

FAMILY PLANNING

PREPAREDNESS FOR PUBLIC

HEALTH EMERGENCIES

Identifying factors impacting access and exploring interventions to improve access to family planning services in LMIC during the current and future public health emergencies

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FAMILY PLANNING PREPAREDNESS FOR PUBLIC HEALTH EMERGENCIES

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by

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Declaration:

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ABBREVIATIONS

CHW	Community health workers
COVID-19	Coronavirus disease
CSO	Civil society organisations
FGM	Female genital mutilation
FIGO	The International Federation of Gynecology and Obstetrics
FP	Family planning
FP2020	Family Planning 2020
GBV	Gender-based violence
H1N1	Influenza A virus subtype H1N1
HIC	High Income Countries
HIP	High Impact Practices
LARC	Long-acting reversible contraceptive
LMIC	Low- and Middle-Income Countries
MSI	Marie Stopes International
NGO	Non-governmental organisation
PHE	Public health emergencies
PNC	Post-natal contraception
PPE	Personal protective equipment
RH	Reproductive health
SARS	Severe acute respiratory syndrome
SARS-CoV-2	Severe acute respiratory syndrome coronavirus 2
SRH	Sexual and reproductive health
SRHR	Sexual and reproductive health rights
UNFPA	United Nations Population Fund
WHO	World Health Organization

GLOSSARY

Adolescents: there is no global standardised age range for adolescents, but they are individuals or a group of individuals who are in the transitional phase between a child and matured adult (1).

Community health workers (CHW): Members of the community who work as part of the local health system. CHW usually come from the same community and share similar characteristics, such as language and ethnicity, from the community which they serve. They can be in either paid or volunteer positions (2).

Contraceptive commodities: Includes contraceptive medication, barrier contraceptives, such as condoms, and other goods that are required for contraceptive use by clients.

Endemic: a persisting illness that is present at consistent and predictable rates within a particular population (3,4).

Epidemic: The rapid spread of an illness, affecting a large number of people within a population or region (5,6).

Family planning (FP): The provision of information, counselling, and methods to individuals who wish to plan and control if and when they want to have children, as well as how many. This involves many different methods including long-acting reversible contraception (LARC), short-acting contraception, barriers, permanent methods, and natural techniques (7). For this review, abortion has also been included within the scope FP as it is a means of enabling women to achieve their FP goals (8).

Health Care Access: Access in health care can most simply be defined as “the opportunity or right to receive health care” (9), however, access also includes the opportunity to seek, reach, and use services to meet a health care need (10). There needs to be both the availability of effective services on the supply side, and the realisation of this access through service utilisation on the demand side (11), and a problem on either side can result in poor access.

High Impact Practices (HIP): Family planning practices which have been appraised by experts and assessed for evidence of proven or promising effectiveness. HIP’s target: enabling environments; service delivery; social and behaviour change; and enhancement of reach and access (12).

Long-acting reversible contraception (LARC): Contraception that provide long-acting, reversible, and effective protection from pregnancy through the insertion of a hormonal implant in the woman’s arm, or a intrauterine device, which require minimal upkeep (13).

Lockdown restrictions: Whilst the specifics of a lockdown vary in different public health emergencies, typically lockdown restrictions involve the closure of unessential businesses, schools, and the enforcement of rules to stay at home and minimise travel.

Outbreak: A sudden and rapid increase in the incidence of an illness in a geographic area where the illness was constantly persisting at a stable rate, or the first incidence of a disease in a new region (6,14).

Pandemic: The global and extensive spread of a novel and dangerous disease (15). However, other characteristics of a pandemic often include high transmissibility, novelty with no prior immunity within the population, and severe outcomes (16).

Personal protective equipment (PPE): Equipment that an individual uses or wears to protect them from hazards to their safety. In the context of PHE, this includes respiratory protective equipment, such as face masks, eye protection, such as goggles or visors, gloves and gowns (17,18).

Pharmacy/drug shop: Sites where medicines and health commodities can be purchased. Unlike pharmacies, trained pharmacists do not work in drug shops, and therefore, these shops can only sell non-prescription or medication that has been pre-packaged (19).

Post-natal contraception (PNC): Initiation of contraception in the postnatal period to prevent unintended pregnancies and allowing spacing between pregnancies (20).

Private health sector: Actors that are independent of governments and who provide health services. This includes for-profit and not-for-profit actors, including non-governmental organisations, private institutions, and pharmaceutical companies (21).

Public Health Emergency (PHE): Events or conditions that incapacitate routine functions and abilities due to the severity, uncertainty, and timing of said event or condition (22). PHE within this review will focus on PHE caused by the spread of disease, such as an outbreak, natural disasters, or environmental causes that pose a risk to peoples' health, such as radiation, which negatively impact the health of a large portion of the population (23).

Public health sector: Health care provided through governmentally funded services.

Self-care methods: Methods that enable the service user to attend to their family planning needs without direct contact or supervision from a health care worker, including medication, such as injectable contraception (24).

Service providers: In this review, service providers relate to the provision of health care services. They are either a health care organisation or facility where a range of services, such as treatment, counselling and medicines are provided to clients seeking their care, Service providers can also be the individual health professionals who make up health care systems, such as a doctor, nurse, or pharmacists, who are able to provide differing expertise and skills depending on the needs of the client (25,26).

Service users: Individuals or a group of people who use or are impacted by services (27,28), in this review, specifically health care services.

Sexual and reproductive health (SRH): the “complete physical, mental and social well-being” relating to an individuals’ reproductive system and sex life (29,30)

Short-acting methods: Contraceptive methods that require the user to regularly use due to the short-acting effectiveness. They include hormonal methods (oral pill, including combined and progesterone-only, contraceptive patch, contraceptive ring, and injectable contraception) and barrier methods (male and female condoms, diaphragm, cervical cap, sponge, and spermicides) (31).

Telehealth: Provision of health services, including medical care, information, education, and self-care through the use of digital technologies and telecommunications. This includes mobile apps, live video calls, and remote patient monitoring (32).

Women: an adult female, however, in the context of this literature review, it refers to women of reproductive age who utilise family planning services.

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I would also like to dedicate this thesis to the health care workers battling on the front lines of the COVID-19 pandemic, who are working relentlessly to save lives and safeguard our access to health care. I hope this thesis can provide some support in the future of public health emergency preparedness to ease the burden on health systems and protect the sexual and reproductive rights of people around the world.

INTRODUCTION

My name is Elizabeth Jackson, a paediatric nurse from the United Kingdom. Even prior to the commencement of my nurse training, I have been interested in international health and becoming an asset to the work of organisations that pursue the goal of health for all.

During my nursing career, I took my first steps towards this by completing a professional diploma in tropical nursing, which further developed my drive to invest my time and skills in the sphere of international health.

I have also contributed to the works of international studies focusing on women's sexual and reproductive health, including analysing data from a survey study on sexual and reproductive health behaviours, with this data subsequently presented during the Global Women's Research Society's (GLOW) 2020 online conference. More recently, I was invited to assist researchers working in Bangladesh on a study for Share-Net International looking at the impact of COVID-19 on family planning services.

Throughout the course of my Master's, I directed my learning towards sexual and reproductive health, and have been interested in the role of gender in health inequities, including family planning. However, just 4 months into my studies, the first case of COVID-19 was detected, and the subsequent and unprecedented fallout of the pandemic has greatly impacted the lives of people around the world.

The COVID-19 pandemic has persisted for 20 months and there is still uncertainty for how long we will be living with the repercussions of this pandemic. The pandemic has impacted nearly every aspect of living, including family planning. Outbreaks, pandemics, and other public health emergencies are not new, yet there was a complete unpreparedness for how to ensure continuity of crucial services whilst tackling the virus. This neglect of persisting and essential health needs can have large and permanent consequences on the health of the population, and there is need to uphold peoples' health rights, regardless of whether they are accessing health care during a public health emergency or not.

Whilst not all public health emergencies have been experienced to the same scale as the current COVID-19 pandemic, there should be lessons learnt from previous public health emergencies, including the ongoing pandemic, to ensure that the health of populations are not compromised or neglected in the fight to overcome the threatening disease.

This, in combination with my experiences and learning, has led me to choose a topic for my thesis that focuses not just on how public health emergencies impact access for family planning, but also how we can ensure that access is maintained or improved during the current pandemic and future public health emergencies, and sexual and reproductive rights protected.

ABSTRACT

Background: The emergence of the novel COVID-19 virus in 2019 exposed the lack of preparedness for responding to PHE by health systems, particularly in low- and middle-income countries (LMIC). The emergency efforts to prevent and treat the disease divert attention away from other health services, including family planning (FP). The neglect of FP needs during PHE can have severe, and even fatal, consequences for the population. Therefore, there needs to be a review of the literature to identify the factors impacting access to FP imposed by PHE, and the interventions that can overcome access barriers to inform response planning and preparedness in the current and future PHE in LMIC.

Methods: A literature review was conducted using PubMed, including MEDLINE, Google Scholar, and the Vrije Universiteit Amsterdam online library. Sources from Google and grey literature were also included. The findings were thematically analysed using Levesque's framework of access to health care and disaggregated amongst the 5 dimensions: Perceptions of needs and desire for care; Health care seeking; Health care reaching; Health care utilisation; and Health care consequences.

Results and Discussion:

The main findings of this review showed that deprioritisation of FP, lack of service user engagement in response planning, fears of infection at facilities, and lockdown restrictions were the primary factors impacting access. Successful and promising interventions to improve FP access in PHE included the recognition of FP as an essential service, engagement of service users, the implementation of telehealth, client reassurance of safety measures within facilities, collaborations with community leaders and CHW, and public and private sector partnerships. The barriers and interventions were discussed and used to formulate a list of recommendations for stakeholders to inform and improve the preparedness plans for future PHE.

Conclusion: This literature review was able to recognise how PHE can be detrimental to FP access in LMIC and offers support and recommendations that can be used and adapted to improve the preparedness of health systems in the future. However, there is a need for a stronger body of evidence to provide support for the effectiveness, appropriateness, and safety of the interventions in LMIC.

