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Research Report

Abortion Self-Care (ASC) Need Assessment and Context Sensitive Human-Centered Prototype

Telemedicine for Abortion Self-Care in Southern Thailand Project
The Planned Parenthood Association of Thailand
under the Patronage of Her Royal Highness the Princess Mother (PPAT)

August 2022

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By

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Contents

Acknowledgements ... 4

Executive Summary ... 5

Chapter 1: Introduction ... 8

1.1 Background and importance ... 8

1.2 General objectives ... 11

1.3 Objectives of the research ... 11

Chapter 2: Review of Related Literature ... 12

2.1 Situation of abortion ... 12

2.2 Telemedicine as it relates to SRHR ... 15

2.3 International guidelines for abortion ... 24

2.4 Domestic research related to knowledge, attitudes and behaviors about SRHR ... 27

2.5 Domestic research on the availability and expectation of receiving telemedicine services ... 30

Chapter 3 Research Methodology ... 35

3.1 Scope of the research ... 35

3.2 Study sample ... 35

3.3 Research instruments ... 36

3.4 Data collection ... 37

3.5 Data analysis ... 38

3.6 Limitations of the research ... 39

3.7 Duration of implementation (2022) ... 39

Chapter 4: Results ... 40

4.1 Results of the quantitative data collection ... 40

4.2 Results of the qualitative research ... 48

4.3 Results from the Co-creation Workshops ... 59

4.4 Summary of Key Findings of the Research ... 64

Chapter 5: Summary and Discussion ... 67

5.1 Characteristics of the abortion clients ... 67

5.2 Knowledge about SRHR, including care and self-managed abortion ... 68

5.3 Abortion service at PPAT clinics ... 68

5.4 Readiness, opinions, need for, and expectations of telemedicine for self-managed abortion ... 69

5.5 Summary ... 70

References ... 71

Appendix ... 76

Appendix A: Results of the Quantitative Data Analysis: Frequency Distributions (Additional) ... 76

Appendix B: Data Collection Instruments ... 79

Appendix C: Graphic of an Example of the Methodology ... 88

Appendix D: Prototype of Interactive Manual ... 91

Appendix E: Ethical Approval Certificate ... 92

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Executive Summary

This research report is created as evidence in support of the development of a prototype and a telemedicine system for abortion self-care. This study introduces the concept of designing and creating a new era of work that is based on the client's self-determination as a Human-Centered Design (HCD) that focuses on solving problems from the client's perspective and real human needs. The study attempts to help inform the design and implementation of a system that meets the exact needs of users. The research methodology used quantitative data collection methods with a sample of 100 clients who received abortion services. The researchers also conducted qualitative data collection through in-depth interviews (IDI) with ten purposely selected clients who gave consent to participate in the study. The researchers also conducted 2 co-creation sessions with internal stakeholders. A prototype was also developed and validated by users and stakeholders.

The quantitative sample had a mean age of 28 years (range 18 - 51), with the mean age of clients as 27.9 years and caregivers/accompanying persons as 31.9 years. Most clients were in the 25-to-44 years age group, and most came to the clinic by themselves. For the qualitative sample of clients, the average age was 30 years (range 22 - 42), six were Thai citizens, one was a Canadian, and one was a national of Myanmar. Six had come from a location within the area while four came from outside the area but in the southern region. Most of this group of clients came to the clinic by themselves. They learned about the PPAT clinic service by searching the Internet, or by the #1663 hotline, or by referral from an acquaintance.

A key finding from the research among the samples of abortion clients is that most had little knowledge about their sexual reproductive health and rights (SRHR). However, they believed in their right to health care, including abortion, without discrimination or stigma. They also felt they had a right to benefit from advances in technology and science.

When a woman has an unplanned pregnancy, her first tendency is to seek information by herself from anonymous or confidential sources. A common source for that information is the Internet, followed by first-hand information from a peer who has had an abortion. That information will inform their decision whether or not to seek an abortion at a PPAT clinic. Key

factors in the process of seeking service is the guarantee in confidentiality, legality of the procedure, and confidence in the safety and effectiveness of the procedure. This study looked at the relatively new method of telemedicine to help women self-abort as another way to help clients achieve their SRHR goals safely and in privacy. Women who use telemedicine need to have access to a phone and computer with Internet access, and the ability to ensure that their communication with the provider is confidential. The potential clients also need to provide informed consent to follow the prescription of the attending clinician. There needs to be a reasonable expectation of close follow-up after the procedure and the maintaining of confidentiality.

Telemedicine is becoming increasingly accepted as an ethical and safe way to expand coverage of treatment which clients can practice in the privacy of their own home. Remote medicine was even proven to be essential during the COVID-19 pandemic, when people were under lockdown or neighborhood quarantine. Many persons with chronic or even acute conditions could not easily travel to the nearest qualified provider for review of symptoms and essential treatment. Telemedicine helped bridge that gap and allowed persons to receive treatment and care uninterrupted. Telemedicine is most appropriate when a client can safely take medicine by themselves while under the supervision of a qualified practitioner. This remote service includes the provision of an Interactive Manual to educate women in need of abortion, relevant and general people from a series of research, analysis, co-creation workshops to develop a prototype validated by stakeholders and partners resulting in launching the Interactive Manual of Telemedicine for Abortion Self-Care Guide.

This research points to the importance of a Human-Centered Design (HCD) approach to clinical services, to ensure that the procedure meets the genuine needs of the client. This is important in establishing the credibility and trust in telemedicine since this service is still relatively new to Thailand. Thus, this study looked at the understanding and acceptance of this approach to remote treatment, and the holistic methods to ensure client safety and satisfaction. The telemedicine approach also needs to adapt the in-person counseling service, and contraceptive education to prevent future unplanned pregnancy. The telemedicine approach has the potential to vastly expand coverage of outreach education on SRHR for women and couples in need. Areas for future research include satisfaction of the telemedicine service for abortion self-care by the PPAT southern Thailand clinic, access to essential

knowledge and information about abortion services, and factors related to contraception or the reason for repeat unplanned pregnancy.

Chapter 1: Introduction

1.1 Background and importance

Thailand is ranked 51st in total area among countries in the world. However, Thailand is ranked 21st in terms of population size with its population of nearly 70 million persons, as of 2021 (Thailand Population, 2022). The population has a relatively even sex distribution with 51% of the population female and 49% male. Government hospital data reveal that approximately 30,000 therapeutic abortions occur each year in Thailand, but most abortions are performed in private sector facilities, undisclosed clinics, or are self-induced. Thus, a crude estimate of the actual number of induced abortions in Thailand is 300,000 to 400,000 (Abortion Policy Landscape: Thailand, 2018).

The Universal Health Coverage (UHC) scheme in Thailand, launched in 2001, provides access to essential health care services to citizens, virtually free of charge. This includes SRHR services as listed in the ICPD Action Plan. Despite the success of the UCS and other national health insurance schemes, Thailand is still facing formidable challenges to meet the SRHR needs of the population. While the relevant ministries and various agencies have strategies and programs, there remain shortages of qualified clinical personnel and materials. In addition, many sub-fertile couples lack assistance to have a viable pregnancy, and there is a dearth of care for menopausal women. The national health insurance is not able to cover all Thai residents who are in need, and there are logistical problems trying to reach migrants, refugees, squatter populations, and undocumented persons living in Thailand. While decades ago, there was intense interest in safe abortion rights, this issue has faded, as other health challenges have taken front stage, such as HIV/AIDS, and now COVID-19. At present, there is little information about how well Thai women are accessing safe abortion, how many have repeat abortions, and what the level of unmet need there is. Importantly, the new generation of reproductive-age Thais are becoming sexually active at a progressively younger age. Yet, there is little government interest in improving the state school curriculum to include comprehensive sexuality education and promote contraception for adolescents in need. Add to that the fact that the UCS benefits package still does not include emergency contraception

(i.e., the morning-after pill) and abortion. Finally, in Thailand, as a predominately Buddhist nation, nearly every person, if asked, will say they view abortion as a sin against the Dharma.

Thai laws and policies do not explicitly state gender orientation, gender identity and expression, or gender-related discrimination (SOGIESC) related to sexual orientation or gender identity. Recently, there are two relevant legal provisions regarding abortion according to the country's penal code. With the amendment of the Article 301 under the Thai Criminal Code, abortion is legal up to the 12th week of gestation. After the first trimester, abortion is illegal and punishable by imprisonment for not more than six months or a fine of not more than 10,000 baht, or both. The bill also amended Article 305, which allows abortion in the event of rape. At the time of this report, therapeutic abortion is now permitted if performed by a qualified medical professional under the following circumstances: (1) The abortion is necessary for a woman's physical or mental health; (2) The fetus is at risk of severe physical or mental disability at birth; (3) Pregnancy was due to sexual assault (i.e., rape); (4) The woman is less than 12 weeks pregnant and requires an abortion; and (5) The woman is more than 12 weeks pregnant but less than 20 weeks pregnant and still requires an abortion after undergoing examination and counseling procedures under the Adolescent Pregnancy Prevention and Response Act.

Regarding telemedicine, before July 21, 2020, there were no laws or regulations directly regulating telemedicine services. As a result, hospitals that wished to provide telemedicine services could operate independently without requiring a remote medicine license or other permission from the Thai authorities. However, on July 21, 2020, the government issued an "*Announcement of Guidelines for Telemedicine and Online Clinics No. 54/2020*" effective October 20, 2020. This announcement sets standards on how telemedicine providers should act. However, the announcement does not yet have legal authority and, in effect, serves as a warning to abide by certain ground rules. That said, the Thai Medical Council recommends that all practitioners who wish to provide telemedicine follow best practices to protect safety, confidentiality, and privacy of the client (Navin Chaiyakul, 2020).

In addition to the above guidance, the Ministry of Public Health (MOPH) issued an announcement on "*Standard services in relation to telemedicine facilities*," effective February 1, 2021, which provides a number of conditions and requirements for obtaining a telemedicine

license. The MOPH has stipulated that private medical institutions are only permitted to perform such (telemedicine) services under the Hospital Act, B.E. 2541 (1998).

The Planned Parenthood Association of Thailand (PPAT), under the royal patronage of Her Royal Highness the Princess Mother, has ten clinics in Thailand which provide safe and effective abortion services. There are three clinics in Bangkok, three in the north, two in the northeast, and two in the south region. PPAT has been providing safe abortion to Thai women for over 40 years. The methods used in PPAT clinics include Manual Vacuum Aspiration (MVA), which is practiced approximately 7,600 times a year; and Medication Abortion (MA), which is used in approximately 4,600 cases a year. During the COVID-19 epidemic in Thailand, the need for abortion did not necessarily decline and may have actually increased due to home confinement and reduced access to contraception. Nearly every province in Thailand, especially Phuket imposed some sort of lockdown, curfew, or neighborhood quarantine to contain outbreaks of Covid which were very had to predict. Thus, PPAT was aware of the continued need for safe abortion and the reduced access to clinical SRH services. PPAT was particularly concerned about abortion access for women in the southern region which is more conservative than other parts of the country. As noted, the MOPH authorized telemedicine in early 2021, and the Thai Medical Council issued guidelines for telemedicine and online clinical services. PPAT decided to adapt its clinic-based abortion to try out a pilot project for telemedicine service using MA instead of MVA for women in the first trimester of pregnancy. This approach is seen as consistent with PPAT's dedication to Human-Centered Design and care. The telemedicine service is able to provide pre- and post-abortion counseling, and periodic follow-up with clients to monitor symptoms and reinforce the need to practice contraception when returning to sexual activity. Even during the harsh containment measures of the government's response to the Covid epidemic, PPAT clinics were still able to provide clinic-based SRH services to walk-in clients, including abortion.

PPAT wants to formalize this telemedicine service for self-care abortion, and design a telemedicine support system to increase access to safe abortion, either during outbreaks of infectious disease (i.e., Covid), but also during non-epidemic situations, as a routine service. The abortion service can be fully self-managed or with in-person screening and follow-up care. Such a model will include collecting information about the needs of women regarding planned or unplanned pregnancy, using a client-centered approach. The goal of PPAT in

developing this model of care is to obtain a license from the Thai government to register as an official telemedicine service provider, including standard gender-based and SRH care. In addition to being a model telemedicine service provider, PPAT clinics could become centers of excellence as a training site for other clinics and hospitals around the country. In addition, PPAT will partner with established abortion networks to increase awareness and access to telemedicine for abortion self-care. The expected benefit is that no woman in need of a safe abortion is denied access due to constraints of travel restrictions, cost of travel, fear of being seen, or other impediment to achieving their SRH goals.

1.2 General objectives

1. The Global Care initiative aims to enable abortion self-care practices worldwide by developing person-centered and context sensitive abortion models of self-care, communication and advocacy tools that help stakeholders from community, institutional and political level to support and empower women and pregnant individuals.
2. PPAT aims to increase abortion self-care access in Thailand by developing telemedicine to support and empower women and pregnant individuals targeting 800 persons per year in Songkhla and 200 persons per year in Phuket. This pilot project will also be a model for PPAT to replicate it to other PPAT clinics throughout Thailand.

1.3 Objectives of the research

1. To study and meet the needs of women using the Human-Centered Design (HCD) concept, and creating a new paradigm of service that is centered on the heart of clients.
2. To create a prototype that provides information to women in need of abortion (and their confidants) by recommending legal methods of safe and effective self-administered abortion through a telemedicine system
3. To provide empirical information to support the development of systems and services to increase access to safe and confidential abortion by the clients themselves through telemedicine

Chapter 2: Review of Related Literature

2.1 Situation of abortion

Termination of unwanted pregnancy (therapeutic abortion) has been documented as long as there is a record of human history. Over time, countries have introduced laws to limit a woman's ability to have an abortion based on gestational age and the rationale for the abortion. Today, abortions can be legal, illegal, or extralegal, and clinical or non-clinical (Nuan et al., 2011). However, of most concern to public health professionals is the practice of unsafe abortion by an unqualified practitioner, or self-administered abortion using dangerous or ineffective methods. The prevalence of illegal abortion remains an important public health problem in the world today. In addition, the issue of abortion is fraught with religious politics due to the disagreement of when a human life begins. Some of the more extreme antiabortion groups argue that human life begins at conception, and any attempt to abort the pregnancy is homicide – by both the woman and the practitioner. On the other side are groups who argue that a fetus does not become a human life until it reaches the stage of development where it could survive outside the womb, independently of its mother. Some groups want exceptions to abortion bans for cases of rape and incest. Others want exceptions for endangerment of the health of the mother if the pregnancy continues, or in the case of fetal abnormalities. The following list gives some of the common categories for a woman's or a couple's need to terminate a pregnancy (Sopen Chunuan et al., 2011):

1. Economic factors such as insufficient income, lack of employment, etc.
2. Individual factors (of the pregnant woman) such as stress, mental health problems, physical illness, lack of ability to properly use contraception, etc.
3. Family factors such as divorce, partner conflict, etc.
4. Sociocultural factors such as refusing to accept an out-of-wedlock pregnancy, or religious/cultural taboos about abortion, etc.
5. Factors related inadequate access to information and services related to SRHR such as lack of information resources on services and counseling units which do not cover the full range of reproductive ages, especially teenagers, for example.

The global statistics and trends in illegal abortion are worrying, especially in developing countries. WHO estimated that over half of illegal abortions (54%) occur in developing

countries. There are an estimated 68,000 abortion deaths per year, with the highest mortality rate in Latin America and, in particular, the Caribbean (Allsworth and Goldman, 2008). Between 1995 and 2008, the estimated prevalence of unsafe abortion among women age 15-44 years actually rose: From 44% to 47% to 49% in 1995, 2003, and 2008, respectively. For countries in Southeast Asia, between 1995 and 2008, the prevalence of unsafe abortion was generally constant: From 60% to 59% to 61% in 1995, 2003, and 2008, respectively (Sedgh, et al., 2012). Between 2010 and 2014, WHO estimated that 45% of all induced abortions were unsafe. Annually, from 5 to 13% of maternal deaths are attributable to unsafe abortion, varying by geographic region and economic status (Ganatra, et al., 2017). In 2017, the most common health risks from unsafe abortion was incomplete abortion, severe hemorrhage, infection, perforation of the uterus, and trauma to the vagina and anus (WHO, 2021). It is also hypothesized that the COVID-19 pandemic and harsh government containment measures may have increased the number of unwanted pregnancies, and led to increase unsafe abortion due to inability to access legal providers.

In Thailand, the data on abortion, especially illegal abortion, is unclear. Part of the reason is the woman's and/or couple's desire to keep the abortion secret. Though Thailand is considered a family planning success story, the sociocultural attitudes toward abortion are still overwhelmingly negative, and women who have an abortion suffer shame, being shunned by family and peers, and self-stigma for having "sinned." For many decades, Thai law viewed cases of abortion harshly, both for the pregnant woman and the provider of the abortion. Still, despite these obstacles and sanctions, the demand for abortion has not dwindled, even as Thai fertility has fallen well below replacement levels. In Thailand, in 1999, it was estimated that there were at least 100,000 induced abortions per year, with the majority being illegal and/or unsafe. This led to an estimate of 300 abortions per 100,000 population in non-accredited facilities that resulted in complications and death. Where credible data exist, the median age of the abortion client was 24 years, with mean gestational age of 13 weeks at the time of the procedure. The most common rationale for seeking abortion was socio-economic constraints, i.e., inability to raise a child at that time (Sophen Chunuan et al., 2011). The average cost to the woman for an abortion (including time, travel, lost wages, and the procedure itself) was estimated to be 21,000 baht, or an avoidable cost to the nation of 100 million baht per year (Benjaporn Panyayong and Thanwarut Buranasuksakul, 2014).

