Government of Pakistan
Ministry of National Health Services, Regulation & Coordination
United Nations Children's Fund

Scoping Study to Establish a Baseline for Reporting to SDGs for WASH in Health Care Facilities in Pakistan

FINAL REPORT

Volume Two: Analytical Assessment Report

July 2021

Innovative Development Consultants (Pvt) Limited
INNOVATIONS IN DEVELOPMENT

List of Abbreviations and Acronyms

ABHR	Alcohol Based Hand Rub (Hand Sanitizer)
ADB	Asian Development Bank
AKRSP	Aga Khan Rural Support Program (Gilgit)
AKUH	Aga Khan University Hospital (Karachi)
AJK	Azad Jammu & Kashmir
BCC	Behavior Change Communication
BRSP	Balochistan Rural Support Program
FGDs	Focus Group Discussions
HCFs	Health Care Facilities
HAI	Healthcare Associated Infections
HH	Hand Hygiene
HSRU	Health Sector Reform Unit (KPK)
ICT	Islamabad Capital Territory
IEC	Information, Education, Communication
INNOVATIVE	Innovative Development Consultants (Pvt) Limited
IPC	Infection Protection and Control
JMP	UNICEF-WHO Joint Monitoring Program
KIIs	Key Informant Interviews
KP / KPK[1]	Khyber Pakhtunkhwa
KPND / KPMD[2]	KP New Districts / KP Merged Districts
MHM	Menstrual Hygiene Management
PBS	Pakistan Bureau of Statistics
PIMS	Pakistan Institute of Medical Sciences
SH&ME	Specialized Health & Medical Education Department (Punjab)
SDGs	Sustainable Development Goals
SIWI	Stockholm International Water Institute
TWG	Technical Working Group
UNICEF	United Nations Children's Fund
WASH	Water, Sanitation, and Hygiene
WASH BAT	WASH Bottleneck Analysis Tool
WHO	World Health Organisation

[1] Although KP is the officially used abbreviation, by the KP Government, both KP and KPK are synonymously used in Pakistan, and are similarly used in this Report.

[2] Although KPND is the latest abbreviation, currently used by the KP Government, both KPND and KPMD are synonymously used in Pakistan, and are similarly used in this Report.

i) Introduction

Constituting Volume Two of the WASH in HCFs Scoping Report, the Analytical Assessment Report presents the WASH and IPC situation in Health Care Facilities (HCFs), in. This is done through the administration of a detailed questionnaire in a statistically significant sample of primary, secondary, and tertiary HCFs from all the provinces and territories of Pakistan.

The Questionnaire employed for the assessment survey of HCFs in Pakistan was initially developed by UNICEF Pakistan from an adaptation of the Global Questionnaire. The Tool was thoroughly reviewed, modified as necessary and presented by INNOVATIVE in the Inception Report and extensively discussed with UNICEF and TWG members.

Through successive, substantive and formative, improvements, the Tool was field tested in all the provinces and territories of the Country, and further improved in its form and content, on the basis of the lessons learnt during field testing. The Analytical Assessment Report, presented here, is prepared on the basis of the WASH and IPC related assessments, carried out through the administration of this substantially improved tool, (Appendix-1).

Based on a quantitative analysis of the data collected from a sample of 2,0555 HCFs[3] , representing various provinces and territories of Pakistan, the Analytical Assessment Report presents a detailed but succinct discussion of the WASH and IPC situation in various categories of HCFs in the Country.

Along with the Bottleneck Analysis Report, (Volume-Three), the current Report is an integral part of the Scoping Study for WASH in HCFs in Pakistan.

The entire process leading to the preparation of this report, proceeded in close coordination with UNICEF (WASH staff at Islamabad Country Office, and WASH Specialists in provincial capitals), and TWG (Technical Working Group representing the Ministry of Health, Regulation, and Coordination; the Ministry of Climate Change, Pakistan Bureau of Statistics, UNICEF, and WHO. Liaison was maintained with the provincial focal persons / reference groups, where they have been appointed / constituted.

The Analytical Assessment Report is organized in two parts. Part One – Text is the main report, constituting nine chapters. Part Two consists of a number of appendices providing the survey tool, and a set of tables presenting organized data, collected from the field. It also provides the chronological calculation of sample weights by three HCF Levels (Primary, Secondary, and Tertiary) from the sample weights by sub-categories, provided by PBS.

[3] The sample frame, including the determination of the statistically significant sample size and distribution of HCFs was formulated by the Pakistan Bureau of Statistics. The sample represents all the districts in various provinces and territories of Pakistan. It also covers all HCF categories, i.e. primary, secondary, and tertiary.

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PART ONE – MAIN REPORT

CHAPTER-1 BACKGROUND & OBJECTIVES

1.1 National and Global Context & Commitments

Pakistan is signatory to the SDGs and is committed to improving the overall quality of health care in the Country through improved health care system. The National and Global contexts and commitments addressed in this Study are presented in Box-1.1, and Exhibit-1.1 respectively).

Box-1.1 National Health Vision Statement

"To improve the health of all Pakistanis, particularly women and children, by providing universal access to affordable, quality, essential health services, which are delivered through a resilient and responsive health system, capable of attaining the Sustainable Development Goals and fulfilling its other health responsibilities."

Pakistan National Health Vision (2016-25)

The provision and maintenance of adequate WASH in Health Care Facilities is recognized to be an essential step in achieving quality universal health. WASH helps to prevent infections and spread of disease, protects staff and patients, and upholds the dignity of vulnerable populations including pregnant women and physically challenged persons. However, a significant percentage of health care facilities, particularly those in low income areas, lack basic WASH facilities.

In view of the above, the Federal Ministry of National Health Services, Regulation and Coordination, in collaboration with the Ministry of Climate Change has taken the initiative of carrying out a comprehensive study of WASH in Health Care Facilities in Pakistan. And the Pakistan Bureau of Statistics has been called upon to design the survey frame for the Study, including the selection of a statistically significant sample of HCFs to be surveyed at different levels, (primary, secondary, and tertiary), in all provinces and territories of Pakistan.

Again, the said Ministries appreciate that UNICEF is an important player in advocating and facilitating the provision and maintenance of WASH in health care facilities, and that in collaboration with WHO, it also facilitates the reporting of WASH in Health Care Facilities, to SDGs, through the JMP platform. Accordingly, UNICEF has been requested to finalize the Terms of Reference of the Study, provide necessary funds for the Study, and select the Consultants through competitive bidding process, using the UNGM platform.

In the above perspective, UNICEF Pakistan is administering this scoping study to establish a baseline for reporting to SDGs for WASH in health care facilities in Pakistan. The Study also includes a Bottleneck Analysis, to identify bottlenecks in the provision of and maintenance of WASH in health care facilities. Carried out in a WASHBAT framework, the bottleneck identification encompasses financial, managerial / administrative, and human resource capacity constraints in the maintenance of adequate WASH in health care facilities.

Exhibit-1.1 WASH in HCFs Global Context – Related SDG Goals and Targets

Goals		Targets
	**6: Ensure availability and sustainable management of water and sanitation for all**	6.1: By 2030, achieve universal equitable access to safe and affordable drinking water for all
		6.2: By 2030 achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situation
	**3: Ensure healthy lives and promote well-being for all at all ages**	3.8: Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all

Source: WHO and UNICEF, "WASH in Health Care Facilities – Urgent Needs and Actions, Global Meeting Report, World Health Organization, Geneva, 2015

1.2 Major Study Objectives

Major objectives of the Study are as follow:

a) To assess the status of WASH in health care facilities in Pakistan, with a view to improving access to quality WASH facilities,
b) To help in reporting back to JMP with regard to SDG 3.8, 6.1, and 6.2,
c) To conduct a nationwide assessment of a statistically significant sample of healthcare facilities at primary, secondary, and tertiary levels, with a focus on primary healthcare,
d) Conducting a Bottleneck Analysis for WASH in healthcare facilities

Being prepared through a participatory consultative process, the Study aims at producing a document to be used as an advocacy and planning tool for improving the universal access to WASH in healthcare facilities in Pakistan.

A spinoff effect of the Study is envisioned to be a catalyst for the promotion of WASH in Health Care Facilities in other countries of the World, as it will provide tested survey tools and methodologies for an analytical assessment of WASH in HCF in a country with vast physical, ethnic, and social diversity.

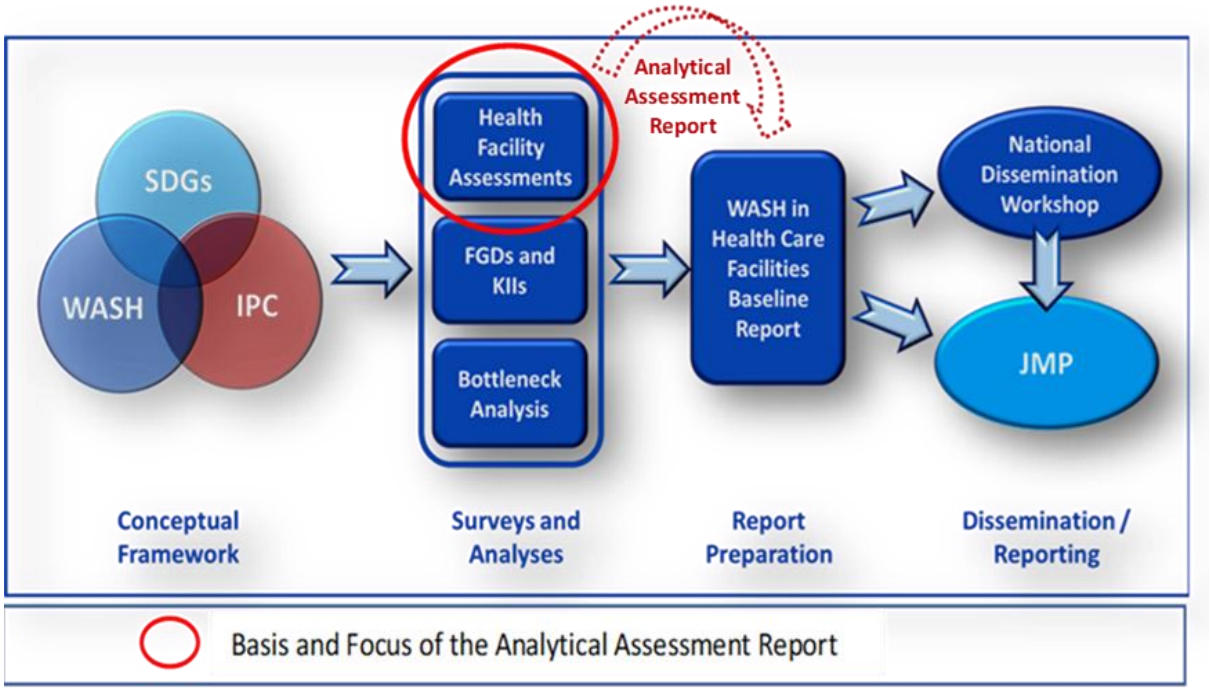
CHAPTER-2 WORK METHODOLOGY AND SCOPE OF THE CURRENT REPORT

The Study Approach and Work Methodology, encompassing the Conceptual Framework, Surveys and Analyses, Report Preparation, and Dissemination / Reporting, is presented in Figure-1.2, below.

2.1 Overarching Approach and Work Methodology

Keeping in view the ultimate objective of reporting the WASH in HCFs situation in Pakistan to SDGs on the international forum of JMP, it is important that the Study is fully owned and respected by all stakeholders. Accordingly, the overarching approach of the Study is to proceed through a consultative / participatory process, involving all key stakeholders. They include the federal ministries of Health and Climate Change, WHO and other sector partners, as well as provincial health departments, decision makers, subject experts and practitioners, and private sector organizations involved in the management of HCFs through a Public-Private-Participation framework. For this purpose, a high-powered Technical Working Group (TWG), and provincial representatives / focal persons are constantly kept on board, at all stages of the Study.

Figure – 2.1 Study Approach and Methodology



As shown in Figure-2.1, the overall report is intended to report to SDGs of the current status of wash in HCFs in Pakistan. For this purpose of a set of three types of surveys and investigations have been carried out. The report in hand is an intermediate deliverable and presents analytically driven findings of the HCF Assessment Surveys of a statistically significant sample of HCFs from all the provinces and territories of Pakistan,(highlighted in red in Figure-2.1). (The current interim version of the Report is exclusive of KPK and KPMD where the surveys will be conducted on obtaining NOC and Letter of Cooperation from the concerned departments). The Assessment Surveys employed a detailed questionnaire (Appendix-1), formulated by UNICEF Pakistan, by adapting a global questionnaire. The questionnaire was thoroughly reviewed by the Consultants, and was finalized, following detailed deliberation with TWG. The questionnaire used included three additional sections: (a) a section of the Maternity Waste Management, (b) a section on practices related to COVID-19, and (c) a section recording detailed observations of the Study Team on the prevailing situation of WASH and IPC on the day of the survey.

