e.g. faith, internalised stigma)

Women use a range of networks to access abortion information (Carlsson et al., 2016; Kimport et al., 2012b; Osur et al., 2015), but their ability to obtain accurate information about abortion varies (Ramos et al., 2015). Knowledge about the possibility and sourcing of abortion-related care might include prior experience or exposure to abortion from social networks (Arambepola & Rajapaksa, 2014). Low levels of knowledge about abortion legality may act as a barrier to accessing abortion services (Marlow et al., 2014).

Women’s perceptions about the consequences – positive and negative – of care-seeking may be linked to their reasons for seeking an abortion (Gipson et al., 2011; Ralph et al., 2014). How women, and others involved, make sense of relative risks is important for understanding trajectories (Izugbara et al., 2015).
Trajectories are additionally shaped by the need to maintain secrecy (Marlow et al., 2014) or fear of prosecution (Schuster, 2010). Whether the need to maintain secrecy is out of fear of punishment from others or fear of exposure – for socially-unsanctioned sex or abortion - can shape her trajectory. Construction and experiences of stigma are multiple and overlapping (Orner et al., 2011) and can impact delays in obtaining an abortion or post-abortion care, and how that care is sought. (Izugbara et al., 2015). These trajectories may be influenced by women’s strategies to manage their religious and moral beliefs (Cockrill et al., 2013; Schuster, 2005) and internalised stigma (Kebede et al., 2012; Palomino et al., 2011).

5.2 Individual characteristics

- Socio-economic, demographic and health characteristics (e.g. age, wealth, education, sexuality, gender identity, ethnicity/race, language, legal status [e.g. legal minor, refugee, undocumented migrant], partnership type [e.g. non-/marital, non-/consensual, romantic, commercial, transactional, incestuous], pre-existing health condition [e.g. HIV, substance abuse])
- Partner / family / community context (e.g. status in household, family role [e.g. daughter-in-law])
- Fertility intentions (e.g. non-use of contraception, contraceptive failure, parity, sex of foetus)
- Life course aspirations (e.g. education, employment, fertility, partnership)
- Self-efficacy / agency (e.g. autonomy, power)

Individual characteristics, that is, a woman’s social location, aspirations and efficacy, influence abortion-related trajectories in multiple and intersecting ways. These include: education (DaVanzo & Rahman, 2014), age (Clyde et al., 2013), economic status (Sundaram et al., 2012), experience of violence (Nguyen et al., 2012; Perry et al., 2015), health, including pre-existing conditions such as HIV status or mental illness (Barbosa et al., 2012; van Ditzhuijzen et al., 2015), partner characteristics (Chibber et al., 2014), previous
experience of abortion (Asplin et al., 2013), ethnicity or race (Cowan, 2013), parity (Puri et al., 2011), sexual orientation and gender identity (Beaumonis & Bond-Theriault, 2017) and religiosity (Liang et al., 2013). Relationship expectations have implications for the consequences of pregnancy, while the roles played by men in women’s trajectories are heterogeneous, from non-involvement to mutual decision-making (Freeman et al., 2017). Women’s aspirations – or others’ aspirations for them - including (future) fertility, education, employment and relationships can contribute to the decisions around abortion (Gbago et al., 2015; Gomez-Scott & Cooney, 2014). In contexts where women have control over their fertility decisions, women’s autonomy or self-efficacy to obtain an abortion is mediated by factors such as age (Domingos et al., 2013) or mobility (Azmat et al., 2012).