By 2009, the estimate of the number of abortions in Thailand had increased to 300,000 per year. The government had to bear medical expenses for treating complications of unsafe abortion in the amount of 123 million baht per year (Women's Health and Reproductive Right Foundation). The estimated mortality rate for Thai women was from 300-500 deaths per 100,000 illegal abortions (Malee Kuanphakul et al., 2014). In 2010, the mass media was in a frenzy over the discovery of the remains of over 2,000 aborted fetuses in three temples in Bangkok. Other cases documented unsafe abortions being performed in brothels. There have also been gruesome reports about late-stage abortion as a means to harvest fetal organs or other nefarious purposes (Wipaporn Netichirachot, 2017).

It is often assumed that unplanned pregnancy which results in unsafe or illegal abortion is a problem of adolescence. Part of the challenge is the lack of comprehensive sexuality education in Thai public schools, inaccessibility of modern contraception for single youth, and social stigma of premarital sex. Thus, in many ways, Thailand continues to be in a state of denial about the problem of unsafe abortion, and will not take overt steps to improve access to safe and confidential abortion, regardless of age and marital status (Kamhaeng Chaturachinda and Nongluck Boonthai, 2013).

The persistent problem of illegal abortion points to the need to improve Thai laws and the health and social welfare systems to enable women and couples who are not yet ready to bring a child into the world to postpone childbearing, without stigma or rejection, until they are in a better position to do so. What is more, in countries where the law allows for abortion on demand, the rate of illegal abortion, complications, and death are very low. Indeed, the only sure way to reduce the problem of abortion is to make access to effective contraception universal, regardless of age or marital status. Unfortunately, at the time of this report, Thailand still does not provide social welfare specifically for unplanned pregnancy, and abortion is still restricted in practice since many practitioners may be reluctant to provide the procedure after so many decades of punitive laws and sanctions. Thus, illegal and unsafe abortion continues to be a problem in Thailand, despite the improving legal environment (starting in February 2021).

As alluded to above, the COVID-19 epidemic in Thailand led to the government’s harsh containment measures (e.g., closing borders, lockdowns, curfews, restricting travel, etc.) While

this may have slowed transmission of the virus in the first year (2020), the impact on the economy of the nation and individuals and families was devastating. Millions of workers lost their jobs overnight as the lucrative international tourism industry was virtually shut down in March 2020, when Thailand was closed to all non-essential travel. What is more, nighttime entertainment establishments were ordered to close, and indoor restaurants could only provide take-out services. The confinement of couples to their domicile might have increased the frequency of unsafe sex, leading to demand for abortion (Bangkok Business, 2022). Couples and individuals probably had more difficulty accessing contraception, especially for methods requiring a clinical procedure. The demand for hospital beds to serve Covid patients and only those with life-threatening conditions meant that few people could arrange for surgical contraception that might require a hospital stay. Hospitals that had provided therapeutic abortion now had to give priority to treating Covid patients, with cases of unplanned pregnancy considered not life-threatening. Many health facilities for safe abortion have been disrupted, leading to their inaccessibility amid stringent infection controls. The MOPH recognized the scale of the problem, and urgently tried to alleviate the situation by issuing exemption measures regarding abortion travel, disseminating information, advocating for more liberal policies on abortion, distributing medical supplies and contraceptive devices, and developing remote client care (Telemedicine) with online counseling (Jaw Leuk Rabope Sukaphap, 2020). As of January 7, 2021, Thailand had 139 safe abortion service providers/facilities registered with the Department of Health, covering 51 provinces. Abortion medicines can be obtained by participating health care providers through 84 locations of the Department of Health, covering 37 provinces. The National Health Security Office (NHSO) also supports 65 outlets for medication abortion (MA) drugs from 19 importing companies (Bureau of Reproductive Health, MOPH, 2021).

2.2 Telemedicine as it relates to SRHR

2.2.1 Telemedicine system

Telemedicine is the use of information and communication technology for health-related activities, services, and systems to achieve the goals of health promotion, disease prevention, health maintenance, as well as education, management, and research on health (World Health Organization, 1998). In general, there are two types of telemedicine models: Collecting and transmitting information to physicians or medical professionals; and interactions between clients and clinicians or specialists directly via teleconferencing or telephone. The

telemedicine system has been used in the United States since the 1960s. Over time, it was gradually developed in parallel with the expansion of telecommunication systems internationally. The development of telemedicine can be divided into the 1st Generation (early 1970s), where telemedicine was not as successful due to the high cost and technological inefficiencies, and the 2nd Generation (the 1990s onwards), in which telemedicine started to play an increasingly important role in medicine, public health, and related fields due to advances in communication technology (Chavaphon Kithirunkul and Wiphawan Annoppornchai, 2021). The COVID-19 pandemic has elevated the role of telemedicine due to the need for social distancing, the limited access to hospitals and hospital beds, and to reduce the risk of contracting/spreading COVID-19 by having to travel to a medical facility. The global market value of telemedicine reached $38 billion in 2019 (Chitkan Chiaratrakul, 2020). The following provides a synopsis of how telemedicine is being applied in different countries around the world.

In the USA, the state of New Jersey enacted (new) Telemedicine and Telehealth legislation that defines telemedicine as providing health services through electronic communications, information technology (IT), digital methods, or any other technology to bridge the gap between patients and remote health care providers. This does not include talking on the phone, email messaging, text messaging, or faxing. As for the duties of the remote physician to the patient, conduct falls under the standard of face-to-face treatment. The patient's consent to the treatment is under the standard of caution. The state also developed tele-pharmaceutical services in hospitals and pharmacies, including the selection of drugs, drug prescription, drug review, drug distribution, medication counseling, and tracking, including the examination of the mixing and preparation of injectable drugs (Krit, Culture et al., 2021).

Germany conducted a pilot project called "*Telemedallianz in Ingostadt*" as a joint public-private partnership. This project focused on the development of a network of data connections as a program that provides cooperation between hospitals and educational institutions under related regulations to create acceptance from society of remote care. It also enacted e-health legislation which deals with data collection, use, and dissemination of medical information among physicians, hospitals, pharmacies, insurance companies, and related entities for the safety and efficiency of the service. There are also plans to develop

electronic health cards that can store and retrieve health data of each client, such as treatment history, drug allergies, and clinical reports of the patient (Chitkan Chientrakul, 2020).

In Malaysia, the Telemedicine Act was enacted to regulate the practice of licensed professionals by defining telemedicine as an occupation using visual, audio, and IT to facilitate communication between client and provider. This arrangement includes requiring the patient's written consent prior to consultation or treatment. The physician must inform the patient that they can withdraw their consent at any time, tell them about the risks, effects, and benefits of the remote treatment, assure them of the confidentiality of any information of patients treated or disclosed during telemedicine treatment, and that there will be no disclosure of any treatment information from using remote communication without informed, signed consent (Chavaphon Kithirunkul and Wipawan Annophornchai, 2021).

In Africa, the South African Council of Health Professionals established telemedicine control measures, and defined Telemedicine as the practice of medicine using electronic communication, IT, or other electronic means between two health professionals to facilitate, improve, and optimize clinical care, as well as to promote education and research in health sciences under domestic services. The duty of the physician to the patient is articulated as the professional duties set out in the African Council of Health Professions' General Ethics Guidelines for Good Practice, which must be fulfilled, even in telemedicine, always maintaining the best interest or well-being of the patient. The South African National Health Act emphasizes the need for respect of patient privacy and dignity, providing patients with information they need about their condition, and always maintaining patient confidentiality and obtaining the written consent of the patient in advance (Chitkan Chiaratrakul, 2020).

In Thailand, telemedicine was first used in 1973 through radio communication as part of the Princess Mother’s Medical Volunteer Foundation. That system was modeled after a remote medicine system in Australia called “Air Doctors” or “Radio Doctors.” Initially in Thailand, sick soldiers or police could use radios to communicate with doctors to report symptoms, get advice, and get prescriptions. The system also used radio to communicate with helicopters to transport emergency patients to hospitals. In 1994, a satellite telemedicine project was initiated which provided services in the form of participation in academic conferences and distance learning. Next, the pilot project added telemedicine counseling in

19 public hospitals with a service center at the Information and Communication Technology Bureau of the MOPH. After the pilot project successfully concluded in 2003, various hospitals began to integrate telemedicine services in their routine program of care, such as Ao Luek Hospital in Krabi and Mae Sariang Hospital in Mae Hong Son Province. Later other hospitals introduced remote services, such as Lom Sak Hospital in Phetchabun, Phang Nga Provinical Hospital, and the Takuapa Hospital in Phang Nga. Next followed hospitals in ten provinces (e.g., Yala, Pattani, Naratiwat, Tak, Nan, Mae Hong Son, Ubon Ratchathani, Nong Khai, Nakorn Phanom, and Trat) in cooperation with the National Broadcasting and Telecommunication (NBTC) and Qualcomm (Chananit Kulratmaneeporn, 2010). In 2019, the MOPH and the NBTC joined forces to implement a project to develop applications of medical services via high-speed Internet in rural areas (Telehealth), which focuses on the use of telemedicine in conjunction with medical innovations and telecommunication systems to support vital health care, such as screening for dangerous disease using artificial intelligence technology, and telehealth counseling/monitoring of people living in remote areas and patients with chronic diseases such as diabetes, high blood pressure, retinal disease, and skin disease (Chitkan Chiaratrakul, 2020).

Meanwhile, Thailand is trying to update laws to incorporate telemedicine, such as the 1992 Public Health Act, the Medical Professions Act, regulations of the Thai Medical Council on ethics and practices of the medical profession, etc., in order to control the quality of treatment through telemedicine to ensure that standards of safety and patients' rights are adhered to. Some of the recent milestones include the Announcement of the Medical Council No. 54/2563 regarding guidelines for telemedicine or telemedicine practice and online clinics, which was issued on July 9, 2020, and the following MOPH announcements, issued on February 1, 2021:

1. Announcement of the Medical Council No. 54/2563 regarding guidelines for telemedicine or telemedicine practice and online clinics

- Definition of telemedicine: It means the transmission or communication of modern medical content by a medical practitioner from either a public and/or private healthcare facility from one location to another by electronic means for consultation, advice to a medical professional or any other person for medical procedures in the field of professional medical knowledge according to the condition, outlook, and existing circumstances, by virtue of the responsibility of the person transmitting or communicating such medical content.

- Service providers must comply with the Medical Practitioner Standards Criteria of the Medical Council of Thailand (2012), and the Criteria for Assessment Knowledge and Capability for a License to be a Medical Practitioner (2012); and amendments (2020); and criteria or guidelines set by the Thai Medical Council in accordance with the legal framework of the medical profession.
- The provider and their client have the right to refuse the use of telemedicine; they must understand the risks of information systems and limitations on the use of telemedicine channels; clients have the right to be informed of medical facts in accordance with patient's rights and treaty declarations, as announced on August 12, 2015.
- Information systems used in telemedicine must meet information security standards, and must be in accordance with the Electronic Transactions Act of 2019, and the Personal Data Protection Act of 2019, and/or related laws.

2. Announcement of MOPH on the Service Standards of Hospitals Using Telemedicine Service System (2021)

- Definition of telemedicine services: It means providing medical and public health services of a healthcare facility to clients by a professional with a telemedicine service system. The purpose is to exchange useful information for consultation, examination, diagnosis, prescription of treatment, medical treatment, disease prevention, health promotion, rehabilitation, and for the benefit of continuing education of medical and public health personnel.
- Definition of telemedicine service system: It refers to a system where digital communication is used to provide medical and public health services in different locations by means of transmitting audio and visual information digitally, or by any other electronic method.
- Licensees and operators of healthcare facilities wishing to use the telemedicine service system must provide a sufficient number of practitioners in accordance with professional standards, and must prepare service plans and telecommunication equipment and technology which allow clear communication between service providers and clients. Providers need to obtain permission to operate additional telemedicine services as required by law. This includes arranging registration Service Report Verification and confirmation of every step of the telemedicine service process, as well as explaining the details of the service to clients at every step. In addition, there are telemedicine operating manuals of related agencies to guide and standardize service, such as the following:

- Manual of remote psychiatric examination services (Telepsychiatry) for outpatients: Department of Mental Health, MOPH. This manual specifies the criteria for recruiting clients, appointment channels, service program, service process, communication method, potential risks, and how to prevent and manage risks (Kalapaya Rajanagarindra Institute, 2021).
- Outpatient Service Operation Manual by the Department of Medical Services of the Bangkok Metropolitan Administration (BMA), which specifies the form of telemedicine patient service as part of the operational process and plan.
- A Guide to Providing Telemedicine Services to the Public: Find a Doctor Online: Lertsin Hospital (2020).

During the COVID-19 epidemic in Thailand, telemedicine assumed increasing relevance and importance due to restrictions in travel, and concerns about contracting or transmitting COVID-19 during trips to clinics or hospitals. This preference for private, confidential home care through telemedicine is also a more client-friendly approach for providing RH services, including abortion. Telemedicine can increase access to legal, effective, and safe abortion without exposing the client to risk of COVID-19. At present, there are effective formulations for medication abortion (MA) which a woman can use in the privacy of her home to terminate an unwanted pregnancy. Globally, the use and acceptance of telemedicine services for pregnant women is high and increasing. The effectiveness and sequalae of abortion through telemedicine is not that different from clinic-based treatment, with the exception that use of curettage is higher with cases of telemedicine (Endler, et al., 2019). The following is a summary of the situation of telemedicine for abortion around the world:

2.2.2 Telemedicine for abortion

In the USA, the recent decision of the Supreme Court to let states determine a woman's right to abortion has resulted in nearly one-third of American women being denied access to abortion that they had enjoyed for 50 years. Even though telemedicine for self-managed abortion was already being practiced before the high court's decision, MA through telemedicine is certain to increase exponentially now that abortion is being made a crime even in the first few weeks after conception. Even where there are exceptions for the ban on abortion due to rape, incest or endangered health of the mother, physicians and hospitals/clinics may be reluctant to offer abortion service since the laws are becoming much more punitive than ever before in modern America. Women in the US are increasingly turning

to international remote medicine prescription and delivery of MA. The NGO Aid Access based in Austria has been inundated for requests for MA ever since the US Supreme Court decision. Aid Access obtains the pills for MA from drug companies in India, showing the global-level collaboration in helping women protect their SRHR. This service model is similar to that of the NGO Women on the Web "WoW" in Canada, whereby physicians provide advice, support, and follow-up with an online support team. However, the equality of SRHR and human rights through safe and efficient use of services is still an important issue at the level of policy and public health stakeholders (Aiken, et al., 2020). It remains to be seen how the US state-level battles over abortion rights will play out at the ballot box during elections in November 2022 and beyond. But it is certain that, at the time of this report, millions of women in the US are in a state of outrage and panic about the removal of their right to safe, effective abortion.

In Scotland, the government passed a law that allows women under 12 weeks of pregnancy to self-abort at home. This law included establishing guidelines for the use of telemedicine, whereby women in need of abortion could consult with a medical professional over the phone without ultrasound. Data are collected on medication use and the results of a standard pregnancy test before prescribing MA. A study of 663 women undergoing MA through telemedicine followed up the cases at four months and confirmed that 95% had agreed to self-abortion after the pre-counseling session; of these, 98% had a complete abortion, and only 2% reported some abnormal, post-abortion bleeding but no severe infection. This study attests to the safety of abortion services through telemedicine (Reynolds-Wright, et al., 2021).

In Germany, abortion is legal up to 12 weeks gestation only in the case of rape. After 12 weeks, abortion is only legal if the continued pregnancy poses a threat to the physical or mental health of the woman. The Canadian WoW group provides online consulting service to abortion clients in Germany, and this is another form of cross-border telemedicine. WoW service statistics for 2018 show that 96.2% of over 100,000 women in need of abortion used WoW services. They preferred the anonymity, convenience, affordability of a web-based counseling service. In this way, online (i.e., telemedicine service) filled gaps in regular health services in Germany, especially among teenagers, lower-income women, and illegal immigrants (Killinger, et al., 2022).

In Sub-Saharan Africa, telemedicine is achieving increased acceptance and popularity. There is a project on biochemical imaging in Senegal and Mozambique, teleconsultation in Ethiopia, online knowledge sharing in Zambia, Internet-based training, opportunity creation, and education between Ghana and sponsors in England and Switzerland, and telediagnosis between D.R. Congo patients and providers in Italy. However, telemedicine for reproductive health, hormonal contraception, abortion, and sexual health treatment is more limited due to IT provider limitations for communication equipment, unstable or weak Internet service, and lack of state support (Oyediran, et al., 2020).

For countries in Asia, since 2015, in Sri Lanka, therapeutic abortion is accessible through the network of public hospitals. The law permits the registration and use of MA. There is a manual on how to self-manage abortion, and what to do when abortion is incomplete. There is guidance on post-abortion contraception to prevent a repeat unwanted pregnancy. The two drugs for MA can be purchased over the Internet, or directly at pharmacies and hospitals. There is hotline counseling service to discuss MA. However, restrictions on Internet access were found for women who were in need of an abortion (Prachathai, 2021, Referral System for Safe Abortion, RSA, 2021).

In India, the government has been enacting abortion laws since 1971, but there still remain obstacles to safe, effective, and legal abortion, especially in remote areas where there is insufficient medical personnel, medicine, and equipment. During the COVID-19 epidemic, the government provided a manual on how to use telemedicine by public health providers, including SRH, and there are efforts by agencies to provide abortion safely through a variety of websites and online platforms. This includes referral of clients in the online network. However, at the time of this report, MA was still not allowed through telemedicine.

In Indonesia, there are laws that allow abortion under conditions, similar to Thailand (i.e., in cases of rape, incest, endangered life of the woman). As a somewhat conservative Islamic society, Indonesia has certain tacit stigmas and barriers to abortion as sinful or a social burden. Furthermore, COVID-19 has made the problem of unwanted pregnancy worse, through difficulty of travel and fear of Covid infection. Accordingly, the telemedicine system has been adapted to reduce the need to travel across cities to see a doctor. However, there is still a

legal limbo regarding whether MA should be allowed through telemedicine. Thus, many Indonesian women are referred to NGOs such as WoW.