In order to have a thorough assessment of WASH in HCFs, and a rational identification of bottlenecks in bringing about quantitative and qualitative improvements in the HCFs, a three-pronged study approach has been followed, (Figure-2.2).

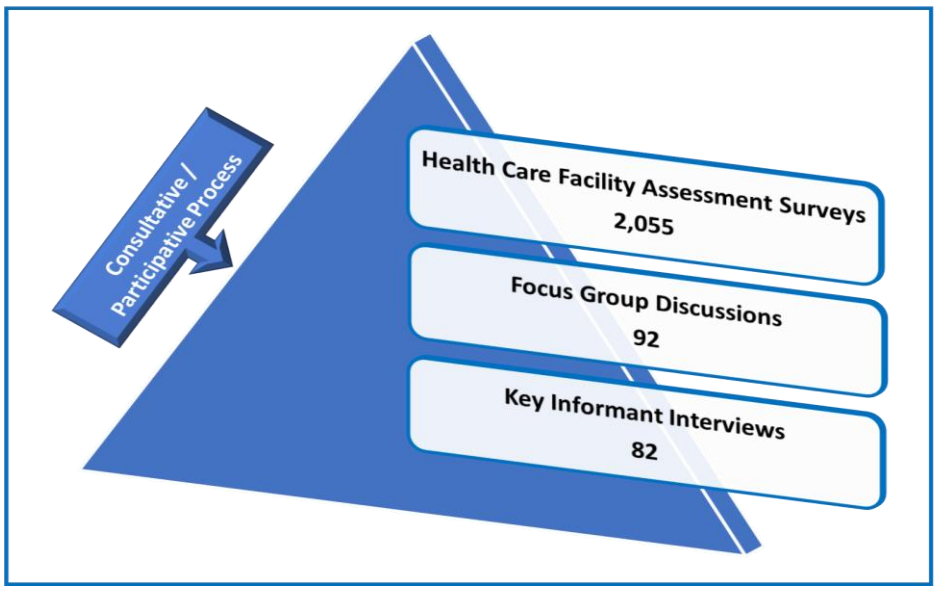


Figure-2.2 Three Pronged Investigation Approach

As shown in Figure-2.2, the Study is based on a set of three types of inter-supporting investigations, consisting of: (a) Observations and interviews in a statistically significant sample of HCFs, encompassing 2,055, rationally selected HCFs, (b) Focus Group Discussions in 92 of randomly selected facilities from among the overall sample of the HCFs, and (c) Interviews with the 82 Key informants, including HCF Heads, senior Government officers, and experts[4].

[4] Figure-2.2 gives the number of surveys and investigations actually carried out. These numbers vary slightly from the original sample, owing to reasons explained later.

The Assessment Report, along with the Bottleneck Analysis Report will feed into the comprehensive Scoping Study Report on WASH in HCFs in Pakistan, (Figure-2.1).

2.2 Scope of the Current Report

The current report presents an analytical account of the assessment of WASH in HCFs, based on an analysis of the data generated through the administration of a detailed questionnaire, (Appendix-1), in 2,055 facilities from all over Pakistan. An inter-provincial / territory distribution of the HCFs surveyed is presented in Table-2.1.

Table-2.1 Number of HCFs Surveyed

Sr. No.	Province / Territory	Number of Health Care Facilities					
		Primary	Secondary	Tertiary	Total in Sample	Total Surveyed	Percent Surveyed
1	ICT	18	00	00	16[5]	**16**	**100%**
2	Punjab	607	32	07	646	**646**	**100%**
3	Sindh	456	20	02	478	**479**	**100%**
4	Balochistan	274	08	02	284	**266**	**94%**
5	KPK	224	20	04	248	**249**	**100%**
6	KPMD	177	05	00	182	**145**	**80%**
7	AJK	196	04	00	200	**200**	**100%**
8	GB	53	02	00	55	**54**	**98%**
Pakistan Total		**2,005**	**91**	**19**	**2,109**	**2,055**	**97.44%**

As shown in Table-2.1, as many as 2,055 out of a total of 2,109 HCFs have been surveyed. This works out to **97.44%.**

The main reason for the inability to survey a relatively small number of HCFs (mainly in KPMD and Balochistan), was owing to their location in "no go" areas. In a few cases the access to tertiary facilities was denied by the concerned administrations, despite the best efforts by INNOVATIVE and UNICEF. Nevertheless, the number of facilities surveyed remains exceptionally high for a study covering all the districts of the Country, including facilities located in high security risk areas.

2.3 SOPs and Protocols Related to COVID-19

The field work was carried out in health care facilities, in the wake of widespread COVID-19 onslaught. In order to protect against and avoid the transmission of COVID-19, detailed and stringent SOPs and protocols were formulated and agreed to with UNICEF/ TWG, prior to

[5] This may be noted that the total number of HCFs to be surveyed in ICT has been given as 18. However, one of the facilities has been listed thrice under different names /spellings. Hence the actual number of facilities to be surveyed in the Territory is 16.

the commencement of data collection. Given below is a brief discussion of the measures taken.

2.3.1 Before Leaving for Field

Prior to leaving for field, all the four Principal Field Investigators took a COVID-19 test (nasal / throat swab), and were reported negative.

Each Principal Investigator was provided with

(a) An Infrared Gun Thermometer
(b) Surgical face masks in sufficient quantity, calculated as:
Number of team members x Days in Field x 1.1
(c) Surgical gloves, (in sufficient quantity, calculated as above).
(d) Personal hand sanitizers (with more than 60% alcohol), in sufficient quantity, calculated as above.

2.3.2 Hiring of Joint Investigators and Enumerators

Temperatures of all candidates were checked prior to the interview. Only those within normal temperature range qualified for interview.
Once selected, they got themselves tested for Covid-19, (Nasal Swab) Test, at the nearest Government Facility. Only those, reported negative, were included in the Team.

2.3.3 SOPs During Work and Stay in the Field

- Principal Investigators checked the temperature of every team member, (including themselves), on a daily basis. Only those having temperature within normal range were allowed to go to the field.
- All team members and vehicle drivers wore face masks and gloves, and carried hand sanitizers. The masks and were changed on a daily basis.
- Those not using glasses will wear broad transparent or lightly shaded goggles.
- Investigators / enumerators will make sure that all the interviewees also wear masks, and maintain a distance of 1 to 2 meters. The client agencies are requested to issue these instructions to the HCFs selected for the survey. However, the investigators / enumerators will carry extra face masks to give to someone who is not wearing a mask.
- Size of an FGD group was kept small to allow social distancing. It should not include more than 5 interviewees and one or two interviewers, such that the total number of persons in the room does not exceed 7. Size of the room must be large enough to allow a minimum of 1 m distance from person to person.

2.3.4 General Precautionary Measures

- Wash and dry hands (with a tissue paper or hot air blower), before putting on fresh gloves.

- Avoid frequent touching of face, eyes, nose, and ears.
- Do not touch surfaces which you suspect to be contaminated.
- No hand shaking / hugging
- When sneezing or coughing cover your mouth with bent elbow or tissue paper and dispose it off immediately. Do not use hands to cover your mouth or nose.
- Politely refuse any hospitality offered. Carry your own water bottle.

2.3.5 At the Place of Stay

- Before accepting a room, insist on sanitizing the whole room / wash room and check that the linen and towels are fresh. Insist on changing of the towels on a daily basis.
- After returning from field, before interacting with family members, take a shower, change clothes and send the used clothes for washing
- Avoid sharing of cutlery and crockery. Prefer eating in the room, instead of a dining place.
- Disinfect key board, table, chair, stool and desk before using them.

2.4 Ethical Considerations and Protocols

The work ethics demands, integrity, passion and professionalism. These moral and ethical values were adhered to at all stages of work. Again, INNOVATIVE has in place a Quality Assurance, and an Environmental Policy, (Appendix -7), which are integral parts of our work ethics.

2.4.1 Do No Harm

Do no harm to anyone, (physical, emotional, sexual), with whom you come into contact as a result of this research, including Team members, respondents, security staff at the health facilities, sanitary workers, community members, vehicle drivers, and others.

2.4.2 Behaviour

Always be honest in written and verbal communication; be patient and attentive in listening to the respondents; be polite; beg his/her pardon if you do not understand the answer; do your best to put respondents at ease.

2.4.3 Team Work

Be cooperative and helpful to each other as a team; Maintain cordial working relationship with each other; conflicts of interest should be amicably resolved.

2.4.4 Professional Standards:

Maintain responsible professional behaviour; collect accurate data and check your data before handing in completed tools to the Principal Investigator. Each team member is responsible for the information he/she collects and will be held accountable for errors.

2.4.5 Impartiality

Do not show favouritism with colleagues, respondents and staff members; do not discriminate against anyone with whom you come into contact as a result of this investigation, on the basis of sex, religion, language, ethnicity, nature of work, sexuality or any other grounds

2.4.6 Transparency

Decision-making and disciplinary processes must be transparent (i.e. everyone should know how things are done); however, whilst processes are transparent, the information that passes through these processes may be confidential.

2.4.7 Community Ethics: Dress code

- No camouflage / military print clothes or military style clothes to be worn by researchers
- Men wear long sleeve shirt and trousers or shalwar - kameez. (No shorts).
- Women wear shalwar-Kameez and dupatta / head-scarf.

2.4.8 Smoking and *"Pan"* / Betel nut

- No smoking or displaying of cigarette packets during interviews / discussions.
- Dispose of cigarette ends, packets and packaging properly – no littering.
- No chewing during data collection (household questionnaires, interviews, group activities).

2.4.9 Language: Verbal and Body

- Use simple, polite language; (preferably Urdu, as everyone doesn't understand local languages); no derogatory (bad or negative) words to be used about people of another religion, ethnic group, province, sex, age etc.; avoid words which have different meanings in different languages. This applies to the whole period of the research both 'on' and 'off-duty'.
- No inappropriate or rude gestures; show respect and attentiveness in your body language. This applies to the whole period of the research both 'on' and 'off-duty'.

2.4.10 Physical Environment and Social / Cultural Norma

- Consider the venue of the data collection to make sure it is safe, well ventilated, and spacious enough to maintain social distancing. Keep wearing mask during FGDs and interviews. Care for the community environment and property – no littering or vandalism, (Ensure safe disposal of masks and gloves).
- Show respect for cultural practices, religious and community activities, HCF protocols, during the interview / discussion, and exiting from the HCF.

2.4.11 Behavioural Guidelines

- Try to avoid placing yourself (and others) in a compromising or vulnerable position; be accompanied by a second adult whenever possible; the circumstances of any situation which occurs which may be subject to misinterpretation; keep in mind that actions, no matter how well intended, are always subject to misinterpretation by a third party.
- Avoid any form of sexual harassment. Principal Investigators will maintain zero tolerance policy among all field staff, for sexual harassment, involving colleagues, HCF staff, at the place of stay, or during travel.

2.4.12 Physical and Psychosocial Behaviour

- Strictly follow the COVID-19 protocols / SOPs
- Do not use language that may mentally or emotionally harm respondent or FGD participant. Avoid any harsh word or facial expression that may embarrass, shame, humiliate, or degrade junior staff members, or sanitary workers. Do not show discrimination of race, culture, age, gender, disability, religion, sexuality, or occupation.

2.4.13 Confidentiality

- Do Inform respondents that their identity will remain anonymous, as stated in the research tools;
- Do not reveal any personal information about respondents to anyone, and do not seek information from a respondent if they have not volunteered such formation themselves.

2.5 Data Analysis and Reporting Format

2.5.1 Analytical Discussion by HCF Level

The data collected from the field has been analyzed using Excel and /or SPSS soft wares. Results of the analysis are presented in thematically organized chapters. Each chapter presents analytical discussion by various WASH components and IPC.

The tables and graphics within each chapter, are designed to present province / territory specific data, leading to a comparative analysis of the situation in each entity. Within each Section, there are sub-sections dedicated to an account of the WASH situation in primary, secondary, and tertiary facilities.

2.5.2 Computation of Weighted Averages

Using the weights provided by PBS, the weighted average of the HCFs in each province / territory and the National level have been worked out. It is however, important to note that the PBS provided sample weights for various sub-categories within the primary, secondary, and tertiary levels. However, in consonance with the scope of this Study, we have calculated weighted averages of weights for the primary, secondary, and tertiary levels, (Table-2.2).

