GUIDELINES AND BEST PRACTICE RECOMMENDATIONS ON CONTRACEPTION AND SAFE ABORTION CARE SERVICE PROVISION AMID COVID-19 PANDEMIC: SCOPING REVIEW
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ABSTRACT
INTRODUCTION: Policy makers and health professionals prefer to use summarized evidence of practice recommendations. The aim of this scoping review is therefore to identify available practice recommendations on contraception and safe abortion care service provision during the COVID-19 pandemic.

METHODS: We searched guideline databases and websites of professional associations and international organizations working on sexual and reproductive health. Additionally, we searched: PubMed, EMBASE Google Scholar MedRxiv and Research Square. We included English records labelled guideline, or recommendation, or consensus, or practice parameter, as well as position papers on contraception and safe abortion care service practice during the COVID-19 pandemic. Data extraction was done by two independent reviewers using a customized tool that was developed to record the key information of the source that is relevant to the review question. The difference between the two authors on data extraction was resolved by discussion.

RESULTS: Fourteen records on safe abortion care and thirteen records on contraception service were identified. Identified recommendations were categorized into thematic areas. The records addressed approaches to the safe medication and surgical abortion, self-serving family planning and long-term and reversible contraception.

CONCLUSIONS: Consensus statements and recommendations consistently stated that there should be access to contraception service and safe abortion care during the COVID-19 pandemic. The practice recommendations focus on innovative ways of service provision to minimize patient and staff exposure to COVID-19, as well as alleviate the burden on the health care system. These include utilizing telemedicine or digital health and community/home-based care or self-care

KEY WORDS: COVID-19, Pandemic, Reproductive health, Abortion, Contraception.

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INTRODUCTION
The WHO considers reproductive health services, including care during pregnancy and child health, as essential health services to continue during the COVID-19 pandemic. Additionally, WHO stated, “Women’s choices and rights to sexual and reproductive health care should be respected irrespective of COVID-19 status, including access to contraception and safe abortion to the full extent of the law.” But when staff and services are under extreme stress, there is a real risk of increasing avoidable harm. The tremendous burden caused by the COVID-19 outbreak is exceeding the capacity of many national and local health systems, which is jeopardizing routine service delivery and undermining other health priorities. Redirecting resources to COVID-19 mitigation, lock downs and travel restrictions forced health services to shut down. Additionally, lockdowns and travel restrictions are affecting production and supply chain of different contraceptives methods, thereby impacting availability. As such, the evolving COVID-19 pandemic may affect routine services including sexual, reproductive, and maternal health service delivery. Marie Stopes International (MSI) warned nearly 9.5 million people will miss out on reproductive service if service reduction continues for three months because of the lockdown which could lead to 1.3-3 million unintended pregnancies, 1.2-2.7 million unsafe abortions and 5000 to 11,000 pregnancy related deaths.

Riley et al. published a projection of the impact of the pandemic on SRH services using 2019 data on SRH services from 137 low-and middle-income countries. According to the projection, 10% service reduction will result in nearly 48,558,000 additional women with an unmet need for modern contraceptives and 15,401,000 additional unintended pregnancies. Furthermore, according to the projection, a 10% service reduction will result in 3,325,000 additional unsafe abortions, resulting in 1,000 additional maternal deaths from unsafe abortion. Experience in past epidemics has also shown that lack of access to essential health services and shut down of services unrelated to the epidemic response resulted in more deaths than the epidemic itself.

To mitigate the impact of COVID-19 on reproductive health service, different institutions and organizations, including WHO, defined abortion and contraception service as essential service. Different national and local protocols, consensus statements, practice guidance, and directions to maintain provision of safe abortion and contraception service were released.

The aim of this scoping review is therefore to locate, describe, and summarize available local, national or international guidelines and practice recommendations on provision of safe abortion and contraception service during the COVID-19 pandemic.

Review questions
Providers, institutions, and clients need to know the best way safe abortion and contraception service provision could continue during COVID-19. What are the available documents that inform such practice recommendations? What are the available clinical practice guidance and recommendations that guide safe abortion service provision amid the COVID-19 pandemic? What are the available practice guidance and recommendations that guide contraception service provision amid COVID-19 pandemic?