Keywords: access, barriers, COVID-19, family planning, low- and middle-income countries (LMIC), preparedness, public health emergencies, sexual and reproductive health (SRH)

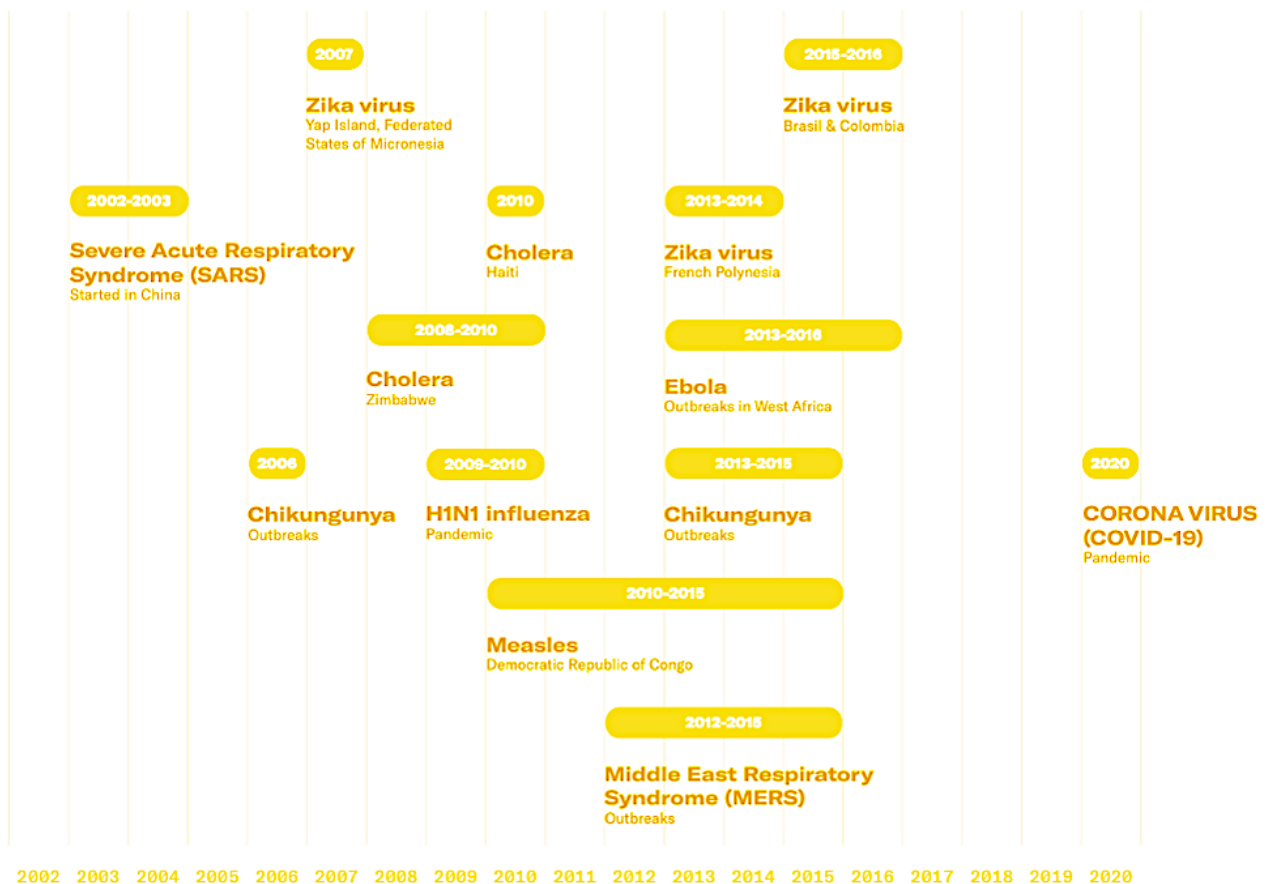
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CHAPTER 1: BACKGROUND

1.1. PUBLIC HEALTH EMERGENCIES

Public health emergencies (PHE) are significant and unpredictable events, such as the spread of an illness, a natural disaster, or environmental hazard, that lead to disruptions to routine functions, subsequently inducing negative impacts on population health (22,23). In the context of this review, PHE refer to the spread of infectious diseases, as seen in outbreaks, endemics, epidemics, and pandemics. Humans have always been plagued with the threat and introduction of new and dangerous diseases. During the span of just over 20 years, there have been 13 global PHE, including severe acute respiratory syndrome (SARS), Influenza A virus subtype H1N1 (H1N1), Ebola, and Zika, as seen in Figure 1 (33). Whilst certain characteristics amongst these illnesses vary, they all can create barriers that adversely impact the accessibility of health care to populations (34). Often, PHE create conditions where health services are unable to continue the provision of primary health services, due to the increased burden of patients on health systems or a lack of necessary supplies. Other disruptions can leave service users' struggling to physically reach health services at all.

Figure 1. Timeline of public health emergencies since 2002 (33)



For years, experts in infectious diseases have warned of the inevitable emergence of a new disease that would rapidly spread, leading to the next PHE (35,36). As globalisation and international travel continue to expand (37,38), infectious diseases epidemiologist Syra Madad estimated that it could take just two months for a novel disease to spread worldwide (35). However, despite these warnings and experiences of previous PHE, we still were unprepared when the SARS-CoV-2, or COVID-19 virus, emerged in Wuhan, China, in December 2019 (39). To date, COVID-19 has infected over 200 million people, with over 4 million deaths worldwide (40); however, there are speculations that these number have been underreported (41,42).

Whilst there is hope with the development and rollout of vaccines (43), the long-term picture and impact of the current pandemic are still unknown. West Africa is still living with the scars from the Ebola outbreaks (44,45), and we cannot be naïve enough to think the current pandemic will not be the same, if not more prominent.

Unlike other PHE, COVID-19 effectively shut down the whole world in an unprecedented global response to tackle the virus, as countries struggled to control the spread (46). Due to this, businesses and industries were halted, and the world is now facing an economic downturn (47). As with other PHE, hospitals have become overwhelmed with the influx of infected patients, at the expense of other health needs, with death rates in non-COVID-19 patients also expected to rise (48,49) due to the suspension of services not deemed essential (50–54).

1.2. FAMILY PLANNING

According to the United Nations Population Fund (UNFPA), sexual and reproductive health (SRH) is “a state of complete physical, mental and social well-being in all matters relating to the reproductive system” (30); however, the World Health Organization (WHO) adds that healthy and fulfilling sexual experiences should also come under SRH (29). To achieve this, access to adequate SRH information and a choice of effective and affordable contraceptive methods are imperative (55). However, SRH is just an umbrella term under which many other aspects of an individuals’ SRH fall, including sexuality, STI-prevention, maternal care, and family planning (FP) (30). FP encompasses the use of contraceptive methods, information and counselling to enable individuals to plan and achieve the number of children they desire, if and when they desire (7,56). Abortion often is not considered a form of FP due to the stance that FP is strictly preventative (56,57). However, it is a crucial element in empowering women to meet their FP goals (58), and therefore, throughout this literature review, it will be included in the scope of FP.

Although FP is a fundamental human right that is essential for peoples’ overall health and quality of life (7,56), it remains a highly stigmatised and overlooked topic, with many governments, service providers and service users neglecting FP to avoid the associated controversy (59–62). But this negligence has had dire consequences. Globally, 40% of pregnancies are unintended, leading to 85 million pregnant women. Of these, 50% of women abort the pregnancy; however, in low- and middle-income countries (LMIC), a lack

of access to safe abortion services pushes women towards unsafe abortions, resulting in thousands of additional maternal deaths each year (63).

Furthermore, whilst FP affects everyone, the conversation of FP is often presented as a women's issue and responsibility (55,64), which has led to the manipulation of FP laws and practices as a means to oppress the rights of, particularly marginalised, women (65–68). The advantages of adequate FP for women's health and empowerment are numerous, from reductions in maternal deaths, improved educational outcomes and career prospects, increased income, reduced population growth, and bodily-autonomy (7,30,58,69). Therefore, the fight for gender equality and global development cannot overlook the importance of access to adequate, accessible, and appropriate FP for women. FP has been deemed one of the most cost-effective health interventions as these outcomes also create economic benefits and stronger societies, as women can earn their own income and pull themselves out of poverty (70).

Nevertheless, accessing FP services is not always easy. Many women are experiencing circumstances that make them more vulnerable and health care less accessible. For adolescents, unmarried women, women living in remote areas, or those who have a low income, there is greater difficulty in acquiring FP commodities. Additionally, a lack of knowledge of the services available, supply shortages and inability to travel also hamper women's ability to identify or fulfil their FP needs. Therefore, these barriers make certain women more susceptible to an unplanned pregnancy (7) and the subsequent consequences, such as perinatal depression, unsafe abortions, and, particularly for unmarried women in certain societies, social stigma (71–74).

CHAPTER 2: PROBLEM STATEMENT

2.1. PROBLEM STATEMENT

During PHE, there is a shift in the priorities of health systems, as they divert their attention and resources towards tackling the spread and treatment of the threatening disease (35). In response to the emergence of the novel coronavirus in 2019, or COVID-19, necessary mitigation measures have been implemented to slow down the spread of the, now global, virus. However, health systems continue to become overwhelmed with COVID-19 patients, requiring more and more of these resources to be drawn away from non-COVID-19 departments, such as services for non-communicable diseases and chronic conditions, and pooled into the treatment and prevention of COVID-19 (75–79).

As other health services become deprioritised, there is a risk of secondary consequences to the populations' health, such as rises in mortality among people with cancer due to the postponement of oncology services and referrals during the current COVID-19 pandemic (80–82). Additionally, service utilisation decreases during PHE, as users avoid or struggle to access health care services (44,83,84). The burden of PHE is experienced differently across the globe depending on the resilience of each countries health system. There is a particular concern for LMIC where health systems are already facing a lack of resources, governance, and infrastructure prior to the strain of PHE.

FP services have often been side-lined in the efforts to tackle PHE, with restricted service access and reduced uptake despite service users' ongoing needs and rights (33,85). Even before COVID-19, FP access was fragile and insecure. However, these are not novel findings. Women's sexual and reproductive health rights (SRHR) have continually been oppressed due to the actions and inactions of governments that have failed to recognise the necessity of FP access throughout PHE, such as the Ebola and Zika epidemics, and, now, the COVID-19 pandemic (85–88).

This can have lasting ramifications on women and their families. During the current pandemic, the Guttmacher Institute has estimated that, globally, an additional 48.5 million women in LMIC are not having their FP needs met due to the disruptions to FP services, leading to an estimated 1.4 million more unintended pregnancies (89). Moreover, with access to abortion care also being hampered, facilities cannot meet the increasing number of pregnant women's needs (90,91).

The social, financial, physical and emotional implications for women of unmet FP needs can be as urgent and fatal as the disease itself, with increases in the rates of gender-based violence (GBV), female-genital mutilation (FGM) and financial instability (92). Furthermore, Riley et al. anticipated that the combination of increases in unintended pregnancies and the decreases in access to quality maternal and abortion care in LMIC would lead to an additional 28,000 maternal deaths, 168,000 newborn deaths and 1,000 deaths from unsafe abortions during the ongoing COVID-19 PHE (89). Furthermore, the consequences of compromising FP are disproportionately distributed, with populations that faced access

barriers and vulnerabilities before PHE more heavily impacted, such as refugees, minorities, and those with low-income (82,93).