Since 1997, there have been abortion laws in Cambodia, but access to services is difficult due to relatively high abortion charges, few abortion specialists, and limited equipment/medicines to provide services. The NGO Population Services International (PSI) is playing a key role in the distribution of abortion drugs (i.e., MA) among healthcare facilities, and has helped to develop an RH drug distribution system, combined with an abortion/family planning counseling system to clients via a hotline.

Since February 2021, Thai law has been liberalized to allow abortion up to 12 weeks of gestation in most cases. If the woman is over 12 weeks but under 21 weeks pregnant, abortion can still be obtained, but the circumstances must be extenuating and there has to be a rigorous process of counseling. Thai law related to abortion falls under Penal Code Amendment Act (No. 28) 2021. There is a separate set of abortion rules issued by the Thai Medical Council. Telemedicine service for RH started to be actively promoted in 2020 after the Covid epidemic and the harsh government restrictions on travel. Thailand is part of the Referral System for Safe Abortion/RSA, which has 56 country and international network partners and 599 advocates. The RSA lobbied the Department of Health of the MOPH to approve telemedicine for safe, effective, and legal abortion to reduce the burden of women having to travel to a hospital or clinic to obtain abortion, in particular to reduce exposure to COVID-19 (Sulaiporn Chonwilai, 2020).

At the time of this report, the status of telemedicine in Thailand in relation to RH, according to information from the Department of Mental Health, 2021, is as follows:

- Hotline service #1663: This hotline gives advice anonymously on HIV/AIDS and pregnancy, including referral to abortion providers, and advice in case of complications of incomplete abortion such as hemorrhage, infection, perforation of the uterus, etc. The hotline operates from 9 a.m. to 9 p.m. This hotline was developed by the Thailand Health Promotion Foundation (ThaiHealth), the Department of Health (MOPH), the AIDS Access Foundation, and the Choices Network. Currently, it is used as the main channel for distressed women to obtain counseling and is expanding to cover all 76 provinces. The Department of Mental Health

(2021) reported that, during May 2021 (the peak of the Thai Covid epidemic) the hotline recorded its highest number of users: 4,461 calls, or an average of 149 per day.

- There are other websites such www.rsathai.org which is a channel for information on contraception, antenatal care, and unplanned pregnancy, as well as referral to government services in each province where adolescents can consult on RH problems, semi-permanent contraception, pregnancy, and abortion options.
- Another website that is particularly targeted and tailored to adolescents and younger sexually active Thais is the website www.lovecarestation.com which has real-time counseling and chat rooms for users to seek information, compare experience, and/or obtain referral for RH issues.

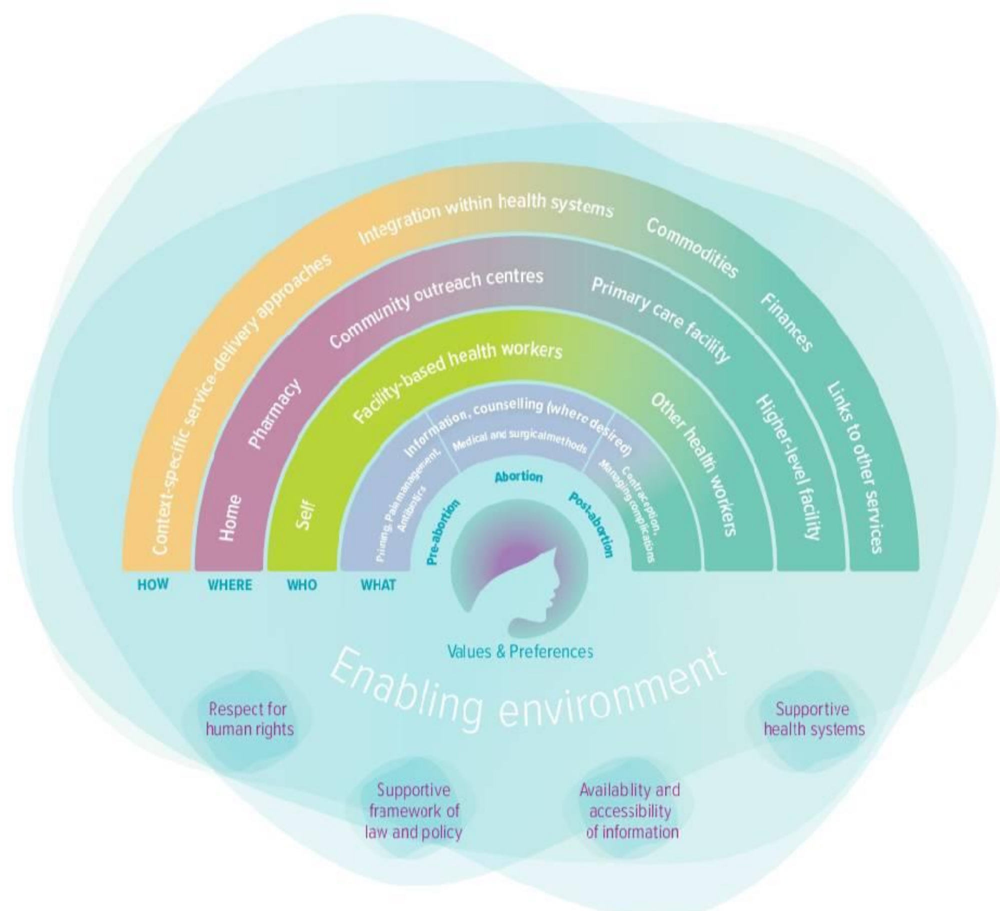
In addition, Thailand has developed guidelines for MA through the telemedicine system. This was a collaboration of the Department of Health, the RSA Volunteer Network, the #1663 Hotline Service, and the Women's Choice Support Network. To goal was to maximize access to safe, legal, and effective abortion through a standard telemedicine system.

Telemedicine provides a safe, secure, and confidential alternative to clinic- and hospital-based services and should help reduce complications from incomplete abortion by women who attempt to self-abort using ineffective or dangerous methods. The steps in safe abortion are holistic (i.e., comprehensive abortion care) which consists of alternative counseling, assessment of statutory health indications, consultation before abortion, history taking, follow-up after service, care/referral for complications, and post-abortion contraceptive counseling. The #1663 hotline works in partnership with a participating hospital nearest the client's location in order to provide the drugs for MA, and to provide the clinical care in the event of incomplete abortion or complications. The Thai telemedicine service is still quite young, and still in need of continuous improvement to meet the growing demand. To the extent that telemedicine for abortion relies on the Internet, then it is imperative that the telemedicine program ensures coverage of service for all women who need it, even when they cannot go online (RSA Volunteer Network Development Association, 2021).

2.3 International guidelines for abortion

WHO produced its latest revised version of its Abortion Care Guideline in 2022. The guidelines define health worker roles in providing safe abortion care and post-abortion

contraception (formerly known as “task sharing” guidance in 2015, and “medical management of abortion” in 2018). The purpose of the document is to provide quality guidance and presentation of good practice regarding abortion, in the context of the different legal and policy environments. The aim of WHO, of course, is to promote international RH rights and services through education of policy makers, program managers, line personnel, community health care workers, etc. The main conceptual framework is a combination of human rights principles, policy, and legal support framework, and availability and access to information and the health care support system. This framework leads toward the creation of value and satisfaction of the service client before, during, and after abortion (see the below diagram).



WHO Framework for Pregnancy Termination Service

Source: WHO (2022), p. 5

The main content in the WHO Abortion Care Guidelines consists of the following:

- **Abortion regulations**: This refers to how more or less restrictive a government or society is to elective abortion, including the defining the gestational age at which abortion is still legal, and the various conditions for legal abortion at different gestational ages.

- **Services across the continuum of care**: The emphasis is on explaining information and providing unbiased counseling by medical personnel, pharmacists, community health care workers, etc., so that the client can make an informed choice which is best for her.

- **Pre-abortion care**: This focuses on explaining how to wait for the right time for the abortion without feeling coerced, and the various clinical procedures, e.g., medication abortion, surgical abortion, ultrasound, and pain relief.

- **Care during the abortion**: This involves explaining the abortion method, and the use of abortion medication by gestational age.

- **Post-abortion care**: At this stage, the focus is on explaining the importance of keeping check-up appointments, the need for treatment in case of incomplete abortion, treatment of complications (infections, hemorrhaging), and the timing and methods of contraception to prevent future unwanted pregnancy.

- **Service delivery options and self-management approaches**: The guidelines highlight the use of telemedicine to deliver care, medication abortion, providing information for the clinical database, counseling and abortion, self-management of abortion at less than 12 weeks' gestation, and self-management for post-abortion contraception.

Each country can set its own abortion rules under criminal law principles and make exceptions in case of threats to the physical and mental health of the women if she continues the pregnancy. Other exceptions may include fetal anomalies, pregnancy as a result of rape or incest, or even being in a state of economic and social necessity to not have a child at this time in the couples' life. Some countries have very restrictive abortion laws and criminalize both the woman and provider, whereas other countries have much more liberal laws, such as Canada and Mexico in North America, France, the Netherlands and Germany in Europe, and Singapore, Vietnam, and Nepal in Asia. As yet, there is no consensus as to what an international abortion law would look like. Only UN conventions and covenants pertaining to human rights, including the rights of children and women, may be applied to a woman's right to abortion. (ASEAN Civil Society and Culture, 2017; United Nations, 2013). However, the ultimate challenge is for a society to define when a human life begins, i.e., when the fertilized egg, zygote, or fetus can be considered a human life that is independent of the mother.

2.4 Domestic research related to knowledge, attitudes and behaviors about SRHR

2.4.1 Sexual and Reproductive Health and Rights (SRHR)

A study of knowledge of SRHR and the need for SRH services among adolescents was conducted in Phayao Province by Dolruedi Petchkwang et al. The study covered such topics as the right to life, the right to equality and not to be discriminated against, privacy rights, the right to choose to marry and to whom, rights to family planning and contraception, the need for pre-pregnancy services, counseling in hospitals, ensuring confidentiality, providing proper care, involving family members in care, use of various media to promote awareness of SRHR among adolescents, and provision of health services to meet adolescent needs.

2.4.2 Unplanned pregnancy and abortion

One of the causes of unwanted pregnancy in Thailand is lack of adequate sex education and insufficient skill in using contraception. There are also socio-economic factors that may have changed from the time a couple tries to get pregnant and when pregnancy actually occurs. It is also probable that the man and the women in a relationship may have different opinions about having a child, and unless these are resolved in advance, there is likely to be discord when a pregnancy occurs. Ultimately, since both members of a couple are involved in creating a pregnancy, there should be equality of each partner in making the decision if and when to have a child, or if and when to terminate a pregnancy. Couple counseling before or soon after marriage can address these issues so that couple achieve a harmonious decision-making norm (Sunari Lertpratuntam, 2003).

Sophen Chunuan et al. (2011) studied the situation of abortion in southern Thailand, and found that 1 in 3 abortions were unsafe, including both induced abortion and miscarriage. The study found that 64.3% of the abortions were therapeutic. About half of the unsafe abortion were among women who attempted to abort the pregnancy themselves without medical guidance. Among those having an unsafe abortion, social factors include not being ready to have a child (60.8%), not being married (24.5%), and still being a full-time student (23.1%). Women who had an unsafe abortion cited economic reasons for seeking to terminate the pregnancy, including insufficient income (42.7%). Other women cited family factors such as fear of shaming the family (16.8%), or not wanting anymore children (16.1%). Of those who had an unsafe abortion and experienced adverse effects, 44.8% had severe abdominal pain, 38.5% had fever, 17.5% had anemia, and 7.0% had shock. Despite the dangers, most of the

women made the decision to have an abortion very soon after learning they were pregnant. Most felt relieved after having the abortion, while a few felt remorse.

Sasinan Phansuwan (2013) studied the experiences of pregnant, unmarried adolescents in the upper north region of Thailand. The women ranged in age from 15-18 years, and gestational age of 32-36 weeks. The majority experienced a decline in self-esteem by being pregnant out of wedlock because, in this part of Thailand, pregnancy before marriage is condemned, and the woman is viewed as a sinful person who has lost dignity by her pre-marital loss of virginity. No matter how it turns out, the pre-marital pregnancy immediately ends adolescent life for these teenagers. In other words, the social condemnation prevents them from continuing with their peer group or engaging in activities which adolescents and young adults do when they are single. Invariably, the pregnant teen is expected to drop out of school. Even if the father of the pregnancy does not take responsibility, the girl is viewed as domesticated by the pregnancy. These girls experienced a range of emotions when they found out they were pregnant, ranging from shock, anxiety, embarrassment, and ambivalence about terminating the pregnancy or letting everyone know. Initially, most were reluctant to disclose their pregnancy, and some tried taking abortifacients of unknown effectiveness or safety. Most lacked the confidence in their ability to raise a child. That said, after revealing the pregnancy to their family and the community, these girls expected to adapt and learn how to take care of a newborn and make preparations for being a mother. They were also optimistic about the future and intended to complete their education and pursue a career.

Students and academic personnel had strong attitudes toward school-age pregnancy in a survey among Muslim adolescents at a university in southern Thailand. Most agreed strongly that the family plays an important role in sex education of the child. That said, they also believed that the school had an obligation to provide sexual health counseling to students before an unwanted pregnancy occurs. There was little support for abortion when an unplanned pregnancy occurs. The respondents recommended that youth who are full-time students should refrain from engaging in a sexual relationship. Students should remain single until graduation, before marrying. They felt that pregnancy out of wedlock is a religious offense. Students who become pregnant may feel they have to drop out. That said, schools should provide maternity leave for students who want to continue the pregnancy without

dropping out. Schools should also cultivate a religious consciousness and use rules/regulations to control behavior (Surerat Rongruang, 2016).

A study was conducted to determine predictive factors of whether a woman would decide to continue or terminate a pregnancy by assessing the attitudes of adolescents age 15-17 years in Muang District, Phayao Province (Chanya Kaewchaiboon, 2017). That study found that those who were more prone to abort the pregnancy were adolescent girls with low self-esteem and poor economic outlook. These youth felt that pregnancy at their age would just make life more difficult, tarnish their image, and lead to future failures in life. The sample believed that a couple needs to be financially ready to support a child before getting pregnant. In this sample, nearly three in four respondents (73.6%) said they could continue the pregnancy if it occurred. They felt strongly that a person needs to be accountable for their mistakes. However, they also acknowledged that teen pregnancy spoils one's chances for higher education and a good future. Nevertheless, abortion is still blameworthy, and abortion is frightening and dangerous. The study found that families with youth in their care would still accept their child if they became pregnant (out of wedlock). But they also felt that a young couple must have means of economic support and readiness to raise a child on their own. Overall, Thai society still views abortion as sinful, immoral, and irresponsible.

A study was conducted in Mahasarakham (northeast Thailand) on factors related to the prevention of unplanned pregnancy among adolescents (Ratchanan Srisupak et al., 2021). The factors contributing to skillful pregnancy prevention were knowledge, attitude, media, and society. The level of knowledge and concern about preventing unplanned teen pregnancy was 'good' among this sample.

Nipada Thareepien and Kosoom Setthawong (2001) studied perceptions about prevention of unplanned pregnancy and abortion by tapping into the opinions among student counselors in a private college/university. Barriers to prevention of unplanned pregnancy included inadequate access to knowledge and resources on sex education and RH. It takes time for guidance counselors to gain the trust of students, especially when considering stigmatizing issues such as unplanned teen pregnancy. Students need to know about methods for preventing unplanned pregnancy, and how to get help in a timely manner. The youth need to know about the laws related to abortion, and there should be involvement of the family

in decision-making about an unplanned pregnancy. Society's attitudes need to be less punitive toward unplanned pregnancy, and there should be more support for educating Thai youth about RH and birth control.

2.5 Domestic research on the availability and expectation of receiving telemedicine services

There is a study called “Telemedicine Studies: Innovations in Health Care” (Chayanit Kulratmaneeporn, 2010). This study looked at the experience of 22 clients in Ao Luek District, Krabi, 18 telemedicine service providers (doctors, nurses, health center staff), 23 government personnel (village headmen, kamnans, staff of Tambon administrative organizations, district offices, provincial public health officials), and 11 national experts. The Tambon Health Promotion Hospital (THPH) and health centers are suitable peripheral parts of the national public health system to provide services and counseling through telemedicine. That is because they are distributed around rural communities of the country, and can be easily accessed by villagers in need. However, the operations of the relevant support units lack unity, and there is duplication of operations, and coordination bottlenecks. Therefore, a central agency should be established to help connect and support the operation of THPH, along with enacting telemedicine legislation to increase the reliability of the peripheral services and the confidence of clients, as well as publicizing the telemedicine service. This should include organizing training for personnel so that they can effectively manage the relevant technology, and creation of a system of monitoring service standards of THPH. There should be policy guidelines for telemedicine services which cover details about the responsible agencies, the related laws and regulations, a standard model of telemedicine, uptime, compensation, expansion of the pharmaceutical framework, public relations to provide knowledge and understanding, service efficiency improvement, and quality control.

Researchers have looked at developing a prototype of a medical communication system using the Android operating system. A prototype was developed with a user manual on storing and processing client data. This is a tool to enable doctors to confer via video call/chat, and helps in early diagnosis for treatment, and consulting with clients. As a result, the treatment service can be more accurate, timely, and reduce the cost and hassle of travel to the hospital of clients. The overall assessment of this applications was “good” (Akkanon Ponglaksmana, 2014).

Another study looked at the adoption and application of telemedicine for public health in remote areas. This was a case study of the Somdej Phra Yuparat Chiang Khong Hospital in Chiang Rai Province in northern Thailand. The study found that the factors affecting the adoption of the telemedicine system were the perceived benefits of the telemedicine system, the ease of use, the availability of technical tools, budget readiness, availability of medical diagnostic tools, the expertise of personnel in the use of tools and equipment, the speed of the connection signal, and data transmission rate. The recommendation of the study was that the user skills should be developed through personnel development policies. There should be backup technology in case of problems with IT connections. There should be a user manual to increase operational efficiency. In addition, a comparative study of the use of telemedicine between urban and rural communities should be undertaken (Orphan Kongmalai and Wasan Jaiwong, 2017).

