



An assessment of facility readiness for comprehensive abortion care in 12 districts of Pakistan using the WHO Service Availability and Readiness Assessment tool

Palitha Gunarathna Mahipala,^a Sabeen Afzal,^b Qudsia Uzma,^c Atiya Aabroo,^d Nilmini Hemachandra,^e Katy Footman,^f Heidi Bart Johnston,^g Bela Ganatra,^h Tahira Ezra Reza,ⁱ Ahsan Maqbool Ahmad,^j Hasan Bin Hamza,^k Maida Umar,^l Kauser Hanif,^m Sayema Awais,ⁿ Mariyam Sarfraz,^o Ellen Thom^p

- a WHO Representative & Head of Mission, World Health Organization Country Office, Islamabad, Pakistan
- b Deputy Director Programs, Ministry of National Health Services, Regulation and Coordination, Islamabad, Pakistan
- c Technical Officer RMNCAH, World Health Organization Country Office, Islamabad, Pakistan. *Correspondence*: uzmaq@ who.int
- d Deputy Director Programs, Ministry of National Health Services, Regulation and Coordination, Islamabad, Pakistan
- e Technical Officer RMNCAH, World Health Organization Country Office for Myanmar, Yangon, Myanmar
- f Consultant, UNDP-UNFPA-UNICEF-WHO-World Bank Special Programme of Research, Development and Research Training in Human Reproduction (HRP), Department of Sexual and Reproductive Health and Research, World Health Organization, Geneva, Switzerland
- g Technical Officer, UNDP-UNFPA-UNICEF-WHO-World Bank Special Programme of Research, Development and Research Training in Human Reproduction (HRP), Department of Sexual and Reproductive Health and Research, World Health Organization, Geneva, Switzerland
- h Unit Head, UNDP-UNFPA-UNICEF-WHO-World Bank Special Programme of Research, Development and Research Training in Human Reproduction (HRP), Department of Sexual and Reproductive Health and Research, World Health Organization, Geneva, Switzerland
- i Director, Centre for Global Public Health-Pakistan, collaborative centre for Institute of Global Public Health, University of Manitoba, Islamabad, Pakistan; Technical Advisor, Health Services Academy, Islamabad, Pakistan
- j Senior Technical Advisor, Ministry of National Health Services, Regulation and Coordination, Islamabad, Pakistan; Senior Technical Advisor, Centre for Global Public Health-Pakistan, collaborative centre for Institute of Global Public Health, University of Manitoba, Islamabad, Pakistan; Technical Advisor, Health Services Academy, Islamabad, Pakistan
- k SRHR Advisor, Ministry of National Health Services, Regulation and Coordination, Islamabad, Pakistan
- l Statistician/ Data analyst, Health Services Academy, Islamabad, Pakistan
- m MNCH Specialist, Centre for Global Public Health-Pakistan, collaborative centre for Institute of Global Public Health, University of Manitoba, Islamabad, Pakistan; MNCH Specialist, Health Services Academy, Islamabad, Pakistan
- n SRHR Coordinator, Ministry of National Health Services, Regulation and Coordination, Islamabad, Pakistan
- o Associate Professor, Health Services Academy, Islamabad, Pakistan
- p Team Lead for Healthier Population Cluster, World Health Organization, Islamabad, Pakistan

Abstract: Although Pakistan's Essential Package of Health Services was recently updated to include therapeutic and post-abortion care, little is known about current health facility readiness for these services. This study assessed the availability of comprehensive abortion care, and readiness of health facilities to deliver these services, within the public sector in 12 districts of Pakistan. A facility inventory was completed in 2020–2021 using the WHO Service Availability and Readiness Assessment, with a newly developed abortion module. A composite readiness indicator was developed based on national clinical guidelines and previous studies. Just 8.4% of facilities reported offering therapeutic abortion, while 14.3% offered postabortion care. Misoprostol (75.2%) was the most common method provided by facilities that offer

therapeutic abortion, followed by vacuum aspiration (60.7%) and dilatation and curettage (D&C) (59%). Few facilities had all the readiness components required to deliver pharmacological or surgical therapeutic abortion, or post-abortion care (<1%), but readiness was higher in tertiary (22.2%) facilities. Readiness scores were lowest for "guidelines and personnel" (4.1%), and slightly higher for medicines and products (14.3—17.1%), equipment (16.3%) and laboratory services (7.4%). This assessment highlights the potential to increase the availability of comprehensive abortion care in Pakistan, particularly in primary care and in rural areas, to improve the readiness of health facilities to deliver these services, and to phase out non-recommended methods of abortion (D&C). The study also demonstrates the feasibility and utility of adding an abortion module to routine health facility assessments, which can inform efforts to strengthen sexual and reproductive health and rights. DOI: 10.1080/26410397.2023.2178265

Keywords: abortion, post-abortion care, health facility assessment, service readiness, service availability, Pakistan

Introduction

Over the past decade, the Government of Pakistan¹ has acted to reduce morbidity and mortality caused by unsafe abortion. Most of the 2.2 million induced abortions occurring in Pakistan each year are unsafe, resulting in an estimated 700,000 lifethreatening complications.^{2,3} To prevent and manage unsafe abortion, the government has endorsed national training standards for postabortion care in 2015, included misoprostol in the national essential medicines list for post-abortion care in 2016 and published national service delivery standards and guidelines for high-quality safe uterine evacuation and post-abortion care in 2018.^{4,5} In 2020, the Ministry of National Health Services, Regulations and Coordination (MoNHSR&C) further published the Essential Package of Health Services (EPHS) at Community and Primary Healthcare Centre (PHC) Level, recommending the provision of the following services at primary health care level and first-level hospitals: management of miscarriage or incomplete abortion and post-abortion care (PHC level); pharmacological therapeutic abortion using mifepristone and misoprostol or misoprostol alone (PHC); and surgical therapeutic abortion by vacuum aspiration and dilatation and curettage (first-level hospitals).6 Provincial standards and guidelines also exist (e.g. in Punjab province), as the health sector was devolved to the provincial level in 2011. However, since its reinstatement in 2013 the national MoNHSR&C has also had the mandate of providing national-level strategic direction and policy frameworks in collaboration with the devolved provinces, which are translated at provincial levels into respective operational action plans and strategies. The Ministry, therefore, also progresses standards and guidelines at the national level,⁴ working collectively with devolved provinces.

The recent inclusion of therapeutic abortion and post-abortion care services in Pakistan's essential package of health services is an important step towards improving access. However, there is often a lag between health policies that support improved availability of quality services and actual changes in access to these services. Barriers to realising policy change can include gaps in health system structure and capacity, health care providers' training, budget allocation, technical guidance, and population awareness.⁷ Legal restrictions are also a barrier, as abortion is only permitted in specific circumstances. The Penal Code of 1860 allowed abortion to save the life of the woman. In 1997, the Penal Code was amended to make therapeutic abortion legal, prior to formation of foetal organs or limbs, on the grounds of "necessary treatment". 1 However, foetal development markers and the term "necessary treatment" can be variably interpreted, and this ambiguity often prevents therapeutic abortion services being provided9 as providers may fear prosecution due to uncertainty about the legal status.

To assess implementation of the essential package of health services in Pakistan at baseline, the MoNHSR&C adopted the World Health Organization Service Availability and Readiness Assessment (SARA) tool. This tool was used to assess the capacity of public sector facilities to provide EPHS-prioritised interventions, including therapeutic abortion and post-abortion care (PAC). Within this study, the term "therapeutic abortion" is used to refer to an induced abortion that is permitted to save the woman's life or to provide "necessary treatment", using either

pharmacological methods (known as "medical" or "medication" abortion in other contexts) or surgical methods (vacuum aspiration, D&C or D&E). The term post-abortion care (PAC) refers to care for incomplete abortion or complications of unsafe abortion, using either pharmacological or surgical methods.

Service availability and readiness are important requirements for achieving access to quality care, 11 and measurement of these indicators is more feasible and cost-effective than downstream outcome indicators of service quality. 12 The WHO SARA assessment, therefore, functions as a systematic tool to assess service availability and readiness on a regular basis, ¹⁰ which can inform health system planning for human resources, essential services, drugs supply and equipment. Although SARA has been used to evaluate service readiness for reproductive, maternal, newborn and child health (RMNCH) services, abortionrelated care has not previously been included in a SARA assessment. Inclusion of such indicators within health facility assessments can provide Ministries of Health with necessary data to inform government priorities for health system strengthening within sexual and reproductive health.