Recent PHE and FP literature consistently outline the need for better preparedness of health systems to ensure FP needs can be met and services accessed throughout the current and future PHE (94,95). In order to maintain and better ready FP services and build them to be more resilient during PHE in LMIC, we must look back and learn from the struggles, and the successes and failures of previous PHE, including the ongoing pandemic. We must also protect the rights and abilities of service users to access these services.

2.2. JUSTIFICATION

Up to 48.5 million women worldwide have unmet FP needs due to the pandemic, and previous PHE have similarly impacted women's access to FP services (85,87–89). There is a need to identify how access to FP is impacted during PHE and explore more effective methods to ensure women's FP needs continue to be met in LMIC during PHE, including the current pandemic, to maintain their SRHR.

2.3. OBJECTIVES

Main objective: Improve preparedness plans for the current and future PHE through identifying factors impacting supply and demand factors impacting access to FP during a PHE in LMIC and exploring interventions to improve this access

Sub-objective 1: Identify the supply and demand factors impacting access to FP services in LMIC during the current and previous PHE

Sub-objective 2: Explore previously successful, unsuccessful, and promising measures to ensure access to FP in LMIC during the current and past PHE

From the findings of these objectives, recommendations will be formulated for preparedness plans for future PHE.

CHAPTER 3: METHODOLOGY

In order to fulfil the objectives, a literature review was conducted and set of defined inclusion and exclusion criteria (Table 1.) were applied to results to determine which literature was incorporated into the review.

The selected literature was read and analysed thematically using the chosen Levesque analytical framework. The selected literature was read, and their findings were allocated to the applicable dimensions of the framework to allow for the discussion and formulation of recommendations later in the paper.

3.1. SEARCH STRATEGY

The search strategy aimed to find literature focused on FP access and use of contraception and abortion services, primarily through the current and previous PHE; however, literature with findings in stable settings that may be promising during PHE were also examined.

The terms outlined in Table 1 were chosen and applied to ensure all relevant literature was captured in the search. The key search terms were family planning and public health emergency. Synonyms of these words and examples of recent PHE, seen in Table 1, were also searched to ensure all relevant literature was captured in the search.

These terms were run through PubMed, which includes the MEDLINE database, and the Vrije Universiteit Amsterdam online library to identify relevant literature. When searching in PubMed, MeSH terms were used to ensure findings with keywords that are linked to these terms were also found. Google Scholar and Google were used to find literature and grey literature sources, and the snowballing technique was applied to locate significant literature further. Grey literature includes unpublished literature, government documents, reports, and presentations (96,97). These findings have been acquired through Google searches and reviewing the online sites of the following organisations: Guttmacher Institute, Share-Net International, WHO, United Nations Population Fund (UNFPA) and International Planned Parenthood Federation (IPPF), among others.

Table 1. Search terms

Key word	Synonyms used
Family planning	Sexual health, reproductive health, sexual and reproductive health, sexual and reproductive health rights (SRHR), contraception, contraceptive, abortion
Public health emergency	Public health emergencies (PHE), pandemic, epidemic, endemic, outbreak, COVID-19, Coronavirus, Ebola, SARS, MERS, Zika virus, H1N1, Cholera, HIV, AIDS, Chikungunya, Measles

3.2. SEARCH CRITERIA

From the search results, the inclusion and exclusion criteria in the table below (Table 2.) were applied to narrow the selection to only pertinent, readable, and current literature. In addition to this, duplicates of the same literature found in different searches were removed.

The abstracts and summaries of the resulting literature were read and screened for relevancy. Both qualitative and quantitative literature were included to allow the triangulation of findings and enrich discussion on the success of suggested methods. Furthermore, no FP methods were excluded from the search to broaden the findings for discussion. There are no exclusion criteria for “Context”, as promising findings from stable settings will also be included in the results. Whilst this review focuses on access in LMIC, relevant literature from all settings were included to identify potentially promising interventions that could inspire innovation in LMIC. There has, however, been recognition of the setting from which the findings originate, and how success in one setting, such as a high-income country (HIC) may not produce the same effect in another, such as a LMIC.

Table 2. Inclusion and exclusion criteria

CATEGORY	INCLUSION CRITERIA	EXCLUSION CRITERIA
Population of interest	People of reproductive age (15-49 years) <u>Reasoning:</u> whilst FP tends to focus on women, male-focused interventions may have success and should also be discussed	People outside of the reproductive age range <u>Reasoning:</u> this study is focusing on FP and thus literature on populations who do not require these services will not be relevant
Focus	Family planning <u>Reasoning:</u> to ensure the focus of literature on access and interventions is centred on FP	Non-FP focus <u>Reasoning:</u> FP presents with a range of specific issues that do not relate to other health focuses, such as stigma and gender Inequities, therefore, literature with a non-FP will not be relevant
Context	Public health emergency <u>Reasoning:</u> the FP landscape in PHE, such as pandemics, is very different to that of stable and unimpaired contexts	
Publication date	Literature published post-2011 (last 10 years) <u>Reasoning:</u> ensure findings are current and reflective of the world today	Literature published pre-2011 <u>Reasoning:</u> whilst there have been health crises pre-dating 2010, the advances in technology, healthcare and infrastructure since 2011 mean literature older than 10 years may no longer be relevant for the current global situation
Language	English texts <u>Reasoning:</u> the author is only able to read English	Non-English texts <u>Reasoning:</u> non-English texts may be translated incorrectly, and due to time constraints, translation of of non-English literature is not available

Of the findings, 2 of the sources were recorded webinars from Family Planning 2020 (FP2020) and WHO (98,99). For these findings, the webinars were watched, and the relevant

data was transcribed verbatim by the author. The resulting data was then combined with the other findings and underwent the same thematic analysis.

3.3. ANALYTICAL FRAMEWORK

Multiple analytical frameworks were examined for this review. Initially, the Framework for Ensuring Human Rights in the Provision of Contraceptive Information and Services by WHO was considered; however, the WHO's framework concentrated more on respecting and adhering to human rights laws in the design, implementation and provision of contraceptive services rather than on access to these services (100). The MEASURE Evaluation Family Planning and Reproductive Health Conceptual Framework was also contemplated (101), and whilst this framework is comprehensive and focuses on both supply and demand sides of healthcare, it was decided that the framework was too complex and the detailed disaggregation of the process may falter the flow of discussion. Eventually, the Levesque framework of access to healthcare (Figure.1) was chosen due to its' focus on access from the demand and supply perspective, comprehensiveness, and logical and clear structure (10). As this review focuses on identifying barriers to access and methods that enable women's access to FP services during PHE, it was decided that this analytical framework would be most suitable for analysing the literature.

The five steps in Levesque's framework correlate to the five dimensions of access: perceptions of needs and desire for care; health care seeking, health care reaching; health care utilisation; and health care consequences. The literature findings were reviewed and sorted into the appropriate steps of the framework. The findings were discussed through the lens of the service providers accessibility (supply) and the corresponding abilities of the services users (demand), to identify the experienced barriers to access and whether found methods and interventions were suitable to overcome these barriers in the current and previous PHE. Whilst other definitions of access were explored, Levesque's definition and corresponding model of access will be used during this review (10).

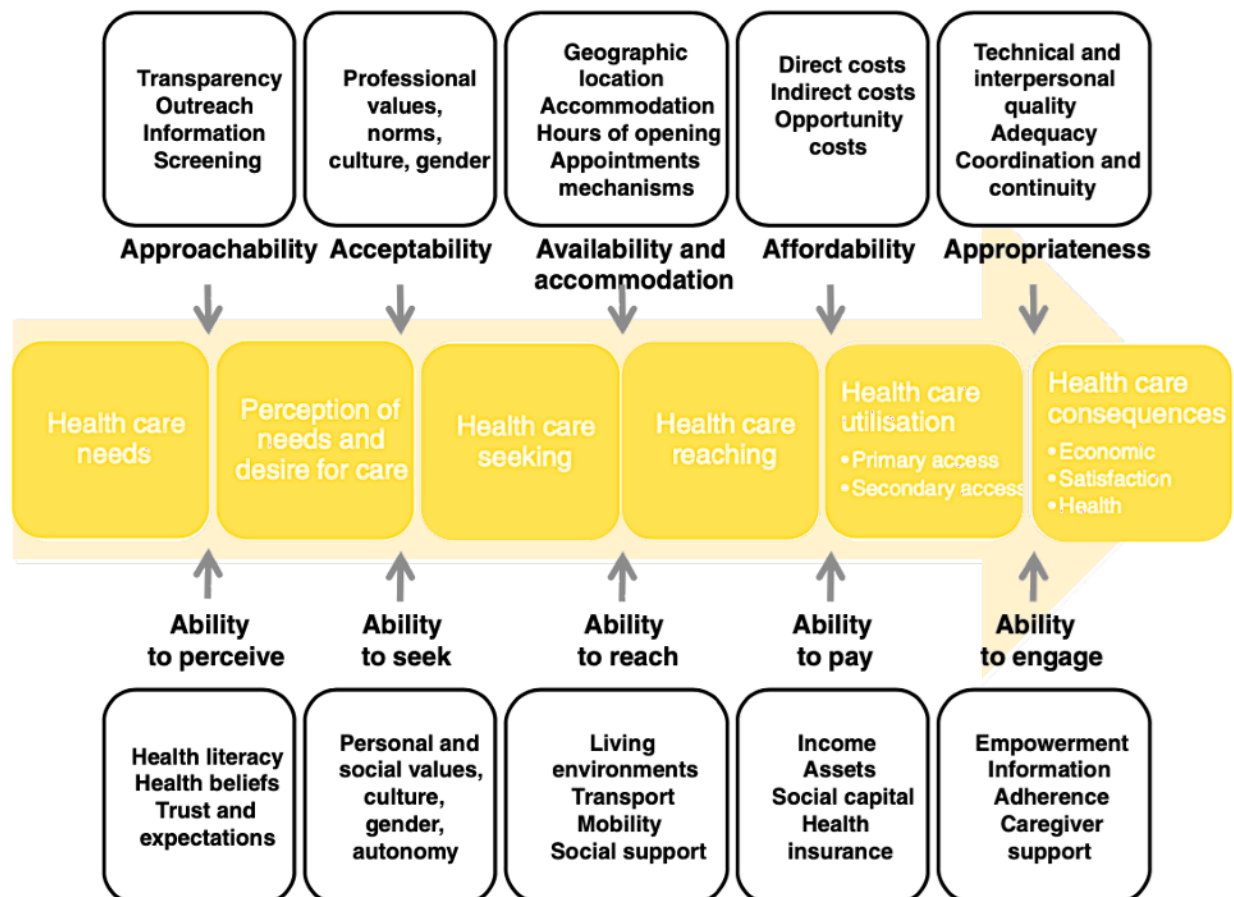
3.4. THEMATIC ANALYSIS

The selected literature was read, and the findings and key discussions were extracted and tabulated. These findings were then applied against the Levesque framework, and assigned to the appropriate dimensions of the framework. Findings that were relevant to more than one dimension were grouped as such and could appear under multiple dimensions of the framework.