Kachitwan Ruangrattanaamporn (2018) conducted a study on the liability of physicians to tort risk as part of a case study of telemedicine treatment in Thailand and abroad. The study found that the application of telemedicine in the provincial health service system may be more feasible and cost-effective than trying to expand the static, bricks-and-mortar network of hospital expansion, both in the primary and secondary care systems. However, countries need to establish legal standards for treating patients through telemedicine in order to prevent cases of malpractice. Practitioners must still be liable for violations of treatment standards, and patients need to receive treatment safely, and receive protections in a timely manner. There must be informed consent for telemedicine, just as with in-person care. In the event that a provider gives substandard treatment, it would be considered an offense of negligence which requires compensation to the injured client.

Atiporn Truktrong (2020) studied legal measures to control the health technology business by conducting a case study of the telemedicine system. The study found that there was still a lack of specific legal measures to control the form of requesting permission, and controls over the professional standards of service providers in the telemedicine system. The Public Health Act of 1992 is too dated to accommodate the advances in IT and the Internet. Thus, there is uncertainty of clients about the safety standards and expertise of service providers in telemedicine. Tools related to the use of telemedicine systems can make it impossible to control the quality of services according to 2008 Medical Device Act. Despite

the law on the protection of people's rights, the use of telemedicine services is at risk of infringing on the protection of personal health information, security rights, and the right to give consent before receiving treatment.

Another study evaluated telemedicine systems to support "*health care for the elderly in the 21st century in 12 must-visit tourism development zones*" (Wiphada Mukda and Wanpen Kuansamarn, 2020). This study examined a number of dimensions of telemedicine including: (1) Data transfer (having surveillance of health and environmental risks); (2) Sustainability (improving quality of life, reducing costs, creating equal access to services); (3) THPH context (increased access to counseling with doctors/hospitals in the network); (4) Effectiveness (convenient, fast, reduce length of sickness); (5) Impact (reduce travel for those who are far away, but the THPH still lacks the readiness of personnel, equipment, facilities, budget, and management); (6) Processes (the THPH as the center for disseminating health information); and (7) Inputs (the THPH has communication tools/professional nurses). The guidelines for the development of telemedicine include the need for a law to support the practice. The ratio of personnel should be assessed, and tasks must be assigned clearly. The service should be handled more quickly, and the quality of the tools/equipment needed to link the service network should be improved. The target population should be involved by providing input to the development of the system.

Ruengrit Phollue (2020) studied the behavior of using an application for online doctor consultation. He found that 86% of potential clients are interested in using the service, 43% know about online medical services at Samitivej Plus, 50% want to use the application to search for doctors for treatment, 59% would like to use online doctor services for general healthcare, and 33% know about online medical services from the Internet. In addition, it was found that the factors affecting the decision to use the online doctor's consultation application were the stability of the system, good quality care, and word-of-mouth marketing. Respondents suggested improving the stability of the communication signal, and developing service quality that shows care in every step.

Another study looked at the application of a telemedicine system for improving the quality of telemedicine emergency services in rural areas (Wiphawan Annoppornchai and Chavaphon Kithirunkul, 2021). There are two types of universal telemedicine that were used:

(1) There is collection, transmission, and storage of medical information, without the doctor talking directly to the patient; and (2) There are direct interactions between patients and doctors, such as telephone calls, video-chat by in the form of a consulting, surveillance, health information, and medical learning system. In Thailand, telemedicine has been applied in the emergency medical system by establishing emergency medical institutions to be an information hub between service providers and clients. That application encountered several obstacles that need to be improved, including difficulty in coordination with multiple units in the system, and the need to boost skills of providers in the use of IT tools. There is also a lack of legal measures regarding medical treatment guidelines and services.

One study examined factors of telemedicine screening and how it affected attitudes and intentions in choosing telemedicine services of Ramathibodi Hospital clients. It was found that the factors affecting the choice of telemedicine service were knowledge, competence, and confidence in using communication devices. Other factors include confidence in maintaining data privacy, social influence, perception of information, recognizing the benefits of using the service, perceived ease of use, positive attitude towards service, the intention of choosing the service, and examination/interaction with a doctor. It was also found that service intent directly influences service attitude and is a direct consequence of perceived ease of use. In addition, the ability to use technology, privacy awareness, and social influence are direct determinants of perception. That said, the perceived benefits, difficulty or ease of use, and the perceived usefulness factors did not affect the intention of choosing the service. The participants in the study recommended that people should adjust their attitudes to be more accepting of telemedicine by disseminating more knowledge and understanding about the benefits of its use. Telemedicine systems should be developed to be more modern and easier to use, and programs should encourage a doctor or family member to recommend the use of the service (Thanaporn Thongjood, 2021).

Saraya Wangcharoen and Wichian Chutimasakul (2021) investigated the effectiveness of remote health care technology for stimulating development in children with developmental delays. That pilot study found that the developmental outcomes of children in the experimental group and the control group were not different. Even so, the caregivers of the experimental group saw that the use of long-distance technology is simple and uncomplicated. Regardless of the lack of a difference in outcomes, there remains the inherent

advantage of using long-distance technology in terms of time and cost savings by not having to travel to a hospital, clinic, or therapeutic center. Children's caregivers can watch repetitions of child development training videos. They can share knowledge with family members as well. They can take care of children continuously. In addition, medical personnel can continue to monitor the child's development without the need for caregivers to take the child to the hospital.

Chapter 3 Research Methodology

3.1 Scope of the research

This study included both quantitative and qualitative data collection methods, as well as co-creation workshops and prototype development. For the quantitative component, data were collected using a self-administered questionnaire with 100 participants during the first two weeks of February 2022 at the PPAT Clinics in Hat Yai, Songkhla, and Bang Khen, Bangkok. The results of this study provide useful guidelines for obtaining background or information on the availability of opinions on SRHR in service, including the need for self-abortion telemedicine services. The qualitative component used in-depth interviews (IDI) with a semi-structured guideline. Ten clients who received abortion services were interviewed at the PPAT Clinic in Hat Yai, Songkhla Province during February 21 to 22, 2022 and online given the COVID-19 pandemic. Observation was conducted using the AEIOU method. Two co-creation workshops were also held using the Zoom meeting application system on March 31, 2022, and April 1, 2022.

3.2 Study sample

3.2.1 Quantitative sample

The study sample consisted of 100 clients (patients and caregivers), selected by non-probability sampling at PPAT Clinics in Hat Yai, Songkhla and Bangkhen, Bangkok during the first two weeks of February 2022.

3.2.2 Qualitative sample

The study sample consisted of ten clients who received abortion services at PPAT Clinic, Hat Yai, Songkhla Province. Participants were selected by purposive sampling, with characteristics in accordance with the research objectives.

3.2.3 Participants of the Co-creation Workshops

The participants consisted of seven people: Service providers (1 doctor from the PPAT Clinic in Hat Yai, 1 nurse from the PPAT Clinic in Khon Kaen); Clinic staff (1 Finance and Accounting officer each from the PPAT clinics in Hat Yai, Phuket, and Khon Kaen; and Project staff (1 person each from the PPAT Hat Yai Clinic and the Khon Kaen PPAT Clinic).

3.3 Research instruments

3.3.1 Quantitative data collection tools

The quantitative data collection used a structured questionnaire. The content is divided into the following seven sections:

1. General information of PPAT client or caregiver, including respondent's status, gender, religion, marital status, and age.
2. Reasons why the client chose the PPAT clinic.
3. Readiness to receive telemedicine services: There are 2 sub-sections (for patients and caregivers) which are: 1. Readiness to participate in the service; and 2. Availability of agreements to participate in the telemedicine service. Both sections have five questions each, with questions to be answered according to a 4-level estimation scale with the following opinion levels:

Readiness level score

3 most ready

2 very ready

0 not ready

1 not sure

4. Level of Knowledge about SRHR, including self-abortion
5. Opinion about the telemedicine for abortion
6. Desire for telemedicine service for self-abortion.

Opinion questions used a 5-point Likert scale as follows:

5 most agree

4 strongly agree

3 moderately agree

2 slightly agree

1 least agree

7. Expectations or recommendations for the self-abortion service using telemedicine

3.3.2 Qualitative research tools

Data were collected using IDI with a guideline. IDI were tape recorded. The discussion guide has the following three parts:

Part 1: Service Information

Part 2: Information on telemedicine needs, i.e. knowledge and attitude about the service; receiving the service during COVID-19; readiness to receive service; recommendations of clients for design of the system

Part 3: Information on basic knowledge and attitudes about the concept of gender rights, RH, and self-abortion

Non-participant observation used the AEIOU method.

3.3.3 Co-creation Workshops

The researcher uses the free online platform, Miro | Online Whiteboard for Visual Collaboration. The co-creation workshops covered the following topics:

1. Warm-up discussion: TWO TRUTHS, ONE LIE
2. Awareness: STORY
3. Divergence: HOW WOULD THEY DO?
4. Convergence: CO-STORMING 360
5. Prioritization: RANKED VOTING

3.4 Data collection

3.4.1 Quantitative data collection

In order to help design the self-administered questionnaire, the researcher conducted a review of related documents to inform the conceptual framework and as a component of the content before analyzing the data and synthesizing the discussion of the results in order to answer the research questions based on the objectives of this study.

- The researcher collected primary data from a defined sample of 100 people who came for the abortion services of two PPAT clinics. The participants filled out the structured questionnaire themselves. Completed questionnaires were screened for missing information.
- The researcher entered the raw data using the Epidata program, then transferred the dataset to MS EXCEL for analysis.

3.4.2 Qualitative data collection

The researcher conducted ten IDI with service clients, either in person or online. The IDI were audio-recorded, then transcribed and stored in the form of am MS WORD for use in the content analysis. The information from the observation was recorded as notes. The researcher used the AEIOU guideline to collect details from observation. The AEIOU method is like a checklist, and the prompts are as follows:

A = Activities: Refers to activities that the target audience is trying to accomplish

E = Environment: Means the place where the event takes place

I = Interaction: Refers to actions that occur, whether they are between people, people and things, or even what the person does independently

O = Objects: Refers to static components of the environment

U = Users: Refers to the characteristics of the target audience

3.4.3 Collection of data by co-creation

The researchers facilitated and took notes during the co-creation workshops. Participants joined the discussion through the Zoom application. Miro is a real-time co-creation platform online, which uses an online virtual "whiteboard" where anyone can present or participate. Participants can join in real-time, and anyone can type in information, offer ideas, and comment on the board.

3.5 Data analysis

3.5.1 Quantitative data analysis

• General information about clients. This includes descriptive statistics analysis to provide an overview of general information about clients using frequency distributions, percentages, means, and standard deviation. Data are presented in the form of pie charts and data tables.

• Tabulations of response to the question about why clients chose to use the services at the PPAT Clinic. Data are also presented in the form of a bar graph.

• The following three data areas had the same statistical analysis: 1. SRHR knowledge, including self-abortion; 2. Opinions about the telemedicine system for abortion; and 3. Need for telemedicine services for self-abortion. The statistics in the data analysis were mean and standard deviation. The opinion data were recoded using a 5-point Likert scale as follows:

5 4.51 - 5.00 Most agree

4 3.51 - 4.50 Strongly agree

3 2.51 - 3.50 Moderately agree

2 1.51 - 2.50 Slightly agree

1 1.00 - 1.50 Least agree

3.5.2 Qualitative Data Analysis

The qualitative data analysis of this study was based on an analytic induction approach, which is to interpret the conclusions from the concrete or visual phenomena collected.

Observational data analysis helps to better understand clients or users as to what the actual situation is like.

3.5.3 Data analysis from Co-creation

The researcher used an inductive analytical approach as a qualitative content analysis method used by researchers to develop theories and identify key points.

3.6 Limitations of the research

A main limitation of this research is that due to the epidemic situation of COVID-19 in Thailand, repeat outbreaks of contagious variants of the virus posed obstacles to travel. Therefore, the researchers used both in-person and online data collection methods for the interviews with clients. The co-creation workshops were entirely online.

3.7 Duration of implementation (2022)

Activity	Jan 22	Feb 22	Mar 22	Apr 22	May 22	Jun 22	Jul 22
Review of relevant literature/research							
Select and develop tools for collecting data (quantitative, qualitative, co-creation)							
Collect quantitative data (questionnaire)							
Qualitative data collection (observation and IDI)							
Analyze data							
Organize 2 co-creation workshops							
Summary and discussion of the results							
Develop and submit a prototype							
Write a final research report							

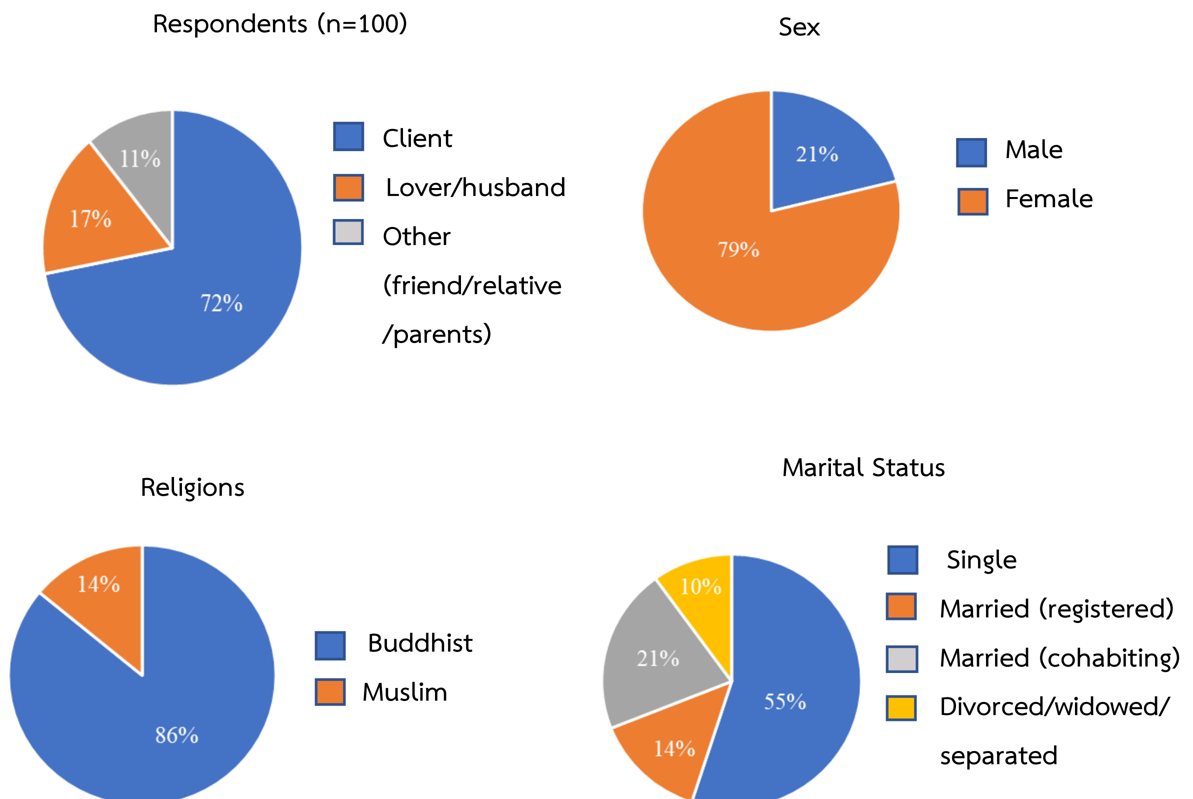
Chapter 4: Results

4.1 Results of the quantitative data collection

The results of the quantitative data collection are presented by the following sections according to the research objectives:

1. General information of PPAT client and/or caregiver
2. Reasons why the client chose to use the service at the PPAT Clinic
3. Readiness to Participate in Telemedicine of Clients
4. SRHR knowledge, including the right to self-abortion
5. Opinion of the telemedicine system for abortion
6. Desire for telemedicine service for self-abortion
7. Expectations or recommendations for the self-abortion service using telemedicine

1. General information of the PPAT clients or caregiver



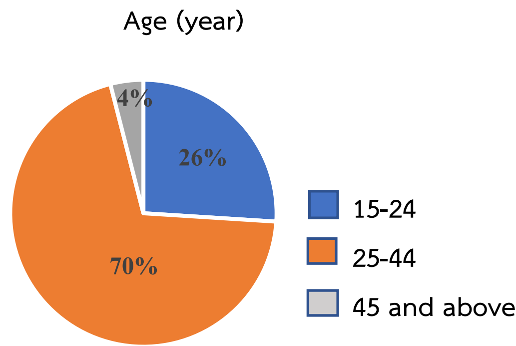


Figure 1.1: Descriptive Statistics of the Sample of Clients (n=100).

Table 1.2: Descriptive Statistics of the Quantitative Sample

Age (Total)	Age (client)	Age (caregiver)
Mean ± SD = 28.0 ± 7.3	Mean ± SD = 27.9 ± 6.2	Mean ± SD = 31.9 ± 8.9
Min = 18, Max = 51	Min = 18, Max = 46	Min = 21, Max = 51

The results show that, of the 100 respondents, 72% were patients, 17% were partner/spouse of the client, and 11% were other persons (friend/relative/parent). The sample was 79% female and 21% male. The clients were 86% Buddhist and 14% Muslim. Over half (55%) of clients were single, followed by co-habiting (21%), married (14%), or divorced/widowed (10%). The majority were in the age group 25 to 44 years (70 %), followed by 15 to 24 years (26%), and 45 years or over (4%). In addition, the mean age of clients was 28 years, with the youngest age 18 years, and the oldest age 51 years old. The mean age of clients was 27.9 years and caregivers was 31.9 years, as shown in Figure 1.1 and Table 1.2.