METHOD AND MATERIALS
The report included in this scoping review was prepared based on Preferred Reporting Items for Systematic scoping review (PRISMA-SC).

Inclusion and exclusion criteria
This review considered worldwide records issued by recognized local or international institutions or organizations addressing service delivery approaches and recommendations on safe abortion and contraception service during the COVID-19 pandemic. The review included reports that include adolescent girls, reproductive age women, women seeking abortion, women or men seeking contraception service, health care providers,
health managers and health care institutions connected to safe abortion and contraception. We included international, national, or local records labelled guidelines or recommendations, consensus statements, practice parameters, as well as position papers on contraception and safe abortion care service practice during the COVID-19 pandemic. We excluded records on safe abortion and contraception care not related to COVID-19, reports on reproductive service during COVID-19 in which abortion and contraception care were not clearly indicated, and documents with no clear recommendation on safe abortion and contraception care amid COVID-19.

**Source of information**
We searched for professional associations and international organization guidelines, protocols, consensus statements, and practice recommendations on safe abortion and contraception services during the COVID-19 pandemic. We looked for guideline databases and websites. We searched websites of the following associations and organizations: World Health Organization (WHO), America College of Obstetrics and Gynecology (ACOG), Royal College of Obstetrics and Gynecology (RCOG), Royal College of Midwives (RCM), International Federation of Obstetrics and Gynecology (FIGO), Society of Maternal and Fetal Medicine (SMFM), Society of Obstetrics and Gynecology of Canada (SOGC), RANZCOG (The Royal Australian and New Zealand College of Obstetricians and Gynecologists), UNICEF (United Nations International Children’s Emergency Fund), Faculty of Sexual and Reproductive Healthcare (FSRH), British Society of Abortion Care Providers (BSACP), Society of Family Planning (SFP), United Nations Population Fund (UNFPA), International Planned Parenthood Federation (IPPF), and Marie Stopes International (MSI). The guideline data bases searched were: Turning Research into Practice (TRIP) database, Guideline International (GIN) library, National Guideline Clearinghouse (NGC) and National Institute for Health and Clinical Excellence (NICE).

**Search strategy**
The search strategy aimed to locate both published and unpublished studies. We initially searched websites of organizations and associations working on reproductive health to identify articles on the topic, as well as keywords and text words commonly used in the relevant articles. The commonly used keywords were COVID-19, SARS-CoV-2, abortion care, reproductive health, gender equality, contraception, and telemedicine. These keywords were used to search relevant articles in guideline databases. The text words contained in the titles and abstracts of relevant articles and the index terms used to describe the articles were used to develop a full search strategy for data bases (see Table 1: PubMed search strategy). We conducted a systematic search in PubMed and EMBASE. Likewise, a search extended to Google Scholar and preprint publications in MedRxiv and Research Square. The reference list of all selected studies was screened for additional studies. The search is limited to English and within one year (considering...
the duration of the outbreak to be after December 2019).

**Data extraction and synthesis**

Data extraction was done by two independent persons using an Excel sheet customized tool that was developed to record the key information relevant to the review question. The data extraction tool was developed for guideline related documents, consensus statements, and practice recommendations. Types of document and summary of recommendations were extracted. The difference between the two authors on data extraction was resolved by discussion. We looked for service delivery organization changes, new position statements, and guidelines on safe abortion and contraception service areas in relation to the COVID-19 pandemic. We categorized identified guidelines or practice recommendations according to the following thematic areas: first trimester and second trimester medication abortion, first and second trimester surgical abortion, short-term and long-term contraception. Additionally, we looked for post-abortion and postpartum contraception. The findings were summarized into similar and dissimilar recommendations and described narratively. Data extraction tool and guidelines extracted are provided as supplementary file (Appendix 2: S1 excel document).

**RESULTS**

The initial search yielded a total of 400 records. After removing duplicates, 380 documents were retained for further examination. After screening the titles and abstracts, 36 papers were retained for full-text review. Based on pre-defined inclusion criteria, 14 records were included in the scoping review.