3.5. LIMITATIONS OF METHODOLOGY

The utilisation of only English texts means that pertinent literature that was not available in English have been missed, and thus, any significant findings from these sources will lack in this studies discussion and recommendations.

Figure.2 Diagram of Levesque’s framework of access to healthcare (10)



CHAPTER 4: RESULTS

The results have been disaggregated along the five dimensions of Levesque's framework; Perception of needs and desire for care, Health care seeking, Health care reaching, Health care utilisation, and Health care consequences. Within each dimension, the findings have further been divided according to which sub-objective they answer.

Answering Sub-objective 1 is necessary to identify what barriers are experienced during PHE, for both the supply and demand sides, and which dimension of access they lie. This then informs us where intervention is required (102). Sub-objective 2 explores the interventions that have been implemented in response to previous PHE, including the current COVID-19 pandemic, which may overcome the barriers found in Sub-objective 1.

4.1. PERCEPTIONS OF NEEDS AND DESIRE FOR CARE

In this dimension, Levesque's framework outlines how the transparency of services providers and how they provide information to the population can impact service approachability. Service users' ability to perceive is determined by health literacy and beliefs and the populations' trust and expectations of services.

Sub-objective 1: Identify the supply and demand factors impacting access to FP services in LMIC during the current and previous PHE

The findings of the review show that the primary barrier within this dimension for supply was linked to the blockage of information and outreach channels for service providers to inform clients of the services available to them. Demand-side barriers were caused by the populations' fears of facilities as sources of infection during a PHE leading to negative perceptions of health care.

One factor impacting the supply side of access during PHE was the obstruction of outreach and information provision channels during COVID-19 and Ebola lockdown restrictions. Manasa Priya Vasudevan outlined how these restrictions during COVID-19 in India completely halted the work of their youth-based organisation and restricted adolescent access through the closure of schools (99). Whilst this integration in schools would usually improve information dissemination for adolescents; it shut down this channel for FP information. Interestingly, Vasudevan claimed that the SRH of Indian adolescents hadn't necessarily worsened during COVID-19, indicating that this population experienced ongoing vulnerabilities even before the pandemic. During the Ebola epidemic, channels of information sharing for adolescents were also shut down due to the closures of schools and outreach services. The impact of this was apparent in the discussions between adolescents and UNFPA, during which there was a significant lack of knowledge on safe contraceptive methods (103). In the Zika epidemic, just 10% of adolescents in Brazil had received FP

information during the PHE, despite sexual transmission assisting in the spread of the disease (104).

The literature found that the main demand-side factor affecting the ability to perceive health care needs during PHE was the fear of infection, leading to reduced facility attendance and contraception uptake in multiple countries (99,102,105,106). Shortages of personal protective equipment (PPE) during COVID-19 meant that staff could not provide safe care, which only added to women's fear of transmission risk within facilities (105). Adelekan et al. claimed the 30% decrease found in primary health care utilisation during COVID-19 lockdown measurements in South Africa was, in part, an indirect effect of populations' fear and anxiety surrounding the pandemic, as well as due to the reduction of facilities' staff and resources (45). Endler et al.'s global mixed-methods survey studied the trends in abortion access within 29 countries during the current pandemic. Fear of infection was reported as a deterrent from seeking abortion care in nearly 30% of countries, followed by lack of transport, closure of pharmacies, and restriction of travel (107).

Similar patterns were also seen in West Africa during the Ebola outbreak, where fear of health care facilities, along with movement restrictions, acted as deterrents for clients accessing primary health care services, including FP, and was followed by a spike in teenage pregnancies (44,82,85,87,103,108). Even post-Ebola, health-seeking behaviours did not recover for six months (45). The impact of these barriers to reproductive health (RH) services, including FP, was so severe that it was a more significant cause of increased mortality during the Ebola epidemic than the virus itself (109).

This belief that health care facilities were sites of infection manifested into stigma and mistrust towards healthcare workers, further discouraging clients utilisation of health care during the COVID-19 and Ebola PHE (44,103,106,110). Vora et al., instead, attributed reduced access in India to the COVID-19 pandemic distracting women's attention away from their own health needs (111).

Contrastingly, Aolyamat's online cross-sectional survey in Jordan found a significant decline in contraceptive use during and after COVID-19 lockdown restrictions, however, fear of infection was not the predominant reason. The reported reduction in facility access was attributed to fears by just 3% of the participants, and instead the reduction in use was attributed to the closure of commodity access sites in Jordan (95).

Sub-objective 2: Explore previously successful, unsuccessful, and promising measures to ensure access to FP in LMIC during the current and past PHE

Out of the literature, the interventions identified to improve the approachability of services were service integration and accessible and effective messaging. Interventions that positively affected service demand were collaborations with community leaders and community health workers (CHW) to overcome PHE misconceptions and client reassurance of the safety of service access.

Multiple literatures recognised the importance of optimising each interaction women have with the health system as a means to overcome supply access barriers during COVID-19. Through integrating vital FP information, education, and supplies to women during the immediate postpartum and postabortion period, the need for future visits to the facility is reduced, as are the associated infection risks of COVID-19 (112). Campbell et al. found that providing immediate postnatal contraception (PNC) information in a UK-based hospital during the COVID-19 pandemic led to the initiation of a contraceptive method amongst 45.2% of postnatal women. Just 41% of women reported prior knowledge of PNC, and an overwhelming 88% of staff agreed that this is a topic that should be raised and discussed with postpartum women (113). However, this study was based in the context of a HIC, and therefore, its' generalisability is limited. This was, however, supported by The International Federation of Gynaecology and Obstetrics (FIGO), and in Pfitzer et al.'s global commentary They recognised integrated immediate PNC as a long-term investment in the safety of both women and health workers and health system resilience in subsequent PHE, due to the reduction in contact required, and thus lowered risk of disease transmission. Immediate PNC also fills the gap in FP need created by the closure of FP services during COVID-19 (102,114). Yet, this requires collaboration and integration between hospitals, FP services and primary care, and training of PNC initiation for staff (113). As a proven High Impact Practice (HIP), PHE can provide leverage for immediate PNC implementation. However, Mickler et al. remarked that the adaptation and uptake of this intervention during the current pandemic might be hindered by social distancing, facility-avoidance and the closure of sites, leading to more women giving birth at home (115,116).

Operational guidance from WHO outlined that the strategies for information provision and service awareness need to be remodelled for COVID-19 circumstances to ensure that services users are informed of which services are available, and how to access them (117). One prevailing recommendation from the literature is the use of media, such as TV, radio and social media, and telehealth to disseminate FP service information and educate service users on their contraceptive choices and available services (95,99,110,112,114,116–122). Outside of the PHE context, use of such medias in LMIC had already shown to promise in health information dissemination (123–125). During the Ebola outbreak in Sierra Leone, the reduced uptake of FP services correlated with an increase in teenage pregnancies. Therefore, the lessons learnt from the Ebola outbreak led to the rapid collaboration with school radio programmes in Sierra Leone to provide FP advice and inform young people of services available to them in the current COVID-19 PHE. However, this source lacks any follow-up for the outcome of this intervention on access uptake and subsequent pregnancy rates (108).

Looking at the demand side of access, much of the literature recognised the influence of local, traditional, and religious leaders on service users' perception of health care. Thus, in the context of the COVID-19 pandemic, the literature recommended that messaging campaigns collaborate with these actors to overcome the misconceptions and anxieties regarding safety within facilities and stigma related to FP services, which have led to service avoidance during the pandemic (107,110,126). These figures in society can also provide an alternative channel for information dissemination (117,119), which is supported by the organisation, Family Planning 2020 (FP2020), who highlighted the role of friends, family and community members in FP education and behaviours throughout the COVID-19 emergency

(99). The use of CHW can also bridge communities to health facilities, and amend the spread of false information, as seen in COVID-19 (116,127), during which misinformation on the origin, transmission and severity of the virus have circulated (128). In the Ebola outbreak, CHW, community leaders and traditional healers were crucial to easing the concerns amongst service users of infection from health provider contact due to the rapport that could be built between them and service users. However, the engagement of these actors in response plans was delayed and poorly supported, meaning the full potential of this intervention was not realised (129). UNFPA also recommended using women who have had positive experiences of health care access during Ebola to advocate for facilities and encourage their peers to utilise services (103).

Pathfinder international's technical guidance suggested that information should be integrated into existing communication channels for COVID-19. WHO and UNFPA state that all messaging and guidance needs to be comprehensible and simple, translated into local languages, and accessible in for audiences with visual and hearing impairments (39,117,119,130).

To improve the perceptions of service providers, service users need to be reassured of the measures that facilities are taking to reduce the risk of infection of the illness within their sites. Multiple literature claimed that implementing the measures isn't enough. Providers need to explicitly communicate to clients the measures in place to reduce virus transmission to ease their concerns and encourage service access if possible. In the case of COVID-19, this included mandatory mask-wearing, isolation, distancing, and PPE, (106,127,131). In Mali, this was performed through utilising radio shows, and Facebook broadcasts to raise awareness of the measures in place at facilities to reduce the risk of COVID-19 transmission and how service users could also protect themselves, yet there was no support for the effectiveness of this intervention (108). Church et al., however, saw increased FP uptake in areas where such messaging was circulated during the present pandemic. Further facility-based adaptations that may improve the perceptions of services were introducing an appointment system that ensures time spacing and avoids overcrowding to allow physical distancing in clinics (106,112). This is supported by reflections on the Ebola outbreak in Guinea, out of which ensuring safety within facilities and enforcing infection prevention measures were highlighted as necessary for maintaining clients' trust (98).

4.2. HEALTH CARE SEEKING

This dimension encompasses the acceptability of services regarding professional values and norms, and the inequity that specific populations may face in this seeking care. Conversely, the service user perspective focuses on the cultural and societal values and norms, and the capacity of users to seek this care independently.

Sub-objective 1: Identify the supply and demand factors impacting access to FP services in LMIC during the current and previous PHE

Within this dimension, the critical barriers to FP services were identified as increased stigma and deprioritisation of FP services impacting the supply of care, and the neglect of marginalised populations in response planning limiting demand.