Little is known about current health facility readiness to provide quality medically indicated therapeutic abortion or post-abortion care in Pakistan, but research suggests that formal therapeutic abortion services are largely unavailable outside of urban areas⁸ and most (85%) women access services through untrained, informal providers.³ A health facility survey and health professional survey conducted in 2012 found that dilatation and curettage (D&C) or dilatation and evacuation (D&E) were most commonly (59%) used to treat abortion complications while misoprostol was less commonly used (29%).² Misoprostol was used to treat a higher proportion of cases in public (39%) than private facilities (23%) but its use had risen drastically, with 90% of facilities reporting having used misoprostol for medication abortion in 2012, up from 2% in 2002.² A corresponding decline in the severity of post-abortion complications treated over the same period was also observed in this study. However, these data highlighted that many facilities lacked adequate supplies, equipment, and staff to provide WHO -recommended care for abortion complications.² The readiness and availability of therapeutic abortion services were also found to be poorer in the public sector and in rural areas. 13 Regular monitoring of the availability and readiness of public facilities to deliver high-quality therapeutic abortion and post-abortion care can help to identify needs and develop evidence-based strategies for ensuring the availability of these essential services.

The aim of this study was to assess the availability of comprehensive abortion care (including medically indicated therapeutic abortion, post-abortion care and contraception), and the readiness of health facilities to deliver this care, within the public sector in 12 districts of Pakistan, using an adapted version of the SARA tool. The assessment was intended to update previous estimates of comprehensive abortion care availability² and to provide the first estimates of service readiness, which can inform national policies and interventions for strengthening access to comprehensive abortion care. This Service Availability and Readiness Assessment was also the first to include an abortion module, which can enable the future collection of necessary routine data for strengthening sexual and reproductive health and rights.

Methods

Service availability and readiness assessment

A facility inventory was completed using the WHO SARA toolkit, 10 a globally harmonised questionnaire used to assess health facility service availability and readiness. The assessment was conducted by the MoNHSR&C and the Health Services Academy, a public sector university in Pakistan, in collaboration with the University of Manitoba in Canada, and WHO Pakistan. In brief. SARA is a comprehensive tool that provides a set of indicators for health system review, management, and planning and can be used at primary, secondary and tertiary care level. SARA is not intended to provide comprehensive data on all aspects of health system functioning but focuses on key "tracer" elements. It broadly assesses three areas: service availability (physical presence of the delivery of services), general service readiness (overall capacity of health facilities to provide general health services) and servicespecific readiness (the ability of health facilities to offer a specific service and the capacity to provide that service measured through tracer items such as trained staff, guidelines, equipment, diagnostics, medicines and commodities). 10 The SARA tool contains the following sections: introduction (facility characteristics); staffing; inpatient and observation beds; infrastructure; available services (reproductive, maternal and newborn health; child and adolescent health; communicable diseases; non-communicable diseases; surgery); diagnostics; medicines and commodities; and interviewer's observations.

The abortion module

An abortion module was collaboratively designed and developed for inclusion in the Pakistan SARA assessment. The module development drew on existing SARA service-specific modules, particularly the family planning module, and the module design was based on WHO Abortion Guidelines. 10 The module was developed by WHO Pakistan and WHO Eastern Mediterranean Office and reviewed by WHO Headquarters. Final review and modifications were made by an expert panel comprising clinicians, researchers, experts working in development sectors, professionals from the Population Welfare division, Provincial Health departments, WHO Pakistan and WHO Eastern Mediterranean Office. Health Services Academy and University of Manitoba during a 2-day national stakeholder consultation which was led by the federal health ministry.⁶

The final abortion module included: whether the facility offers therapeutic abortion care, miscarriage management and PAC services; the types of technologies provided for these procedures; whether these services are offered as inpatient, outpatient or both; and service provision to married adolescents (age 10-19). Ouestions were also added to the tool to assess whether the facility has guidelines available for therapeutic abortion. PAC and infection control and whether staff providing abortion in the facility had received training on safe abortion or post-abortion care in the past two years. The module was placed in the reproductive, maternal and newborn health (RMNH) section of the SARA assessment. Indicators relevant to therapeutic abortion and PAC were also included in the medicines and commodities section of the SARA tool, so that the availability of essential commodities for therapeutic abortion and PAC (e.g. misoprostol, vacuum aspiration kit) could be measured.

Phase 1: Islamabad capital territory

The SARA assessment was implemented in Pakistan in two phases. The first phase was

implemented in the Islamabad Capital Territory (ICT) from January to February 2020, which served as a pilot for the methodology. Out of the total 118 public facilities in the ICT that were eligible for inclusion, data were collected from 86 facilities. Of the 32 facilities excluded, 9 were found to be non-functional and 23 were in restricted areas with a security concern. Of the included facilities, 40 were located in rural and 46 in urban areas. The distribution of these health facilities by type were: 4 tertiary care hospitals, 3 rural health centres, 14 basic health units, 1 community health centre, 2 maternal and child health centres, 1 medical centre, 34 family welfare centres, and 27 dispensaries. Table 1 contains a summary of the different types of public facilities and their roles in the health system of Pakistan. Health services are delivered through both the provincial/ areas' health departments and through the Population Welfare departments. Under the administration of the Department of Health. there are three tiers of primary, secondary and tertiary level facilities. Health facilities providing reproductive health services (limited to family planning) include Reproductive Health Services (RHS-A and RHS-B) Centres. Family Welfare Centres (FWC) and Mobile Service Units (MSU).

Training of master trainers (ToT) was conducted by a consultant from WHO Cairo. Master trainers were professionals with an extensive background in public health research from MoNHSR&C, Health Services Academy and the Center for Global Public Health Pakistan (a collaborative office of the University of Manitoba). Master trainers were responsible for training and oversight of field enumerators in both Phase 1 and Phase 2.

Four-day training of the enumerators was conducted, facilitated by using a standardised training manual which contained instructions with examples for each type of question, validation methods and procedures for correctly recording information. Training also included an explanation of the overall purpose of the assessment, obtaining informed consent, ethical issues, problem-solving in the field, data entry, geographical coordinates, and common data collection and data entry mistakes. These enumerators were recruited based on their previous experience of conducting large surveys, and preferably health facility assessments.

Data collectors travelled in teams of two members for smaller facilities and teams of six

Facility type	Facility level	Characteristics of Health Facility
Under Department of Health		
Tertiary care hospital/ Teaching hospital	Tertiary	Tertiary/Teaching Hospitals provide specialised care facilities receiving population from across provinces
District Headquarter Hospital (DHQ)	Secondary	DHQs cater to the entire population of the district
Tehsil Headquarter Hospital (THQ)	Secondary	THQs cater to the entire population of the tehsil
Rural Health Centre (RHC)	Primary	Serve an estimated catchment size of 40,000-80,000; providing Comprehensive Emergency Obstetric and New born Services (CEmONC)
Basic health unit	Primary	Serve an estimated catchment size of 5000–25,000 providing delivery services
Basic health unit 24/7	Primary	Serve an estimated catchment size of 5000–25,000 providing Basic Emergency Obstetric and Newborn Services (BEMONC)
Maternal child health centre (MCH/MNCH)	Primary	Provide Basic Emergency Obstetric and Newborn Services (BEmONC)
Medical centre	Primary	Basic health services and referral
Other specialised clinic	Primary	Specialised clinics provide limited services pertaining to TB, etc.
First Aid Point (FAP)	Primary	Provide First Aid health services and referral
Dispensary	Primary	Provide basic health services and referral
Under Provincial Population	Welfare Depa	artments and provide only reproductive health services
Reproductive health service A (RHS-A)	Secondary	Provide all reproductive health services including surgical interventions like implants and permanent methods, housed within tertiary level facilities
Reproductive health service B (RHS-B)	Secondary	Run by NGOs but are registered with the population welfare department; RHS-B centres provide the same set of services as the RHS-A centres
Family welfare centre (FWC)	Primary	Provide Family Planning services including Oral contraceptive pills, Injectables and Intrauterine Contraceptive Devices (IUDs) but do not provide implants and surgical methods
Mobile service unit	Primary	Responsible for providing services in areas with limited access to even PHC Family Planning services. These provide the same set of services as FWCs

members for larger facilities (secondary or tertiary), and within each team one master trainer was included. Upon reaching a facility, enumerators were instructed to identify the manager. the person in-charge of the facility or the most senior health worker responsible for the facility. **Enumerators** introduced themselves explained that they were visiting on behalf of the MoNHSR&C and provincial health department for a health facility assessment of service availability. Data collection teams carried a letter from the MoNHSR&C. issued by the district health officer, confirming they had permission to collect data from the facility and requesting facility in-charges to facilitate their data collection. Verbal consent, which was documented by the enumerator as confirmation of approval to conduct the survey, was obtained. Respondents were told that each section of the questionnaire would be asked at the department or station where a particular service was provided and that the most senior person within the respective department would be approached for questioning. All data collection was done at the station where the service was provided. At the start of the abortion module section of the questionnaire, enumerators were instructed to ask whether the facility offered "safe abortion (induced abortion) care (SAC) services". If the respondent answered yes, enumerators asked to be shown the location in the facility where these services were provided and asked to speak to the person in the facility most knowledgeable about these services for the remaining questions in the module. During this first phase, data collection teams reported that respondents were reluctant to answer questions about abortion care and that the enumerators found it difficult to explain to respondents differences in the terminology of therapeutic abortion care and miscarriage management. This language of "safe abortion / induced abortion care" was therefore updated in phase 2 of data collection. as described below.