Table-2.2 Sample Weights by HCF Level

Sr. No.	HCF Category	Provinces / Territories								National
		ICT	Punjab	Sindh	KPK	KPMD	Balochis-tan	AJK	GB	
1	Primary	1.25	4.66	5.76	6.10	1.65	5.50	1.78	1.75	4.61
2	Secondary	-	5.28	8.05	5.15	12.75	10.75	2.50	14.00	6.42
3	Tertiary	-	2.70	2.00	4.00	-	3.50	-	-	2.90

The overall HCF averages for various provinces and territories is complemented with the presentation of standard deviation in various tables under their respective columns[6]. The interprovincial / territory weighted averages for various HCF categories, and the allied standard deviations are presented in Chapter-10, presenting the overall National situation.

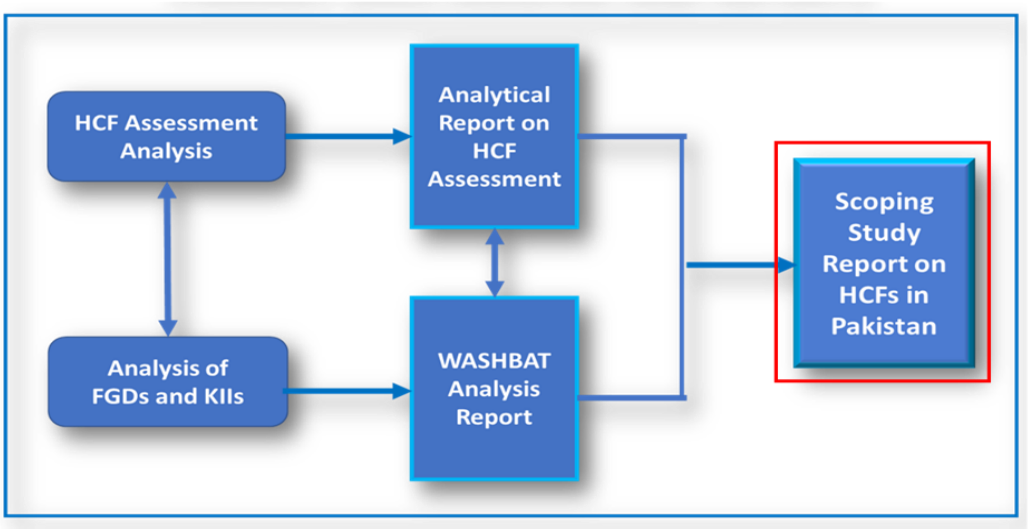
The Report includes small reader friendly Tables and self-explanatory graphics. Complete, carefully organized data is presented in thematic tables in the Appendix.

[6] Not applicable in case of Tables with multiple answers, and varied inter category ranges.

2.6 Analytical Assessment Report in the Overall Study Report

The Analytical Assessment Report, (along with the Bottleneck Analysis Report), is complemented with the Bottleneck Analysis Report (Volume-Three), which, together with the (a relatively more detailed than usual), Executive Summary (Volume One), constitute the Scoping Study of WASH in HCFs in Pakistan. Besides an analytical review of the data available from secondary sources, detailed assessment surveys of a significant sample of HCFs, Focus Group Discussions and Key Informant Interviews have fed into the two major reports mentioned above, leading to the preparation of this Report, (Figure-2.3).

Figure-2.3 WASH Scoping Study Report Preparation Process



CHAPTER-3 WATER SUPPLY

Supply of an adequate quantity of good quality water is a *sine qua non* of healthcare service. Water is not only needed for human consumption, it is required for hand hygiene, toilet use, cleaning of different areas in the HCF, and washing of linen. Assessment Surveys thoroughly studied all these aspects.

3.1 Water Availability in HCFs

The availability of water in the primary, secondary and tertiary HCFs in different provinces and territories is presented in Table-3.1.

Table-3.1 Availability of Water in the HCFs (%)

HCF Level	Water Availability								
	ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	100%	99%	93%	79%	74%	49%	100%	100%	89%
Secondary Level	-	100%	100%	100%	100%	100%	100%	100%	100%
Tertiary Level	-	100%	100%	100%	-	100%	100%	-	100%
Weighted Average - All HCFs	100%	99%	93%	81%	79%	51%	100%	100%	89.33%
Standard Deviation	0	0.48	4.07	12.12	18.38	29.22	0.00	0.00	17.28

Given below is a brief discussion of the current situation.

3.1.1 Water Availability in Primary HCFs

Water in ICT, Punjab, KP, KPND, and GB is adequately available in all primary facilities. However, water availability in 10% primary HCFs in AJK, and 15% in Sindh is unsatisfactory. In the case of Balochistan water is available in only 42% of the primary facilities, about 10% of which are served with water brought in from un-improved sources of water, such as unlined dug wells or channels.

In case of Sindh, water in the HCFs located in the desert district of Tharparkar is rarely available, while water quality in the coastal districts of Thatta and Badin is generally poor. Water scarcity in Balochistan is widespread and is a major cause of many primary HCFs remaining unfunctional.

3.1.2 Water Availability in Secondary and Tertiary HCFs

Owing to their location in the urban centers, all secondary and tertiary facilities surveyed were found to have adequate arrangements for their water needs. Water in over 95% of these HCFs comes from improved sources.

3.1.3 Summary of National Situation

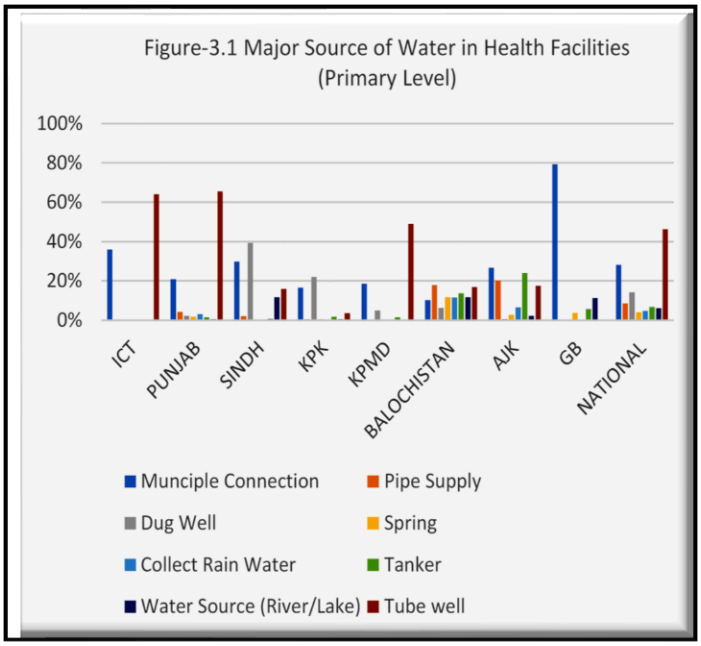
The inter-entity[7] average of water availability at the National level is 89% for primary HCFs and 100% each for secondary and tertiary HCFs. The National weighted average works out to 89.33%, with a standard deviation of 17.28, (Table-3.1).

3.2 Major Source of Water in HCFs

Depending upon their location with respect to the quality of underground water, and the distance and sources of surface water available, water in HCFs is harnessed from a large variety of sources. In most urban areas, the municipal water supply is the preferred source. However, where the ground water table is not very deep, hand pumps, and motorized pumps are preferred. The major sources of water in the primary, secondary, and tertiary facilities are discussed below, with the help of diagrams.

3.2.1 Water Sources in Primary HCFs

The sources of water supply at the primary level varies significantly among provinces and territories. Interestingly the highest number of primary HCFs connected to the municipal water supply is in GB (70%), followed by ICT (37%), Sindh (30%), AJK (27%), Punjab (20%), and Balochistan (10%).

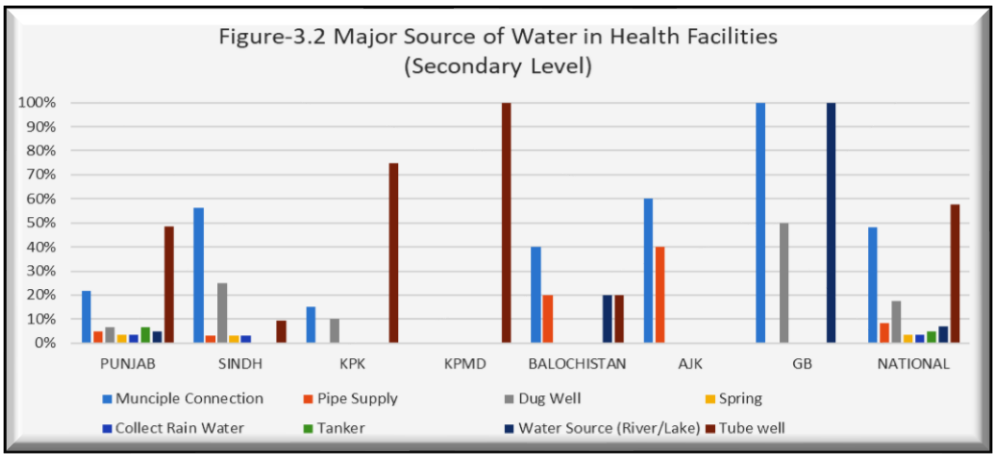


As shown in Figure-3.1, primary HCFs in Punjab rely heavily on tube wells / motorized pumps installed on bore holes, (66%), followed by ICT (62%), KPMD (48%), AJK (18%), and Balochistan (17%). Again, 20% of water in AJK and 18% in Balochistan, is carried by gravity from springs, in pipes, under pressure. All these mechanisms allow plumbing to carry piped water to cistern flushed latrines and hand hygiene facilities. However, a significant percent of primary HCFs in Sindh (39%), and KPK (22%) get water from dug wells, which does not support cistern flushing of latrines, (unless a motorized pump to lift water to an overhead tank is installed, which is usually not the case). Again, there is no flowing water for hand hygiene, and the toilets have to be pour-flushed. Nevertheless, over 90% of the dug wells are lined, with a parapet wall, and have a sunken filtration unit of indigenous material (wood), hence they can be categorized under an improved source of water.

[7] Throughout this Report, the phrase "Entity" is used to represent all provinces and territories.

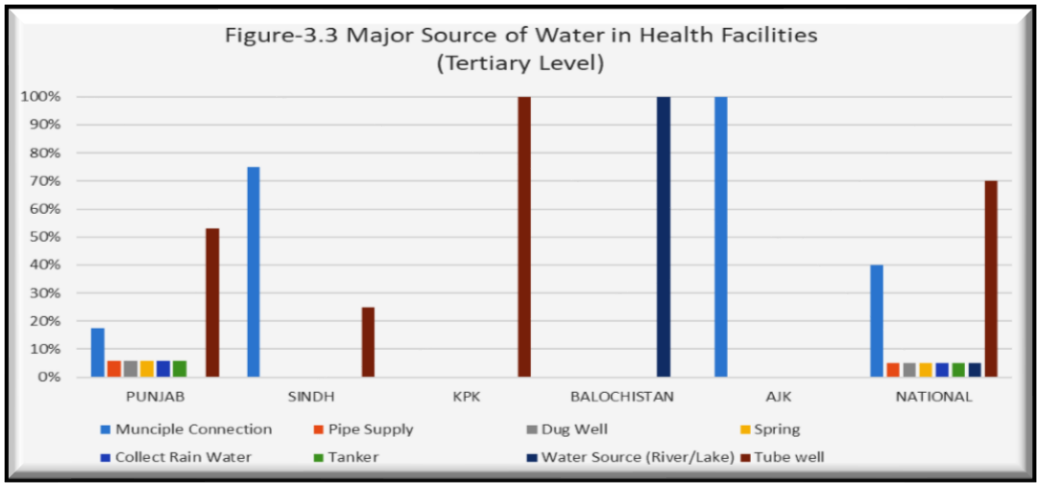
3.2.2 Water Sources in Secondary HCFs

Most of the secondary HCFs in Sindh (57%), Balochistan, (40%), AJK (60%), and GB[8] (100%). However, the secondary HCFs in Punjab, (48%), KPK (75%), and KPMD (100%), use tube wells as the main source of water, (Figure-3.2). As the tube wells have a well designed filtration devices, and abstract water from deeper aquifers, it is an improved source of water, which normally generate safe drinking water. (However, water needs to be tested regularly for biological and chemical impurities, including heavy metals, like Arsenic).