Respondents of Endler et al.'s online survey on the impact of COVID-19 on access to abortion and contraception services reported an increase in stigma towards seeking FP and abortion care as a barrier to the acceptability of services (107). Furthermore, a lack of SRHR prioritisation prior to the Zika and COVID-19 PHE indicated continued deprioritisation during the pandemic (104,107). In Kenya, Italy and Poland, survey respondents claimed that the COVID-19 pandemic was used as a cover for a lack of political will, with decision-makers hampering or reversing efforts to improve women's health rights under the pretext of tackling the virus (107).

The current pandemic exposed and exacerbated pre-existing inequities in service users' ability to seek care due to a lack of inclusivity in service access, leaving certain vulnerable groups unable to seek the appropriate care for themselves. Multiple literatures discussed the increased burden of the COVID-19 and Ebola restrictions on vulnerable women and girls, including those with low-income, those living in rural settings, and migrants and refugees. As they rely more heavily on mobile outreach services as their source of FP information and access, limitations on travel and the capacity of outreach overlook the needs of these women. Furthermore, they are least likely to be able to reap the benefits of telemedicine, afford pharmacy-supplied commodities, or travel to further-afar facilities for care (106,107,132). Women's workload also increased during Ebola and COVID-19, as they took on the roles of caregivers for sick relatives, and teachers for their, now home-schooled, children (103,133–135), limiting their opportunities to seek care. Additionally, victims of gender-based violence (GBV) may be further oppressed by lockdown restrictions, meaning that they are stuck at home with their abuser and lose their external social support, autonomy, and healthcare access all at once (98,110). Church et al. predicted these marginalised groups would bear the brunt of the reproductive burden and contribute to an additional 1.3 million unintended pregnancies leading to 1.2 million unsafe abortions and 5000 maternal deaths (106).

As for adolescents, FP2020's webinar discussed how their ability to seek care during COVID-19 was impaired by stay-at-home regulations, meaning they lacked the private space to attend to their own FP needs (99). In the Ebola epidemic, health services targeted at adolescent girls were converted to Ebola treatment centres, reducing young girls ability to seek appropriate care, and was followed by increases in teenage pregnancies (103).

Sub-objective 2: Explore previously successful, unsuccessful, and promising measures to ensure access to FP in LMIC during the current and past PHE

The primary interventions found to improve the acceptability of service providers were service provider sensitisation, and the provision of judgement-free care. On the demand side, the literature recognised the need to engage beneficiaries in PHE response discussions and protect women's autonomy to ensure their ability to seek FP care.

For the supply side, service providers need to be aware and trained on the growing risks women face during the COVID-19 pandemic, including GBV, to provide appropriate and judgment-free care (99,107,117). The Guttmacher Institute's list of recommendations for ensuring FP access throughout the ongoing PHE includes providing judgement-free and non-discriminatory FP care from health care providers who do not impose their own religious and moral beliefs as cause to refuse care (136).

Guidance for FP service provision during COVID-19 and Zika falls within both the supply and demand side of the framework. WHO proposed lifting access restrictions based on the clients' age and marital status and removing the requirement for consent from parents or partners to reduce the barriers from service providers for adolescents trying to access FP care during the COVID-19 pandemic (99,117). In response to the Zika epidemic, experts advised that youth centres be utilised to create spaces for adolescents to seek SRH services safely (104). This both improves the appropriateness for these groups to access FP services but, on the demand side, also increases their capacity to choose to seek care.

To improve service acceptability for vulnerable populations, the needs of these beneficiaries, such as pregnant women, adolescents, and other marginalised groups, should be embedded in the discussions for the PHE response. Multiple literatures state that PHE response plans should support gender justice, to prevent exacerbating inequities in access for these populations (45,99,110,120,132,137–140). For the demand perspective, service users need to be made aware of their health options through the preparation and sharing of information in ways that are accessible and appropriate to vulnerable populations. In the Democratic Republic of Congo, maintenance of FP access throughout Ebola was attributed to the adaptation of messaging to fit the norms and customs of the audience through creating a platform for the beneficiaries to contribute their perspective to the process (141).

During FP2020's webinar, the findings of telephone interviews with adolescents in India during COVID-19 found that respondents struggled to answer truthfully to socially sensitive FP questions, as the stay-at-home restrictions limited their privacy when responding. However, this barrier to uptake and demand was overcome by using code words via SMS, allowing more discrete disclosure of FP needs (99). Due to the sensitivity of this topic, privacy is crucial when addressing the FP needs of adolescents (120). Outside of the PHE context, HIP recognised the promising effects of making information and commodities accessible for adolescents seeking care via pharmacies and drug shops. Adolescents reported experiencing reduced intimidation and judgement and increased confidentiality and accessibility at these sites (116). HIP claimed that pharmacies and drug shops can assist over-burdened and fragile health systems in meeting demand (19), such as in the context of PHE.

The Guttmacher Institute further recommended protecting women's autonomy to seek appropriate care by ensuring their decision-making process is free from external bias and fear of prosecution for women who undergo self-managed abortions (136).

4.3. HEALTH CARE REACHING

For service accessibility, there needs to be the availability of resources and skills, which can be logistically and realistically reached. The geographic location of both the services and the users and the presence of transportation systems can also greatly impact the ability to reach services.

Sub-objective 1: Identify the supply and demand factors impacting access to FP services in LMIC during the current and previous PHE

The barriers found to service availability and accommodation were the deprioritisation of FP services, leading to the diversion of resources towards tackling the PHE and the closure of clinics. The factors impacting the demand for services were the restrictions on movement and travel caused by mitigation measures.

There was consensus throughout the literature that the deprioritisation of FP and concentration of efforts towards PHE responses had drawn away staff and resources from FP services, impacting the supply side of service access. The literature found that services lost the specialities and knowledge of SRH health providers as they were reassigned to the PHE response (45,105,107,142,143). The shortages of skilled staff during COVID-19 resulted in increased waiting times for services users and crowded clinics (144). According to Church et al., this was exacerbated by staff sickness, familial commitments, and lack of staff working in or able to reach remote, underserved areas for outreach (106). This further added strain to countries where the proportion of patients to health provider was already deficient and where they previously struggled to meet demand before the current pandemic (105,142–144). In South Africa, these factors were held responsible, alongside the fear of infection and COVID-19 lockdown restrictions, for the reported reductions of 30% in primary healthcare visits (45). Consequentially, as client access declines, so too does the income of private facilities, meaning they are may be unable to afford the overhead costs of service sites, leading to closures of private access sites (98).

This deprioritisation also led to the closure and scaling-back of clinics, and thus, reduced availability of services and commodities. Respondents in Endler et al.'s multi-country survey disclosed that the prioritisation of the COVID-19 pandemic response caused FP services to close or left them without support from health authorities to ensure continuation of services (107). Many of Marie Stopes International (MSI) static clinics also reported having to reduce opening hours (106). A news article by IPPF stated that across 64 countries, there were 114 million users served by static clinics, yet during the current pandemic, 1 in 5 of these facilities had been closed (145). In Palestine, there was even government-mandated closure of many FP clinics during the current pandemic (131). Throughout the Ebola epidemic, many health facilities were closed and often recommissioned as Ebola treatment centres, limiting the availability of safe and accessible sites (44,87,103). In Aolymat's study, just 1% of respondents reported a total lack of access to contraception during the COVID-19 lockdown period, but as the complexity of the required care increased, such as IUD removals, the number of women able to access care decreased, due to the closed clinics and lockdown restrictions (95).

Regarding service demand, limitations in service users' ability to reach services were attributed to the mitigation measures that restricted movement and transportation options. The literature reported a severe decrease of clients accessing services because of closed clinics, movement restrictions for both service providers and users and a lack of transport (106,107,111). This is echoed in accounts from MSI clinics around the world (108). For instance, in Madagascar, women used to discretely access FP services under the pretext of attending the market. However, COVID-19 lockdowns saw the closure of these markets, meaning women lost their cover to access services. Furthermore, in Uganda, Zimbabwe and Nepal, strict lockdown rules, roadblocks and penalties for breaking travel restrictions discouraged and disallowed women and health care workers from reaching FP facilities or fulfilling any referrals to specialised centres (131). As mobile outreaches that provided free contraception were either reducing their geographical range or closing altogether, data from MSI showed that those living in remote or rural areas were disproportionately affected, as care was instead concentrated in the larger, urban centres (106). In the Ebola context, the closure of facilities in addition to regular screening checks along routes to sites increased the travel times for women, deterring them from accessing health services. Instead they turned to other means, such as traditional healers (87).

Sub-objective 2: Explore previously successful, unsuccessful, and promising measures to ensure access to FP in LMIC during the current and past PHE

From the findings, the critical interventions for improving health care reach for supply were: CHW; service integration; telehealth; improving safety measures within clinics; long-acting reversible contraception (LARC); self-care methods; changes to prescription regulations; immediate PNC. The only interventions for the demand aspect of access were transportation and home delivery of commodities. Interventions to address the deprioritisation of FP that has impacted the availability of services have been discussed in the Health care consequences dimension.

During the current COVID-19 pandemic, the isolation and travel restrictions created further distance between service users and providers. For ensuring the supply of health care services, the literature observed the need for trained CHW who can bridge the gap between service users and primary health care, including contraception and information provision (39,45,111,118,120,127,131,146,147). The employment of CHW in FP has already been recognised as a proven HIP for improving service access before the pandemic. However, it might require a review of the national task-sharing guidelines (117,148,149). Mickler et al. suggested that the adaptation of these HIPs can bring services to clients who have been confined due to movement restrictions, particularly those living in remote regions with poor telehealth access (116). CHW workers in Burkina Faso utilised their pre-existing relationships with local figures, including health providers and checkpoint officers, to overcome movement and access restrictions (108). In Cameroon, health workers travelled to community-based partner clinics to provide specialised care, such as abortions, and improve accessibility for those affected by travel limitations. The initiative proved so successful that it is to remain in place even after removing COVID-19 travel restrictions (131). However, these workers must be adequately protected against infection with PPE and infection

control training (108,116), especially as health care workers, including CHW, have had higher rates of infection in PHE, such as H1N1, Ebola, and COVID-19 (150–153).

Another recommendation to overcome this was to integrate FP services with the PHE response (147,154). Integrating FP services with immunisation operations was shown to be a promising means of improving access to FP provision and service referrals (116,155), as seen in Zimbabwe, where 3,500 women's were served with FP care in 2 weeks alone (108). Yet, in the current pandemic, further data has shown that immunisation services have also been severely disrupted, limiting this intervention (156).