**Characteristics of included guidelines and practice recommendations**

Identified recommendations were categorized into the following service thematic area: Safe abortion and contraception areas and then into subthemes as first and second trimester, medication or surgical abortion, and different contraception types (Table 2 Characteristics of identified records). Data extraction tool and individual records included in the extraction are provided as supplementary file (See appendix 2: S1 excel document).
Table 2: Characteristics of identified records and common practice recommendations

<table>
<thead>
<tr>
<th>Practice recommendations</th>
<th>Number of records</th>
<th>Sources and name of the record</th>
<th>Types of document (guideline, commentaires, position statements)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Safe abortion</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No-touch /no-test early medication abortion.</td>
<td>11</td>
<td>FIGO, RCM, SOGC, RCOG, RANZCOG, NAF, IPPF, UNFPA, MSI, FSRH, BSACP</td>
<td>Guidance, position statements and commentaries</td>
</tr>
<tr>
<td>Minimum contact second trimester medication abortion.</td>
<td>11</td>
<td>FIGO, RCM, SOGC, RCOG, RANZCOG, NAF, IPPF, UNFPA, MSI, FSRH, BSACP</td>
<td>Guidance, position statements and commentaries</td>
</tr>
<tr>
<td>Minimum contact surgical abortion.</td>
<td>11</td>
<td>FIGO, RCM, SOGC, RCOG, RANZCOG, NAF, IPPF, UNFPA, MSI, FSRH, BSACP</td>
<td>Guidance, position statements and commentaries</td>
</tr>
<tr>
<td><strong>Contraception</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-serving contraception methods.</td>
<td>9</td>
<td>FIGO, WHO, RCM, RCOG, FSRH, IPPF, UNFPA, MSI, RANZCOG</td>
<td>Guidance, position statements and commentaries</td>
</tr>
<tr>
<td>Extended use of long-term contraceptives.</td>
<td>7</td>
<td>RCM, RCOG, FSRH, IPPF, UNFPA, MSI, RANZCOG</td>
<td>Guidance, position statements and commentaries</td>
</tr>
<tr>
<td>Minimum contact long term contraceptives.</td>
<td>8</td>
<td>FIGO, RCM, RCOG, FSRH, IPPF, UNFPA, MSI, RANZCOG</td>
<td>Guidance, position statements and commentaries</td>
</tr>
</tbody>
</table>

**Contraception service**

**For women already on contraception**

Telemedicine and self-care family planning methods were recommended consistently in all the guidelines. Self-care family planning methods include contraceptive pills, self-injectables, subcutaneous depo shot, condoms, vaginal rings, and fertility awareness methods [WHO, FIGO, RCOG, RCM, SOGC, RANZOG, IPPF, UNFPA, MSI and FSRH ] 10, 15-19.

There are consistent position statements that recommend combined hormonal contraception (CHC) and progesterone only pills (POP) users to continue 6-12 months without rechecking body mass index (BMI) and blood pressure. RCM, RCOG and FSRH recommends depot medroxyprogesterone acetate (DMPA) users to switch to available progesterone only pills (POP) to avoid face to face contact 9, 10, 15, 20. For long-term contraceptive users RCM, RCOG, FSRH advised extended use and delaying removal of implants and IUCD during the pandemic crisis unless serious side effects happen or the woman wants to get pregnant. If women want long-term contraceptives, FIGO, SOGC, RANZOG, UNFPA, IPPF and MSI advise provision with precautions to avoid COVID-19 exposure 10, 13, 15, 18, 20, 21.
New contraception starters
Telemedicine and self-care family planning with remote assessment and prescription of CHC and POP for 6-12 months and self-injectable contraception were consistently recommended. However, administration of DMPA or insertion of implants or intrauterine device are to be considered where concerns about adherence, individual intolerance of oral contraceptives, or use of teratogens make longer-acting reversible contraception the only suitable option. Pre-procedure assessment and information-giving remotely to minimize face-to-face contact time (minimum contact service) with healthcare professionals was recommended [WHO, FIGO, RCOG, RCM, SOGC, RANZOG, IPPF, UNFPA, MSI and FSRH]. Optimal use of contact points, such as expanding post-partum family planning with special focus on long acting reversible contraception were recommended [FIGO, RCOG, RCM, FSRH, MSI and UNFPA]. RCOG, RCM, FSRH, MSI, NAF and BSACP all recommend self-care family planning with early medical abortion or routine post-abortion family planning 13, 20, 22.