3.2.3 Water Sources in Tertiary HCFS

As shown in Figure-3.3, the tertiary facilities studied in Balochistan[9] and AJK, depend exclusively on municipal network for their water needs, while 78% facilities in Sindh are



connected to the municipal water supply network[10]. However, only 18% of the tertiary HCFs

[8] All the municipal systems in GB provide water from rivers and streams. In some HCFs, (50%), dug wells exist, but that is not the preferred source of water.

[9] The municipal supplies harness water from surface sources.

[10] This may be noted that the high percentage of tertiary facilities receiving water from municipal networks, does not necessary reflect upon the high reliability of continued supply of water from this source. In fact, all these facilities have overhead tanks to store at least 8 hours of the water need, thus ensuring continued

in Punjab are connected to municipal water supply. Majority of tertiary HCFs in Punjab (52%), and all of them in KPK have installed self-operated tube wells for their water needs. Owing to the vast diversity of ecological conditions in Punjab, about 30% of the HCFs use a variety of other sources to meet their water needs, about 10% of which may not be adequately improved.

3.2.4 Situation at the National Level

The National averages point to on-site HCF operated tube well as the major source of water. 46% of the primary HCFs, 58% of secondary HCFs, and 70% of the tertiary HCFs relay on tube well as the major source of water.

3.2 Availability of Drinking Water at the Time of Survey[11]

3.2.1 Availability of Drinking Water in Primary HCFs

At the time of the survey, 98% of primary HCFs in Punjab, and 90% each in Sindh and ICT were found to have drinking water available, whereas 88% in AJK, and 78% in GB had water available for drinking. However, only 42% of the primary facilities in Balochistan had water available for drinking purposes.

3.2.2 Availability of Drinking Water in Secondary and Tertiary HCFs

All the provinces and territories surveyed were found to have drinking water available at the time of the Survey.

3.3 Availability of Water at Different Spots in HCFs

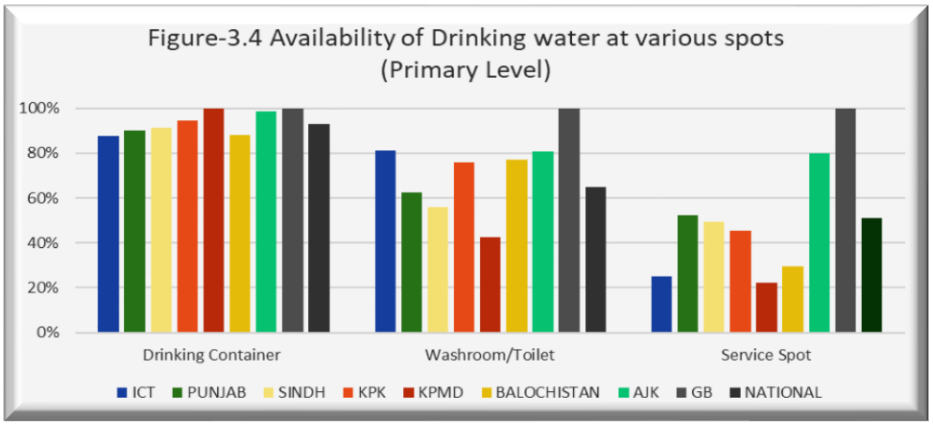
Other than the overall availability of drinking water in different facilities, the Assessment Surveys also investigated the water available at various critical spots in each facility. Given below is a discussion of the water available at specific points in the facilities, where water was available.

3.3.1 Water Availability at Different Spots in Primary HCFs

Primary facilities in GB have again been best served (100 %) in terms of water availability at different spots, including drinking water container for staff, patients, and attendants; water in the wash rooms, and hand washing facilities in the service area. (Figure-3.4)

supply of water in the facility. In the case of Sindh, these tanks are often filled with municipal or private tankers.

[11] The figures given here are regardless of the quality of water. It is feared that a high percentage of primary facilities do not have safe drinking water. Water quality aspects will be discussed in subsequent sections of this report.



Interestingly, all (100%) primary HCFs in KPMD, also have drinking water available for staff, patients, and attendants. However, only 42% of them have water available for the toilets and hand washing facilities.

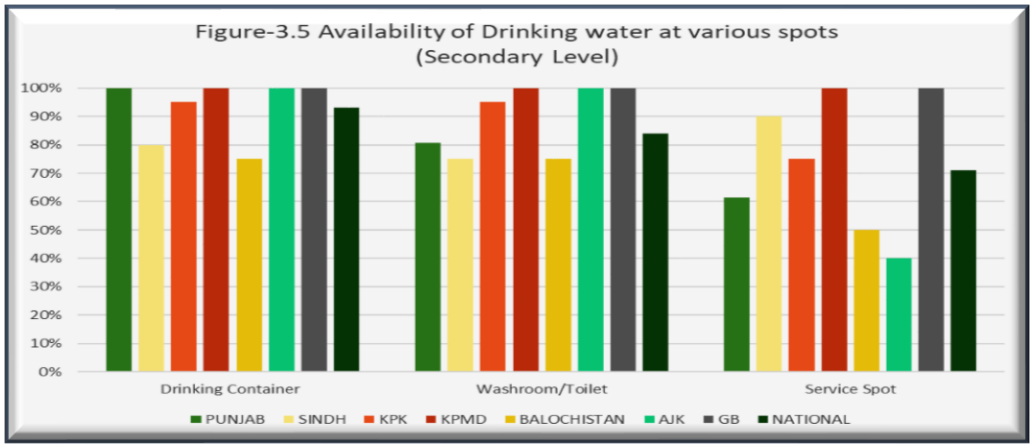
AJK follows closely with 99%, and 80% each in the three spots. Drinking water availability remains above 80% in all entities, with the national average of 92%,

While, a 100% of the facilities surveyed in GB have water inside the toilets, 80% have water in case of ICT and AJK, and 75% in KPK. Of a small number of facilities, where water is available, about 78% have water inside the toilets in Balochistan. However only 60% of the facilities in Punjab, and 58% in Sindh have toilets with water. The National average therefore works out to 62%.

Regardless of its critical importance, the service areas, (with the exception of GB (100%), and AJK (80%), only a small percentage of primary HCFs have a hand washing facility in the service area. 52% of the facilities in Punjab, 48% in Sindh, 45% in KPK, and 28% in Balochistan have this facility in the service areas. Only 24% of the facilities in ICT have water in service areas. The National average therefore remains at 62%.

3.3.2 Water Availability at Different Spots in Secondary HCFs

Secondary HCFs are well served (100%) in terms of drinking water availability in Punjab, AJK, KPMD, and GB. 95% of them in KP, However, 80% in Sindh and KP, and about 78% in Balochistan have this service. The National average therefore stands at 92%, (Figure-3.5).

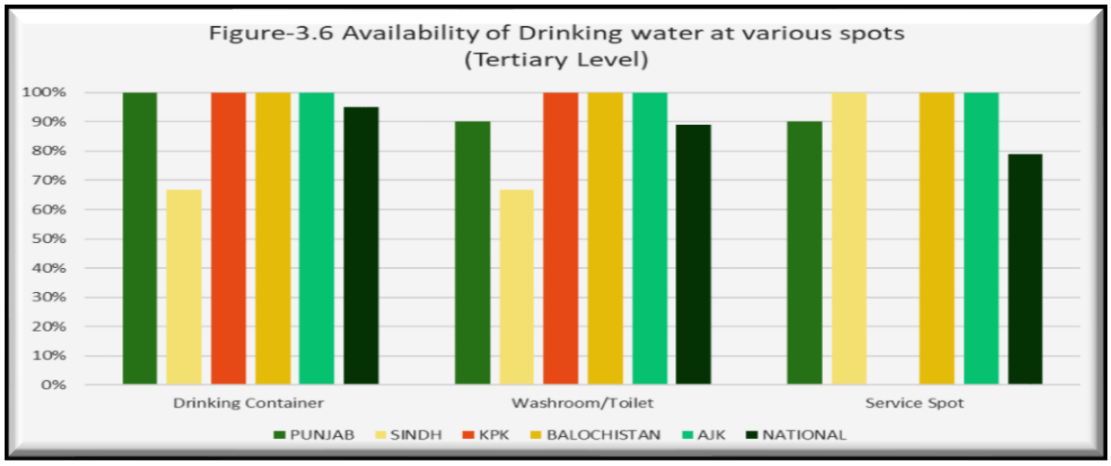


All the toilets (100%) in AJK and GB have water inside them. However, 80% in Punjab, and 78% of the toilets in Sindh and Balochistan have this facility.

100% of the secondary facilities surveyed in GB have a hand washing facility in service area, with 90% in Sindh. This facility in Punjab, Balochistan, and AJK is available in 60%, 50%, and 40% in Punjab, Balochistan, and AJK respectively. This generates a national average of 70%.

3.3.1 Water Availability at Different Spots in Tertiary HCFs

As expected, the overall situation of water availability in the tertiary facilities is better than those at the secondary and primary levels. As shown in Figure-3.6, with the exception of Sindh, drinking water is available in all the facilities surveyed, (100%), in the case of Punjab, KPK, Balochistan, and AJK. However, only 68% of the tertiary HCFs in Sindh provide this service.



All (100%) of the toilets in, tertiary facilities surveyed in KPK, Balochistan, and AJK have water inside them. However, 90% of the HCF in Punjab, and 68% in Sindh, have this facility. This leads to the ational average of 95%. All (100%) of the tertiary facilities surveyed in KPK,

Balochistan, and AJK have hand washing facility in service areas. About 90% of the toilets in tertiary HCFs in Punjab have this facility.

3.3.4 Situation at the National Level

A variety of drinking water appliances, including water dispensers / containers, and flasks ("coolers) are available in most HCFs. 93% of HCFs at the primary level, 93% at secondary level, and 95% of tertiary HCFs have either of this facility. However, water is available at only 65% of toilets at the primary level, 84% at tertiary level, and 89% at tertiary level. Water is least aviailable, where it is most neede – the service spot. Only 51% of primary, 71% of secondary, and 79% of tertiary facilities have water available at the point of service.

3.4 Water Dispenser Availability

Depending upon the location and level of HCFs, a large variety of water dispensers has been provided. They include clay pots with taps; insulated flasks with taps ("coolers"), larger electically operated dispensers providing cold water for drinking directly from the tap, mounted at the top; and (mainly for staff in tertiary faciities), modern dispensers, with branded bottled water. The availability of drinking water dispensers at different levels, in various provinces / territories is given in Table-3.2.

Table-3.2 Availability of Drinking Water

HCF Level	Water Dispenser Availability								
	ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	88%	97%	89%	74%	80%	45%	88%	77%	83%
Secondary Level	-	100%	100%	100%	100%	100%	100%	100%	100%
Tertiary Level	-	100%	100%	100%	-	100%	100%	-	100%
Weighted Average - All HCFs	88%	97%	90%	76%	84%	47%	88%	83%	84%
Standard Deviation	0	1.62	6.37	15.21	14.04	31.84	7.14	13.07	15.35

3.4.1 Comparative Analysis of Inter-Entity Situation

All (100%) of the secondary and tertiary HCFs in all the provinces territoroies have drinking water available in the form of a variety of water dispensers. However, the situation needs to be improved at the primary level, particularly in KPK and GB, where 74% and 77% of HCFs have water available for drining. Nevertheless, the primary HCFs in Balochistan need immediate attention, as only 45% of the HCFs in that province have water available for drinking.

3.4.2 Situation at the National Level

The national weighted average (84%) of drinking water avialability does not paint a bleak picture. However, it will be an oversimplification if Balochistan is not singled out, which has a weighted average of 47% with standard deviation of 31.84.

3.5 Water Quality Testing

The drinking water in the HCFs is required to conform to the water standards, for physical, biological, and chemical characteristics, provided in the National Drinking Water Quality Standards[12]. For this purpose, the quality of drinking water needs to be checked regularly for biological and chemical contaminations. While biological quality needs to be checked more frequently, the chemical contents need also be monitored, particularly for Arsenic, nitrates, and sulphates. However, as the respondents were generally unaware of the frequency of testing, only the practice of testing has been recorded, (Table-3.3)

Table-3.3 Practice of Water Quality Testing

HCF	Practice of Water Quality Testing								
	ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	National
Primary Level	13%	35%	11%	2%	0%	16%	3%	0%	20%
Secondary Level	-	58%	9%	15%	0%	50%	20%	0%	37%
Tertiary Level	-	70%	67%	0%	-	0%	0%	-	56%
Weighted Average - All HCFs	13%	36%	11%	3%	0%	17%	4%	0%	21%
Standard Deviation	0	18.01	32.63	8.14	0.00	25.48	10.83	0.00	12.18

3.5.1 Comparative Situation in Provinces and Territories

As shown in Table-3.3, water quality testing in HCFs appears to be a low priority in most provinces and territories in Pakistan.