During implementation, a quality assurance team made visits to data collection sites to observe and verify reliability of data collection. Data was collected on handheld devices and real-time entry was conducted by enumerators. The database was developed using CAPI application on CSPro programme 7.6.2. Data manager and editors' team reviewed each questionnaire for completeness and data entry errors prior to finalisation.

Detailed validity checks and data cleaning were also conducted prior to final analysis.

Phase 2: implementation across 11 districts

Following the completion and analysis of data collected during Phase 1, a second phase was implemented across 11 districts of Pakistan from November - December 2021. The 11 districts were selected from each of the four main provinces and federating areas of Pakistan, from a total of 135 districts. 14 Districts were selected by their respective provincial governments as priority districts for universal health coverage benefits package implementation. District selection criteria were determined through consultation with stakeholders and partners, and provinces were asked to select priority districts based on the following criteria: (1) population of district is around 0.5–3 million; (2) have the human resources and infrastructure in place to deliver essential health services (i.e. not a district with no skilled health workforce): (3) higher levels of poverty according to the multidimensional poverty index; (4) higher burden of disease: (5) low utilisation of essential health services: and (6) adequate levels of administrative motivation. As in phase 1, enumerators carried an authorisation letter issued by MoNHSR&C and the District Health Department of the respective district. In Phase 2, provincial organisations, which included medical universities or public health institutes, were selected for implementation of the SARA survey within the districts of their respective provinces. Two to three representatives from each selected provincial organisation were selected and trained as master trainers. Within each province, 4 days of training of district data collection teams was conducted by the provincial master trainers under the supervision of the Phase 1 master trainers. All public facilities were included within each selected district (n = 1407), but 98 facilities were found to be non-functional and were then excluded. Most facilities in phase 2 (77%) were rural.

In Phase 2, amendments were made to the abortion module and training processes based on feedback from the implementation of phase one. During phase 1, it was observed that the position of the abortion module at the start of the RMNCH section of the tool made respondents feel uncomfortable about the sensitivity of the information. The module was, therefore, relocated to the penultimate position in the RMNH section in phase 2, with the aim of developing rapport with RMNH

respondents before asking a question considered to be more sensitive. The wording of the question about whether the facility offered abortion care was also modified from "safe (induced) abortion" in phase 1 to "safe abortion/ therapeutic abortion /uterine evacuation" in Phase 2, based on terminology used by the clinicians during the ICT pilot and discomfort with the use of the words "safe abortion". The "mifepristone and misoprostol" option was removed from the question asking respondents which type of therapeutic abortion services were offered, because mifepristone had not vet been added to the National Essential Medicines List at the time of the assessment. Finally, the training was updated to include greater emphasis on the national legal status of abortion: differences in therapeutic abortion and post-abortion care: handling resistance from respondents (particularly in rural areas); and discussion of the sensitivities around this topic and addressing enumerators' own misconceptions.

Analysis

A descriptive analysis was completed using Stata 17. Data from all health facilities in the 12 districts included in Phase 1 and Phase 2 were analysed together. As a census of facilities was included in the assessment, results are not weighted.

The readiness indicator used in this analysis was developed based on that used by Bell et al. 15 and adapted based on Pakistan's national clinical guidelines and service standards (2018).⁵ For pharmacological abortion, the readiness indicator included three domains (guidelines and trained personnel; medicines and products; laboratory services) and eight tracer indicators, while for surgical abortion and post-abortion care, the readiness indicator included additional domain (equipment and consumables) so there were 4 domains in total and 8 additional tracer items (total tracers = 16) (see Table 4). There was a minor variation in the tracer items between post-abortion care and surgical abortion, as the antibiotic tracer item for surgical abortion was in tablet form, while for post-abortion care, it was in injectable form. A facility was considered to have a given item if it was observed available and valid, or reported to be present but not seen. If the item was available but non-valid, not available today, or never available, the facility was not considered to have the item. An aggregate readiness indicator was calculated for each domain and for each service type (pharmacological abortion, surgical abortion, post-abortion care), which showed the proportion of facilities that had every tracer item in place for each domain and for each service type overall.

Ethics

The research was reviewed and approved by the Institutional Ethical Review Committee of the Health Services Academy Islamabad for Phase I (ref: No.7-82/IERC-HSA/2020-03) on 8 January 2020 and for Phase II (ref: No. 7-82/IERC-HSA/2021-03) on 12 April 2021.

Results

Facility characteristics

In total, 1395 facilities were included across the 12 districts, with most from Punjab districts i.e. Rahim Yar Khan and Kasur (Table 2). Accounting for population size, the districts with the highest number of facilities per 500,000 population were Gilgit (115), Kotli (76), and Khuzdar (60), while the lowest were Islamabad (22), Hyderabad (27) and Rahim Yar Khan (28) (data not shown). Most (75.1%) facilities were located in rural areas and the vast majority (96.6%) were primary level, predominantly family welfare centres, basic health units and dispensaries.

Service availability

lust 8.4% of all facilities reported they offer therapeutic abortion while a slightly higher proportion (14.3%) reported that they offer post-abortion care (Table 3). Accounting for population size, the number of facilities per 500,000 population that offered therapeutic abortion ranged from 0.5 in Rahim Yar Khan to 7.5 in Loralai. The number offering post-abortion care per 500,000 ranged from 1.6 in Kech to 10.6 in Khuzdar (data not shown). The Healy et al. 16 safe abortion care model recommends that 5 facilities per 500,000 population should offer therapeutic abortion and post-abortion care. Of the 12 included districts, 10 districts did not meet this standard for therapeutic abortion and 6 did not meet this standard for post-abortion care.

Misoprostol was the most common method reported to be provided by those facilities that offer therapeutic abortion (75.2%), followed by vacuum aspiration (60.7%) and dilatation and curettage (D&C) (59%). For PAC, misoprostol (74.9%) was also the most reported method provided, followed by D&C (55.3%). About one-quarter of

		%
Province / federating area and district*		
slamabad Capital Territory	86	6.2
Balochistan	213	15.3
Kech	78	5.6
Khuzdar	95	6.8
Loralai	40	2.9
Chyber Pakhtunkhwa	172	12.3
Charsadda	92	6.6
Kohat	80	5.7
Punjab	492	35.3
Kasur	223	16.0
Rahim Yar Khan	269	19.3
indh	239	17.1
Hyderabad	118	8.5
Larkana	121	8.7
zad Kashmir and Gilgit-Baltistan	193	13.8
Kotli	126	9.0
Gilgit	67	4.8
Jrban/Rural		
Urban	348	25.0
Rural	1047	75.1
acility level		
Tertiary	9	0.7
Secondary	66	4.7
Primary	1320	94.6
acility type		
Tertiary care hospital / teaching hospital	9	0.7
District Headquarter Hospital (DHQ)	12	0.9
Tehsil Headquarter Hospital (THQ)	26	1.9
Rural health centre (RHC)	77	5.5
Basic health unit (BHU)	329	23.6
Basic health unit 24/7	112	8.0
MCH / MNCH	47	3.4
Medical centre	3	0.2
Other specialised clinic	23	1.7
First aid point (FAP)	75	5.4
Dispensary Reproductive health comics (RUS A)	285	20.4
Reproductive health service (RHS-A)	17 11	1.2
Reproductive health service (RHS-B) Family welfare centre (FWC)		0.8
Mobile service unit	359 10	25.7 0.7

	n	%
Therapeutic abortion services offered (n = 1395)	117	8.4
Post-abortion care services offered ($n = 1395$)	199	14.3
Therapeutic abortion methods provided (among facilities that	offer TA, <i>n</i> = 117)	
Mifepristone and misoprostol (phase I only)	2	1.7
Misoprostol alone	88	75.2
Vacuum aspiration	71	60.7
Dilatation and evacuation	50	42.7
Dilatation and curettage	69	59.0
Post-abortion care methods provided (among facilities that off	er PAC, <i>n</i> = 199)	
Misoprostol alone	149	74.9
Vacuum aspiration	98	49.3
Dilatation and evacuation	80	40.2
Dilatation and curettage	110	55.3
Prophylactic antibiotics and pain medication provided (among	facilities that offer TA and	/or PAC, <i>n</i> = 211)
Prophylactic antibiotics for surgical termination $(n = 136)^*$	106	77.9
Pain medication for medical or surgical termination	160	75.8
Post-abortion family planning methods provided (among facili	ies that offer TA and/or PA	AC, <i>n</i> = 211)
IUCD	157	74.4
mplants	45	21.3
Progestin-only injectable contraceptives	122	57.8
Oral contraceptive pills	162	76.8
Male condom	136	64.5
Other methods (specify)	24	11.4

*Only facilities that provide surgical methods of PAC or TA included. Abbreviations: TA: therapeutic abortion; PAC: post-abortion care; IUCD: intrauterine contraceptive device.

facilities reported that they did not provide prophylactic antibiotics for surgical abortion or PAC, and one-quarter did not provide pain medication for surgical or medical abortion or PAC.