2. Reason Why the Client Chose the PPAT Clinic

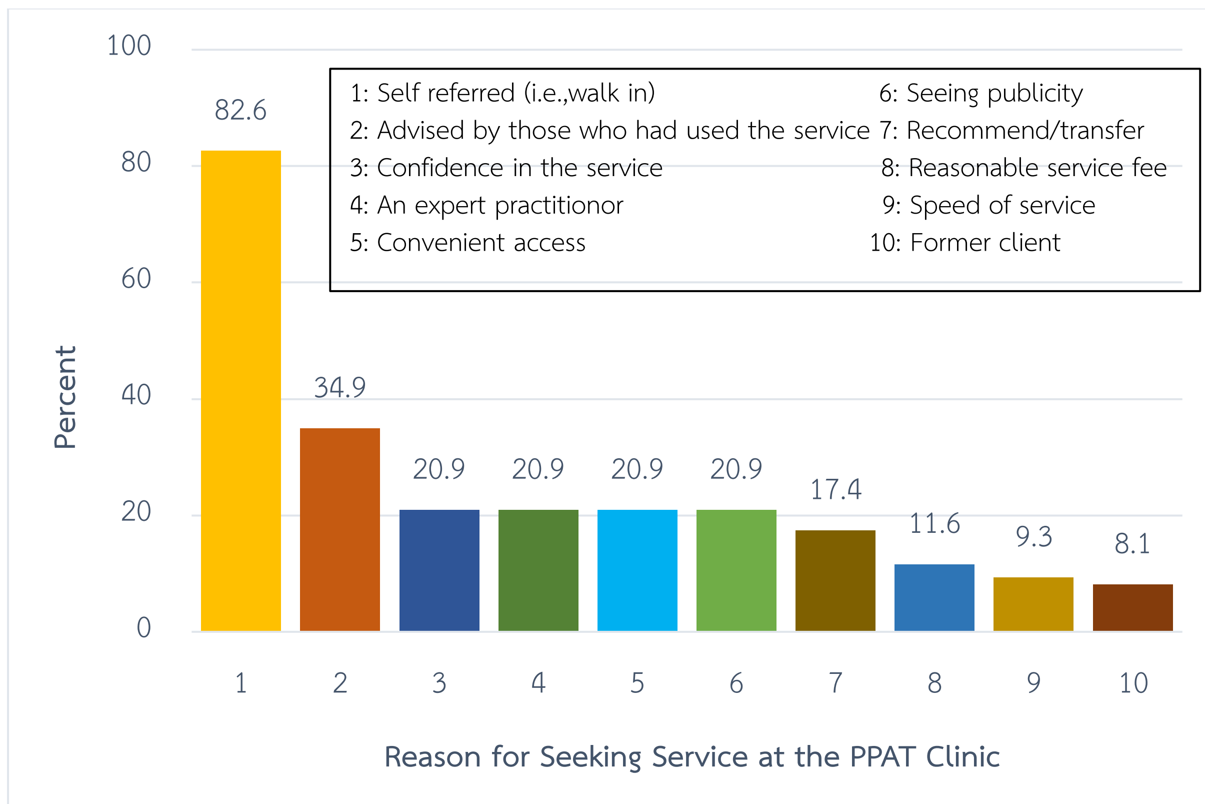


Figure 2.1: Reason for Seeking Service at the PPAT Clinic

This figure shows the percentage distribution of reasons for choosing a service at a PPAT clinic. The data show that 82.6% of clients were self-referred (i.e., walk-in), followed by clients who had been advised by those who had used the service (34.9%). About one in five each chose PPAT because of confidence in the service, availability of an expert practitioner, convenient access, or from seeing publicity about the clinic. Some were referred, e.g., from the #1663 hotline (17.4%), felt the service fee was reasonable (11.6%), or the speed of service (9.3%).

3. Readiness to Participate in Telemedicine of Clients (or caregiver/accompanying person)

Table 3.1: Readiness of the Client to Engage in Telemedicine

Dimension of Readiness	Level of Readiness (%)			
	Very Ready	Ready	Not Ready	Unsure
1. You can use your phone to communicate via video call system as specified by the PPAT Clinic	36	53*	9	2
2. While receiving remote service, you have a private space, and there is no unrelated person other than an immediate relative or caregiver with you during the service	29	58*	8	5
3. You are a person who has a residence in Thailand; you can provide accurate, exact address, and are able to receive medicines by mail	36	51*	11	2
4. You can provide accurate identification information (e.g., client and caregiver ID)	41	44*	13	2
5. You are able to be present, yourself, at the appointed time of the service. The PPAT Clinic will not provide services if the service provider cannot not see the client and caregiver as indicated at the time of the screening	38	54*	4	4

From Table 3.1, the vast majority (89%) of clients said they were 'very ready' or 'ready' to use a smart phone for video calls as required by PPAT Clinic, while 9% of clients were not yet able to do this. A similar percentage (87%) are 'ready' or 'very ready' to engage in telemedicine and have a private space where they can be alone or only with a close relative or friend. Only 8% said they were not yet prepared in this regard. Fully 87% of clients said they had a precise address and could medicines by mail, and 85% had personal ID information for themselves and their caregiver (accompanying relative or friend). Nearly all (92%) assured that they would be present, themselves on the day of the PPAT telemedicine appointment.

Table 3.2: Readiness to Engage in Telemedicine

Readiness to engage in an agreement to receive telemedicine	Readiness (%)			
	Most	Very	Unsure	Least
1. Agree to allow the PPAT Clinic to assess the client's condition through the video call system	36	53*	8	3
2. Agree to the transfer of information between the caregiver, the client, the doctor, the nurse and the personnel involved in the remote system in the clinic without viewing that as an infringement of the client's rights	33	43*	18	6
3. Agree to allow the PPAT Clinic to record pictures or video for evaluation of treatment and/or for technical use	20	35	36*	9
4. Confirm that the medicine or medical supplies received will not be transferred to anyone other than the client who is prescribed to receive those supplies	59*	32	8	1
5. Can follow the doctor's instructions exactly as prescribed	55*	41	2	2

As with the client's readiness to participate in telemedicine with a PPAT clinic, this sample of clients is 'most ready' or 'ready' to enter into an agreement with the PPAT clinic about the terms of service (Table 3.2). The vast majority respondents were 'most' or 'very' ready to all the PPAT clinic to assess their condition via video call (89%). Three out of four (76%) agreed to the transfer/exchange of information about the client with PPAT clinic staff without viewing that as violation of client's rights, although nearly one out of five were unsure about this item. That said, only 55% were ready to allow PPAT to record pictures or video of the client for evaluation of treatment or technical use. Still, 91% assured that any medicines or supplies they were prescribed by PPAT would be used only by themselves. Nearly all (86%) said they were confident they could follow the physician's instructions exactly.

4. Knowledge about SRHR, including care and self-abortion

Table 4.1: Attitude score

Level of agreement	Score range	Meaning
5	4.51 - 5.00	Most agree
4	3.51 - 4.50	Strongly agree
3	2.51 - 3.50	Moderately agree
2	1.51 - 2.50	Slightly agree
1	1.00 - 1.50	Least agree

Table 4.2: Level of Knowledge about SRHR, including Self-administered Abortion

Knowledge about SRHR, including Self-administered Abortion	Knowledge Level		
	Mean	SD	Meaning
1. All women and girls should receive quality services that are consistent with their needs and preferences, with and caring and sensitivity about their feelings	4.58	0.61	Most agree
2. All women and girls have the right to equal health care services without discrimination	4.55	0.69	Most agree
3. Women and girls have the right to independently judge their bodies, and have the right to benefit from scientific progress	4.41	0.78	Strongly agree
4. Women and girls can make their own decision about having an abortion and abortion care without being stigmatized.	4.40	0.77	Strongly agree
5. All women and girls who choose to have an abortion must have conditional access to the abortion service based on the contingencies of each client	4.39	0.68	Strongly agree
6. Every woman and girl should have the right to abortion as a respect of their right to free choice	4.30	0.85	Strongly agree

The levels of knowledge of gender rights and RH rights included the right to self-abortion. Of the six statements as shown in Table 4.2, the majority of clients responded “Most agree” for Statements 1 and 2, with mean scores of 4.58 and 4.55, respectively. For the remaining

four statements, the majority of respondents “Strongly agree” with mean scores of 4.41, 4.40, 4.39, and 4.30, respectively. This shows a high level of knowledge and appropriate attitude toward women’s RH rights, including to decision to have an abortion.

5. Opinion of telemedicine for abortion

Table 5.1: Opinion of Telemedicine for Abortion

Opinion of Telemedicine for Abortion	Level of Opinion		
	Mean	SD	Meaning
1. Reduce risk of diseases such as COVID-19	4.48	0.68	Strongly agree
2. Reduce congestion in hospitals/clinics	4.40	0.67	Strongly agree
3. Reduce travel to hospital/clinic; save waiting time	4.34	0.70	Strongly agree
4. Increase the efficiency of accessing treatment; quality of medical care has improved	4.28	0.65	Strongly agree
5. Clients living in remote areas do not need to travel	4.25	0.73	Strongly agree
6. Reduce overall medical expenses	4.24	0.79	Strongly agree
7. Concern about properly taking the abortion medicine at home if they are not treated at the clinic	3.93	0.94	Strongly agree
8. Confidentiality of the client and/or medical personnel is easy to maintain	3.83	0.94	Strongly agree
9. Would feel uncomfortable talking to the doctor, nurse, or counselor if not seeing them in person	3.75	0.86	Strongly agree
10. Unavailability of online communication systems and devices	3.70	1.01	Strongly agree
11. If people can receive medication for abortion by mail, it would be easy for them to give it to	3.63	1.10	Strongly agree

Opinion of Telemedicine for Abortion	Level of Opinion		
	Mean	SD	Meaning
someone else who had not been screened or prescribed by a practitioner			
12. Unavailability of medical personnel	3.61	0.93	Strongly agree
13. *** If there is a telemedicine system What level of service are you interested in?	3.80	0.97	Strongly agree

The mean response to all of the 13 statements about telemedicine for self-administered abortion was “Strongly agree.” Scores ranged from 3.61 to 4.48. The strongest agreement was for the advantage of telemedicine in reducing risk of communicable diseases such as COVID-19, reduced congestion in hospitals/clinics, reduced travel cost and time, and increased efficiency of service. Still, there was concern among the respondents about the ability of the client to take the abortion medication correctly if not in the presence of the clinician at the PPAT clinic. Also, some felt uncomfortable about the idea of remote counseling via video call. Some clients felt they did not have the adequate communication technology to use telemedicine. Clients recognized the problem of people receiving the abortion medication and then giving it to someone else who was not seen by the PPAT clinic staff.

6. **Desire for telemedicine service for self-abortion**

Table 6.1: Desire for Telemedicine Service for Self-administered Abortion

Desire for the option of telemedicine for self-administered abortion	Level of Opinion		
	Mean	SD	Meaning
1. You would like to have a follow-up appointment after abortion by visiting the clinic in person	4.47	0.79	Strongly agree
2. You need a phone number where you can text or call if you have questions when self-aborting at home	4.40	0.81	Strongly agree
3. You would like to have a screening test or a pre-abortion test to assist your doctor's diagnosis	4.36	0.78	Strongly agree

Desire for the option of telemedicine for self-administered abortion	Level of Opinion		
	Mean	SD	Meaning
4. You want the medicine for abortion to be delivered to your home	3.80	1.19	Strongly agree
5. You would like to get medicine for abortion at the pharmacy	3.41	1.42	Moderately agree

The majority of respondents in this part of the survey “strongly agreed” with the key aspects of the telemedicine service. These include desire for an in-person check-up at the clinic after the self-abortion, need for a number to call if they had problems or concerns, having a screening test to assist the clinical diagnosis, and delivery of the abortion medication to the client’s home. There was only moderate agreement about having the client pick up the medication at a local pharmacy, perhaps due to concerns about maintaining confidentiality.

7. Additional recommendations and expectations for using telemedicine self-abortion services

The majority of clients saw the advantage of a private, telemedicine service, especially for abortion, since most women would like to keep the matter confidential. They also see the advantage of saving money and time by not having to travel some distance to a clinic, and undergoing wait times. They also feel that the abortion costs should be reasonable. That said, some respondents still expressed the desire for in-person consultation or examination by the attending clinician. Some were concerned about their ability to exactly follow the instructions correctly for MA. Clients using the telemedicine service for abortion should still have voluntary informed consent in advance. Each person has a different reason for the abortion, and if the medication is sent to the client’s home, their confidentiality needs to be protected.

4.2 Results of the qualitative research

The results are presented in two parts: The findings from the IDI; and the findings from the non-participant observation.

4.2.1 In-depth interviews (IDI)

The IDI used a semi-structured questionnaire or discussion guide. The IDI were conduct with ten clients at the PPAT Clinic in Hat Yai, Songkhla Province. Details are as follows:

1. Characteristics of the IDI respondents

Table 1.1: Characteristics of the Ten Clients

	Number (%)
Age group (mean 30.4 years; range 22 – 42)	
20-24	3 (30%)
25-44	7 (70%)
Nationality	
Thai	8 (80%)
Canada	1 (10%)
Myanmar	1 (10%)
Religion	
Buddhist	7 (70%)
Islam	2 (20%)
Christ	1 (10%)
Province of residence	
Songkhla	6 (60%)
Narathiwat	2 (20%)
Yala	1 (10%)
Pattani	1 (10%)

The data in Table 1 show that most of the IDI respondents are working age. Seven are age 25-44 years, and the mean age is 30.4 years. The lowest age was 22 years, and the highest age was 42 years. Eight women are Thai nationals, while one is Canadian and one is a Myanmar national. The sample consists of seven Buddhists, two Muslims and one Christian. Six women are from Songkhla Province, which is the province where the Hat Yai PPAT Clinic is located. Two women are from Narathiwat, and one each are from Yala and Pattani. The respondents said that it takes four hours to travel from Narathiwat to the PPAT clinic, two hours from Pattani and six hours from Yala.

2. Service at the PPAT Clinic

From interviews with clients, it was found that most initially knew about the PPAT Hat Yai Clinic from a search on the Internet (e.g., Google and Facebook), by contacting the Clinic by phone, via the #1663 Hotline, and self-referral. For the client from Myanmar, she knew about

the PPAT Clinic through a medical clinic in Betong District, Yala Province, which has a phone number for the PPAT Hat Yai Clinic. When asked why they chose the PPAT hat Yai Clinic for the abortion, all respondents said because they trusted the clinic to have a qualified doctor, and that the service is legal. They felt safe going to the clinic and felt confident that the service would be effective with few or no complications.

"*Because here, it is safe, and it is legal. And there is a qualified doctor to give advice as well. It's not like one of those underground clinics. We trust PPAT.*"

(HY01, 42 years old, Buddhist, Thai nationality, from Songkhla Province)

"*I learned about PPAT from the #1663 Hotline. They suggested that the Hat Yai Clinic is the closest from where I live*."

(HY02, 40 years old, Muslim, Thai nationality, from Songkhla Province)

"I feel safe to come here. I don't feel pressured. I don't feel afraid of any danger. I like that it's very open. Sometimes it's wide open for easy access. This is nearby from where I live."

(HY06, 33 years old, Christian, Canadian, from Songkhla Province)

As for the issue of limitations in receiving services, one case had an ectopic pregnancy, while another had an abnormal uterus. These cases are not appropriate for MA. Overall, however, none of the clients said there were major obstacles to service. The clients felt that the staff were compassionate and client friendly. The clients felt reassured that they would be taken care of. The counseling beforehand helped to ease their anxiety and concerns. There is also post-abortion counseling which helps to relieve worries or feelings of guilt or remorse. Some said they had a better understanding about use of birth control pills after talking with the Clinic staff.

"Overall, the experience was ok. Everything is ok, and the doctor gives good advice. The staff provided good advice on the medication, methods, procedures, and contraception."

(HY03, 31 years old, Muslim, Thai nationality, from Songkhla Province)

"I think that, because I've been watching a lot of movies, I'm afraid. At first, I was afraid that it's dangerous, or it will be painful. I was afraid that the staff or doctor would scold me. But, in fact, the counselor was very nice and encouraging, and the staff helped me to understand birth control better. I had never used the pill before; but now I know how."

(HY05, 22 years old, Buddhist, Thai nationality, from Songkhla Province).

3. Knowledge and attitudes about SRHR, including abortion

The majority of these ten abortion clients had scant knowledge of gender or RH rights, or abortion rights. They first received that information during this visit to the PPAT Clinic.

"Actually, when they told me about the law, I was shocked. I didn't know that my partner had to know about the abortion. I was only vaguely aware of the 12-week limit, and that the abortion would be legal in that time frame. Okay, it's the law and I'm still in time. So, it is not wrong if we choose to abort the pregnancy at this time [gestational age]*."*

(HY07, age 28, Buddhist, Thai nationality, from Pattani)

The study found that only a few of the respondents were well-informed about their right to elective abortion in the first 12 weeks of pregnancy. But they understand that some couples are just not ready to bring a child into the world, and it is better to wait until they are ready. That said, some of the women were aware of gender rights, and right to contraception. However, most accessed their information from the Internet. They acknowledged that information on abortion is more convenient through social media. It is easy to search on Google. They can study the different methods, and compare the risks and safety. Safety seems to be the pre-eminent concern of these women.

"I just found out when I searched for it [on the Internet] *and sat and read it"*

(HY05, age 22, Buddhist, Thai nationality, from Songkhla)

"I first did a search on Google using the term 'abortion.' Then I read about the right to abortion, and whether it is legal. I then called the clinic, and the staff invited me to come in for counseling and to have a look around."