The situation is particularly alarming at the primary level, where Punjab fairs slightly better (35%), while the situation is dismal in all other provinces and territories, particularly in KPK (2%), AJK (3%), and 0% in the case of KPMD and GB.

At the Secondary level the situation is relatively better in Punjab (58%), and Balochistan. However, it is far from satisfactory in all other provinces and territories. At the tertiary level, Punjab (70%), and Sindh (67%), demonstrate some interest, while the HCFs in all other provinces /territories appear to attach little importance to water testing.

3.5.2 Situation at the National Level

The weighted National average of the practice of water quality testing at all HCF levels, works out to 21%, with a standard deviation of 12.18. This is an alarming situation, requiring high priority intervention, at a senior level.

[12] Government of Pakistan, Ministry of Environment, "National Standards for Drinking Water Quality," (NSDWQ),"June 2008.


So~Safe


گورونا وائرس کان کیئن بچي سگھجي ٿو؟
پي پي ايڇ آءِ سنڌ ڊسٽرڪٽ لرباڪر

CHAPTER-4 SANITATION

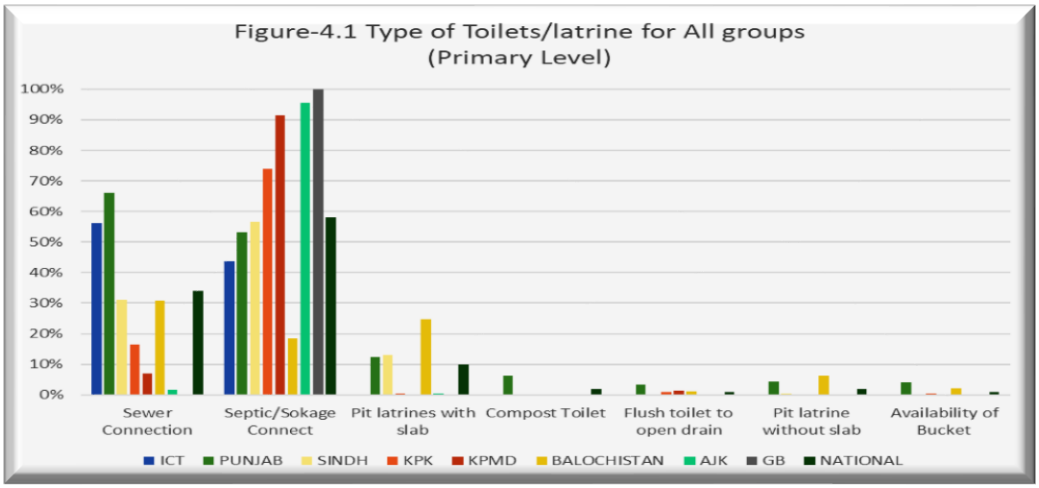
4.1 Type of Latrines

This section deals with the type of the latrines with respect to the disposal of the wastewater, on-site sanitation through septic tanks, or other excreta digestion mechanism. Situation in the provinces / territories is discussed below.

4.1.1 Types of Latrines at Primary Level

Depending upon its ultimate treatment / disposal, a connection to municipal sewer is considered, (by HCF managers), to be the best option for wastewater disposal. This option is reported to be followed by about 67% of the HCFs in Punjab, 57% in ICT, and 30% in Sindh, and Balochistan, (Figure-4.1).

A large number of HCFs at the primary level also resort to on-site sanitation through septic tanks, connected to a soakage well. All (100%) toilets in GB, 96% in AJK, 91% in KPMD, 74% in KPK have this system in place. 57% of the toilets in primary HCFs in Sindh, 54% in Punjab, 48% in ICT, and 18% in Baochistan have this system.

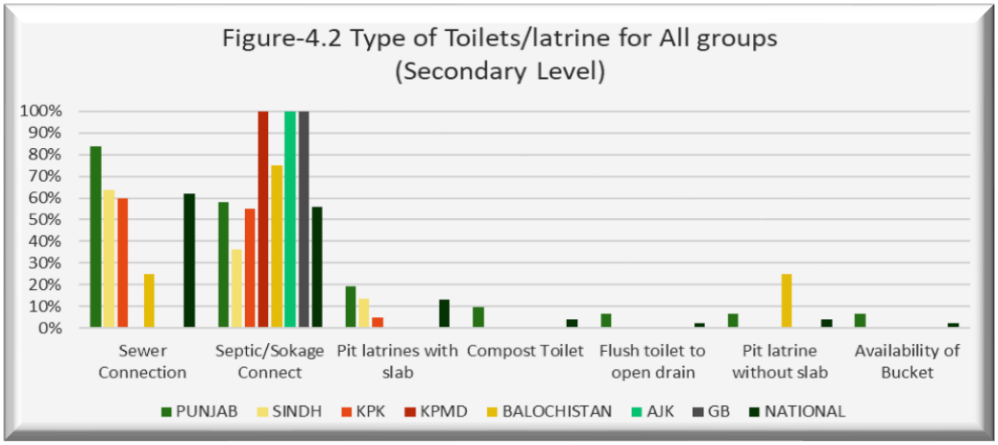


In water scarcity areas, pour-flush latrines are constructed with pits, covered with a slab. Improved varieties include, twin pit latrines to allow one of them to be emptied, while the latrine continues working with the other pit. A VIP (Ventilated Improved Pit latrine) are fitted with vent-pipes to keep the latrine smell free. 25% of the latrines in Balochistan, 15% in Sindh and 10% in AJK have this system.

A small number of latrines in Balochistan, (5%), AJK, (3%), and other entities have environmentally unacceptable and primitive systems of uncovered pits, and scavenger collection and transport of excreta in buckets. A small percent (less than 3%) of toilets in all provinces / territories are flushed directly into municipal open drains.

4.1.2 Types of Latrines at Secondary Level

Despite their usual location in the urban centers, the HCFs at the secondary level exhibit less dependence on the municipal sewer system. With the exception of Punjab, Sindh and KP[13], where the toilets in 82%, 62% and 60% of HCFs are connected to the municipal wastewater networks, majority of them, have instead, opted for septic tank mechanism. (Figure-4.2). In comparison, all (100%) secondary HCFs in AJK, KPMD, and ICT have on-site sanitation, in



the form of a septic tank, connected to soakage well. 72% of secondary HCFs in Balochistan, 58% in Punjab, 55% in KP, and 37% in Sindh, have their latrines connected to septic tank, with its effluent going to a soakage well. This is a satisfactory system, where water table is low, and the soakage well is located sufficiently away from the source of water (about 30m).

18% of the HCFs in Punjab and 14% in Sindh have latrines, connected to covered pits. The proportion of other options are negligibly small in all provinces /territories, with the exception of Balochistan, where 24% of secondary HCFs have latrines connected to uncovered pits.

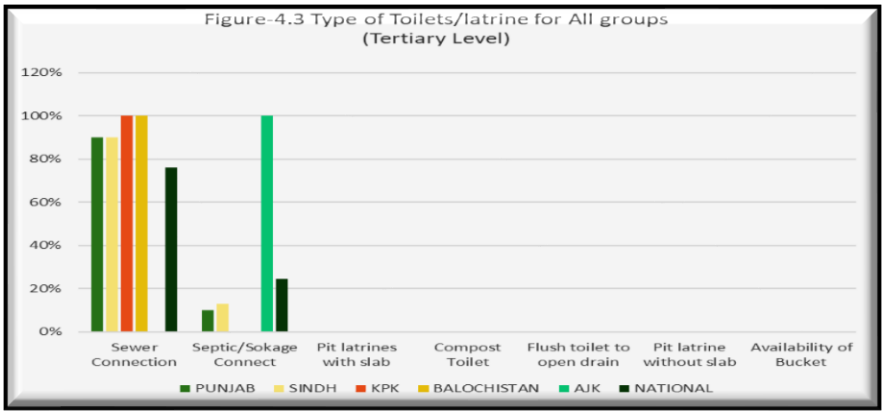
4.1.3 Types of Latrines at Tertiary Level

Although all the tertiary facilities are located in large urban centers, served with municipal sewerage, the preference for municipal connection, or on-site sanitation appears to be related to the reliability of the municipal system, (breakdowns and leakage are common), and the presence of a good capacity overhead water tank, (ensuring 24 hours of water supply), in the HCF premises.

All (100%) of the tertiary facilities in Punjab and KPK were found connected to the municipal sewer system, while 32% of the tertiary HCFs in Sindh are also connected to the municipal

[13] Wastewater in most urban centers of KPK is carried in open drains. Connecting the untreated wastewater from HCFs to the municipal networks in this Province is therefore an environmentally hazardous option.

sewer network[14]. On the contrary, all (100%), of the tertiary level HCFs in Balochistan and AJK, 68% in Sindh and 20% in Punjab have septic tank – soakage well systems for their latrines, (Figure-4.3)



4.1.4 Situation at the National Level

The National average indicates that on-site sanitation in the form of septic tank connected to a soakage well is most followed option at the primary (69%0 and secondary (64%). However, a vast majority of tertiary HCFs, (76%) are connected to the municipal sewer system. While the HCF managers appear very satisfied with this (latter) arrangement, it must be cautioned that the discharge of untreated HCF wastewater into municipal sewer network can be an environmentally hazardous practice, as the municipal sewage is often disposed of, without treatment to water bodies and agricultural fields.

4.2 Total Number of Toilets in HCFs

Percent distribution of the number of toilets at different HCF levels is given in Table-4.1.

Table-4.1 Number of Toilets at Different Levels of HCFs

HCF Level	Number of Toilets	Number of Toilets usable, Functional Private								
		ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	0 – 3	88%	95%	96%	97%	99%	98%	94%	92%	96%
	4 - 6	13%	4%	4%	3%	1%	2%	6%	8%	4%
	7 - 9+	0%	1%	0%	0%	0%	0%	0%	0%	0%
Secondary Level	0 – 15	-	94%	100%	100%	100%	75%	80%	0%	94%
	16 – 30	-	3%	0%	0%	0%	25%	20%	50%	4%
	31 – 80	-	0%	0%	0%	0%	0%	0%	0%	0%
	>80		3%	0%	0%	0%	0%	0%	50%	1%
Tertiary Level	0 – 30	-	60%	100%	100%	-	0%	0%	-	65%
	31 – 70	-	30%	0%	0%	-	0%	50%	-	20%
	71 – 150	-	0%	0%	0%	-	0%	0%	-	0%
	>150	-	10%	0%	0%	-	100%	50%	-	15%

[14] This must be borne in mind that the medical wastewater, discharging in to municipal sewerage, must be pretreated to kill all pathogens, as with very few exceptions, the municipal wastewater in Pakistan is discharged into water bodies or agricultural fields, without any treatment. It is a common practice to grow vegetables on municipal wastewater. Similarly, the septic tank effluent must undergo secondary treatment, (in stabilization ponds, aerated lagoons, or reed beds), before connecting to a municipal system or allowing to percolate into ground, through a soakage well.

Regardless of their efficacy, (Number of patients per toilet), or condition, toilets are available for patients in all the HCFs.

4.3.1 Inter Entity Comparative Analysis

As given in Table-4.1, In majority of the provinces / territories, there are 1 to 3 toilets at the primary HCFs, while majority of the secondary HCFs have up to 15 toilets. The number of toilets in the tertiary facilities varies significantly. All the tertiary HCFs in Sindh and KPK, and 60% in Punjab have less than 30 toilets. The only tertiary facility (Bolan Medical College) surveyed in Balochistan has more than 150 toilets. In the case of AJK, 50% of the tertiary facilities have 30 to 70 toilets, while the other half has more than 150.

4.3.2 Situation at the National Level

Regardless of the patient load, the total number of toilets, (including those for staff, men and women), in as many as 96% of the primary HCFs is less than 3. Similarly, in 94% of secondary HCFs the number of toilets for all groups is less than 15. However, although in majority (65%) of tertiary HCFs the total number of toilets remains less than 30, it does go up to 70 in 20% cases and above 150 in a few (15%) tertiary HCFs.

4.4 Reasons for Lack of Access to Toilets

Although, there always are some toilets in every HCF, a significant proportion of these facilities are not available to the patients and attendants for various reasons, (Table-4.2).

4.3.1 Inter-Entity Comparative Analysis

As shown in Table-4.2, the major reason for all categories of HCFs in all provinces and territories is that they are generally kept locked by the sanitary staff and the HCF Management[15]**.** Non functionality of a large number of toilets, is another reason.