The extent and direction of the influence of individual social, economic, demographic and health characteristics depends on context. Abortion access for young people who have not reached the age of majority varies by regulations about parental notification (Kavanagh et al., 2012). The role of men’s involvement in abortion trajectories reflects not only the type of relationship in which the pregnancy occurred but also the gendered norms and roles of the woman’s culture. Women may seek abortion to prevent anticipated negative relationship consequences (Vallely et al., 2015). Fertility decision-making power may not rest with the pregnant woman, and others (e.g. her partner, mother-in-law, mother) may be important influencers (MacQuarrie & Edmeades, 2015; Madkour et al., 2013). Individual characteristics intersect to affect women’s trajectories; a study of women who had an abortion in the Netherlands found that, compared to women without prior mental disorders, women with a psychiatric history were more likely to score lower on abortion-specific self-efficacy (van Ditzhuijzen et al., 2015).
6.0 The (inter)national and sub-national context

This framework domain describes the context within which an individual woman – and her abortion – is situated. It includes components operating at a range of scales, from an individual’s community to international influences. Abortion-specific and individual-level factors occur within and are shaped by (and shape) macro-level structural and institutional environments. Influences include (il)legality of abortion, punishment of those who violate laws, accessibility of safe abortion, and normative constructs of abortion and fertility.

6.1 Structural and institutional environment

- Legal/penal/regulatory environment (sub-national, national, regional, international) (e.g. penalties for providers/procurers of abortion; constitution; non-/commitment to regional/international treaties; treatment protocols [including gestational limits, mandated waiting times / referrals]; commodities registration, marketing and licensing)
- Government (e.g. law enforcement, judicial role, resources [e.g. financial, human])
- Civil society: position and influence
- Faith-based institutions: position and influence
- Role of institutional environment in personal decision-making
- Anti/pro-natalist and associated policies (e.g. education, employment)
- Fragility of state (e.g. post-/conflict, crisis)

Institutions (e.g. political, governmental, faith-based, private, civil society) operate and interact at global, regional, multilateral, national and sub-national levels to shape availability of abortion care in local contexts. The influence of institutions on each other, and each institution’s position on abortion, is interwoven. International institutions can shape the availability of abortion in other national and sub-
national contexts, both ideologically and financially. For example, the issue of a USA Presidential Memorandum that reinstated and extended the ‘Mexico City Policy’ in 2017 prevents non-governmental organisations and agencies operating anywhere in the world from providing, referring or giving information about abortion services if they receive federal funding for any part of their work, regardless of local context (laws, bills of rights) or the professional codes of health practitioners employed in these organisations (Singh & Karim, 2017). Abortion is regulated almost everywhere; to date only Canada has effectively decriminalised abortion (Berer, 2017). Regulation is heterogeneous regarding abortion methods and gestational limits, including the grounds upon which second trimester abortions can occur (Boland, 2010). Laws may be made nationally or sub-nationally, and might apply to specific geographic regions (Sánchez Fuentes et al., 2008) or population sub-groups (Grindlay et al., 2011). The legal position on abortion might be specified in penal codes, but is also set out in health legislation, court decisions, constitutions, or clinical guidelines (WHO, 2017), and may change over time (Bergallo & Ramón Michel, 2016) or be affected by international convention (Daly, 2011). For example, priorities for health services may change in conflict settings (Palmer & Storeng, 2016), along with social rules governing sexual behaviour, increasing risks of unwanted pregnancy and unsafe abortion (McGinn & Casey, 2016). Abortion for rape victims is legal under the Geneva Conventions, customary international law, and international humanitarian law regardless of national laws, but provision is variable (GCJ, 2011).