(HY04, age 26, Buddhist, Thai nationality, from Songkhla)

The clients were asked about decision-making related to self-administered abortion, and what the community and society thinks about this. The clients admitted that most of the people around them still see abortion as sinful and unacceptable.

"Abortion is like destroying a person's life. If we are not ready to have a child, we should protect ourselves [with contraception]. *Abortion is a sin"*

(HY03, age 31, Muslim, Thai nationality, from Songkhla)

"I think, today, it is not like in the past, regarding whether abortion is a sin or not. Yes, abortion may be a sin. However, it would be worse if you brought a child into the world and you were not ready to properly care for the child. If you have a child and they starve because you don't have enough resources to raise them, then that is more sinful. I would feel too much pity for the child if I did that. It is hard to explain it properly."

(HY05, age 22, Buddhist, Thai nationality, from Songkhla)

Parts of this region which are against abortion will not have any sources of information in the community about abortion services. In addition, the idea of abortion is stigmatized and taboo, so people do not dare talk about it. There is a lack of understanding why there would be a need for abortion. The general feeling is, if a couple is not yet ready to have a child, they should use contraception. They don't consider the possibility of contraceptive failure, or rape. Thus, there needs to be more education of communities and society about why abortion is still needed for proper RH, even when modern contraception is widely available.

4. Knowledge and attitudes toward self-abortion by telemedicine

All ten clients were not aware of the telemedicine system for self-abortion. They thought that the service must be new and did not know anybody who had used it. None had any experience with telemedicine generally, nor had their family members or people they know, such as relatives, friends. The closest experience they had to this was during COVID-19, when one client had to get medicine from the hospital for her mother. Another said that a relative with a chronic non-communicable disease (NCD) was able to order medicine by phone during COVID-19 lockdowns, and the hospital sent resupply by mail.

"I've heard about an online application where you pay 500 baht for a medical consultation. They will ask about fever, and other symptoms. They then ask what medicine you need and they send it by post. Doing it that way is convenient but more expensive than going to the public hospital."

(HY07, age 28 years, Buddhist, Thai nationality, from Pattani)

Despite not know about telemedicine, all ten respondents believed that this type of remote health service will be popular in the future. This is especially true for self-managed abortion. However, the clients had different opinions on the issue of self-abortion via telemedicine. Some saw it as good for people who are not comfortable traveling to the clinic, or did not want to face the doctor in person. These persons might prefer to communicate just verbally or in writing with the clinician. However, they felt that they would still have to go for an ultrasound exam first, for safety's sake. Others felt that in-person service for abortion would be better because then there is less possibility of misunderstanding. The client is also more likely to follow the MA instructions correctly if they have an in-person consultation with the clinician.

If the counseling is to be done online (either before, during, or after the abortion), the counselor should be a physician or specialist. In the words of one client:

"*I think the counselor should be a doctor. The doctor is the person we can trust the most. If not a doctor, then it should probably be a trained nurse counselor*."

(HY09, age 35, Buddhist, Thai nationality, from Narathiwat)

Most of the ten clients were not concerned about having more risk if they used telemedicine for self-managed abortion. They have trust in the clinic, the personnel, and the medicines they would be given. They felt that any woman like them could easily learn the steps and the process of MA. They also weren't concerned about getting answers if they had questions or concerns. That is because they have many options to get quick answers, either through the Hotline, the Internet, or peers. One respondent expressed concern that the pills (i.e., MA) would be confusing if they looked too much alike. They all saw how telemedicine could be a more efficient way for abortion service, and they felt confident that they could

get good advice from the doctor, even by remote communication. However, they would like to know that the service is registered and backed up by law.

"I think [abortion by telemedicine] *can be effective. That is because, compared to before, when you're in another province, a woman would have to travel all the way to Bangkok to have the abortion. This way, the woman could be anywhere in Thailand, and still have the abortion in the privacy of her home. So this would be better. If a woman doesn't know about the service, then they can search the Internet and learn more about it. Then they can call and consult with the doctor. But the doctor has to be sure about how many weeks pregnant the woman is*."

(HY09, age 35, Buddhist, Thai nationality, from Narathiwat)

These clients also recognized that telemedicine has the advantage of enabling women to access abortion without being stigmatized. They appreciated the confidentiality of this approach. The telemedicine system gives a feeling of privacy. Another factor is that it would be most helpful for women who live in remote areas. Even if they have the resources, they may be reluctant to travel into town or to an unfamiliar environment. Telemedicine would allow them to receive service in the comfort of their home community.

"Abortion through telemedicine system is a way for us to consult with a professional. Just having the opportunity to consult with someone can help ease the anxiety and fear. The woman will see that there is a safe solution to her problem. That said, abortion through the telemedicine system may also have limitations. How can the woman know by herself how many weeks pregnant she really is?"

(HY02, age 40, Muslim, Thai nationality, from Songkhla)

"Yes, the telemedicine system is important. The doctor diagnoses our situation and then gives us a prescription on what to do. It's good. It's better than having to go see the doctor in person. That is because travel would not be so easy for many women with an unplanned pregnancy. But if it is like this, we can call to talk to the doctor and make an appointment at a convenient time for both parties." (HY04, age 26, Buddhist, Thai nationality, from Songkhla)

"If there's a telemedicine system, it's good. It's very good. That is because some women are not ready to tell others about the pregnancy. They are afraid to consult someone. But, if there is an anonymous, confidential online application that can be used on the Internet, then the woman can consult with the doctor directly, and no one else needs to know. It's good. It helps a lot. Teenagers will like this."

(HY01, age 42, Buddhist, Thai nationality, from Songkhla)

The women were asked if self-managed abortion through telemedicine system would encourage more women who had an unwanted pregnancy to be able to obtain one. The ten respondents felt that the telemedicine system would not encourage a rash decision to have an abortion. Instead, they see it as a convenient channel for women to receive counseling and advice from a professional clinician. That way, the woman can determine the best course of action. In addition, abortion services through telemedicine should empower women to make the decision herself. That way, the woman can play a greater role in making the decision about her own body. Telemedicine removes the risk that the woman might run into someone they know at the clinic, undermining her confidentiality. In sum, these women felt that telemedicine for abortion would make it easier for clients to make the right decision.

1. Services in the context of the COVID-19 epidemic

The COVID-19 epidemic in Thailand and the harsh government containment measures restricted travel all over the country, and for many months. This included hospital and clinic closures in areas of outbreaks. Also, there were strict limitations on how many people could be accommodated in a hospital at any one time, producing long lines and delays for service. All of this made it more difficult for a woman to visit a clinic or health provider if they were concerned about an unplanned pregnancy.

"COVID-19 is a problem. It has made many things more costly. People's income dropped. People were forbidden to go to places where there might be crowding, like a hospital. But a woman who is seeking an abortion needs to have her gestational age determined. If the woman cannot be diagnosed in time, then she will not be able to get a safe abortion in a clinical facility."

(HY02, age 40, Muslim, Thai nationality, from Songkhla)

Additionally, most clients were of the opinion that the COVID-19 epidemic discouraged abortion practitioners from doing abortions in the clinic, such as MVA. Instead, the doctors themselves may prefer MA since that reduces exposure to clients. But that puts women who are in a later stage of pregnancy at greater risk. Other respondents felt that the convenience and remote service outweighed the risks. It makes women feel like they are more in control of their bodies.

2. **Readiness for the service**

This study found that most clients could use a phone or computer to communicate via telemedicine. If required, they were ready and willing to fill out personal history through the telemedicine system. The majority accepted that collecting and storing client data (including audio, pictures, video) through telemedicine would not infringe upon clients' rights.

"Telemedicine is a good option. It's also convenient for us. It's okay. We know we can trust the clinic and the staff to protect us. If there is any problem, we know we can contact them."

(HY04, age 26 years old, Buddhist, Thai nationality, from Songkhla)

"Actually, if [our personal data] *is not published anywhere I think the clinic should keep it. It is our history, like a treatment. This is standard practice whenever you go to the hospital. They take a history a keep records of the treatment and outcomes. They need to know our individual characteristics and where we can be contacted."*

(HY07, age 28, Buddhist, Thai nationality, from Pattani)

Clients were asked if they feared loss of confidentiality or rights infringement by using telemedicine.

"Forwarding our clinical information, if it is useful for treatment, wouldn't be a violation. Plus, that information is important for doctors and nurses to know so that treatment can be continually improved."

(HY02, age 40, Muslim, Thai nationality, from Songkhla)

The clients acknowledged that there might be some women who take the medicine that is prescribed by the doctor through telemedicine and give that to someone else who was

not seen by the doctor. Most parts of the country still have drug stores which sell illegal or ineffective abortifacients. Thus, some women might do this to help others who are disadvantaged. But it would be the small minority of cases. There will always be a group of women who prefer to go to the clinic and see the doctor in person, even if telemedicine would be just as effective.

"It's like when we hear about something new, we want to see it with our own eyes first. We want to know it's real, that it exists, and what kind of medicines will be available, and where does it come from. I would like to see the doctor, nurse, or other people, just to verify that it works."

(HY08, age 24, Buddhist, Thai nationality, from Narathiwat).

3. **Design or attributes of the telemedicine service**

- System design for the use of telemedicine systems
- Channels of payment
- Channels for counseling
- Channels for delivering the MA drugs; need for recipient name; how much can be revealed?
- Storing the client's medical history in the system should have a long duration
- The cost should be reasonable, not very high.
- An online system that reminds/tracks/consults birth control clients that are tailored to each individual
- Online system that is cheaper than going to the doctor
- An online system that provides privacy, and removes the need to come to the clinic
- An online system that can prescribe pills and contraceptives with experts to give advice (even going to a pharmacy is too embarrassing for some women)
- Online platforms are a space for women to share experiences together; there are chat rooms with clinicians and counselors to answer questions about gender and reproductive health (stress, read about other people's experiences, friendly atmosphere)
- Online system is multi-lingual (non-Thai speakers do not have to copy and translate with an online app)

- An online system that can inform the criteria for using the same standard service, and appointment system to see a doctor
- An online system that acts like a "friend" 24 hours a day (automatic answering system or have a central care provider 24 hours a day)
- An online system that encourages women to self-administer MA at home/in their private space
- An online system that doesn't require travel outside the home or neighborhood (undocumented persons may have concerns about legal status)

4.2.2 Non-participant Observation

The non-participant observation was conducted at the PPAT Clinic in Hat Yai, Songkhla Province on February 21, 2022, between 9:00 a.m. and 4:00 p.m., using the AEIOU method. The results of the analysis are shown below.

Table 4.2.2.1: Analysis of Observations using the AEIOU Method

<table>
<tr><td>Date: Feb 21, 2021</td><td colspan="2">Project Name: Telemedicine for Abortion self-care in southern Thailand</td><td colspan="2">Type of Research: Qualitative Research Passive Observation – Fly on the wall and AEIOU</td></tr>
<tr><td>Time: 9 a.m. – 4 p.m.</td><td colspan="2">Researcher Name: Research and Program Development Officer</td><td colspan="2">Place: PPAT Medical Clinic, Hat Yai Branch</td></tr>
<tr><th>A – Activities</th><th>E – Environments</th><th>I – Interactions</th><th>O – Objects</th><th>U – Users</th></tr>
<tr><td>After seeing the doctor, women came to pay for service fees at a staff counter.</td><td>1.Not many people at the clinic.
2. PPAT staff spoke with a sweet voice.
3. Due to COVID-19 situation, boyfriends were waiting outside the clinic.</td><td>1. A client asked about online money transfer to the clinic's account.
2. PPAT financial officer replied that according to the policy, she can pay only cash.
3. The client had little difficulty finding money in her wallet.
4. Her face showed no emotion.</td><td>1. Clinical design with a film on all front glass making outsiders unable to see inside the clinic.
2. Clients could see their boyfriends outside but they could not see the clients.</td><td>The clients came into the clinic for follow-up the results after having the medical abortion (MA) method.</td></tr>
</table>

4.3 Results from the Co-creation Workshops

Insight: People that are not access to safe abortion during COVID-19 (Insight protagonist) use methods that are at risk (Activity, action or interaction performed) because the travels are restricted in Thailand (Reason behind the activity, action or interaction) and this causes women are facing health issues from unsafe abortion (Restriction or consequence of the activity) and they could die. (Final consequence).

Opportunity: How could PPAT increase (guiding verb/ objective to be achieved) access to safe abortion (touchpoint to intervene) for all women in reproductive age (stakeholder or

area to be impacted) <u>who are searching for an abortion self-care during COVID-19 pandemic and new normal lives</u> (context)?

The Co-creation workshops were organized by Research and Program Development Division led by Saneekan Rosamontri, Research and Program Development Manager and Sarawut Sukkhum, Academic Officer, PPAT. The participants included staff from north-eastern and the southern offices. The general objective is to design solutions to the problem of women that their lives are at risk due to unable to access to safe abortion and the specific objectives are to generate inclusive strategies that could be implemented in the entire PPAT clinics; take into account and policy making to protect women; take into account the self-care component; and create a telemedicine system that responds to women's needs. People who participated included health providers, project leader, project officer, finance and accounting officer. The participants were motivated to work as a team. The creative sessions consist of **WARM UP** (TWO TRUTHS, ONE LIE); **AWARENESS** (STORY); **DIVERGENCE** (HOW WOULD THEY DO IT); **CONVERGENCE** (CO-STORMING 360); **PRIORITIZATION** (RANKED VOTEING).

The first session was **WARM UP** and the selected tool was TWO TRUTHS, ONE LIE. This activity aimed to help the participants to get to know each other better. Although the participants have already known each other as they have been working together, this activity created fun because they never thought or known about those their colleagues' two truths, one lie before. The north-eastern team could only guess correctly for one person while the southern team could guess correctly for two persons.

The second session was **AWARENESS** where each person told STORY based on their background. <u>For the northeastern team</u>, 1) the health provider (nurse) talked about telemedicine and abortion self-care experience that she heard about it since early 2020.; 2) the project officer told us about his experience working with sex workers, mostly in the field of prevention. He heard about telemedicine since early 2021 but did not know how it worked.; and 3) the finance officer just heard about telemedicine recently and did not know anyone who obtained an abortion self-care service through telemedicine. She heard about delivery of other kinds of medicines such as medicines for diabetics and blood pressure. <u>For the southern team</u>, 1) the health provider (doctor) told us about his telemedicine experience that started because of COVID-19 pandemic, especially in Phuket province where this was no any other

service provider and the province was locked down. The doctor therefore started to provide telemedicine services for ASC partially by setting up a system, collecting data (treatment results shown no difference between onsite and online). He found that many clients concerned about privacy, so they chose online more than onsite.; 2) the project officer knew a telemedicine service because her father obtained the service.; and 3) the finance officer said that we should increase number of service providers in support after abortion services especially for incomplete cases. The doctor commented that mostly service providers' attitudes towards abortion are negative although it has been legal since February 2021. A strong safe abortion network namely Referral System for Safe Abortion (RSA) has also tried to increase numbers of service providers in support of referred cases, especially incomplete cases. In general, 97% of total cases with less than 12 week-pregnancy are successful while 3% of the total are incomplete and their pregnancy period are more than 12 weeks.

The third session was **DIVERGENCE,** and the selected tool was HOW WOULD THEY DO IT. It allowed participants to think of ideas that are different from what they would usually come up with. Each person thought about solutions from the perspective of specific stakeholders. <u>For the north-eastern team</u>, 1) the health provider (nurse) chose 4 stakeholders which were client, doctor, relative, and community. She explained in the view of clients that they would need reliable service providers. If in the view of doctors, they need to know about clients' information in details such as period of pregnancy, ultrasound results, any other abnormal matters. In the view of relatives, they need to know how they could help take care women during the abortion process. In the view of communities, it needed communications and awareness raising to help the communities take care of women obtaining abortion.; 2) the project officer identified 3 stakeholders which were local health service provider, client, and teacher. He thought that the local health service providers would concern about instructions of using medicines, risks after taking medicines, and referral systems. For clients, they could be worried about expenses, confidentiality, how to use medicine, and who would support during the ASC process. Since the project officer has worked with many teachers, he thought that teachers would support students to have their own choices without stigmatization and strengthen networks to support young people.; 3) the finance officer informed that she selected 3 stakeholders which were finance officer, client, and counsellor. As she is a finance officer, she needed to ensure receiving payment before providing services. In the view of clients, they would be able to obtain advice anytime, 24 hours and they concerned about

stigmatization from other service providers in case of transfers. In the view of counsellors, they would listen more, protect clients' privacy, prevent stigmatization, provide choices for clients (MVA/MA), ask in details for the best service provision, advise clients how to evaluate risks, and recommend contraceptive methods. They would also mention about human rights and consent forms. For the southern team, 1) the doctor focused his concern to client only. The clients should be confident to obtain services, reminded about taking medicines, supported throughout the ASC process.; 2) the project officer chose 5 stakeholders which were clients, health providers (doctor/ nurse), finance and accounting, project, and IT officers. Clients would need a system that are safe, confidential, and easy to access. The organization must be reliable, provide relevant information and hotline. Doctors follow up closely. In the view of health providers, the telemedicine system should support human resources management, OPD cards, counselling, live streaming, SMS reminders, appointments, and service mind. For finance and accounting officer, the system should send notifications when receiving payment, support database management and stock management. In the view of project officers, they would develop a system that support service providers, increase public awareness, expand networks, access to friendly counselling, increase creditability and outreach to young people. In the view of IT officers, they would have strong IT and telemedicine knowledge; 3) the finance officer in Songkhla selected 5 stakeholders which were health provider, finance officer, call center officer, client, and clinic. In the view of health providers, they would be reliable and provide clear instructions to clients. In the view of finance officers, they would provide clients several options and convenience channels for payment. In the view of call center officers, they would provide initial information of telemedicine services. In the view of clients who could not travel, they would need telemedicine service that are reliable with clear information. In term of clinics, they should increase awareness and public relations about the ASC telemedicine services.; 4) the finance officer in Phuket chose 3 stakeholders which were caregiver, finance officer, and receptionist. In the view of caregivers, they would like to ensure that the abortion would not affect future pregnancies, it's legal, if they needed to accompany and provide consent to young people and at what age. In the view of finance officers, they would like to ensure they received payment, having discount options in the telemedicine system, connecting with bank online, and protecting people's personal data in case of using credit cards. In the view of receptionists, they would recommend the telemedicine system to the women who walk-in for next services and ask those women to recommend it to others.