In the case of Balochistan, the major reason of non-functionality is lack of water. This is the case in 85% of the HCFs at primary level and 50% at the secondary and tertiary levels

4.3.2 Situation at the National Level

Of a number of reasons identified by the respondents, the national scenario presents “Kept locked by HCF Management” as the major reason for lack of access to the toilets at all levels. The National averages for primary, secondary, and tertiary level HCFs being 59%, 64% and 85% respectively.

[15] The main reason for keeping them locked is to keep them clean for the purposes of securing good reports from the inspection staff of the Health Commission, and the district administration.

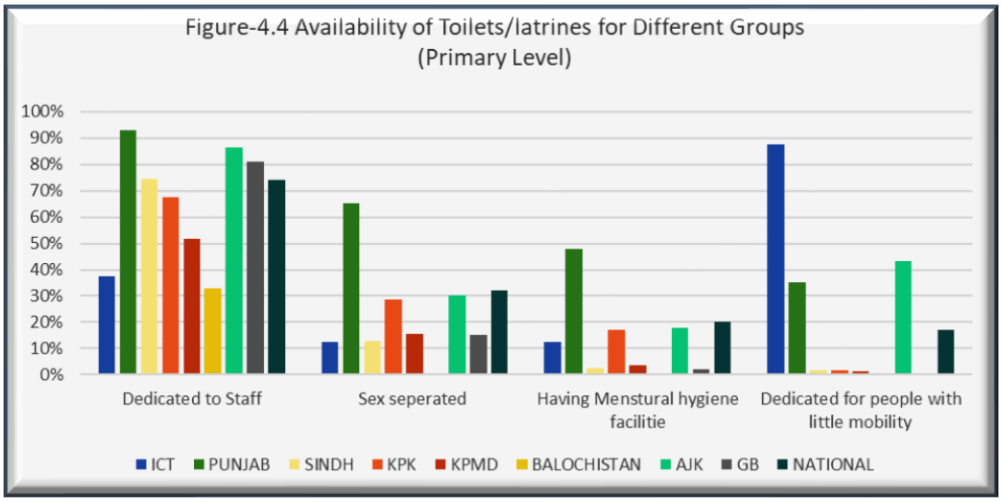
Table-4.2 Reasons for Inability to Use Toilets

HCF Level	Reason for inability to Use Toilets	Reason for Not Being Available								
		ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	Inadequate Toilets	6%	10%	8%	5%	6%	6%	1%	0%	7%
	Kept locked by the sanitary staff	13%	10%	1%	28%	20%	1%	3%	2%	9%
	Kept locked by HCF Management	68%	67%	69%	45%	48%	8%	96%	98%	59%
	Water & Drainage issue	13%	13%	21%	22%	26%	85%	0%	0%	25%
Secondary Level	Inadequate Toilets	-	13%	18%	0%	0%	25%	20%	0%	12%
	Kept locked by the sanitary staff	-	16%	0%	10%	0%	0%	0%	0%	8%
	Kept locked by HCF Management	-	55%	64%	70%	100%	50%	80%	100 %	64%
	Water & Drainage issue		16%	18%	20%	0%	25%	0%	0%	16%
Tertiary Level	Inadequate Toilets	-	10%	0%	0%	-	0%	0%	-	5%
	Kept locked by the sanitary staff	-	10%	0%	0%	-	0%	0%	-	5%
	Kept locked by HCF Management	-	60%	100%	100 %	-	100%	100 %	-	85%
	Water & Drainage issue	-	20%	0%	0%	-	0%	0%	-	5%
Weighted Average - All HCFs		Not Applicable								
Standard Deviation		Not Applicable								

4.4 Availability of Toilets for Different Groups

4.4.1 Situation at Primary Level

High percentage of staff dedicated toilets exists in the HCFs surveyed, in most provinces and entities. Although toilets have been reported to exist in all HCFs, various factors limit their accessibi9lity to different groups. Given below is a brief discussion of the situation at various levels of HCFs, (Figure-4.4).



In 92% of the primary HCFs in Punjab, toilets are dedicated to staff-only. This is the case in 85% of primary HCFs in AJK, 80% in GB, 73% in Sindh, 68% in KPK, 50% in KPMD, 38% in ICT, and 34% in Balochistan.

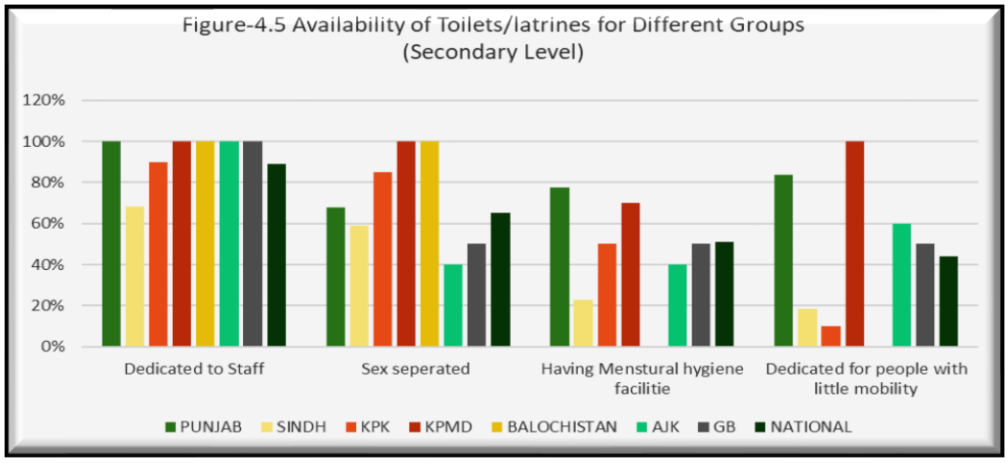
About 63% of the toilets in Punjab are sex separated. This proportion is small in other provinces and territories, varying from 30% in AJK, to 29% in KPK, 18% in KPMD, 17% in GB, and 12% in ICT and Sindh, and none in Balochistan.

MHM provisions are available in a small number of women dedicated toilets, varying from about 48% in Punjab, to 18% in AJK, 17% in KPK and 12% in ICT. These facilities are found in negligible numbers in KPMD, Sindh and GB.

Having dedicated toilets for physically challenged people, is negligible in all entities, other than ICT (85%), AJK (42%), and Punjab (38%).

4.4.2 Situation at Secondary Level

situation at the secondary level is markedly better at the secondary level. Staff at all (100%) of the secondary HCFs in Punjab, KPMD, Balochistan, AJK, and GB has access to toilet facilities. However, the staff at 90% of secondary HCFs has access to toilets in KPK, and 68 % in Sindh, (Figure-4.5).



All the secondary HCFs in KPMD and Balochistan, 86% in KPK, and 68% in Punjab have separate toilets for ladies and gents. This percentage reduces to 50% in the case of GB and 40% in AJK.

Interestingly, women dedicated toilets in 72% secondary HCFs in KPMD have MHM facilities, in comparison with only 52% in KPK. 82% of secondary HCFs in Punjab, 50% in GB, 40% in AJK, and 21% in Sindh have MHM facilities in the women dedicated toilets. No such facility exists in the secondary HCFs in Balochistan.

While only 10% of secondary HCFs in KPK have dedicated toilets for physically challenged persons, this facility is available in all (100%), secondary HCFs in KPMD. 82% of secondary HCFs in Punjab, 60% in AJK, 50% in GB, and 18% in Sindh have this facility. No secondary HCF in Balochistan has a toilet dedicated to physically challenged persons.

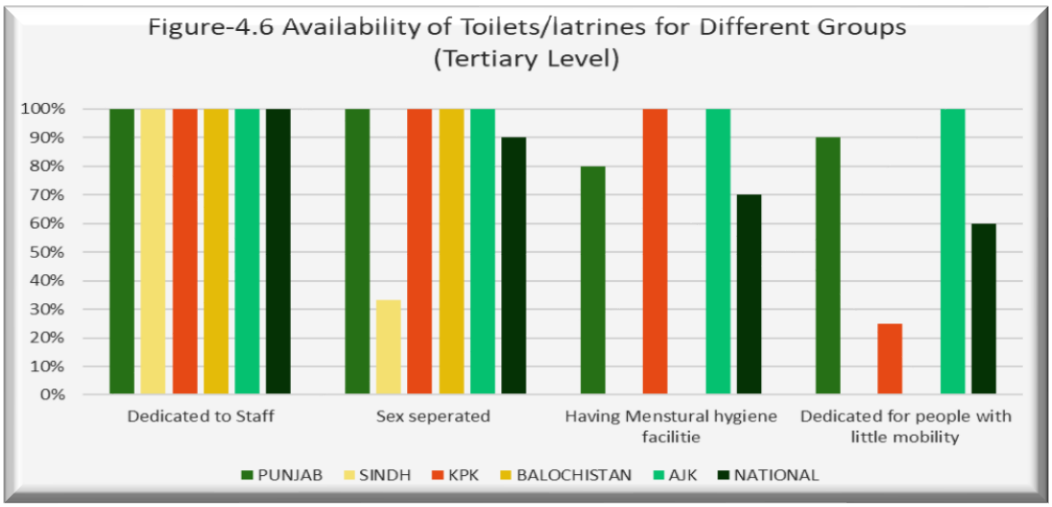
4.4.3 Situation at Tertiary Level

Staff in all (100%) the tertiary HCFs in all the provinces and AJK has access to toilets, with the exception of KPK and Sindh, where toilets are accessible to staff in 90% and 67% tertiary HCFs, (Figure-4.6).

There are sex separated toilets in all tertiary HCFs surveyed in KPMD and Balochistan. 82% of tertiary HCFs in KPK, 67% in Punjab, 59% in Sindh, 50% in GB, and 40% in AJK have separate toilets for women.

80% of the tertiary HCFs in Punjab have MHM equipped women toilets. The women toilets, equipped with MHM facilities are 70% in KPMD, 50% in KPK and GB, 40% in AJK, and 22% in Sindh. No such facility is available in the women dedicated toilets in tertiary HCFs Balochistan.

All tertiary HCFs in KPMD, and 85% in Punjab have toilets dedicated to persons with limited mobility. The corresponding percentage in AJK and GB are 60% and 50% respectively. Only 18% of the tertiary HCFs in Sindh, and 10% in KPK have such toilets, while no tertiary facility in Balochistan has this facility, (Figure-4.6).



4.4.4 Situation at the National Level

At the primary and secondary levels, the percent of functional toilets tends to decrease with the number of toilets in an HCF. 83% of the toilets at the primary level are functional if the number of toilets is less than 4. However, the percent of functional toilets decreases up to 2% number of toilets is 9 or more. Similarly, at the secondary level, the percent of functional toilets is 61% in 1-20 bracket, decreasing to 4% when the total number of toilets is 80 or more. This clearly points to the limitations in O&M capacity at these levels.

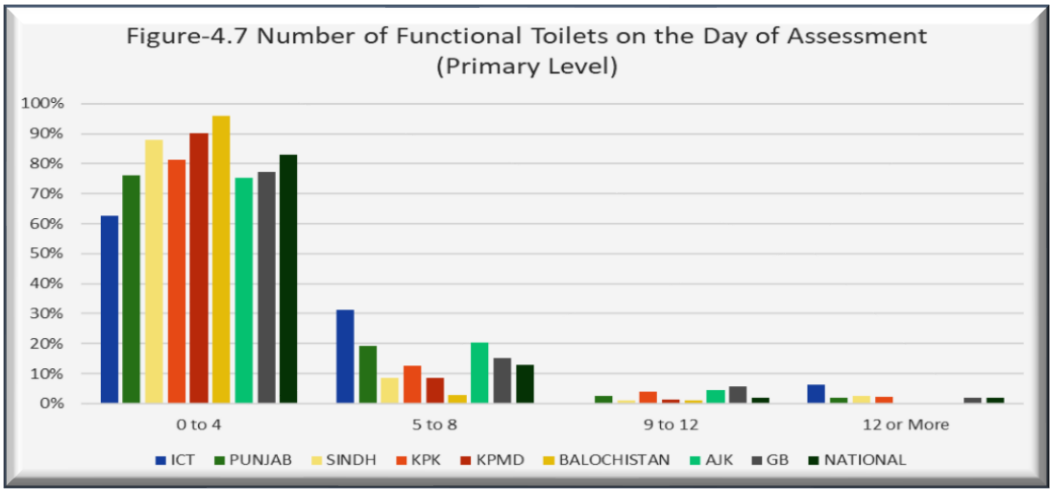
Contrary to this, at the tertiary level, the percent of functional toilets remains low (10 to 30%), regardless of the number of toilets, which varies from less than 30 to more than 150. This is a case of the over provision of toilets with no regard to patient load, as well as a general lack of capacity to maintain.