However, legal position only partly determines access to abortion care (Berer, 2013). Policymakers and service providers alike have may low levels of knowledge about abortion legality, influencing how and whether they provide care (Moore et al., 2014). Inaccurate knowledge of the law may prevent otherwise willing practitioners from providing legal services (Ramos et al., 2014), while practitioners may provide services clandestinely despite legal restrictions (Pheterson & Azize, 2005). Abortion regulation may be at best difficult to understand, and at worse contradictory (Boland, 2010) so that arbiters of law themselves,
including police and prosecutors, lack clarity about what is il/legal (Suh, 2014). Where abortion is legally restricted, there may be punishments specified for providers and/or procurers; these punishments may be rarely enforced or enforced unequally (Bankole et al., 2008). Abortion laws, policies and services shift in response to religious, societal and political change (Hodes, 2013). National and international civil society includes advocates for both increased and reduced access to abortion services (Berer, 2017; Castle, 2011). For example, following legal reform in Colombia, feminist civil society organisations used strategic litigations to counter backlash from institutions opposed to abortion (Ruibal, 2014). Communities mobilise (and can be mobilised); an intervention to educate communities about gynaecologic uses for misoprostol in Kenya and Tanzania, where abortion is legally restricted, showed it was possible to share information without political backlash (Coeytaux et al., 2014). Transnational advocacy is increasingly used to increase the visibility and scale of abortion debates and information (Stevenson, 2014).

Faith-based organisations influence access to abortion depending on the dominance of religion(s) in a setting, the extent to which religion influences governance and health service delivery, and permissibility of abortion within religious teaching and local interpretation (Al-Matary & Ali, 2014). For example, the Roman Catholic Church has a strong stance against abortion yet its influence on national laws and policies is stronger in Catholic Latin America, where abortion is severely restricted, than in Catholic Western Europe, where abortion is widely available (Blofield, 2008). Religious institutions’ messages on abortion can have multiple influences including how a woman perceives the morality of abortion and how women who have abortions are treated by society. Faith-based organisations may also shape abortion trajectories as healthcare providers (Eisenberg & Leslie, 2017). Institutional influence on reproduction, including abortion, range from coercive and/or explicit mandates to implicit disincentives or inducements (Barot, 2012). These might be linked to policies, such as school exclusion of pregnant pupils, or legality of anti-abortion protests.
### 6.2 Health system

<table>
<thead>
<tr>
<th>Components</th>
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<tbody>
<tr>
<td>Formal (e.g. finance [public, private, insurance], infrastructure, governance, health information, training, investment priorities, provision for conscientious objection, commodities [including drug regulation, marketing and distribution], human resources, stigma/harassment experienced by providers, diagnostic testing, abortion conditionality, parental/spousal notification)</td>
</tr>
<tr>
<td>Informal (e.g. alternative and/or illegal providers [e.g. traditional healers or herbalists, unlicensed doctors or pharmacists], self-administration of abortion)</td>
</tr>
<tr>
<td>Quality of care (e.g. health workforce treatment of women, accessibility of il/legal and/or un/safe services, privacy, confidentiality)</td>
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Trajectories to abortion care are shaped by complex health systems that incorporate formal and informal components, government and non-government provision, infrastructure (e.g. where health facilities are located and how they receive resources, including commodities), flows of information (e.g. health messages about where, how and for whom abortion is provided), and level of investment. For example, access to safe abortion is influenced by who is legally permitted to provide services. In many settings only doctors provide services; where services are delivered by mid-level providers, safe abortion care has become more accessible (Berer, 2009). Less- or un-regulated abortion care is delivered by a range of practitioners, including public sector practitioners with private clinics at their homes, herbalists, traditional birth attendants, and pharmacists (Norris et al., 2016). The safety of abortion provided outside of the formal health system or by less-regulated providers varies. Informal abortion may be sought because: these services are more established; of limited knowledge of how to access care from formal health systems; of understandings about quality of care provided within each system; or, because of perceptions
or expectations of poor and/or non-confidential treatment within formal systems. Health system financing (e.g., free, subsidised, insurance, co-payments) affects how abortion-related care is sought and paid for (Foster & Kimport, 2013). Funding and services in some settings can be tied to laws and policies of donor countries (Barot, 2017b). Health systems may act as barriers to or delay obtaining abortion care, including multiple referrals or follow-up visits, mandatory diagnostics (including ultrasound), or the waiting times, parental or spousal notification discussed, and conditionality (French et al., 2016; Janiak et al., 2014).