The fourth session was **CONVERGENCE,** and the selected tool was CO-STORMING 360 to have much more robust ideas that bring together the perspective of several stakeholders. The participants chose the idea he/she liked the most from the divergence session. Each participant strengthened each selected idea and socialized their ideas. For the north-eastern team, 1) the health provider (nurse) chose the view of clients, which they would need reliable service providers. Other adding ideas included reliability of medicines provided by PPAT and reviews at famous platforms.; 2) the project officer chose teachers who would support children to have their own choices without stigmatization and strengthen networks to support young people. Other adding ideas included to identify which networks, to have responsible persons at schools to facilitate students in need to access abortion services, and to host meetings with relevant parties from 6 Ministries mentioned on the Prevention and Solution of Adolescent Pregnancy Problem Act (2016).; 3) the finance officer chose her own duty to ensure receiving payment. Other adding ideas included having connected bank account with SMS and developing a clear policy to support women in need. For the southern team, 1) the health provider (doctor) chose the view of clients that needed a reminder system. Other adding ideas included SMS to connect throughout the process such as confirmation of sending and receiving medicines.; 2) the project officer chose the view of clients that needed a system that are safe with confidentiality and easy to access. Other adding ideas included reliable system and no record of clients' data.; 3) the finance officer for Songkhla office chose clients who could not travel. They would need telemedicine service that are reliable with clear information. Adding ideas included records on the system, increasing awareness, providing clear communications and consent forms.; 4) the finance officer for Phuket office chose her own view to ensure receiving payment. Adding ideas included providing a safe telemedicine system connected to banking system, notifications of reminding and receiving payment and linking to finance and account system to stock system.

The fifth session was **PRIORITIZATION,** and the selected tool was RANKED VOTEING as it is necessary for everyone in the groups to vote to define the final idea. For the north-eastern team, **the rank no. 1 was the health provider (nurse)'s idea of reliable service providers.**; the rank no. 2 was the finance officer's idea of ensuring receiving payment.; and the rank no. 3 was the project officer's idea of teachers and networks. For the southern team, **the rank no. 1 was the project officer's idea of safe system with confidentiality and easy to access.**; the rank no. 2 was the finance officer for Songkhla office's idea of telemedicine service

that are reliable with clear information.; the rank no.3 was the health provider (doctor)'s idea of a reminder system.

In summary, when developing the telemedicine system, it needs to take into account and emphasize that PPAT clinics are reliable. It needs to also ensure the telemedicine system is safe, user friendly, and support women needs, especially in the areas of providing privacy and keeping personal data confidential. Other ideas are also good components to consider when developing the telemedicine system, such as having convenient payment channels and confirming the receipt of payment before sending medicines, providing SRHR and abortion information and knowledge on website/ application, setting up a reminding system for clients to ensure they follow the ASC process correctly, linking the telemedicine services for ASC to networks, and increasing public relations. Furthermore, we need to investigate each touchpoint and develop a clear internal process from the beginning till the end.

4.4 Summary of Key Findings of the Research

4.4.1 Knowledge of SRHR, including abortion: The results of this study show that the sample of clients' value access to quality services that meet the needs of women and girls, and believe that everyone should have equal rights to health services without discrimination. In terms of abortion, they believe that women should have the right to make decision about having an abortion without the threat of stigma or rejection. Most clients, however, have little knowledge about SRHR, and knowledge of their right to abortion mostly comes from contacting a provider. Most were unaware that women can legally have abortion up to 12 weeks' gestation.

4.4.2 Abortion services at PPAT clinics: Most clients in this study were self-referred, in that they came to the clinic by themselves. They gathered information about abortion from the Internet, such as Google, and were persuaded by recommendations from people who had used the service before and were confident in the expertise, legality, ease of access of the abortion service. Some of the women had heard about the service through public relations activities. It was important that the fee for the abortion was reasonable, that the service was fast, and there was an option of referral if needed.

4.4.3 Readiness, opinions, need for, and expectations of telemedicine for self-managed abortion: This study found that the majority of clients are equipped and ready to

use online communication devices (smart phones, computers) in order to participate in telemedicine. They have their own private space when communicating with the clinic staff. They did not have any objection to online screening and prescription of MA. They felt they were competent enough to follow the prescribed procedures as the doctor orders. They said they could receive medicines by mail to their home address, and they would not share the drugs with another person. Some of the clients were hesitant about the clinic storing the photos or audio-video content of their interaction with the clinic staff. Yet they understood the need to use clinical information for learning and technical purposes. Most clients are interested in receiving services through telemedicine. They agree that there should be a preliminary examination to assist the doctor in making a diagnosis. They also know that the clinic must maintain client confidentiality. They saw the advantage of telemedicine as reducing travel and abortion costs. They felt confident they could use the available communication channels (e.g., phone or text) if they had questions during the process of self-managed abortion, and for follow-up. They like the idea of a post-abortion check-up with the doctor at the clinic. Still, the concept of self-abortion through telemedicine is something new, and opinions differed somewhat. The women in this study recognized the importance of telemedicine for women who are not easily able to travel to the clinic, especially during outbreaks of COVID-19. However, they also had concerns about women who were later on in their pregnancy, and the risks of abortion via telemedicine at more advanced gestational age. Telemedicine will also help those women who do not want to travel to the clinic out of fear of encountering an acquaintance who might wonder why they are there. Some felt that there should be an ultrasound exam, prior to prescribing the MA. There should also be a warning system and rapid follow-up if problems arise. Some women felt that it would be best to see the doctor in person in order to have a complete understanding and confidence in the procedure. Most clients are of the opinion that the person they consult with is a specialist physician or nurse, and there should be counseling on contraception and STI prevention. Most clients believe that a telemedicine system would be safe since it is supervised by a medical professional. They would feel most comfortable if the service is officially registered and backed up by law.

4.4.4 Guidelines for addressing lack of access to safe abortion: The co-creation activities were conducted with related persons, including the PPAT Clinic staff in the southern and northeast regions. Participants felt that credibility was the most important factor to

acceptability of the telemedicine service. That’s why it is important to develop a prototype which was an interactive manual with training and consultation with Háptica, and reviewed, commented, and validated by users, Ipas and Women on Web (WOW) to help make the interactive manual of telemedicine guide for abortion self-care clear and easy to use. The manuals were created in both English and Thai languages, posted it online, and can be downloaded as a *.pdf file. It can provide knowledge and confidence to those who are considering self-abortion through telemedicine. This will go a long way to increase access to safe, effective, and legal abortion during the COVID-19 epidemic, and for women in remote areas.

Chapter 5: Summary and Discussion

5.1 Characteristics of the abortion clients

According to the Thailand Abortion Surveillance Report 2020, among cases who were having an abortion for health reasons 81.1% were in the working-age groups, i.e., age over 25 years. Nearly three-fourths (74.2%) said the pregnancy was intended. Of those who did not want a pregnancy, one in three (36.1%) had not been using contraception. Of those who had been using contraception, nearly all (97.7%) had been using temporary methods, such as the pill (57.1%), or condoms (19.0%). Only 3.6% had a history of spontaneous abortion. Over half the cases of abortion (53.8%) were induced abortion and 46.2% were cases of incomplete spontaneous abortion (i.e., miscarriage). Of those having a spontaneous abortion, 23.4% were age 30 to 34 years. Two-thirds (65.8%) of the women who miscarried had been trying to have a pregnancy. Of those not wanting to have a pregnancy, 47.0% had not been using contraception. Most of those that had been using contraception were using a temporary method. Of those cases of abortion who cited social or economic reasons for the abortion, 55.8% were under age 25 years. One in three were full-time students (33.6%), and nearly all did not intend to get pregnant (98.8%). However, of these younger women, 37.9% were not using contraception before the last pregnancy. Nearly all (98.9%) who were using contraception were using a temporary method, such as the pill (46.2%). The most common reason cited for seeking abortion was financial constraints (44.9%), followed by not wanting to drop out of school (24.8%), or having relationship problems with the father of the pregnancy (6.4%). Only 2.7% of these women had a history of prior abortion.

In the current study, the quantitative sample of abortion clients had a mean age of 28 years. Data were collected from a sample of 100 clients at two PPAT clinics. More than half were in the age group 25-44 years (n=70), age 15-24 years (n=26), and age 45+ years (n=4). The qualitative sample of ten clients in this study had an average age of 30 years. More than half being in the 25-44 age group (n=7), while three were age 15-24 years. Based on the statistics of PPAT abortion clinics throughout the country (data from 2021), about one in ten (9%) were under 20 years, one in four (25 percent) were age 20-24 years, two-thirds (66%) were age 25-44 years, and 1% were age 45 years or older. The PPAT client profile is similar to the national data on women receiving induced abortion for an unwanted pregnancy: One in five (20.7%) were age 20-24 years old, two-thirds (66.1%) were married, and 79.9% were not

in school. The reasons for abortion were health factors (45.6%), and socioeconomic factors (54.4%). These findings indicate that there is still room for expanding access to safe, induced abortion among the majority of adolescents and young adults. The use of IT and telemedicine for self-managed termination of pregnancy suits the lifestyle of adolescents and the younger generation of Thai women and couples. That is not to deny that women age 45 years or older also need to have the right to safe, convenient, effective, and legal abortion.

5.2 Knowledge about SRHR, including care and self-managed abortion

This study found that this sample of PPAT abortion clients was not very aware of their rights, specifically their SRHR, and right to abortion under Thai law. That said, most felt that women should have access to quality health services that meet their needs, and which is sensitive to their concerns. They feel that all clients should be treated equally. They also believed that women should be able to have self-determination about the decision to have an abortion, and without fear of stigma or rejection. They feel that women should be able to take advantage of advancements in medicine and technology. To that end, the WHO guidelines on abortion, issued on March 9, 2022, address abortion rights by asserting that every person should have the option to receive an abortion, and the more safe and effective channels, the better, including telemedicine. Women and couples should receive all the information they need to make an informed decision on abortion, and there should be a supportive environment for whatever decision they make. Abortion is a private and personal decision, and no woman or couple should feel pressured or coerced when making that individual decision.

5.3 Abortion service at PPAT clinics

This study reveals one aspect of women's experience that is the same at all ages: that women are the one person who is primarily faced with the problem of unplanned pregnancy. Although many women may have advice from their partner or spouse, their mother, or other close family members, or friends, the decision is often forced by external circumstances and life conditions, and the socio-cultural environment. It is not an easy decision for a woman. Today, many women can find information about abortion on their own by searching the Internet and going for services by themselves. Based on the interviews with these samples of clients, these women chose abortion services at the PPAT clinic because they perceive the

services to be safe, effective, and legal. The women are confident in the expertise of the PPAT clinic staff, and that their confidentiality will be strictly protected. This is in line with the study of Siriwan Thumchua and Pornphan Poomprayoon (2018), which emphasizes the current paradigm of the health system that is client-centered in caring for and solving unplanned pregnancy problems.

5.4 Readiness, opinions, need for, and expectations of telemedicine for self-managed abortion

The COVID-19 epidemic and government containment measures have adversely affected access to abortion services. This is resulting in a "new normal" that is changing people's behavior in everyday life and driving innovations in technology, especially online applications. During COVID-19, many provinces imposed travel restrictions, curfews, and closures of businesses, including medical clinics. Thus, the use of telemedicine for medication abortion (MA) is an important alternative to in-persons clinic visits. Based on the findings of this study, the majority of clients are ready to use a telemedicine service. Some of the respondents had some doubts about the relative benefits of doing the procedure at home versus visiting the clinic. But all the women saw the benefit of telemedicine in making it much easier to access the service. Some women felt that, before undergoing a self-managed abortion, the woman should have a preliminary, in-person examination to aid the diagnosis, such as ultrasound. That said, the respondents understood that, even with telemedicine, there would be a specialist doctor or nurse available to advise the woman throughout the abortion process. They could also receive online counseling about contraception and prevention of STI. The women in this study would feel most satisfied if the telemedicine MA service is registered and backed up by law. PPAT clinics in the south of Thailand have already developed a prototype of a telemedicine system and have found that the results are equally satisfactory compared to the clinic-based service. Clients receive personalized care in both systems. PPAT's use of telemedicine is in line with the new WHO abortion guidelines (March 9, 2022), which, for the first time, includes a recommendation on the use of telemedicine to provide better access to safe and effective abortion using MA. During a pandemic like COVID-19, telemedicine can help to maintain abortion and family planning services uninterrupted. Telemedicine also can be used for many other health services and will continue to evolve and improve as more experience is gained.

5.5 Summary

This study combined quantitative and qualitative data collection among a sample of women at PPAT abortion clinics in different parts of Thailand. The study findings strongly endorse the concept of telemedicine for MA, and it is likely that remote service of this will become a popular alternative to clinic-based service. Telemedicine will make accessibility of safe, effective, and legal abortion available to any woman in need in Thailand who meets the standard criteria.

This sample of clients had only limited knowledge of SRHR, and self-managed abortion. However, most clients consider that they have the right to access and receive appropriate services. The women believe that abortion should be an option for couples who are not yet ready to have a child. They believe that the woman should be able to make her own personal decision whether to have an abortion or not.

Most of the women in this study seem to be equipped and ready to take advantage of telemedicine. They had the expectation that self-managed abortion through telemedicine would be safe, effective, and legal, and fully protect the woman's confidentiality. They all realized the potential of telemedicine to significantly reduce travel costs, and that abortion would continue to be available at a reasonable cost. They saw the value of being able to consult and communicate with clinic staff throughout the process of abortion, and receive online counseling on other matters, such as contraception and STI.

This study included co-creation workshops with internal stakeholders. The consensus was that the telemedicine service must be credible in the eyes of the target population. This led to the development of a prototype in the form of interactive manual in English and Thai languages to increase knowledge and access to safe abortion and abortion self-care. PPAT needs to maintain the level of trust that women already have in their clinic-based service. The new generation of Thai women will probably be the group that quickly sees the benefit and suitability of self-managed abortion through telemedicine since they already spend much on their life online or in virtual surroundings. Thus, in the years ahead, the telemedicine system and guidelines will be easy for clients to understand and have trust in.

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Appendix

Appendix A: Results of the Quantitative Data Analysis: Frequency Distributions (Additional)

Table 4.2: Level of Knowledge about SRHR, including Self-administered Abortion

Topic: Knowledge about SRHR, including Self-administration Abortion	Knowledge Level (%)				
	Most	High	Moderate	Low	Least
1. All women and girls should receive quality services that are consistent with their needs and preferences, with and caring and sensitivity about their feelings	62.79	32.56	3.49	1.16	0.00
2. All women and girls have the right to equal health care services without discrimination	60.47	36.05	1.16	1.16	1.16
3. Women and girls have the right to independently judge their bodies, and have the right to benefit from scientific progress	55.81	29.07	12.79	2.33	0.00
4. Women and girls can make their own decision about having an abortion and abortion care without being stigmatized.	46.51	47.67	4.65	0.00	1.16
5. All women and girls who choose to have an abortion must have conditional access to the abortion service based on the contingencies of each client	53.49	32.56	11.63	2.33	0.00
6. Every woman and girl should have the right to abortion as a respect of their right to free choice	47.67	31.40	17.44	3.49	0.00

Table 5.1: Opinions of Telemedicine for Abortion

Topic: Opinions of Telemedicine for Abortion	Level of Opinion (%)				
	Most	High	Moderate	Low	Least
1. Reduce risk of diseases such as COVID-19	57.14	33.33	8.33	1.19	0.00
2. Reduce congestion in hospitals/clinics	48.81	39.29	11.90	0.00	0.00
3. Reduce travel to hospital/clinic; save waiting time	44.05	41.67	14.29	0.00	0.00
4. Increase the efficiency of accessing treatment; quality of medical care has improved	35.29	51.76	12.94	0.00	0.00
5. Clients living in remote areas do not need to travel	34.12	52.94	11.76	0.00	1.18
6. Reduce overall medical expenses	37.65	43.53	17.65	0.00	1.18
7. Concern about properly taking the abortion medicine at home if they are not treated at the clinic	28.57	40.48	25.00	4.76	1.19
8. Confidentiality of the client and/or medical personnel is easy to maintain	23.81	40.48	29.76	4.76	1.19
9. Would feel uncomfortable talking to the doctor, nurse, or counselor if not seeing them in person	16.67	42.86	35.71	4.76	0.00
10. Unavailability of online communication systems and devices	22.62	27.38	39.29	9.52	1.19
11. If people can receive medication for abortion by mail, it would be easy for them to give it to someone else who had not been screened or prescribed by a practitioner	25.00	23.81	38.10	8.33	4.76
12. Unavailability of medical personnel	16.67	29.76	44.05	9.52	0.00
13. *** If there is a telemedicine system What level of service are you interested in?	21.43	36.90	33.33	4.76	3.57

Table 6.1: Desire for Telemedicine Service for Self-administered Abortion

Topic: Desire for the option of telemedicine for self-administered abortion	Level of Knowledge (%)				
	Most	High	Moderate	Low	Least
1. You would like to have a follow-up appointment after abortion by visiting the clinic in person	52.50	37.50	7.50	0.00	2.50
2. You need a phone number where you can text or call if you have questions when self-aborting at home	52.50	35.00	10.00	0.00	2.50
3. You would like to have a screening test or a pre-abortion test to assist your doctor's diagnosis	42.50	45.00	10.00	0.00	2.50
4. You want the medicine for abortion to be delivered to your home	25.00	32.50	25.00	7.50	10.00
5. You would like to get medicine for abortion at the pharmacy	32.50	12.50	30.00	15.00	10.00

Appendix B: Data Collection Instruments

1. Questionnaire for quantitative research

Questionnaire: Expectations for ASC Telemedicine Services

PPAT Clinic Hat Yai Songkhla Province

Explanation: This questionnaire contains five sections aimed at studying the basic information to be used in the development of the Telemedicine system for PPAT Clinic to meet the needs and up to date for service recipients.