Among facilities that reported providing either therapeutic abortion or post-abortion care, the most common method of post-abortion family planning provided was oral contraceptive pills (76.8%), followed by the intra-uterine contraceptive device (74.4%). A lower proportion of facilities reported providing implants (21.3%) and inject-able contraceptives (57.8%).

Appendix 1 provides a breakdown of service availability by district and facility characteristics.

Service availability was higher in urban than rural areas, and higher in tertiary than secondary and primary facilities. There was considerable variation in the methods available between districts, and whilst tertiary facilities reported having all methods available, there was lower availability of each method type in primary and secondary facilities.

Facility readiness

Overall, fewer than 1% of facilities had all the readiness components required for each service type (Table 4). The domain of "guidelines and personnel" had the lowest readiness score across each service type (4.1%). Readiness was slightly

Table 4. Proportion of all facilities with each component needed for pharmacological and surgical therapeutic abortion and post-abortion care, and overall scores (n = 1395)

and saisical incrapeatic aportion and p			c3 (II 1333)
	Pharmacological TA	Surgical TA	PAC
Guidelines and personnel			
Guidelines on uterine evacuation and PAC	14.6	14.6	14.6
Guidelines on post-abortion family planning	16.4	16.4	16.4
Staff trained in abortion/PAC in past 2 years	6.3	6.3	6.3
Medicines and products			
Misoprostol	23.2	23.2	23.2
Ibuprofen	34.8	34.8	34.8
Antibiotic tablets	n/a	71.5	n/a
Antibiotic injectables	n/a	n/a	38.4
Antiseptic	n/a	56.6	56.6
Equipment			
Vacuum aspirator or D&C kit*	n/a	21.8	21.8
Bed	n/a	28.1	28.1
Speculum	n/a	26.2	26.2
Stethoscope	n/a	91.9	91.9
Blood pressure equipment	n/a	86.7	86.7
Disposable gloves	n/a	24.6	24.6
Laboratory			
Urine pregnancy test	19.9	19.9	19.9
Haemoglobin test	19.2	19.2	19.2
Blood group test	9.5	9.5	9.5
Summary			
Facilities with all guidelines and personnel	4.1	4.1	4.1
Facilities with all medicines and products	17.1	14.6	14.3
Facilities with all equipment	n/a	16.3	16.3
Facilities with all laboratory services	7.4	7.4	7.4
Facilities with all components	0.8	0.6	0.6

^{*}Note: data collection and reporting on vacuum aspirators and D&C kit should be separated in future health facility assessments, as D&C is not recommended by WHO or the Society of Obstetricians and Gynaecologists of Pakistan, but it is beneficial to track the use of D&C. n/a = not applicable. Abbreviations: TA: therapeutic abortion, D&C: dilatation and curettage, PAC: post-abortion care.

higher for medicines and products (14.3–17.1%) and equipment (16.3%), but similarly low for laboratory services (7.4%). For each service type, the tracer indicator that was least commonly available was staff trained in therapeutic abortion or post-abortion care in the past two years (6.3%). Misoprostol was available or

reported to be present in 23.2% of facilities, while vacuum aspirators or D&C kits were available or reported to be present in 21.8% of facilities. Products and equipment used for other general health care services were available or reported to be present in more than half of facilities, such as antibiotic tablets (71.5%),

antiseptic (56.6%), stethoscopes (91.9%) and blood pressure equipment (86.7%).

The only districts with any facilities that had all readiness components were in Punjab and Sindh provinces, in the following districts: Hyderabad, Kasur, Larkana and Rahim Yar Khan (Table 5). The remaining eight districts and Islamabad Capital Territory had no facilities with all readiness components in place. Readiness was slightly higher in urban (1.7–2.0%) than rural (0.2–0.4%) areas, and readiness was higher in tertiary facilities (22.2%) than secondary (4.6–6.1%) and primary (0.2–0.4%) facilities.

The proportion of facilities with each readiness component, by district and facility characteristics is shown in Appendix 2. While training, guideline and laboratory service readiness were higher in urban facilities, readiness for medicines, products and equipment tended to be higher in rural facilities. Readiness for every indicator was higher in higher level (tertiary) facilities.

Discussion

This SARA assessment was implemented in Pakistan shortly after the Essential Package of Health Services (EPHS) endorsed the provision of therapeutic abortion and post-abortion care at community, primary and hospital levels of the health system in 2020.6 The inclusion of therapeutic abortion within primary care was in line with Pakistan's National Service Delivery Standards and Guidelines for High-Ouality Safe Uterine Evacuation/Post-Abortion Care⁵ which state that "both vacuum aspiration and medical methods may be considered at the primarycare level, but where capacity to provide highquality uterine evacuation care services does not exist, referral to services at higher levels is essential". The EPHS also aligns with the 2022 WHO abortion care guideline, which recommends that abortion must be centred within primary health care, which itself is fully integrated within the health system, facilitating referral pathways for higher-level care. 17 This is essential for the achievement of universal health coverage and realisation of reproductive rights. The SARA assessment, therefore, provides an important insight into the service delivery gaps which need to be addressed for the EPHS to be fully implemented, particularly in primary care. The findings can inform future health system strengthening for therapeutic abortion and post-abortion care.

To meet the standards endorsed by the EPHS, these SARA findings highlight the need to improve the availability of therapeutic abortion and postabortion care services. Few facilities reported that they offered therapeutic abortion or postabortion care. Taking population size into account, 10 out of 12 districts fell below the standard recommended by the Healy et al. 16 safe abortion care model (5 facilities providing therapeutic abortion per 500,000 population). There is a particular need to expand availability at the primary care level. Primary facilities accounted for 97% of the facilities in these 12 districts, but there was very low availability of therapeutic abortion and post-abortion care within primary and secondary care compared to tertiary facilities. Availability of quality comprehensive abortion care may therefore be significantly improved in Pakistan by training, stocking, and equipping primary facilities to deliver therapeutic and postabortion care, now that they are mandated to offer these essential services. Offering comprehensive abortion care services at Family Welfare Centres, Basic Health Units and Dispensaries, for example, could substantially increase access to services.

As observed in previous research, this study has also highlighted the need to expand access in rural areas, where the availability of services was lower. A previous study in Pakistan found that just over 30% of facilities that provide post-abortion care are in rural areas, although rural areas account for two thirds of the female population.¹³ Health worker availability is particularly challenging in rural areas, ¹⁸ which may explain the higher rural availability of products, medicines and equipment identified in this SARA assessment, as physical resources go under-used due to a lack of health workforce to deliver care.