Abortion-related care is additionally shaped by providers’ attitudes and practice, which may reflect (in)adequate training (Birdsey et al., 2016; Holcombe et al., 2015). The kind of treatment women expect to receive from providers, including judgemental or punitive attitudes, influences where and when abortion care is sought. Provider attitudes influence the availability of abortion care – both numbers of practitioners and information about finding them (Harries et al., 2009). Providers may support abortion where it is legally prohibited (Vasquez et al., 2012), or refuse to provide abortion where it is legal (Harries et al., 2009). Conscientious objection to abortion may reflect stigma or violence providers themselves perceive or experience (Holcombe et al., 2015), and/or serve to further stigmatise abortion care-seeking.

Registration, marketing and distribution of drugs for inducing abortion influence the availability of abortion, as well as the safety of medical abortions. Within formal systems, factors including funding, communication across different parts of the health system, and the locality and accessibility of healthcare facilities, influence drug supply chains. Drug accessibility may be dependent upon inclusion in essential drugs lists stocked in public facilities and provided through the national government (Ipas, 2009) and availability for non-abortion ‘off-label’ use (Fernandez et al., 2009). For example, in the Palestinian territories, where abortion is permitted only to save the life of the pregnant woman or when the embryo is unviable, pharmacists provide misoprostol to women under a greater variety of circumstances (Hyman et
Availability of abortion drugs is not correlated with legality of abortion: unregulated abortion using drugs is delivered by a range of practitioners, including public sector practitioners who have private clinics at their homes, herbalists, traditional birth attendants, and pharmacists (Norris et al., 2016). Vendors may have limited knowledge about effective doses, dispense drugs without reliable knowledge of gestational age, and provide insufficient instructions about side effects and risks, or where to seek help for complications (Lara et al., 2011; Sneeringer et al., 2012). Poor control of drug marketing and subsequent misuse of abortion drugs is particularly likely when abortion is prohibited (Coêlho et al., 1993). However legal provision of information about illegal off-label use is a harm reduction approach to unsafe abortion used in some settings (Hyman et al., 2013). When drugs are acquired clandestinely, they may be counterfeit (Powell-Jackson et al., 2015). Features of health systems related to the quality of abortion-related care influence women’s experiences, including choice of location or type of treatment (Hedqvist et al., 2016) and privacy and confidentiality (McLemore et al., 2015), discussed above. There is little agreement, however, about what constitutes quality abortion care and the indicators to assess it (Dennis et al., 2016).
The knowledge environment includes general discourses around abortion and the specific information someone might know or seek about abortion-related care (Andersson et al., 2014). This framework component captures the importance of knowledge-sharing norms, differential access to knowledge (mediated by individual contexts, such as wealth, education, language), availability, penetration and types of knowledge-sharing technologies (e.g. internet, phones) and the effectiveness of knowledge-delivery systems for determining individuals’ understanding of the legal, financial and practical availability of abortion. Who delivers messages, how they are delivered, and the content of those messages shape the knowledge environment (Purcell et al., 2014) and may affect service availability and use (MacFarlane et al., 2017) or changes in laws and policies (Umuhoza et al., 2013). Information about abortion may be appropriate to the population’s information literacy skills or it may be concealed. In the USA, information may be obscured by facilities (e.g.: “crisis pregnancy centers”) that advertise abortion services but deliver counselling to dissuade women from having abortions (Rosen, 2012). Information about abortion can include explanations about safety or side effects. In South Africa, mobile phone messages to support women using misoprostol at home for early medication abortion significantly reduced women’s anxiety and improved preparedness for abortion symptoms (Constant et al., 2014).
6.4 Socio-cultural context

- Norms and acceptability of abortion (e.g. presence of stigma or shame, religious influence)
- Fertility norms (e.g. family size, gender preferences, birth spacing)
- Norms and (in)equalities (e.g. gender, race, ethnicity, wealth, caste, social class)