4.5 Functional Toilets on the Day of Assessment

4.5.1 Situation at Primary Level

Interestingly, the proportion of functional toilets decreases with an increase in the number of toilets in a facility. This points to the lack of O&M capacity among the HCFs at the primary level. As shown in Figure-4.7, where the number of toilets is less than 4, the percentage of functional toilets varies from 60% in ICT to 96% in Balochistan.

In the case of the primary HCFs having more than 5 toilets, the percentage of functional



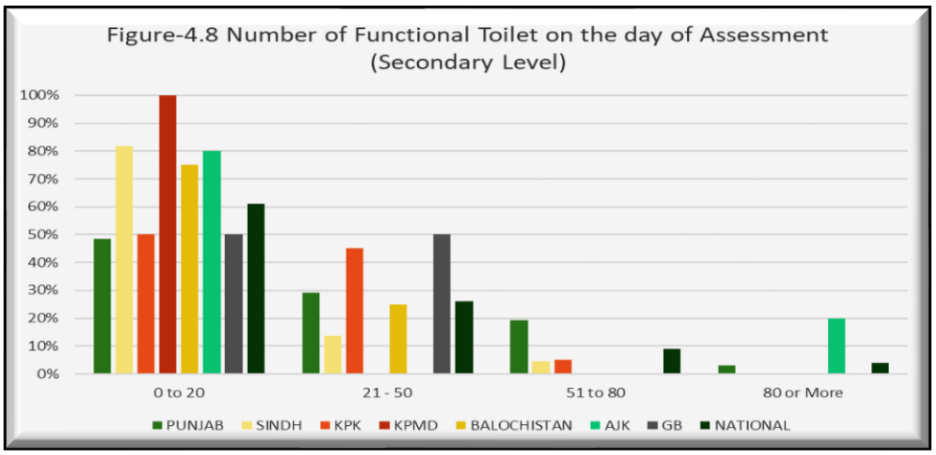
toilets decreases to 30% in ICT, 20% in Punjab and AJK, 18% in GB, 12% in KPK, 9% in KPND, 7% in Sindh, and 2% in Balochistan.

The situation is dismal for more than 9 toilets. In this case the percent of functional toilets does not exceed 7%, anywhere in Pakistan.

The emerging lesson is that building infrastructure, without commensurate development in O&M capacity will always be counter-productive, and only a drain on the scarce financial resources.

4.5.2 Situation at Secondary Level

Owing to the reasons discussed in Section 4.5.1, the situation at the secondary level exhibits a similar pattern – the percentage of functional toilets decreases with the number of the toilets, (Figure-4.8).

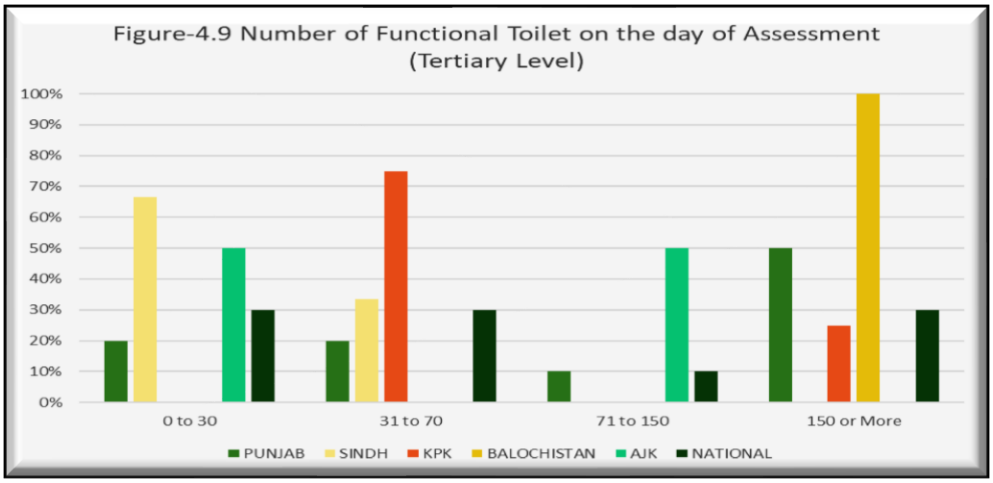


For less than 20 toilets, the percentage of functional toilets, the percentage of functional toilets varies from 45% in Punjab to 100% in GB.

For the number of toilets in the 21-50 range, the percentage of functional toilets drops to about 30% in Punjab, 24% in Balochistan, and 15% in Sindh. For more than 50 toilets only 20% are functional in Punjab, and 5% in Sindh.

4.5.2 Situation at Tertiary Level

There appears to be no correlation between functionality and the number of toilets in the case of tertiary facilities. Although a large number of more than 150 toilets are functional in the case of Balochistan, it cannot be representative of the Province, as only one tertiary facility could be visited in that case, (Figure-4.9).



Again, as shown in Figure-4.9, in the case of Punjab, only 20% of the toilets are functional, where the number of toilets is small, in comparison with 50% for HCFs with larger number of toilets.

In the case of KP, the number of functional toilets is 74% for 33 to 70 toilets range and 25% for 150 plus range. Similarly, for Sindh, 65% of toilets are functional in tertiary HCFs with less than 30 toilets, while the percent of functional toilets drops to 32% for HCFs with larger number of toilets. Regardless of the number of toilets, 50% remain functional in AJK.

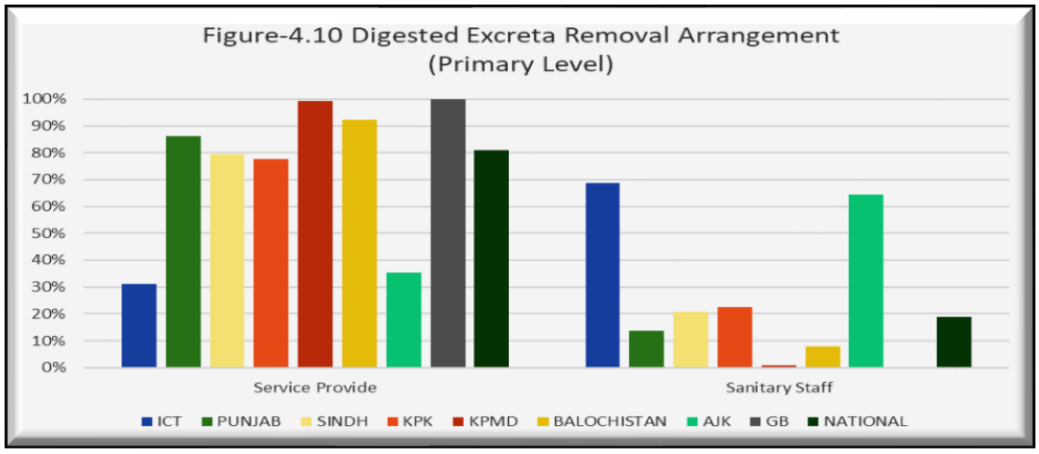
4.6 Septic Tank Content Removal Arrangement / Responsibility

Depending upon the frequency of use, and the design of the septic tank, its contents need to be removed periodically, usually at one to three year intervals. Emptying of the contents of the tank can either be done by the sanitary staff of the HCF, or outsourced to a service provider. A brief discussion of the emptying arrangements at the primary, secondary, and tertiary levels is as follows.

4.6.1 Arrangement / Responsibility at Primary Level

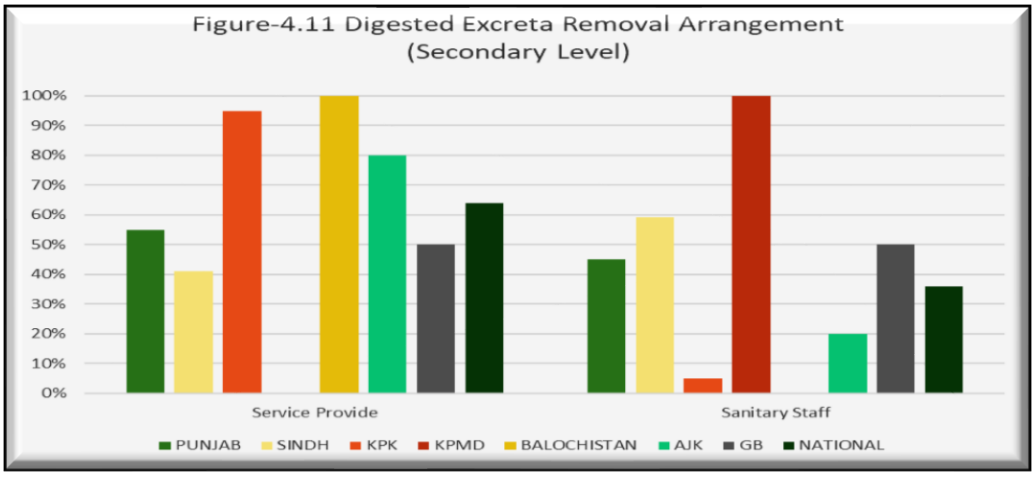
As shown in Figure-4.10, with the exception of ICT and AJK, there is a general tendency to outsource the contents removal task to a service provider. Contents of the septic tanks, (or pits) at the primary level are removed by the service providers in 85% of HCFs in Punjab, 88% in KPK, 80% in Sindh, 92% in Balochistan, and 100% in KPMD and GB. However, only in 31% of the primary HCFs in ICT, and 38% in AJK are removed by a service provider.

On the other hand, 69% of the septic tank contents in the primary HCFs in ICT are removed by the HCF sanitary staff. 15% of the HCFs in Punjab, 20% in Sindh, 8% in Balochistan, and 62% in AJK follow this practice.



4.6.2 Arrangement / Responsibility at Secondary Level

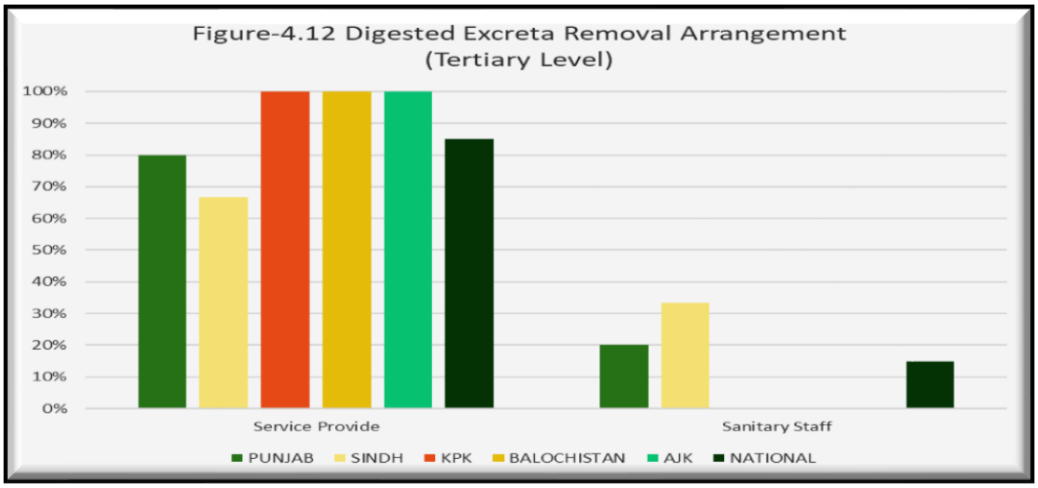
Although, the inter-entity comparisons at the secondary level are somewhat different from the primary level, 56% of the secondary HCFs in Punjab, 40% in Sindh, 96% in KPK, 100% in Balochistan and 80% in AJK, outsource the emptying task to a service provider, (Figure-4.11).



44% of the secondary HCFs in Punjab, 60% in Sindh, 4% in KPK, 100% in KPMD, 20% in AJK, , and 50% in GB involve their own sanitary staff, to perform this task.

4.6.3 Arrangement / Responsibility at Tertiary Level

Outsourcing the septic tank emptying task to a service provider continues to be the overwhelming trend at the tertiary level too. As shown in Figure-4.12, 80% of the tertiary level HCFs in Punjab, 62% in Sindh, and a 100% each in KPK, Balochistan and AJK have appointed a service provider to perform this task.



On the other hand, 20% of tertiary HCFs in Punjab, and 38% in Sindh, continue to deploy their own sanitary staff to perform this task.

4.6.4 Situation at the National Level

In a vast majority of HCFs, at all HCF levels, the responsibility to remove septic tank contents has been entrusted to a service provider. This arrangement is in vogue in 81% of the primary, 64% of secondary, and 85% of tertiary HCFs.