This SARA assessment has also identified the need to improve the capacity of facilities to deliver high-quality care. Few facilities had all readiness components required to deliver quality pharmacological or surgical therapeutic abortion, or post-abortion care. "Readiness" is a strict measure, but there was low readiness across each service type, even when limiting to tertiary or secondary facilities. Surprisingly, we did not see variation in overall service readiness across districts, despite the devolution of health policy

Table 5. Proportion of all facilitie facility characteristic and service	s with all service read type (n = 1395)	diness compon	ents, by district,

	Pharmacological TA	Surgical TA	Post-abortion care
Province / federating area and district			
Islamabad Capital Territory	0.0	0.0	0.0
Balochistan	0.0	0.0	0.0
Kech	0.0	0.0	0.0
Khuzdar	0.0	0.0	0.0
Loralai	0.0	0.0	0.0
Khyber Pakhtunkhwa	0.0	0.0	0.0
Charsadda	0.0	0.0	0.0
Kohat	0.0	0.0	0.0
Punjab	1.2	0.6	0.6
Kasur	1.4	0.0	0.0
Rahim Yar Khan	1.1	1.1	1.1
Sindh	2.1	2.1	2.1
Hyderabad	2.5	2.5	2.5
Larkana	1.7	1.7	1.7
	<u> </u>		
Azad Kashmir and Gilgit-Baltistan	0.0	0.0	0.0
Gilgit	0.0	0.0	0.0
Kotli	0.0	0.0	0.0
Urban/Rural		1	
Urban	2.0	1.7	1.7
Rural	0.4	0.2	0.2
Facility level			
Tertiary	22.2	22.2	22.2
Secondary	6.1	4.6	4.6
Primary	0.4	0.2	0.2
Facility type			
Tertiary care hospital / teaching hospital	22.2	22.2	22.2
District Headquarter Hospital (DHQ)	8.3	0.0	0.0
Tehsil Headquarter Hospital (THQ)	11.5	11.5	11.5
Reproductive health service (RHS-A)	0.0	0.0	0.0
RHS-B	0.0	0.0	0.0
Family welfare centre (FWC)	0.0	0.0	0.0
Rural health centre (RHC)	3.9	1.3	1.3
Medical centre	0.0	0.0	0.0
MCH / MNCH	0.0	0.0	0.0
Basic health unit (BHU)	0.0	0.0	0.0
BHU 24/7	0.9	0.9	0.9
Other specialised clinic	0.0	0.0	0.0
Mobile service unit First aid point (FAP)	0.0	0.0	0.0
Dispensary	0.0 0.4	0.0 0.4	0.0 0.4
] 3.1	0.1
Note: Province or federating area is emboldene	d.		

to the provincial level in Pakistan since 2011. Although the MoNHSR&C was reinstated in 2013 and also has the remit of developing national guidelines, service delivery standards and guidelines for safe uterine evacuation and post-abortion care were published by the Department of Health in Puniab province in 2015, three years prior to the national guidelines. Despite this, we did not see higher service readiness in the districts in this province or higher availability of facilities offering therapeutic abortion when accounting for population size. This may reflect the need for greater structural investment to support the implementation of new standards and guidelines. However, misoprostol availability was highest in Puniab districts (Kasur and Rahim Yar Khan) which may reflect recent efforts in Punjab province to improve the availability of this essential commodity,⁴ and the only districts to have any facilities with all readiness components were in Punjab and Sindh provinces. It is also important to note that the selected districts for this study were not expected to be representative at the provincial level.

This is the first study to measure the readiness of public facilities in Pakistan to deliver therapeutic abortion and post-abortion care. but studies from neighbouring countries have identified similarly low levels of readiness. A nationally representative study of facilities in Nepal identified that fewer than 2% of facilities that reported providing abortion or post-abortion care services in the past 3 months were "ready", based on the authors' application of SARA criteria for service-specific readiness. 15 A 2015 signal functions study in Jessore district, Bangladesh, found that no facilities fulfilled all criteria for "comprehensive" care, and only one facility met the "basic" criteria. 19 Studies in neighbouring countries have also identified low availability of services: a 2012/13 study in Madhya Pradesh, India, identified that fewer than half of facilities reported an ability to provide safe abortion services while fewer than 20% of public facilities had provided abortion care in the past three months.²⁰ In Nepal, fewer than half of eligible facilities had provided safe abortion services in the three months prior, and only a quarter had provided post-abortion care. Similar studies from other countries in the Eastern Mediterranean region were not identified, suggesting there is an opportunity for more countries in this region to include therapeutic abortion within systematic assessments of service availability and facility readiness.

Specific opportunities for quality improvement in therapeutic abortion and post-abortion care services were identified by this assessment. For example, there were promising signs that WHO -recommended methods are commonly provided in facilities that offer therapeutic abortion and post-abortion care (misoprostol, vacuum aspiration), but a high proportion of facilities also reported providing D&C. The Society of Obstetricians and Gynaecologists of Pakistan has highlighted the need for curettage not to be offered as first-line treatment.4,21 and D&C is not recommended by the WHO because it has a higher complication rate, causes pain and suffering and is incompatible with the human right to health.²² On the other hand, misoprostol has played an important role in reducing the severity of post-abortion complications, 3,23,24 and in increasing the accessibility of therapeutic abortion care worldwide.²⁵ Although misoprostol was the most reported method provided by facilities, the readiness assessment highlighted the limited availability of this essential medication across all facilities. The assessment also highlighted that a surprising number of facilities were not providing pain medication and prophylactic antibiotics, which are key components of quality care. This finding could reflect the need to improve the availability of pain and antibiotic medications. or to strengthen training in therapeutic abortion and post-abortion care, as the domain of "guidelines and personnel" had the lowest readiness score across each service type. Finally, this assessment also identified varying availability of postabortion family planning methods, highlighting the need for improved availability of certain commodities, such as contraceptive implants, progestin-only injectable contraceptives, and male condoms.

Inclusion of an abortion module within SARA and other health facility assessments can offer an important step toward reducing complications and mortality from unsafe abortion. By identifying specific gaps in the availability and quality of therapeutic abortion and post-abortion care, these SARA data have already proved valuable in district planning and have informed decisions on how to expand facility readiness for therapeutic abortion. For example, the low availability of misoprostol identified in this SARA assessment informed the decision to include misoprostol

stocks as a monitoring indicator in DHIS 2, the healthcare management platform. This assessment suggests that stocks of family planning commodities, pain medications and antibiotic should also be included in monitoring indicators. Expanding the availability and improving the stock of misoprostol may substantially improve the availability of therapeutic abortion and postabortion care across a range of facilities. However, even if 100% of facilities had misoprostol available and there was no requirement for laboratory services (as recommended in WHO guidelines). 17 only 3% of facilities in this assessment would have been considered "ready" to deliver pharmacological abortion, largely due to a lack of training and guidelines. To expand high-quality pharmacological abortion services, it will be important to also improve the competency of and support structures surrounding health workers, so that patients have access to high-quality information about how to use the medications and what to expect during the process, as well as reducing use of non-recommended methods. For example, a programme to introduce misoprostol and vacuum aspiration in five hospitals in Pakistan was found to reduce the use of D&C and increase the use of safer methods, highlighting the role that training and continuous supportive supervision can have in improving medical practice for therapeutic abortion.26 It is important for health worker training to also include values clarification in sexual and reproductive health and rights, 27 as well as clarity on the legal status of abortion, to ensure health workers feel empowered to provide therapeutic abortion and post-abortion care services to the full extent of the law in Pakistan.

This study has several limitations. First, the assessment was limited to 12 purposively selected districts, so the assessment is not nationally representative, and some criteria used to select districts (e.g. high poverty, low service utilisation) may mean that availability or readiness of services in these districts is below the national average. Conversely, other selection criteria used (e.g. have human resources and infrastructure in place to deliver essential health services, adequate administrative motivation) may have positively biased the results, so the results cannot be taken as representative of the national situation in Pakistan or of each province or federating area. The assessment excluded the private sector, which provides a high proportion of health care,28 including abortion-related care, 3,13 in Pakistan.

The assessment also excluded care delivered outside of health facilities, although misoprostol is known to be available over the counter at pharmacies in Pakistan and thought to be commonly used in self-care contexts.²⁹ Facilities in areas with security concerns were also excluded, which may have introduced further bias. Second, there were some limitations in the measurements used to define availability and readiness in this assessment. For example, the tool asked about the availability of vacuum aspiration kits together with D&C kits, so we could not separate whether facilities stocked the equipment needed to provide WHO-recommended surgical methods (vacuum aspiration) versus non-recommended methods (D&C). Prior research has highlighted lower stocks of manual vacuum aspiration kits and electric vacuum aspiration kits than D&C kits in facilities in Pakistan,² and it would have been valuable to assess whether this was still the case. The tool assessed whether facilities report offering each service rather than whether each service had been provided in the past e.g. three months, as in previous studies, but logbooks often under-report service provision. 12 The assessment does not tell us about actual practice, provider attitudes and willingness to provide care, or quality of care delivered in the facilities. but the assessment does provide an estimate of facilities' capacity to provide quality care. Third, the measures reported in this study are based on facility-report, which is prone to some inaccuracy. although data collectors did ask to observe evidence of the indicators used to estimate readiness. The stigmatised nature of therapeutic abortion and post-abortion care may also have resulted in some under-reporting of availability and readiness. Finally, the assessments took place during the COVID-19 pandemic, which may have affected results, such as the availability of misoprostol stocks.