***The report of the study will be kept confidential and will not be disclosed. Your name is strictly anonymous. Please find the following details of the questionnaire:

1. General information of the service recipient

1.1 Respondents

☐ Client ☐ Lover/husband ☐ Other................................

1.2 Sex

☐ Male ☐ Female ☐ Sexually diverse

1.3 Age .... year

1.4 Religion

☐ Buddhism ☐ Muslim ☐ Other ....

1.5 Marital Status

☐ Single ☐ Married (registered)

☐ Married (cohabiting) ☐ Divorced/widowed/seperated

2. Reasons why you choose the service at PPAT Clinic (can answer more than 1)

☐ Advised by those who had used the service ☐ Recommend/ transfer

☐ Former client ☐ Speed of service

☐ Confident in the service ☐ An expert practitioner

☐ Convenient access ☐ Seeing publicity

☐ Reasonable service fee ☐ Self referred (i.e., walk in)

☐ Others, please specify ....

3. Readiness to Participate in Telemedicine of Clients (or caregiver/accompanying person)

Topic: Readiness of the Client to Engage in Telemedicine	**Readiness level**			
	Very ready	Ready	Not ready	Unsure
3.1 Dimension of Readiness				
1. You can use your phone to communicate via video call system as specified by the PPAT Clinic.				
2. While receiving remote service, you have a private space, and there is no unrelated person other than an immediate relative or caregiver with you during the service.				
3. You are a person who has a residence in Thailand; you can provide accurate, exact address, and are able to receive medicines by mail.				
4. You can provide accurate identification information (e.g., client and caregiver ID).				
5. You are able to be present, yourself, at the appointed time of the service. The PPAT Clinic will not provide services if the service provider cannot not see the client and caregiver as indicated at the time of the screening.				
3.2 Readiness to engage in an agreement to receive telemedicine				
1. Agree to allow the PPAT Clinic to assess the client's condition through the video call system.				
2. Agree to the transfer of information between the caregiver, the client, the doctor, the nurse and the personnel involved in the remote system in the clinic without viewing that as an infringement of the client's rights.				
3. Agree to allow the PPAT Clinic to record pictures or video for evaluation of treatment and/or for technical use.				

Topic: Readiness of the Client to Engage in Telemedicine	Readiness level			
	Very ready	Ready	Not ready	Unsure
4. Confirm that the medicine or medical supplies received will not be transferred to anyone other than the client who is prescribed to receive those supplies.				
5. Can follow the doctor's instructions exactly as prescribed.				

4. Level of Knowledge about SRHR, including Self-administered Abortion

Topics: Knowledge about SRHR, including Self-administered Abortion	Knowledge Level				
	Very high	High	Moderate	Low	Very low
1. All women and girls should receive quality services that are consistent with their needs and preferences, with and caring and sensitivity about their feelings.					
2. All women and girls have the right to equal health care services without discrimination.					
3. Women and girls have the right to independently judge their bodies, and have the right to benefit from scientific progress.					
4. Women and girls can make their own decision about having an abortion and abortion care without being stigmatized.					
5. All women and girls who choose to have an abortion must have conditional access to the abortion service based on the contingencies of each client.					
6. Every woman and girl should have the right to abortion as a respect of their right to free choice.					

5. **Opinion of Telemedicine for Abortion**

Topic: Opinion of Telemedicine for Abortion	Agreeing level				
	Strongly agree	Agree	Moderate	Disagree	Strongly disagree
1. Reduce risk of diseases such as COVID-19.					
2. Reduce congestion in hospitals/clinics.					
3. Reduce travel to hospital/clinic; save waiting time.					
4. Increase the efficiency of accessing treatment; quality of medical care has improved.					
5. Clients living in remote areas do not need to travel.					
6. Reduce overall medical expenses.					
7. Concern about properly taking the abortion medicine at home if they are not treated at the clinic.					
8. Confidentiality of the client and/or medical personnel is easy to maintain.					
9. Would feel uncomfortable talking to the doctor, nurse, or counselor if not seeing them in person.					
10. Unavailability of online communication systems and devices.					
11. If people can receive medication for abortion by mail, it would be easy for them to give it to someone else who had not been screened or prescribed by a practitioner.					
12. Unavailability of medical personnel.					
13. *** If there is a telemedicine system What level of service are you interested in?					

6. Desire for Telemedicine Service for Self-administered Abortion

Topics: Desire for the option of telemedicine for self-administered abortion	Knowledge Level				
	Strongly agree	Agree	Moderate	Disagree	Strongly disagree
1. You would like to have a follow-up appointment after abortion by visiting the clinic in person.					
2. You need a phone number where you can text or call if you have questions when self-aborting at home.					
3. You would like to have a screening test or a pre-abortion test to assist your doctor's diagnosis.					
4. You want the medicine for abortion to be delivered to your home.					
5. You would like to get medicine for abortion at the pharmacy.					

7. Please provide your additional suggestion and expectation for ASC by telemedicine

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2. **Semi-structured questions guideline for the IDI**

This questions guideline was used for in-depth interviews with clients from the PPAT Clinic, Hat Yai Branch. The guidelines consist of three Question Sets, developed by the researcher. The IDI were recorded and took approximately 30-45 minutes.

Question Set # 1: Receiving the service (5 minutes)

1. Inquiry about receiving services at the clinic; get to know the context of life and characteristics of clients

- Service process
- Why did you choose to use abortion service at the PPAT clinic?
- Frequency of receiving services at PPAT clinics
- Problems, obstacles or limitations in receiving services
- Feelings about receiving services at the clinic
- Do you think that, in the future, you will come back to use the service at the PPAT clinic? Why or why not?

Question Set # 2: Need or demand for Telemedicine (15 minutes)

2. Inquiry about Telemedicine (to create a system prototype)

2.1 Knowledge and attitude

- Do you know about the telemedicine system or telemedicine? Do you understand how the system works?
- Have you had any experience of receiving medical services through the website or online application? If so, how do you feel about it?
- If you have never experienced it, has a family member or acquaintance had experience receiving medical services through a website or online application?
- What do you think if, in the future, there will be abortion service via a Telemedicine system? Would you be able to use it (e.g., to take oral medicine or suppository)?
- What should be the nature of the online consultation before, during, and after self-abortion through the Telemedicine system? Who should be a counselor: doctors, nurses, staff?
- Do you think that at older gestational ages, telemedicine abortion would still be safe? What is the gestational age limit?
- Can you calculate the duration of pregnancy by yourself?

- Do you think it's convenient for you to go for an ultrasound? Would you be able to send the results online to the clinic? What is your opinion?
- Do you think telemedicine abortion is risky? What impact would it have?
- Do you think telemedicine abortion will be effective?

2.2 Getting services during the COVID-19 epidemic

- Do you think the COVID-19 epidemic situation has affected the health care of women? If yes, how?
- How do you think the COVID-19 epidemic has affected a woman's access to abortion (ability to locate services, travel restrictions/service restrictions, etc.)?
- During the COVID-19 epidemic, what alternative resources do you think there are for termination of pregnancy, post-abortion care, and contraception, such as web services, telemedicine, illegal doctors, prescription medication, pharmacy, etc.)
- What are your thoughts on accessing abortion services during COVID-19?

2.3 Availability of service

- Do you think you can use your smart phone or computer to communicate via the video call system as specified by the hospital/clinic?
- What do you think if personal information is required? What if the clinic needs to record audio, pictures, video while consulting with the doctor to be used as evidence for examination and evaluating the treatment results through the Telemedicine system?
- Do you think that proper authentication in telemedicine systems should take into account the rights of clients?
- What do you think if there is exchange of information of the client between doctors, nurses and related parties? Do you think that would infringe on the rights of the client? If so, how?
- What do you think about the issue of sharing medicines or medical supplies that you received by mail from the clinic with others? How should this issue be dealt with?
- Do you think clients will be able to properly follow the instructions given by the doctor according to the procedure?

2.4 System design by clients

- If you could design a medical system that meets your needs via online systems such as mobile phones or computers, how would you design such a system (Website, Application)?

- What information should be used when registering for the first time (ID card, face scan, etc.) for each access to the system? Should there be a password set? How can the clinic verify identity of the client?
- Which is your preferred channel for counseling? (e.g., chat / telephone / video call). Why did you choose it? What is your preferred channel for making an appointment for consultation from your chosen doctor (e.g., chat / phone / video call). Why did you choose it?
- What is your preferred payment method (online, cash, credit card, etc.)
- What is your preferred channel for receiving the abortion medication? How should the envelope be addressed? Name, address of sender/recipient: Can it be disclosed or not?
- What additional information would a client need?
- How would you design the color scheme in the online application, or the font style of the desired language application? What kind of privacy policy would you want? For example, on the part of service providers who you want to consult only.
- Should the doctor or nurse attend to you? Would you want to sit alone or with parents, relatives or girlfriend, and in a private space, through video, audio, text?
- If the clinic stores your medical history in the system, how long should it be there?
- How much should the service fee be (lower or higher than the service at the clinic)?

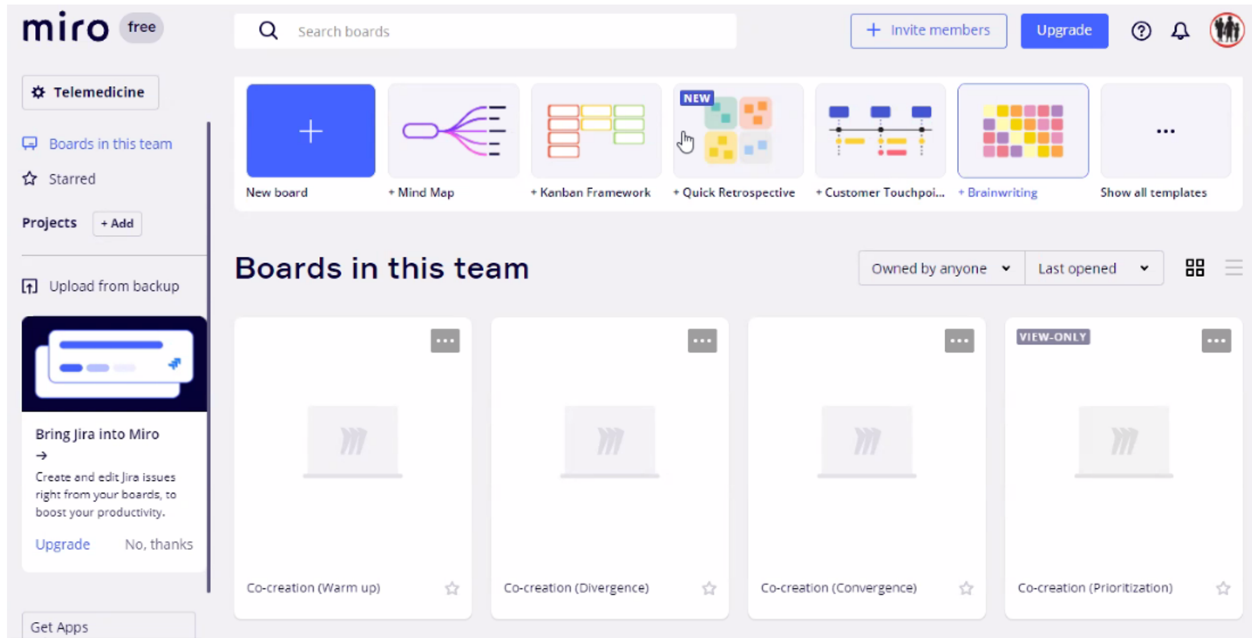
Question Set # 3: Inquiry about basic knowledge and attitudes about the concepts of gender and reproductive health rights and self-abortion. (10 minutes)

3. Inquiry about knowledge and attitudes about SRHR and self-abortion
- How do you know about SRHR?
- Have you used family planning? How do you control births?
- How do you know about abortion?
- Do you know any legal information about abortion?
- What is the overview of abortion services in your area? (Services that are recognized and accessible)
- How do you think people in your community and society view the decision to have an abortion? Is it a right of the woman? How does their opinion affect you?

- Do you think Telemedicine will be one of the channels for girls and women to access abortion services without being stigmatized, and to focus on the emotions of girls and women more than before? Why?
- Do you think self-managed abortion through Telemedicine (with advice by medical professionals and delivering quality, affordable medicines) will encourage girls and women to be decision-makers and control what will happen to their body by themselves, as well as being the main decision maker in the abortion process? How so?

Appendix C: Graphic of an Example of the Methodology

Process Co-Creation Telemedicine system design, online activities with Zoom meeting system, and through miro//https://miro.com/app/dashboard/



miro free Co-creation (Convergence)

ประเด็น คนไข้

ตรวจสอบความน่าเชื่อถือ

ยาจริงหรือป่าว ตรวจสอบโดยใช้การค้นหาในเว็บไซต์ ที่ส่งมา

ดูรีวิว ว่าพูดอะไรบ้าง เช่น พันทิป เว็บ RSA

ประเด็น จนท.การเงิน

อยากได้ความมั่นใจว่า คนไข้จะต้องโอนเงินมาจริงๆ

ต้องมีระบบตรวจสอบ เช็คสลิป ตรวจสอบใน App เวลาโอน

ถ้าไม่มีเงินไม่พอ จะมีนโยบายอย่างไร ในการตรวจสอบ

ประเด็น โรงเรียน

ภาคีเครือข่าย ในการแนะนำ หรือส่งต่อการให้บริการ

จะต้องหาภาคีเครือข่ายทั้ง 6 กระทรวงหลัก พรบ.

เข้าไปร่วม เช่นประชุม บูรณาการร่วมกันกับภาคีเครือข่ายทั้ง 6 กระทรวงหลัก โรงเรียนจะต้องมี flowchart ในการส่งต่อเด็กนักเรียน โรงเรียนจะต้องมีระบบดูแลเด็ก ไม่ว่าจะเป็น walkin หรือ on line

bechin

Co-creation (Convergence) | Co-storming 360

ประเด็น คนไข้ (แอน)

ระบบที่ปลอดภัย เก็บข้อมูลความลับ

สร้างความน่าเชื่อถือ โดยให้คลินิก แสดงให้คนไข้เห็นว่า มันถูกกฎหมาย หรือเป็นพวกเอกสาร หรือประกาศนียบัตร

ระบบที่ปลอดภัย ไม่จดจำการกรอกข้อมูลของคนไข้

แผนเสริมสำหรับ คนไข้ที่ไม่เก่งด้านเทคโนโลยี เช่น คอลเซ็นเตอร์กรอกข้อมูลให้?/ ไลน์

ประเด็น เจ้าหน้าที่การเงิน (อาลีนา)

เชื่อมต่อกับธนาคาร ให้มีการชำระเงิน อัตโนมัติ Internet Banking ความปลอดภัยในข้อมูลหากใช้เครดิต

มีการผูกเอสเอ็มเอสกับโทรศัพท์แจ้งเตือน การโอนเงิน

มี Box ในระบบเพื่อเก็บสลิป หลักฐานการโอนเงิน

การเงินและสต็อก ลิ้งค์กัน เพราะต้องแยก ยาระบบคลินิกกับการแพทย์ทางไกล

ประเด็น คนไข้ (นุ่น)

การให้บริการที่เข้าใจง่ายสำหรับคนไข้ที่อยู่ทางไกล เช่น ระบบอัตโนมัติเหมือน บริษัทต่างๆ เช่น AIS

มีพื้นที่ให้ข้อมูลคนไข้ เบื้องต้น ตัวอย่างเช่นในเว็บ Women on Web มีการสื่อสารองค์กรมีตัวตนในสังคมที่ชัดเจนสร้างความเชื่อมั่น

Juthaporn Kajitwiwat

มี Box set อธิบายขั้นตอน ในการลงทะเบียน หรือการรับบริการ การแพทย์ทางไกล เพื่อการตัดสินใจก่อน โอนเงิน

มีเอกสารใบยินยอมในระบบ

ประเด็น คนไข้ (คุณหมออัยย์)

ระบบที่คอยเตือนคนไข้

Saneekan Rosamontri

กินยาและขั้นตอนต่างๆ จนสมบูรณ์

มีระบบยืนยันว่ายาถึงคนไข้แล้ว

คุยกับบริษัทขนส่ง/เดอรี่ว่าจะช่วยสนับสนุนอะไรได้บ้างในเรื่องยืนยันว่ายาถึงแล้ว

Appendix D: Prototype of Interactive Manual

Appendix E: Ethical Approval Certificate

คณะอนุกรรมการจริยธรรมการทำวิจัยในคน มธ.ชุดที่ 1 และ ศูนย์วิจัยทางคลินิก คณะแพทยศาสตร์

ประกาศนียบัตรฉบับนี้ให้ไว้เพื่อแสดงว่า

ศนีกานต์ รศมนตรี

ได้ผ่านการอบรมหลักสูตร GCP online training (Computer based)

"แนวทางการปฏิบัติการวิจัยทางคลินิกที่ดี (ICH-GCP:E6(R2))"

ประกาศนียบัตรฉบับนี้มีผลตั้งแต่วันที่ 07 ธันวาคม 2564 ถึงวันที่ 07 ธันวาคม 2566

(รองศาสตราจารย์ นายแพทย์ไวพจน์ จันทร์วิเมลือง)	(รองศาสตราจารย์ นายแพทย์สมบัติ มุ่งทวีพงษา)
ประธานคณะอนุกรรมการจริยธรรมการวิจัยในคน มธ.ชุดที่ 1	รองคณบดีฝ่ายวิจัย

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