Telehealth has continuously been cited as a significant intervention to overcome the access barriers imposed by COVID-19 and enable continuity of care. Service users can be counselled for their FP needs, including initiation or continuation of contraception or abortions (106,107,110,114,116,117,119,127,131,136,147,155), and has already been implemented in multiple countries worldwide, including China, the Philippines, Palestine, India and Nepal (98,131). Prescriptions can be issued electronically or over-the-phone and sent directly to the dispensing site, allowing clients to acquire their contraception without arranging an appointment with their health provider (112,116,121,122). During the COVID-19 PHE, such telehealth mechanisms were implemented throughout the 37 countries in which MSI operate and further used for referrals, supervision and technical assistance between different health providers (106). IPPF and the Guttmacher Institute reported that telehealth provided the opportunity to deliver sexuality education and SRH, including FP, information to adolescents via digital mechanisms during COVID-19 (126,131,136), though patient confidentiality and autonomy must be maintained (117).

However, there is a lack of evidence for telehealth effectiveness in LMIC and for FP purposes, even outside the context of PHE (157). Studies in the UK show the great success of telehealth for abortion services during COVID-19, with 80% of participants responding that they would prefer to access abortion services via telehealth again in the future. The study also showed that receiving abortion care via a combination of telehealth and in-person appointments was no less safe or effective than traditional in-person care, and that waiting times decreased for women accessing care via the combined method (158). This study provides support but does not guarantee success outside the UK context. However, IPPF have reported that the success of telehealth for home-abortions during COVID-19 has led to the scale-up of these services for permanent integration into service delivery in India, Fiji, Sudan, and Nepal (126,131). In Sudan, it has enabled access to demographics of people that did not interact with health systems prior to COVID-19.

Some services cannot be replaced by telehealth methods, such as LARC initiation, and hence, appointment mechanisms need to be reassessed to maintain client and health care worker safety during access. In order to prevent over-crowding and space restrictions, scheduling of appointments, reorganising of waiting room layouts and heightened infection control measures are required (106,111,112,122).

Multiple texts highlighted the benefits of continued and increased uptake of LARC in PHE, as the need for regular health provider contact past initiation and removal is much lower than short-acting methods (94,122,137). Furthermore, much of the literature noted how the

period of LARC effectiveness surpasses the recommended duration and can continue to protect women for another year. Therefore, women who are due for LARC removal or replacement have been advised to postpone this procedure during COVID-19 to limit the number of clients attending clinics (107,112,118,119,121,127,159,160). Sharma et al. added that this should be done in combination with other methods, such as condoms, for more insurance of protection from pregnancy (127).

Contrastingly, as access to skilled health professionals suffers during PHE, the literature showed a push towards self-care methods (127), with FP2020 and FIGO promoting self-care as methods empower women's self-efficacy, as they can become more independent in their FP care (99,114). For instance, women who rely on injectable contraceptives can be trained via online videos on self-administration at home (112,117,119,122). However, some of these methods, particularly home abortions, may require the formulation and approval of interim guidelines for implementation during PHE (107,108).

As these methods require regular access for the collection of supplies, scaling up pharmacies to dispense contraceptives and home abortion medicines means that service users do not need to travel far to access these commodities (99,106,108,114,117,120,131,140,147). Decentralising FP access points outside urbanely located centres to more numerous and reachable pharmacies can improve accessibility, especially for rural and impoverished areas (116). The effectiveness of this intervention on improving access prior to the pandemic has been deemed promising by HIP (19). Self-care methods and condoms available from pharmacies can also provide temporary protection for women whose preferred method is not available or whose LARC or sterilisation procedure has been delayed, as seen in the COVID-19 pandemic (112,121).

Furthermore, easing the Ministry of Health dispensing regulations to allow the provision of multiple months-worth of contraceptives, such as the oral pill, has been suggested as a promising intervention in the current PHE (45,112,119,121,122,136,140,147,160). However, this should only be done if there are no contraindications posed to the client, and clients should be made aware of where they can seek care for any mal effects (117). The literature also suggested that emergency contraception should be made available in pharmacies without needing a prescription at all (45,117,140). The Guttmacher Institute recommended reducing the number of appointments required for a medical abortion during the ongoing COVID-19 pandemic, which was seen during Endler et al.'s multi-country survey as a measure to alleviate barriers to access, yet no data was available on the actual impact to uptake (107,136).

As previously discussed, the initiation of PNC, including post-abortion, particularly LARC, also limits the need for multiple health provider contact with postpartum women (102,112,114,115,121,127,140,147). If the woman opts for a self-care method, Nanda et al. recommended prescribing or providing a sufficient quantity of contraceptives before discharge to ensure the client has enough supply. Particularly if the mother is breastfeeding, it needs to be ensured that the supplied contraceptives will not have expired by the end of the lactational amenorrhea period (112).

As for the demand side of access, the COVID-19 lockdown restrictions have limited travel options. In response to this, MSI pushed for the implementation of interim guidelines that would allow travel exemptions for health workers and service users (108), whilst Endler et al. suggested removing the costs of public transport (107). MSI workers in Madagascar gained government permission to initiate an MSI bus service, which both transported women to facilities for appointments and delivered FP commodities directly to women's houses (108). Similarly, in Uganda, a mobile app was produced during the COVID-19 pandemic which allowed the purchasing and delivery of products to clients. In Thailand, IPPF successfully acquired permission for cross-border travel between provinces to allow women to access FP care from IPPF-run clinics in neighbouring provinces (126). However, there is a lack of follow-up for these interventions to evaluate the effect on accessibility of services.

4.4. HEALTH CARE UTILISATION

Health care utilisation is influenced by the financial and social costs of health services, including the direct and indirect costs, and opportunity costs. Services users' ability to pay for and access these services is impacted by their income, financial health, and possession of health insurance.

Sub-objective 1: Identify the supply and demand factors impacting access to FP services in LMIC during the current and previous PHE

Within Health care utilisation, the supply barriers were the unaffordability of privately sourced contraception, the increases in indirect costs, and the gendered opportunity costs of seeking care. On the demand side, the sole barrier was the inability to pay for services due to increased financial hardship during PHE.

During the current COVID-19 pandemic, the capacity of the public sector to subsidise contraception costs lessened, and the reliance on predominately privately administered self-care methods increased, meaning that access for women who relied on free or subsidised services suffered, as they struggled to afford the out-of-pocket costs (118). The concentration of political progress towards women's health care in the private, rather than public, sector meant benefits centred on women from high socioeconomic groups and further enforced the inequities for financially vulnerable women (107). Weinberger et al. also outlined how countries where contraceptive trends favour short-acting methods would be more significantly impacted by disruptions to supply and price changes for these products (118).

The indirect costs of accessing care also increased in the current PHE, with Hussein highlighting that the closure of clinics meant service users had to travel further afield for their care, which could incur higher travel and transport costs (142). Vora et al. noted that some facilities in India implemented measures to reduce the risk of transmission within their centres, including providing a negative COVID-19 test result before entry. However,

the cost of such tests adds an additional financial burden to those seeking care and could have delayed time-critical procedures, such as abortions (111).

Women faced disproportionate opportunity costs for FP access due to persisting gender roles in many countries, where women hold the role as primary caregivers. These responsibilities, namely childcare, left them with little time to attend to their own health needs (98,161).

The ability of service users to pay for FP care was hindered by the financial hardship that many families suffered due to loss of income resulting from the Ebola and COVID-19 lockdown restrictions and business closures (44,98,102). Webinar presenter Tomoko Fukuda additionally mentioned how this financial strain might have caused women's FP needs to have been deprioritised in the allocation of household budgets (98). Contrastingly, during Aolyamat's study in Jordan, respondents who required an IUD replacement during the COVID-19 lockdown but refused replacement were asked the reason for their discontinuation. No respondents cited financial reasons as their cause for discontinuation of their contraception, but rather a fear of health centres, lack of transport and familial duties limiting their ability to access facilities (95).

Sub-objective 2: Explore previously successful, unsuccessful, and promising measures to ensure access to FP in LMIC during the current and past PHE

Whilst the interventions for Health care utilisation were not as numerous; they remain crucial for access. Affordability can be improved through more equitable and supportive health systems, reducing FP commodities costs, collaboration between private and public providers and expanding the scope of health insurance cover. There was a lack of research focused on the ability of service users to pay for FP services from the demand standpoint.

Nanda et al. have previously discussed the benefits of dispensing multiple months-worth of contraception to women (112); however, for women who have to pay this cost out-of-pocket, it may not be possible to acquire the money to pay for multiple months-worth of contraception in one payment. Therefore, for some women this is not a feasible option and instead might push women to LARC uptake (118,144). Within literature focused on the COVID-19 pandemic, contraceptives were advised to be recognised as essential medicines, and health insurance plans remove or reduce prescription costs, at least for the duration of the PHE (112,120). Weinberger et al. similarly recommended implementing financial support strategies throughout the ongoing pandemic that can enable women to afford contraceptive commodities if they can only be accessed privately (118). It was also suggested that free or subsidised contraceptives be distributed via outreach teams and CHW to reach remote service users. The use of voucher schemes to provide subsidies for FP services, in collaboration with donors or governments, and health providers, has been recommended by HIP to enhance equitable access to FP services in stable contexts and may be promising in PHE scenarios. However, this intervention relies greatly on donor and government funding (162).

The Guttmacher Institute also recommended policymakers increase the scope of public and private insurance to cover FP services and uphold publicly financed clinics to maintain contact with service users for whom this is their primary point of health care access (136). However, this policy analysis was set with the context of USA and, therefore, may not be applicable within other contexts.

The literature also recognised a need for more equitable and sustainable health systems, through which service users can access adequate FP information and services without facing financial hardship (137,155). However, this concept of Universal Health Coverage is not new or specific to access in the PHE context (163).

4.5. HEALTH CARE CONSEQUENCES

Within this dimension of Levesque's framework, access is assessed by the appropriateness of service providers in terms of the quality, adequacy, coordination and compatibility between services and users' needs. From the service users' perspective, an ability to engage with services is necessary for access. Clients need to be empowered and supported in order to be self-efficient and adhere to care, as well as involved in the decision-making processes within services.

Sub-objective 1: Identify the supply and demand factors impacting access to FP services in LMIC during the current and previous PHE

Factors that impacted access within this final dimension on the supply side were reduced service quality, incompatible supplies of commodities, and delays and shortages in supplies. Through the demand lens of access, there was an inability to engage with services and a lack of service user engagement in decision-making processes which negatively impacted FP access.

The diversion of focus and resources away from primary care, including FP, and towards the COVID-19 response was correlated with a deterioration in the supply of quality of FP care (111,126,142,144). The literature found that the deployment of staff towards the COVID-19 response negatively affected the quality and capacity of services to meet population needs safely. Users lost access to skilled and specialised health workers and providers lost their staff and capacity to fulfil demand (142–144). Furthermore, the scaling-back of abortion services during the COVID-19 PHE was anticipated to have pushed women towards backstreet abortion options, as access was restricted to low-quality and unsafe alternatives (45,164). Riley et al. estimated that this issue faced on a global scale could lead to 1,000 additional maternal deaths in the current PHE (89).