The study also has several strengths. It provides the first estimates of public health facility readiness to provide therapeutic abortion care and post-abortion care in Pakistan. Although only 12 districts were selected for the assessment, these districts account for almost 10% of the total population of Pakistan and a census of public facilities were included in each district. The districts were distributed across the Islamabad Capital Territory and the four main provinces and federating areas of Pakistan. The assessment was implemented just as an expansion of comprehensive abortion care at the primary and community level had been endorsed by EPHS, thus providing an important

baseline that can be monitored for guidance on service delivery improvements. The study also provides the first-ever application of the WHO SARA assessment to therapeutic abortion care and highlights the feasibility of including an abortion module within this important data source for health system planning. As such, the module has influenced subsequent abortion modules in Health Facility Assessments in Burkina Faso, Uganda, Zambia and elsewhere, as well as the inclusion of an abortion module in the WHO Harmonized Health Facility Assessment core tool.¹⁷

Conclusion

This study is the first to assess service availability and readiness for abortion-related care in public facilities in Pakistan. The survey of 12 districts across four provinces and federating areas has highlighted the potential to expand the availability of therapeutic abortion and post-abortion care in public facilities in Pakistan, and to improve the readiness of facilities to deliver comprehensive abortion care. These findings have important implications for efforts to expand access to comprehensive abortion care in Pakistan and have already contributed to national health system changes - by informing district planning on the expansion of facility readiness for therapeutic abortion, informing the decision to include misoprostol in routine DHIS2 logistics monitoring. and informing an increased focus on health worker training in rural areas and urban informal settlements. The findings highlight the need to increase the availability of services, particularly in primary care and in rural areas, to improve the capacity of health facilities to deliver therapeutic abortion and post-abortion care and to phase out non-recommended methods of abortion (D&C). The assessment demonstrates that health facility readiness can be improved by increasing the availability of misoprostol, but there is also a critical need to improve the availability of trained healthcare providers who can deliver these services. This is the first time a module on therapeutic abortion and post-abortion care has been included in a WHO health facility assessment. As such, it served as a model for subsequent modules, including the module incorporated into the core tool of the newly updated WHO Harmonized Health Facility Assessment. Inclusion of similar abortion modules in future health facility assessments can expand access to necessary

data for strengthening sexual and reproductive health and rights and can improve the visibility and inclusion of comprehensive abortion care within health system strengthening.

Acknowledgements

The authors are grateful to the staff at all health facilities involved in the SARA assessment and to the enumerators who completed the data collection. The authors would like to acknowledge the following individuals for their support with the survey conceptualisation and implementation: Dr Muhammad Afifi. Dr Abdelkreem Eman. Dr Faran Emmanuel, Prof Dr Assad Hafiz, Dr Bagar Iafri. Dr Gholbzouri Karima, Dr Shahzad Ali Khan, Dr Eiaz Khan, Mr Babar Malik, Dr Afifa Munawar, Dr Jamal Nasher, Dr Sikandar Qais, Mr Mata ur Rahman, Dr Ulrika Rehnström-Loi, Dr Rana Safdar, Dr Malik Safi, Dr Raza Zaidi. Finally, the authors are grateful to the following institutions for their support with study implementation: Fatima Jinnah Medical University. Lahore: Dow University of Health Sciences, Karachi: Institute of Public Health & Social Sciences, Khyber Medical University, Peshawar: Institute of Public Health, Ouetta, Health Services Academy, Islamabad and Centre for Global Health-Pakistan and Institute for Global Public Health-University of Manitoba. The design and inclusion of an abortion module in the SARA tool was conceptualised by AA, BG, ET, HBH, HBJ, NH, PM. TR and OU. Overall study implementation was overseen by ET, KH, MS, PM, TR and QU. Data collection was managed by AA, ET, KH, MS, MU. PM. SA. TR and OU. MU. SA and TR conducted data cleaning. Data analysis for the manuscript was conducted by KF with inputs from HBJ, AA, TR and MU. KF wrote the first draft of the manuscript, with inputs from HBJ, which was then critically revised by all co-authors. All authors gave final approval of the manuscript.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work received funding from an anonymous donor and from the UNDP-UNFPA-UNICEF-WHO-World Bank Special Programme of Research, Development and Research Training in Human Reproduction (HRP), a cosponsored programme executed by the World Health Organization (WHO). The anonymous donor had no involvement in the design,

conduct and interpretation of the study. HRP staff were involved in the design, conduct and interpretation of the study, as outlined in the 'Acknowledgements' statement (KF, HBJ, BG).

Data availability statement

The associated dataset for this study is available from the Ministry of National Health Services, Regulation and Coordination upon reasonable request.

References

- 1. Government of Pakistan. Pakistan Penal Code (Act XLV of 1860), Chapter XVI, Section 338(A)-(C). October 6 1860; [cited 2022 Sep 21].
- Sathar Z, Rashida G, Shah Z, et al. Postabortion care in Pakistan. Issues Brief (Alan Guttmacher Inst). 2013;4:1–8. https://www.guttmacher.org/sites/default/files/report_pdf/ postabortioncarepakistan.pdf.
- Sathar Z, Singh S, Rashida G, et al. Induced abortions and unintended pregnancies in Pakistan. Stud Fam Plann. 2014;45(4):471–491. doi:10.1111/j.1728-4465.2014. 00004.x.
- Sharma AC, Dhillon J, Shabbir G, et al. Notes from the field: political norm change for abortion in Pakistan. Sex Reprod Health Matters. 2019;27(2):1–7. doi:10.1080/26410397. 2019.1586819.
- Ministry of National Health Services, Regulations and Coordination. National service delivery standards and guidelines for high-quality safe uterine evacuation/postabortion care. Islamabad: Government of Pakistan; 2018.
- Ministry of National Health Services, Regulations and Coordination. Universal Health Coverage Benefit Package of Pakistan: Essential Package of Health Services with Localized Evidence. Islamabad: Government of Pakistan; 2020.
- Ferguson L, Jardell W, Lambert-Peck M, et al. Mind the Gap: understanding differences between sexual and reproductive health-related legal frameworks on paper and in practice. Front Glob Women's Health. 2022;3.
- Foster AM, Messier K, Aslam M, et al. Community-based distribution of misoprostol for early abortion: outcomes from a program in Sindh, Pakistan. Contraception. 2022;109:49–51. doi:10.1016/j.contraception.2022.01.005.
- Monga T, Bajracharya M, Aziz H, et al. Increasing safe abortion access through universal health care: promising signs from Nepal and Pakistan. Sex Reprod Health Matters. 2020;28(2):26–30. doi:10.1080/26410397.2020.1763008.
- WHO. Service Availability and Readiness Assessment (SARA): An Annual Monitoring System for Service Delivery: Reference Manual. Geneva: World Health Organization; 2013.
- Kruk ME, Gage AD, Arsenault C, et al. High-quality health systems in the sustainable development goals era: time for a revolution. Lancet Glob Health. 2018;6(11): e1196–e1252.

- Abdella A, Fetters T, Benson J, et al. Meeting the need for safe abortion care in Ethiopia: results of a national assessment in 2008. Glob Public Health. 2013;8 (4):417–434. doi:10.1080/17441692.2013.778310.
- Singh S, Sundaram A, Hossain A, et al. Abortion service provision in south Asia: a comparative study of four countries. Contraception. 2020;102(3):210–219. doi:10. 1016/j.contraception.2020.05.015.
- Pakistan Bureau of Statistics. Population Census District Wise Results / Tables (Census 2017) [cited 2022 Oct19]. Available from: https://www.pbs.gov.pk/census-2017-district-wise.
- 15. Bell SO, Zimmerman L, Choi Y, et al. Legal but limited? Abortion service availability and readiness assessment in Nepal. Health Policy Plan. 2018;33(1):99–106.
- Healy J, Otsea K, Benson J. Counting abortions so that abortion counts: indicators for monitoring the availability and use of abortion care services. Int J Gynecol Obstet. 2006;95(2):209–220. doi:10.1016/j.ijgo.2006.08. 002.
- 17. WHO. Abortion care guideline. Geneva: World Health Organization; 2022.
- Mir AM, Shaikh MS, Rashida G, et al. To serve or to leave: a question faced by public sector healthcare providers in Pakistan. Health Res Policy Syst. 2015;13(1):85–91.
- Huda FA, Ahmed A, Ford ER, et al. Strengthening health systems capacity to monitor and evaluate programmes targeted at reducing abortion-related maternal mortality in Jessore district, Bangladesh. BMC Health Serv Res. 2015;15(1):1–10. doi:10.1186/s12913-015-1115-6.
- Chaturvedi S, Ali S, Randive B, et al. Availability and distribution of safe abortion services in rural areas: a facility assessment study in Madhya Pradesh, India. Glob. Health Action. 2015 Dec 1;8(1):26346.
- SOGP. SOGP Guideline of management of spontaneous miscarriage. Society of Obstetricians and Gynaecologists Pakistan; 2022 [cited 2022 Sep 14]. https://www.sogp.org/ assets/frontend/uploads/guidelines/3.management_of_ spontaneous%20_miscarriage.pdf.
- 22. WHO. Harmonized health facility assessment (HHFA) combined questionnaire availability, readiness and management and finance: core questions only. Geneva: World Health Organization; 2022.