Emergency contraception (EC)
Remote assessment of requirement and choice of EC Oral emergency contraception remote prescription or provision without prescription or Cu-IUD provision with minimum face to face contact is recommended [RCOG, RCM, FSRH, BSACP, FIGO].

Safe abortion service
All records (practice recommendations and position papers or commentaries) consistently recommend screening for COVID-19 symptoms remotely before face-to-face contact or during remote early medication abortion without face-to-face contact. FIGO, RCOG, RCM, SOGC, RANZCOG, NAF, IPPF, MSI, FSRH, BSACP and Reproductive access project recommends no-touch early medication abortion 9-11, 13, 23. UNFPA, WHO, and ACOG did not issue specific guidance other than stating abortion as an essential service to continue during the pandemic 1, 12. The no-touch protocol depicts pathways to minimize COVID-19 exposure to patient and staff by organizing early medication abortion services to be delivered via video or teleconferencing /telemedicine and delivery of a treatment package 9, 13, 23. The treatment package includes mifepristone, misoprostol, ibuprofen, and self-care family planning if the patient has accepted post-abortion contraception. The no-touch protocol is self-administered medication abortion in early pregnancy without pre-procedure ultrasound and blood testing. The guideline also indicated that for women in self-isolation because of exposure to COVID-19, no-touch early medication abortion can be arranged at home. If face-to-face contact care is a must for COVID-19 exposed women, RCM, RCOG, FSRH, BSACP, and NAF recommend it should be booked when the isolation period is over, unless the gestation is uncertain and the delay may result in a woman not being able to access abortion in which face-to-face contact must be arranged with full personal protective measures 9, 11, 13, 20. There is no specific recommendation issued for second trimester medication abortion (above 12 weeks), but professional associations and organizations position papers consistently recommend the utilization of telemedicine for digital patient education and counselling to reduce waiting periods and extent of face-to-face contact (minimal contact service) 1, 11, 13, 24.

For surgical abortion, position papers and practice recommendations focus on minimum contact procedure by remote digital patient education, counselling, and evaluation. The other focus of practice recommendations is increasing safety during the procedure by limiting the number of people in the procedure room, appropriate use of personal protective equipment, and decontaminating the area after the procedure as per the recommendation (Appendix II, S1 excel document see included records). RCM, RCOG, BSACP, NAF and FSRH also recommend surgical facemasks and sanitizer or hand washing for patients 11, 13. Regarding procedures, vacuum aspiration, dilatation and evacuation or dilatation and curettage are not aerosol generating procedures unless done by general anesthesia 25. Therefore, these procedures do not require full personal protective equipment like N95, but abortion providers should screen all patients before the procedure and use standard precautions. Where possible and feasible it is also recommended to perform the procedures under local anesthesia or intravenous...
sedation or spinal anesthesia to avoid the need for general anesthesia 9, 11, 13, 25. It is recommended consistently that follow up visits are not required in all conditions, and where needed, can be done remotely by telemedicine.

DISCUSSION
In this review, we attempted to locate documents in the form of guidelines, consensus statements, best practice statements, and standards of practice indicating directions on provision of contraception and safe abortion care service during the COVID-19 pandemic. We searched guideline databases, PubMed, EMBASE, Google Scholar, MedRxiv, Research Square, and website of international professional associations and organizations working on sexual and reproductive health. We identified 14 documents that fulfilled predefined inclusion criteria.

KEY FINDINGS
1. Several international associations and organizations declared contraception and safe abortion care as essential health services to continue during the COVID-19 pandemic [WHO, ACOG, RCOG, FIGO, RCM, SOGC, RANZCOG, Reproductive access project, NAF, IPPF, UNFPA, MSI, BSACP and FSRH]. The common recommendations are:
2. Pre-triage (screening) of all clients for Covid-19 is recommended.
3. Telemedicine and self-care family planning methods are recommended consistently.
4. For women already on combined hormonal contraception (CHC) and progesterone-only pills (POP), it is recommended to continue 6-12 months without rechecking body mass index (BMI) and blood pressure during the pandemic.
5. For long-term contraceptive users its recommended to use options of extended use to avoid face-to-face contact during the pandemic or minimum contact provision of service implants and IUCD.
6. No-touch or no-test early medication abortion is recommended consistently.
7. Minimum contact first and second trimester surgical abortion.
8. Post-abortion follow-up is not recommended. However, telemedicine is recommended to address any post-abortion concerns.