Socio-cultural context includes a broad range of factors influencing abortion trajectories, and is tightly linked to other components such as the influence of institutions or healthcare practitioners’ willingness to provide abortion services. Norms about abortion acceptability, including stigma and shame, are shaped by (in)equalities (e.g. gender, race, ethnicity). In Ghana, women who seek care following an unsafe abortion report social stigma leading to fear, shame and embarrassment in abortion decision-making (Tagoe-Darko, 2013). Norms are reproduced through discourse (media, popular, medical), institutions, communities and personal experiences (Kebede et al., 2012). In rural South Africa, discussion about abortion revealed that legal abortion was considered to be destructive of traditional culture, strongly associated with a colonialist endeavour, and harmful to intergenerational and gender relations (Macleod et al., 2011). Inequities in access to abortion-related services may be affected by individual or group characteristics, such as ethnicity or religion (Liang et al., 2013; Sethna & Doull, 2013).

In some settings, while abortion might be normatively shameful, it might be perceived as less shameful than a pregnancy in some circumstances (Johnson-Hanks, 2002). In other contexts, the reverse relationship may prevail (Fordyce, 2012). Socio-cultural context influences whether sex-selective abortion is present, reflecting norms around sex preference and family size (Bongaarts & Guilmoto, 2015) and attitudes of providers, institutions and society (Hohmann et al., 2014).
7.0 CONCLUSIONS

We present a conceptual framework of women’s trajectories to obtaining abortion-related care (Figure 2). This integrative framework helps develop understandings of women’s abortion-related care trajectories in a way that identifies discrete components while at the same time representing the integration of components operating (sometimes in conflict) at macro- and micro levels. Previous research on women’s trajectories to abortion – including that conducted by the authors – has tended to focus on specific aspects of trajectories. In assembling for the first time all of the explanatory factors influencing a woman’s abortion trajectory, our framework can be used to test theories and generate hypotheses relevant to obtaining abortion-related care.

Our inductive approach to framework building generated a conceptual framework from evidence. Our framework builds on characteristics of other models of health-related behaviour. The three domains – abortion-specific, individual, inter/national – have characteristics similar to a socio-ecological model. However, our framework is not a simple socio-ecological model because it additionally incorporates time-dependent processes specific to abortion. The start of any abortion trajectory begins with pregnancy awareness. In this respect, our framework incorporates aspects of pathway models, acknowledging the dynamic care-seeking processes that can be involved in terminating a pregnancy. The framework is not limited by the individual rational actor-oriented framing of determinant models.

Our conceptual framework is built on expert consultation and a systematic literature mapping. Our systematic approach is sufficiently robust and comprehensive to assert that the framework includes the known universe of factors affecting women’s trajectories to abortion-related care. Our conceptual framework will need to be modified to reflect future empirical and theoretical evidence generation.
The conceptual framework marks a significant step forward for how researchers might conceptualise and understand trajectories to abortion care. By specifying and linking influences, our framework can be used to inform research design and analyses, across epistemologies, methodologies, and contexts. Each component of our framework can be researched in isolation; and by considering the ways in which each component may be affected by other components, we may gain fuller insight into factors influencing women’s trajectories. Our framework components are flexible to adapt to the (sometimes rapidly) changing landscape of abortion care-seeking such as the rapid increase in self-use of medical abortion (Kapp et al., 2017). It situates the abortion trajectory for a pregnancy, highlighting the critical role played by timing of pregnancy awareness, and identifying the set of processes involved in an individual trajectory, including multiple abortion attempts. This identification suggests testable hypotheses about how abortion trajectories might be influenced by policy or practice.

Our conceptual framework can be used to assess how, why and with what consequences, women’s abortion-related trajectories are shaped. Every component of our framework allows for testing hypotheses about how abortion trajectories might be influenced by modifications to, for example, the legal system, policy environment or individual behaviour. Such interventions have the potential to impact abortion-related morbidity and mortality outcomes.
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