- Bello FA, Fawole B, Oluborode B, et al. Trends in misoprostol use and abortion complications: a crosssectional study from nine referral hospitals in Nigeria. PLoS One. 2018;13(12):e0209415.
- 24. Calvert C, Owolabi OO, Yeung F, et al. The magnitude and severity of abortion-related morbidity in settings with limited access to abortion services: a systematic review and meta-regression. BMJ Global Health. 2018;3(3):e000692.
- 25. Jayaweera RT, Moseson H, Gerdts C. Misoprostol in the era of COVID-19: a love letter to the original medical abortion pill. Sex Reprod Health Matters. 2020;28(1):1829406.
- 26. Zaidi S, Yasmin H, Hassan L, et al. Replacement of dilation and curettage/evacuation by manual vacuum aspiration and medical abortion, and the introduction of postabortion

- contraception in Pakistan. Int J Gynaecol Obstet. 2014;126: S40–S44.
- Turner KL, Pearson E, George A, et al. Values clarification workshops to improve abortion knowledge, attitudes and intentions: a pre-post assessment in 12 countries. Reprod Health. 2018;15(1):1–11.
- 28. Khalid F, Raza W, Hotchkiss DR, et al. Health services utilization and out-of-pocket (OOP) expenditures in public and private facilities in Pakistan: an empirical analysis of the 2013–14 OOP health expenditure survey. BMC Health Serv Res. 2021;21(1):1–14.
- Uzma Q, Hamid N, Chaudhri R, et al. The role of partners in promoting self-care for misoprostol and subcutaneous DMPA in Pakistan. Health Res Policy Syst. 2021;19(1):1–10.

Appendices

Appendix 1. Proportion of facilities that offer the rapeutic abortion/post-abortion care by method and service type, and by facility characteristic (n = 1395).

				Therapeutic abo	ortion method cilities that off	Post-abortion care methods available (among facilities that offer PAC)					
	Therapeutic abortion services available	Post-abortion care services available	Mifepristone and misoprostol (phase I only)	Misoprostol alone	Vacuum aspiration	Dilatation and evacuation	Dilatation and curettage	Misoprostol alone	Vacuum aspiration	Dilatation and evacuation	Dilatation and curettage
District											
Islamabad	16.3	40.7	14.3	35.7	35.7	21.4	21.4	25.7	17.1	11.4	8.6
Rahim Yar Khan	1.9	18.2	n/a	100.0	80.0	60.0	80.0	95.9	30.6	32.7	61.2
Kasur	10.8	8.5	n/a	83.3	33.3	37.5	66.7	94.7	52.6	52.6	73.7
Hyderabad	11.9	11.9	n/a	92.9	78.6	64.3	71.4	100.0	71.4	64.3	71.4
Larkana	12.4	12.4	n/a	86.7	80.0	33.3	80.0	93.3	93.3	60.0	80.0
Kohat	7.5	8.8	n/a	83.3	100.0	33.3	33.3	71.4	85.7	57.1	42.9
Charsadda	13.0	14.1	n/a	58.3	50.0	58.3	41.7	69.2	53.9	69.2	53.9
Khuzdar	10.5	17.9	n/a	70.0	60.0	10.0	60.0	64.7	76.5	17.7	76.5
Kech	3.9	3.9	n/a	33.3	66.7	33.3	33.3	66.7	33.3	33.3	33.3
Loralai	15.0	20.0	n/a	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Kotli	5.6	12.7	n/a	85.7	71.4	42.9	42.9	68.8	43.8	31.3	43.8
Gilgit	1.5	4.5	n/a	0.0	0.0	100.0	100.0	33.3	33.3	66.7	66.7
Urban/Rural											
Urban	12.6	17.0	2.3	77.3	72.7	63.6	81.8	72.9	64.4	59.3	69.5
Rural	7.0	13.4	1.4	74.0	53.4	30.1	45.2	75.7	42.9	32.1	49.3

Facility level											
Tertiary	77.8	77.8	14.3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Secondary	40.9	43.9	0.0	81.5	81.5	81.5	88.9	86.2	79.3	86.2	89.7
Primary	6.3	12.4	1.2	71.1	50.6	25.3	45.8	71.8	41.7	29.5	47.2
Facility type											
Tertiary care hospital / teaching hospital	77.8	77.8	14.3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
District Headquarter Hospital (DHQ)	83.3	91.7	0.0	80.0	90.0	100.0	100.0	100.0	90.9	100.0	100.0
Tehsil Headquarter Hospital (THQ)	61.5	65.4	0.0	81.3	75.0	68.8	81.3	76.5	70.6	76.5	82.4
Reproductive health service (RHS-A)	5.9	5.9	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Family welfare centre (FWC)	3.9	9.5	0.0	28.6	7.1	0.0	14.3	17.7	14.7	8.8	8.8
Rural health centre (RHC)	31.2	57.1	4.2	75.0	70.8	33.3	62.5	86.4	45.5	22.7	59.1
Medical centre	33.3	33.3	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
MCH / MNCH	12.8	17.0	0.0	100.0	66.7	33.3	66.7	100.0	62.5	62.5	50.0
Basic health unit (BHU)	7.3	16.4	0.0	79.2	50.0	25.0	33.3	81.5	50.0	37.0	55.6
BHU 24/7	9.8	16.1	0.0	72.7	45.5	18.2	45.5	94.4	38.9	38.9	55.6
Dispensary	1.1	1.4	0.0	100.0	66.7	66.7	100.0	75.0	75.0	50.0	75.0

Appendix 2. Facility readiness to provide the rapeutic abortion / post-abortion care, by facility characteristic and readiness component (n = 1395)

	Guide	lines and perso	nnel		Medio	cines and pro	lucts				ı	Equipment			Laboratory		
	Guidelines on safe uterine evacuation and post- abortion care	Guidelines on post- abortion family planning	Staff trained in safe abortion or post- abortion care in past 2 years	Misoprostol	Ibuprofen	Antibiotic tablets	Antibiotic injectables	Antiseptic	Vacuum aspirator or D&C kit	Bed	Speculum	Stethoscope	Blood pressure equipment	Disposable gloves	Urine pregnancy test	Haemo- globin test	Blood group test
District																	
Islamabad	7.0	7.0	15.1	4.7	20.9	83.7	11.6	48.8	7.0	5.8	15.1	94.2	84.9	10.5	14.0	12.8	15.1
Rahim Yar Khan	8.2	14.5	5.2	44.2	37.9	67.7	43.1	67.3	36.8	44.6	41.6	93.7	91.5	40.5	25.7	24.2	14.1
Kasur	8.1	8.5	4.0	44.4	41.3	68.6	45.3	52.9	33.6	43.1	39.5	89.2	76.7	28.7	29.6	32.3	12.6
Hyderabad	7.6	7.6	5.1	21.2	56.8	77.1	50.9	20.3	11.0	19.5	19.5	94.1	94.9	20.3	40.7	39.8	13.6
Larkana	52.1	55.4	13.2	40.5	43.8	55.4	48.8	48.8	33.9	41.3	33.9	95.0	93.4	42.2	19.0	21.5	6.6
Kohat	2.5	1.3	2.5	8.8	8.8	80.0	57.5	91.3	21.3	23.8	21.3	98.8	93.8	21.3	15.0	13.8	8.8
Charsadda	5.4	8.7	7.6	9.8	9.8	80.4	62.0	76.1	13.0	27.2	22.8	97.8	96.7	20.7	20.7	14.1	7.6
Khuzdar	19.0	21.1	12.6	6.3	53.7	80.0	54.7	74.7	15.8	15.8	15.8	97.9	92.6	17.9	11.6	9.5	6.3
Kech	6.4	7.7	2.6	1.3	9.0	41.0	6.4	19.2	3.9	5.1	2.6	79.5	62.8	3.9	1.3	2.6	1.3
Loralai	22.5	20.0	17.5	5.0	25.0	62.5	2.5	27.5	15.0	25.0	25.0	75.0	65.0	25.0	12.5	7.5	5.0
Kotli	4.0	4.8	0.0	1.6	33.3	81.8	4.0	71.4	9.5	12.7	11.1	84.1	81.8	8.7	5.6	3.2	4.0
Gilgit	61.2	59.7	0.0	1.5	41.8	86.6	34.3	53.7	7.5	13.4	13.4	95.5	95.5	13.4	6.0	7.5	3.0
Urban/Rural																	
Urban	17.2	19.8	8.3	14.1	29.3	57.8	25.3	46.0	17.2	20.7	20.1	93.7	89.9	19.0	18.4	20.7	15.2
Rural	13.7	15.3	5.6	26.3	36.7	76.0	42.7	60.2	23.3	30.6	28.2	91.3	85.6	26.5	20.3	18.7	7.6
Facility level																	
Tertiary	77.8	77.8	66.7	44.4	55.6	100.0	100.0	77.8	77.8	77.8	77.8	100.0	100.0	77.8	77.8	88.9	88.9