The literature discussed how consequences of the COVID-19 pandemic on clients' needs and preferences may render previous commodity forecasts and orders incompatible with the current demand, meaning that providers cannot meet service users' needs. Whilst the preferred method pre-COVID-19 varies from country to country, changes during the

pandemic in how services can be accessed and in the supply of commodities entails that women may migrate to other methods, which require less service provider dependence or are more readily available. Demand increases in short-term methods contradict some of the recent trends in contraception use. Thus the commodities ordered using the previous pre-COVID-19 projections will be incompatible with, and unable to meet, the actual demand (118). Instead, women may be at risk of coercion from health providers to opt for permanent measures of FP to overcome the supply chain challenges of short-acting methods (110); raising concerns of informed consent and appropriateness of care.

The closure of factories producing contraceptive commodities and transportation blockages during the COVID-19 pandemic response led to supply disruptions for nearly all contraceptive commodities. Delays in production, distribution and procurement limited the range of contraceptive availability at sites and affected service users' ability to choose and adhere to their contraceptive method (98,99,130,144,165). Dasgupta et al. reported that, during the current pandemic, 60 million fewer women worldwide are having their reproductive needs met by modern contraception (94). The pre-existing circumstances in each country will determine the global distribution of these women, including contraceptive method trends. Each contraceptive method varies in its' dependence on contact with health providers and vulnerability to disruptions in the supply chain, and thus the pandemic will have had differing effects on each method. A usage decline of 10% was predicted for short-acting contraceptives that can be obtained from different sources, such as the pill, whilst short-acting methods requiring regular health provider intervention, such injectable contraceptives, would be higher, at 20% decline. LARCs and permanent methods require less continual intervention from health providers past initiation and removal; thus, the estimated decline was lower, at 2-5%. Countries with a preference for short-term methods would see a more significant decline in modern contraceptive use than countries that are more reliant on LARCs and permanent methods (94,118). The differing degrees of impact may induce method-switching, from LARCs to less effective, short-acting methods, which may not fit the service users' needs (45,105).

For health care demand, the literature showed that service user's and communities disengaged with FP services during Ebola and the current pandemic, which was correlated to lowering numbers of clients accessing FP services (99,103,106). FP2020's webinar argued that certain COVID-19 initiatives, such as the mobile hotlines for adolescents in India, may not be suitable for all users, as their ability to engage with services is limited, in this case, by the lack of privacy within their household that results from the COVID-19 stay-at-home measures (99).

Sub-objective 2: Explore previously successful, unsuccessful, and promising measures to ensure access to FP in LMIC during the current and past PHE

From the literature, the findings of measures to ensure access from the supply perspective of health care were adequate data collection, securing resources, collaborations with other stakeholders and private-public partnerships. On the demand side, interventions include the engagement of beneficiaries and the empowerment of women.

Shifts in the uptake of contraceptive and abortion methods during PHE need to be monitored to update supply chain requirements (99,102). For the current pandemic, UNFPA suggested the use of Logistic Management Information Systems (LMIS) to anticipate and track facility stocks, consumption and future procurement to prevent stock outs (98,120,130,140) and may allow for international stock trading (98). Such monitoring systems can also empirically support the need for access interventions, particularly amongst vulnerable groups (45).

Adequate resource allocation to FP services must be maintained to ensure the continuity, range and quality of services and prevent additional hardship for women and girls who rely on this care (45,98,102,117,119–121,130,166). The literature has recommended seeking procurement of commodity resources from alternative, and possibly domestic, manufacturers to overcome supply chain and distribution disruptions during COVID-19 (89,118). Whilst 70% of upper- and middle-income countries have managed to secure extra funding for essential services during this pandemic, just 42% of LMIC have been able to do the same (156). Mickler et al. outlined how advocacy toolkits produced by HIP can aid in the securing of funding for public services (116). In Zambia and Morocco, IPPF associations fought to guarantee the commitment and continuation of the government funding towards SRHR in response to the redirection of resources towards the COVID-19 efforts (126).

Facilities must also store a range of different contraceptive commodities that can meet the demand of service users. With the supply shortages experienced throughout COVID-19, this has been threatened. Therefore, there must be a collaboration between the Ministry of Health and stakeholders to project and prevent shortages (114,119). FP supplies need to be recognised as essential care, and supply chains maintained for continued stock (98,120,165). However, the impact of supply chain disruptions has been global, and UNFPA reported difficulties in attempting to remedy the situation due to the scale of the impact COVID-19 has had on production and procurement (98). Facilities must also be sufficiently equipped with PPE and staff trained on effective infection prevention measures to ensure clients have access to safe care (119).

Advocating the importance of FP service continuation during the ongoing pandemic with governmental actors and donors can help harbour high-level support for continued provision and prioritisation of services during lockdown measures and protect the flow of funding towards FP (108,126,137). Partnerships between IPPF and the Zambian government ensured that FP budgets were not been compromised in light of the COVID-19 response (126), whilst MSI workers in Sierra Leone collaborated with the Ministry of Education and Gender to ensure continued access to SRH advice and services for young people (108). In Tunisia, a collaboration between the Tunisian Sexual and Reproductive Health Association (ATSR) and civil society organisations (CSO) successfully advocated for free health care access and financial support from the government for sub-Saharan migrants and refugees during the pandemic (126).

Partnerships between the private and public domain may also improve the capacity and quality of care provided (111,137). It is crucial that the private sector, including non-government organisations (NGO), alleviates the burden and shortages that the public sector is facing. An organised and coordinated response can optimise the scope and quantity of

service providers (130), through programmatic support, provision of contraceptive supplies, upscaling of private pharmacies, and outreach services (39,116).

On the demand side of health care, service users and communities need to be central to the PHE response discussions for access interventions to be effective and appropriate. The literature stated that through engaging with clients, especially those representing vulnerable populations, decision-makers and service providers can ensure that their health and social needs, including FP, are expressed in the pandemic response plans (98,102,110,137,141). Services can be modified to meet users' own perceived needs, and better fit their demands (120,126,167), improving the appropriateness and capacity of services (102). In Sri Lanka, this was executed through weekly virtual meetings between governmental actors and service users during COVID-19, through which actors were made aware of shortfalls in service provision directly by the users (126). UNFPA noted the importance of contraception access to a woman's empowerment (130); therefore great effort should be made to try and continue clients on their preferred method (140).

CHAPTER 5: DISCUSSION

The findings provide the groundwork from which recommendations for effective interventions in LMIC can be formulated to guide future preparedness plans. The interventions will be evaluated and scrutinised for their effectiveness and credibility. They will then be contextualised to ensure their appropriateness, feasibility, and sustainability as a response measure in LMIC during public health emergencies.

5.1. KEY FINDINGS

This thesis described how PHE affected access at the five dimensions of Levesque's framework of access to healthcare. It was evident that barriers in access take place at all levels; however, the deprioritisation of FP, lack of service user engagement in response planning, fears of infection at facilities, and lockdown restrictions were the primary factors impacting access. Interventions mainly focused on the recognition of FP as an essential service, engagement of service users, the implementation of telehealth, client reassurance of safety measures within facilities, collaborations with community leaders and CHW, and public and private sector partnerships.

Throughout both the current and previous PHE, the FP rights and needs of the population have been persistently overlooked. Service providers cannot meet the demand for FP as staff and resources are diverted towards the PHE efforts, leaving FP services under-skilled and overstretched, and subsequently closing or reducing the range and quality of care. Throughout the literature, there is a recurring call for governments and donors to recognise and treat FP as an essential service to maintain funding and availability of high-quality services during PHE. In India and Pakistan, the classification of SRH services as essential led to the sustained provision of FP services through COVID-19 (131). However, this requires political will, which was found to be lacking during PHE, particularly in countries with pre-existing restrictions on FP services. By partnering with governments, Ministries of Health and donors, health systems can work collaboratively to plan appropriate and responsive strategies that protect the populations' rights by securing funds and resources for FP, such as PPE and commodities.

Service users need to be engaged in response planning discussions with decision-makers and stakeholders, in order to formulate a PHE response that is appropriate to the populations' needs. This is crucial for all dimensions of the Levesque framework, and therefore, critical to improving accessibility. Without understanding the beneficiaries' opinions and beliefs about health providers, one cannot produce an approachable and acceptable service. Similarly, through incorporating vulnerable groups into these discussions, providers can ensure that their services do not neglect or obstruct the access of marginalised populations, such as women and girls with low-income or refugees. Affordable and appropriate services that service users can reach may be better established if the services have the insight from the users on their demands, struggles and capabilities during the inception and throughout the whole implementation phase.

Sub-objective 1 aimed to identify access barriers that have been experienced throughout PHE. However, many of these obstacles to care existed prior to the implementation of restrictive mitigation measures, and instead, PHE further exposed these inequities. The vulnerabilities of marginalised groups and those who have poor health literacy also continue to exist alongside the pandemic-specific barriers, and, therefore, need also to be considered in response discussions.

Health policies can also be obstructive, with policies and regulations, or lack of, hindering the implementation of interventions, such as self-administered injection contraceptives. However, PHE create exceptional circumstances that have, in some cases, created positive change, advancing the progress of innovative implementation policies, and lifting restrictive laws and regulations. Without the push of the COVID-19 pandemic, developments, such as medical home abortions via telemedicine, could have taken years to achieve. Additionally, easing the regulations for dispensing contraceptive medicines could enable the procurement of multiple months-worth of supply and remove the need for a prescription. However, caution is needed to ensure these gains are not reversed once the pandemic restrictions have eased. There needs to be more evidence to show that these policy changes are, in fact, effective and safe, and do not present with unintended consequences. Again, this relies on political will, funding, and adequate infrastructure and management, which may not exist all countries (106).

In order for services to provide appropriate care, there must be an understanding of the populations 'needs and capacities, and how these have changed throughout a PHE. As with many processes, COVID-19 has halted studies and data collection programmes (94). Timely data collection is crucial to gaining insights into the impact of the current pandemic on service and contraceptive utilisation (98,102,114), as any changes may have recovered if research activities are delayed until after the pandemic (94). The changing demands in contraceptive uptake need to be recorded to inform the supply forecasts and procurement. Supply chains must be aligned with the demands of service users to ensure women have their choice of contraceptive methods and are empowered to take control over their FP decisions. However, if their choice and autonomy remain restricted, women may disengage with FP, increasing the risk of unintended pregnancy and subsequently creating a greater need for abortions. Yet, abortion services have also been scaled back, leading women to turn towards unsafe abortion methods, potentially contributing to the 1,000 additional maternal deaths globally, predicted by Riley et al. (89). There also should be preparedness for another fluctuation in contraceptive method uptake once restrictions ease and supply chains recover (118). Looking back at the Ebola epidemic, the recovery of service utilisation did not immediately return to the pre-PHE state (45); however data collection could aid in informing usage predictions, which can instruct supply procurement.