Pre-triage (screening) of all clients for any service either remotely by telemedicine or at health facility is recommended consistently. This is, in fact, a universal recommendation by CDC, WHO and others that patients should be triaged and screened at intake with a minimum of a history of exposure, symptoms of COVID-19 with or without temperature 1, 26. This is especially important in cases where face-to-face contact is a must, such as with surgical abortion, or if long-term contraception is needed. In such conditions, they call for minimum contact procedure or service in which remote screening and evaluation of patient is utilized, remote laboratory request is used, remote counselling employed and remote prescription using telemedicine incorporated to reduce patient exposure. In the case of long-term contraception, one viable option included in the guidelines was the option of extended use. This is supported by limited evidence that shows duration of long acting contraceptive effect is 2 years beyond Food and Drug Administration (FDA)-approved duration 27.

Self-care short-term family planning methods for new initiation or checking blood pressure and weight to continue combined hormonal contraception is consistently recommended. These are innovative self-care interventions that emerged recently, and their necessity becomes visible with COVID-19. WHO has guidelines on self-care interventions of which self-injectable and oral contraception service is one 28. Self-care interventions are found to be an effective and viable option in increasing access to reproductive health service 29-31. No touch early medication abortion with remote telemedicine evaluation and prescription of packages of medication for early pregnancy abortion are recommended. WHO guidelines recommend that in conditions where there is access to information, women can by themselves take mifepristone and misoprostol, evaluate completeness of their abortion, and take post abortion self-care injectable contraception 32.
LIMITATIONS
In this scoping review, we tried to capture unpublished records, published preprints, and previewed journals to get as much data as possible for the evidence synthesis. However, the current review has some limitations that are worth consideration. The pandemic is an evolving issue and our search addressed articles reported before July 30, 2020. We did not conduct a methodological assessment of primary studies and many of the recommendations are expert’s consensus that did not pass through a rigorous guideline development process because of the nature of the pandemic. With the above limitations in mind, the scoping review provides insight into the potential viable, effective, and innovative ways to maintain safe abortion and contraception service during COVID-19. Such preliminary evidence might be an input to generate hypothesis or design rigorous implementation research projects that will inform policy decisions.

CONCLUSIONS
Implications for practice
There were consistent consensus statements and recommendations that there should be access to contraception service and safe abortion care during the COVID-19 pandemic. The practice recommendations focus on minimizing patient and staff exposure to COVID-19 by utilizing telemedicine or digital health and includes the following:

a) No touch early medication abortion and minimum contact second trimester medication abortion.
b) Minimum contact surgical abortion
c) Self-serving contraception methods.
d) Minimum contact long-term contraceptive service provision
e) Extended use of long-term contraceptive methods.

Implications for research
Most of the documents that are included in this review did not pass through rigorous guideline development process because of the nature of the pandemics. New evidence is evolving with time as the duration of the pandemic extends. Hence, we recommend primary studies and systematic reviews to generate further evidence on the impact of new practices, and to map and document best practice implementations.

ETHICAL CONSIDERATIONS
Formal ethical permissions are not required for this review and all data used is included in the manuscript and supplementary material.

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CONFLICTS OF INTEREST
The authors declare no conflict of interest in this review.

AUTHORS’ CONTRIBUTION
Conceptualization: LBT, TU, BN, MA, MAS, DB
Data curation: LBT, TU, BN, MA, MAS, DB
Formal analyses: LBT, TU, BN, MA, MAS, DB
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REFERENCES


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Appendix: Supplementary materials.
1. S1 Excel document: Describes data extraction tool with records included and extracted recommendations.
2. S1 Table: Scoping review PRISMA checklist. It describes the review against the checklist for PRISMA reporting guideline.