										_							
Secondary	25.8	28.8	18.2	28.8	34.9	59.1	51.5	66.7	42.4	50.0	50.0	95.5	97.0	43.9	51.5	50.0	40.9
Primary	13.6	15.4	5.3	22.8	34.7	71.9	37.3	56.0	20.4	26.7	24.6	91.7	86.1	23.3	17.9	17.2	7.4
Facility type																	
Tertiary care hospital / teaching hospital	77.8	77.8	66.7	44.4	55.6	100.0	100.0	77.8	77.8	77.8	77.8	100.0	100.0	77.8	77.8	88.9	88.9
District Headquarter Hospital (DHQ)	33.3	41.7	25.0	50.0	41.7	83.3	83.3	66.7	100.0	100.0	91.7	100.0	100.0	66.7	100.0	100.0	75.0
Tehsil Headquarter Hospital (THQ)	34.6	34.6	23.1	46.2	53.9	92.3	84.6	76.9	61.5	80.8	84.6	96.2	100.0	80.8	84.6	80.8	69.2
Reproductive health service (RHS-A)	23.5	29.4	11.8	5.9	23.5	29.4	11.8	64.7	0.0	0.0	0.0	94.1	94.1	0.0	0.0	0.0	0.0
RHS-B	0.0	0.0	9.1	0.0	0.0	0.0	0.0	45.5	0.0	0.0	0.0	90.9	90.9	0.0	0.0	0.0	0.0
Family welfare centre (FWC)	8.9	12.8	4.7	0.0	4.5	39.3	0.3	38.4	1.4	1.7	2.5	88.0	76.9	2.2	2.0	0.3	0.0
Rural health centre (RHC)	24.7	27.3	19.5	58.4	41.6	85.7	67.5	74.0	54.6	64.9	61.0	96.1	93.5	52.0	62.3	57.1	52.0
Medical centre	0.0	0.0	0.0	33.3	33.3	66.7	33.3	33.3	33.3	33.3	33.3	100.0	100.0	33.3	33.3	33.3	33.3
MCH / MNCH	36.2	38.3	10.6	36.2	40.4	61.7	40.4	40.4	42.6	55.3	51.1	87.2	83.0	59.6	23.4	19.2	6.4
Basic health unit (BHU)	14.3	16.1	7.0	33.7	46.5	89.1	62.6	72.0	31.6	44.1	39.2	97.3	91.5	40.1	23.1	18.8	6.4
BHU 24/7	10.7	10.7	6.3	93.8	78.6	98.2	92.0	85.7	75.9	94.6	89.3	100.0	100.0	71.4	53.6	61.6	21.4
Other specialised clinic	4.4	4.4	0.0	0.0	26.1	39.1	30.4	30.4	0.0	0.0	0.0	87.0	87.0	0.0	8.7	26.1	17.4
Mobile service unit	0.0	0.0	0.0	0.0	0.0	60.0	0.0	40.0	0.0	0.0	0.0	100.0	100.0	0.0	10.0	0.0	0.0
First aid point (FAP)	21.3	21.3	0.0	0.0	32.0	78.7	9.3	60.0	0.0	0.0	0.0	80.0	78.7	0.0	0.0	0.0	0.0
Dispensary	12.3	12.6	1.1	7.7	41.8	82.1	33.7	47.4	4.2	6.3	5.3	89.1	85.6	6.3	10.5	12.3	1.8

Résumé

Même si le panier de services de santé essentiels du Pakistan a récemment été mis à jour pour inclure l'avortement thérapeutique et les soins post-avortement, on ignore si les établissements de santé sont prêts à assurer ces services. Cette étude a évalué la disponibilité de soins d'avortement complets et l'état de préparation des établissements de santé pour offrir ces services, dans le cadre du secteur public de 12 districts du Pakistan. Un inventaire des établissements s'est achevé en 2020-2021 à l'aide de la méthodologie d'évaluation de la disponibilité et de la capacité opérationnelle des services (SARA) de l'OMS, avec un nouveau module sur l'avortement. Un indicateur composite de la capacité opérationnelle a été élaboré sur la base de directives cliniques nationales et de précédentes études. À peine 8.4% des établissements ont indiqué qu'ils pratiquaient des avortements thérapeutiques, alors que 14.3% assuraient des soins après avortement. Le misoprostol (75.2%) était la méthode la plus fréquemment utilisée par les établissements qui proposaient un avortement thérapeutique, suivie de l'aspiration (60.7%) et la dilatation et le curetage (59%). Peu d'établissements disposaient de tous les éléments opérationnels requis pour assurer des avortements thérapeutiques pharmacologiques ou chirurgicaux, ou des soins après un avortement (<1%), mais les établissements tertiaires affichaient un état de préparation supérieur (22%).Les scores de la capacité opérationnelle étaient les plus faibles pour le poste « directives et personnel » (4,1%) et légèrement plus élevés pour les médicaments et produits (14.3-17.1%), l'équipement (16.3%) et les services de laboratoire (7.4%). Cette évaluation met en lumière le potentiel d'accroissement de la disponibilité de soins complets en cas d'avortement au Pakistan, en particulier dans les soins primaires et les zones rurales, afin d'améliorer la capacité des établissements de santé à assurer ces services, et progressivement abandonner les méthodes d'avortement non recommandées (dilatation/curetage). L'étude montre aussi qu'il est faisable et utile d'ajouter un module sur l'avortement aux évaluations systématiques des établissements de santé, qui peut guider les activités entreprises pour renforcer la santé et les droits sexuels et reproductifs.

Resumen

Aunque hace poco se actualizó el Paquete de Servicios Sanitarios Esenciales de Pakistán para incluir la atención terapéutica y la atención postaborto, no se sabe mucho sobre la preparación actual de los establecimientos de salud para proporcionar estos servicios. Este estudio evaluó la disponibilidad de la atención integral del aborto y la preparación de los establecimientos de salud para proporcionar estos servicios en el sector público, en doce distritos de Pakistán. En 2020-2021, se realizó un inventario de los establecimientos de salud utilizando la guía de la OMS para la Evaluación de la Disponibilidad y Preparación de Servicios, con un módulo sobre aborto recién elaborado. Se creó un indicador de preparación compuesto basado en las directrices clínicas nacionales v en estudios anteriores. Solo el 8.4% de los establecimientos de salud informaron ofrecer aborto terapéutico, mientras que el 14.3% ofrecía atención postaborto. Misoprostol (75.2%) era el método más común proporcionado en los establecimientos de salud que ofrecen aborto terapéutico, seguido de la aspiración endouterina (60.7%) y la dilatación y curetaje (D&C) (59%). Pocos establecimientos de salud tenían todos los componentes de preparación necesarios para proporcionar servicios de aborto terapéutico farmacológico o quirúrgico, o atención postaborto (<1%), pero el nivel de preparación era más alto en centros de atención terciaria (22.2%). Los puntajes de preparación más bajos fueron para "directrices y personal" (4.1%), y ligeramente más altos para medicamentos y productos (14.3– 17.1%), equipo (16.3%) y servicios de laboratorio (7.4%). Esta evaluación destaca el potencial para aumentar la disponibilidad de la atención integral del aborto en Pakistán, en particular en servicios de atención primaria y en zonas rurales, para mejorar la preparación de los establecimientos de salud para entregar estos servicios, y para eliminar gradualmente los métodos de aborto no recomendados (D&C). Además, el estudio demuestra la viabilidad y utilidad de agregar un módulo sobre aborto a evaluaciones rutinarias de establecimientos de salud, que pueden informar los esfuerzos por fortalecer la salud y los derechos sexuales y reproductivos.