Findings should also be shared amongst programmes and facilities to enable the dissemination of new knowledge and ensure that supply and demand are congruous (98,102,118,120). Stakeholders and manufacturers should be updated on the outcomes of studies, so supply chain needs, including funding and production, can be established.

There is a significant focus on telehealth as an intervention to improve access to services; however, this has the potential to exacerbate health inequities. Whilst telehealth may bridge access for much of the population, there is a risk that marginalised populations, who lack the prerequisites for telehealth, such as the internet, will be overlooked and ignored in the response (106,116). Telehealth has been identified continuously throughout the literature as a promising intervention, both during and prior to the current pandemic. However, the evidence for telehealth's effectiveness in LMIC, as well as for FP purposes, is sparse (157). Learnings from the successful implementation of telehealth in the UK by MSI are being shared to guide implementation in LMIC (108), but the differences in infrastructure and resources need to be acknowledged (106,116). This intervention focuses on overcoming the logistical barriers women face in accessing services; however, telehealth can also address anxieties and fears of infection at facilities. Telehealth provides an alternative means of receiving health care without being physically present, therefore, bypassing the risk of infection.

Many countries are considering the permanent integration of telehealth into health systems, which may protect FP access in future PHE, as structures will already be in place. However, due to the risk of exacerbating health access inequities there should continue to be a mix of channels for service provision, with suitable methods, such as outreach services, that consider vulnerable groups' exceptional needs and access barriers.

To address the negative perceptions towards health facilities, the literature suggested fostering relationships with community leaders and CHW and disseminating messages via various channels, such as social media and radio, to inform clients of the safety measures employed at facilities. Services users should also be involved in this process to ensure that messages are suited to the audience (141). Whilst these have been implemented in various countries, there is little evidence to support that these methods improve service users' perceptions and acceptance of health services.

Service providers need to take care that safety measures within facilities do not detriment access. Requirements for proof of a negative COVID-19 test in some facilities in India (111) may reduce transmission risk; however, they could also deter clients from accessing care as the cost of obtaining this proof may mean services become unaffordable. This is in combination with other rising indirect costs of service access. Costs for transportation may also have increased due to the more considerable distances women now have to travel, as many sites, including outreach, have closed. Considering the financial hardships many families face from the downturn of the economy, such as financial instability and reduced income (168,169), service access costs escalate and become inaccessible to many women seeking care.

As facility services close throughout PHE, much of the remaining sites are centralised in urban and populated centres, again highlighting the inequitable burden for service users living in rural regions. Some transportation solutions have been recommended to overcome logistical barriers for clients, yet bus and home delivery services will not mitigate this impact alone. The implementation of outreach services through the employment of CHW may improve access to FP, although the literature has already shown that outreach services

existing prior to the COVID-19 pandemic have been halted. By recognising FP as essential, these services could be protected and improve access for remote populations during PHE.

Partnerships between the private and public sectors can also fill the gaps created by closed or reduced services. Through scaling up pharmacies to provide contraception, the burden on public services is lessened, and access sites for women become more numerous and less centralised. This may improve access for women with the means of purchasing their contraception, but for service users who relied on free or subsidised commodities, they may struggle to afford the new costs. Weinberger et al. suggested partnering with private health providers to provide free and subsidised contraception via outreach channels (118). However, for future resilience, LMIC governments must avoid deprioritising FP and allocate funds to maintain service PHE, rather than become dependent on private partnerships.

Insurance companies have also been advised to include FP costs in their plans during the COVID-19 PHE. However, service users with a low income and limited access to health information are less likely to be enrolled in an insurance scheme, thus, the intended result of reduced costs will not benefit those who are most financially fragile (170). Instead, voucher systems could ensure equitable access to FP, yet more evidential support for its' use in PHE is needed. The potential after-effects of these measures should be considered, as it could be deemed unethical to take away access to free or subsidised contraception once the pandemic has passed. Many people suffered financial access barriers before the pandemic, and these obstacles will remain unresolved afterwards, alongside their unmet FP needs.

The literature presents some debate about the appropriateness and resilience of both short-acting contraception and LARCs. Whilst this can be considered for the forecasting of commodities, it is women's autonomy that should dictate uptake, in order to maintain women's SRHR and their engagement with their own health.

Immediate PNC has also been repeatedly mentioned in the literature, yet the only empirical evidence supporting PNC comes from a HIC (113). The proportion of women giving birth in facilities differs from country to country (171), and as women deter from attending health facilities due to the fear of infection at sites, there may be fewer women opting for institutional births during PHE, limiting the opportunity for immediate PNC.

There is a need for research conducted within LMIC to ascertain which interventions can overcome access barriers during the current pandemic and in PHE in the future. Although some decision-makers may perceive the threat of the pandemic to be the primary topic of discussion, if left unattended, the impact of restricted FP access will be devastating. Furthermore, we do not yet know how long the threat of COVID-19 will remain, and therefore, we may need to alter services to adapt to the "new normal" of health care provision. However, HIP have provided many proven or promising interventions for improving FP access. These interventions have been studied for their effectiveness within LMIC, and, therefore, although they are based outside of PHE, they could be adapted to fit the current climate or used to inspire innovation, as discussed in Mickler et al.'s commentary (116).

5.2. LIMITATIONS OF THE STUDY

Whilst this study intended to look at many PHE, the literature findings predominately focused on FP access in the context of the recent COVID-19 pandemic, and to a lesser extent, the Ebola epidemic. This may indicate a lack of data or attention to the consequences on FP in other PHE, that FP access was not as impacted, or that the search strategy did not capture this data.

Due to the scale and global impact of the current pandemic, there is a growing wealth of literature on the observed and predicted outcomes on FP health. However, as the pandemic continues to unfold, much of the listed interventions have no evidence yet of their effectiveness on access and FP outcomes. Although scarce, looking back at the literature on previous PHE can anticipate some of the repercussions for FP and women in COVID-19. It should also be considered that future PHE might bring new challenges and barriers that have not been captured in the literature of previous PHE.

Furthermore, this study does not focus on one geographical location but instead looks at LMIC around the world due to a lack of country-specific data. The generalisability of the recommendations are, therefore, called into question. PHE are experienced differently in different countries depending on a magnitude of factors, including the health systems pre-existing circumstances. Whilst this study cannot outline country-specific interventions, it can provide supported recommendations that may be considered to improve FP access during the pandemic and in future PHE. Literature from HIC has also been included to inspire innovation in LMIC, though it has been recognised that caution is needed when applying these findings in lower socioeconomic contexts.

5.3. STRENGTHS AND LIMITATIONS OF THE FRAMEWORK

Levesque's framework of access to healthcare enabled the findings from the literature to be analysed from both the supply and demand positions of access. Furthermore, the five dimensions facilitated an in-depth review of service providers and users' determinants of access within PHE.

However, the framework failed to recognise the political and governmental influences to access. Health systems do not exist in a vacuum but are interconnected with the political environment, and often health care can be politicised for governmental gains or objectives (108). The impact of decisions made by governmental actors have both direct and indirect influences on health access, from the government-mandated closure of clinics to the reallocation of FP resources and staffing for the pandemic response. These actions have contributed to the millions of women left without access to FP facilities, and, therefore, the consequences of political decisions to FP access cannot be ignored in this discussion.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1. CONCLUSION

The recent COVID-19 pandemic has highlighted how unprepared health systems around the world were to the threats of PHE, particularly in LMIC, where infrastructure and resources were stretched even prior to the strains of a pandemic. As FP services continue to be sidelined in the efforts to overcome PHE, the SRHR of populations, particularly women, are compromised, with permanent and potentially fatal consequences. Using Levesque's access framework, we can look back at lessons learnt on FP access in previous PHE; however, the literature is scarce. But COVID-19 provides a new opportunity for learning.

This literature review identifies the access barriers posed by PHE, and has explored successful, unsuccessful, and promising interventions to improve access to FP in PHE, resulting in an extensive list of recommendations. These can inform and be adapted for future PHE preparedness plans and guidelines to ensure the equitable and consistent access to FP services. Learnings from this review could be adapted and applied to improve access for other health needs or in other emergencies, such as natural disasters, where access also becomes impaired.

However, a more substantial body of evidence needs to be produced to provide significant support for the effectiveness, appropriateness, and safety of these interventions in LMIC. COVID-19 has had an unprecedented and sustained global impact, and as the situation continues to play out, the full extent of the effects is unknown.

6.2. RECOMMENDATIONS

Recommendations to the Government, Ministry of Health, and donors:

- Recognise FP as an essential health care service to protect the provision of resources from being reallocated during PHE and prevent the closure of vital FP services, including outreach
- Invest in infrastructure and systems to support the implementation and scaling-up of telehealth services for during PHE and long-term integration into health systems
- Form partnerships between the public and private health sectors to enable the collaborative provision of care and compensation for gaps in service provision during PHE, and expand the access sites for FP by scaling up pharmacies to provide contraceptive commodities
- Collaborate with stakeholders in the contraception supply chain to ensure the availability of contraceptive choices at all facilities for service users

- Invest in training and collaborating with CHW to improve access in remote regions
- Implement financial support mechanisms for financially vulnerable populations, such as voucher systems

Recommendations to the Ministry of Health and policymakers:

- Lift restrictive regulations to FP services to enable easier and more inclusive access for service users, including home abortions and prescription requirements for contraceptive medicines
- Implement policies to enable the provision of multiple months-worth of contraceptives
- Engage beneficiaries, especially service users from vulnerable and marginalised populations, in PHE response planning discussions to prevent exacerbating vulnerabilities to access

Recommendations to researchers and donors:

- Invest in studies during and post PHE on the impact to FP access and the effectiveness of interventions for access
- Build a more substantial body of evidence for PHE access interventions in LMIC, including telehealth, home abortions, immediate PNC, voucher systems, and easing of prescription requirements for contraception

Recommendations to health care providers:

- Disseminate audience-appropriate messaging via different channels to inform service users of the safety measures implemented in facilities to overcome anxieties and encourage service utilisation
- Record and monitor data on the uptake of different contraceptive methods, supply inventory, and user preferences to inform supply forecasts and procurement

Recommendations for health insurance companies:

- Increase the scope of services covered in insurance plans to include FP

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