4.7 Place of Disposal of Septic Tank Contents

In majority of the cases the contents removed from the septic tanks are buried in a covered pit, with a small percent of HCFs the emptied contents are subjected to further treatment, (Table-4.3).

Table-4.3 Place of Disposal of Septic Tank Contents

HCF Level	Disposal of Septic Tank Content	Disposal of Septic tank Contents								
		ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	Treatment Plant	0%	2%	1%	1%	0%	0%	11%	0%	5%
	Buried in covered Pit	63%	77%	9%	87%	70%	11%	83%	0%	52%
	Don't Know	37%	21%	90%	12%	30%	89%	6%	100%	43%
Secondary Level	Treatment Plant	-	6%	0%	5%	0%	0%	20%	0%	5%
	Buried in covered Pit	-	58%	18%	95%	100%	75%	80%	50%	59%
	Don't Know		35%	82%	0%	0%	25%	0%	50%	36%
Tertiary Level	Treatment Plant	-	10%	0%	25%	-	0%	0%	-	10%
	Buried in covered Pit	-	80%	0%	75%	-	0%	100%	-	65%
	Don't Know	-	10%	100%	0%	-	100%	0%	-	25%
Weighted Average - All HCFs		Not Applicable								
Standard Deviation		Not Applicable								

4.8 Availability of Sanitary Staff

4.8.1 Analysis of Inter Entity Situation

Unlike common belief, in most cases, the sanitary workers are on the payroll of the HCFs. It varies from 28% (in Balochistan), to 100% in GB at the primary level, Again, in all (100%) of the HCFs, have sanitary workers on their payroll at the secondary level, with the exception of KPMD. Similarly, with the exception of Balochistan all provinces /territories having tertiary facilities have sanitary workers as regular staff. (The upkeep and cleaning of toilets and environmental cleaning of the HCF, including emptying of septic tank and the disposal of its contents, have been outsourced in these two entities), (Table-4.4).

Table-4.4 – Sanitary Workers as Regular Employees

HCF Level	Sanitary worker available on the facility payroll								
	ICT	Punjab	Sindh	KP	KPND	Balochis-Tan	AJK	GB	NATIONAL
Primary Level	44%	73%	86%	79%	66%	28%	46%	100%	68%
Secondary Level	-	100%	100%	95%	0%	100%	100%	100%	98%
Tertiary Level	-	100%	100%	100%	-	0%	100%	-	95%
Weighted Average - All HCFs	44%	74%	87%	80%	54%	30%	48%	100%	70%
Standard Deviation	0.00	15.87	8.08	10.97	46.67	51.59	31.46	0.00	24.16

4.8.2 Situation at National Level

The weighted national average of having sanitary workers as regular employees works out to 70%, with a standard deviation of 24.16.

4.9 Septic Tank Content Removal Frequency

The bacteria in a septic tank liquifies human excreta in a few days, and the liquid effluent continues to flow into a soakage well or the municipal sewer system. However, in an HCF environment, the wash room wastewater containing detergents and germicides also finds its way into the septic tank. This retards the excreta liquification process, and reduces the efficiency of the septic tank resulting in the generation of relatively larger quantity of sludge, with certain quantity of undigested excreta. It is therefore desirable to design the septic tank to allow for a sludge retention capacity of two years. However, smaller septic tanks fill up and get choked frequently, with wastewater overflowing the manholes, thus demanding frequent cleaning and removal of sludge, impregnated with hazardous biological material.

In the above perspective, the frequent filling up of the septic tank is a worrying factor.

4.9.1 Analysis of Inter Entity Situation

As given in Table-4.5, the need to clean it every year (80% in Punjab and 70% in Sindh), is a worrying factor. It usually becomes necessary if the septic tank is under-designed, or has some construction defects. Cleaning after two to three years is more appropriate, and 'never emptied' is not worrisome, as it happens only if the system is new, or has been designed with a higher factor of safety. In any case it is desirable to clean the tank at least every three years. As shown in Table-4.5, the frequency of removing the septic tank contents, varies significantly, from entity to entity, and between various HCF levels.

4.9.2 Situation at the National Level

In the largest percent of primary and secondary HCFs, (45% and 74% respectively), the septic tank contents are removed on a yearly basis. However, in majority (60%) of HCFs at the tertiary level, the practice of emptying the septic tank after three years is followed, (Table-4.5).

Table-4.5 Frequency of Removing Septic Tank Contents (Years)

HCF Level	Emptying Frequency of Septic tank	Frequency of Removing Digested Septic Tank Content (Years)								
		ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	Every Year	17%	66%	39%	33%	0%	2%	15%	0%	45%
	Every 2 Year	17%	12%	0%	33%	0%	11%	15%	0%	9%
	Every 3 Year	0%	3%	61%	33%	0%	85%	47%	0%	26%
	Never	34%	19%	0%	0%	100%	2%	23%	100%	19%
Secondary Level	Every Year	-	80%	70%	50%	100%	0%	0%	50%	74%
	Every 2 Year	-	4%	0%	0%	0%	0%	0%	0%	2%
	Every 3 Year	-	8%	0%	50%	0%	100%	100%	0%	12%
	Never		8%	30%	0%	0%	0%	0%	50%	12%
Tertiary Level	Every Year	-	0%	0%	0%	-	0%	0%	-	0%
	Every 2 Year	-	0%	0%	0%	-	0%	0%	-	0%
	Every 3 Year	-	33%	0%	100%	-	100%	0%	-	60%
	Never	-	67%	100%	0%	-	0%	100%	-	40%
Weighted Average – All HCFs		Not Applicable								
Standard Deviation		Not Applicable								

4.10 On-Schedule Cleaning

4.10.1 Analysis of Inter Entity Situation

HCFs at all levels in the GB report strict compliance with the cleaning schedule, with Punjab doing reasonably well. ICT (6%), Balochistan (5%), and AJK (2%), exhibit poor compliance with the cleaning schedule at the primary level. Generally, the situation improves at higher HCF levels. The inter-level, weighted averages are satisfactory for Punjab, GB, KPK, and KPMD. However, the corresponding figures in Sindh, Balochistan, and AJK require immediate managerial interventions to improve the compliance levels. (Table-4.6).

Table-4.6 Compliance with the Cleaning Schedule

HCF Level	Compliance with Cleaning Schedule								
	ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	6%	63%	17%	78%	80%	5%	2%	100%	43%
Secondary Level	-	94%	32%	85%	100%	0%	20%	100%	68%
Tertiary Level	-	90%	67%	100%	-	0%	50%	-	85%
Weighted Average - All HCFs	6%	65%	18%	79%	84%	5%	3%	100%	45%
Standard Deviation	0.00	16.86	25.66	11.24	14.14	2.85	24.25	0.00	40.85

However, as argued earlier, it is important to re-visit the cleaning schedules, to avoid pre-mature emptying of the septic tank.

5.10.2 Situation at the National Level

Adherence with the cleaning schedule increase with the HCF level. The inter-entity national average increases from 43% at the primary, to 68% at secondary, and 85% at tertiary level. This generates a National weighted average of 45% with a standard deviation of 40.85.

4.11 Availability of Cleaning Material at the Time of Assessment[16]

4.11.1 Analysis of Inter Entity Situation

Majority of primary level HCFs in Punjab, Sindh, KPK, and AJK were found to have the cleaning material at the time of assessment. However, KPMD, GB and ICT need to improve the supply regime. Serious and immediate effort is required to improve the situation in Balochistan, where only 6% of the primary HCFs were found to have cleaning material at the time of Assessment.

With the exception of GB, the material was observed to be present in most secondary HCFs[17]. And, at the tertiary level, the material was available in all (100%) of the facilities surveyed, (Table-4.7).

Table-4.7 Availability of Cleaning Material at the Time of Assessment

HCF	Availability of Cleaning Material								
	ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	50%	88%	80%	56%	18%	6%	89%	55%	65%
Secondary Level	-	100%	91%	95%	100%	75%	100%	50%	94%
Tertiary Level	-	100%	100%	100%	-	100%	100%	-	100%
Weighted Average - All HCFs	50%	89%	79%	56%	17%	7%	88%	54%	66%
Standard Deviation	0.00	4.50	17.57	10.44	5.66	17.82	45.53	3.34	30.79

4.11.2 Situation at the National Level

Availability of cleaning material increases with the HCF level, from 65% primary to 94% at secondary, and 100% at tertiary level). This generates a National weighted average of 66%, with a standard deviation of 30.79.

[16] The cleaning material relates to the materials required for the cleaning of the toilets, service areas, and other spaces in the HCF buildings.

[17] It appears that the non-availability of the cleaning material in GB relates to the difficult access through roads, which are not all-weather, and are frequently blocked owing to landslides.

4.12 Regular Supply of Cleaning Material[18]

4.12.1 Inter Entity Comparative Analysis

Most primary level HCFs in ICT and Punjab reported reasonably regular supply of cleaning material. It is somewhat regular in Sindh, but the situation in KPK, KPND, Balochistan, AJK, and GB requires to be substantially improved, (Table-4.8).

Supply at the secondary level is reasonably regular in Punjab, Sindh, KPK and AJK. Howeverit it is poor in KPMD and unsatisfactory in Balochistan.

Although the cleaning material was present in all tertiary facilities on the day of assessment, (Table-4.7), the interviewees in Balochistan and AJK complained about the supply being irregular, (Table-4.8).

Table-4.7 Regular Supply of Cleaning Material

HCF Level	Regularity of Cleaning Material Supply at HCF								
	ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	88%	78%	57%	24%	16%	21%	28%	0%	57%
Secondary Level	-	97%	65%	58%	10%	33%	60%	50%	74%
Tertiary Level	-	90%	100%	75%	-	0%	0%	-	75%
Weighted Average - All HCFs	88%	79%	58%	27%	15%	22%	30%	12%	58%
Standard Deviation	0.00	9.58	22.74	25.97	4.24	16.89	30.02	35.36	29.60

4.12.2 Situation at the National Level

Analogous to the pattern discussed under Section 4.11.2, the regularity in supply of cleaning material increases, albeit less sharply, with the increase in HCF level, (From 57% in primary HCFs, to 74% in secondary, and 75% in tertiary). This generates a National weighted average of 58%, with a standard deviation of 29.6.

[18] This question gave regular / irregular options. The zero entries therefore indicate irregular supply of material, rather than no supply.

CHAPTER-5 HAND HYGIENE

Although the hand hygiene in all activity areas is important for human health, its importance at the HCFs is of a basic and critical nature. The recurring waves of COVID-19 pandemic has increased its importance manifolds. The HCF Assessment Survey provided a snapshot of hand hygiene facilities and promotional activities at all levels of HCFs. Given below is a discussion of the overall hand hygiene situation at various levels of HCFs, followed by the availability of hand hygiene facilities at different spots in the HCFs.

5.1 Presence of Hand Hygiene Facilities in HCFs, Percent Functional, and Reasons for Not Functioning

At least one hand hygiene facility does exist, physically, in HCFs, at all healthcare levels, in all provinces and territories. However, the percent of functional facilities varies significantly with the level of the HCFs and their location in different provinces / territories. Major reasons for Not Functioning, include: (a) Lack of Water, (b) Unavailability of soap, and (c) The hand Hygiene (HH) facility located at more than 5m from the toilets.

5.1.1 Percent of Primary HCFs with Functional / Unfunctional Hand Hygiene Facilities

The percent of all functional hand hygiene facilities at the primary level is the lowest in KPND and ICT, (11% and 13% respectively), while it is also low in KP (30%), GB (40%), and Balochistan (44%). However, 60% of primary HCFs in Sindh and 90% in Punjab have functional hand hygiene facilities. This generates a National average of 44%, (Table-5.1).

Table – 5.1 Hand Hygiene Facility at HCFs (Primary Level)

Presence and Functionality of Hand Hygiene Facilities	Percent of HCFs in Various Provinces / Territories								
	ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Presence of a Hand Hygiene Facility	100	100	100	100	100	100	100	100	**100**
Percent Functional	13	90	60	30	11	44	66	40	**44**
Unfunctional Due to Lack of Water	0	1	7	21	26	51	0	0	**13**
Unfunctional Due to Lack of Soap	87	5	17	10	5	2	20	39	**23**
Unfunctional for the HH Facility being away from the Toilet(s).	0	4	16	39	58	3	24	21	**21**

Hand hygiene facilities in majority (51%), of primary HCFs in Balochistan is the unavailability of water. This is the case in 26% of primary HCFs in KPND, and 21% in KP. This leads to the National average of 13%.

However, as many as 87% of primary HCFs in ICT, 39% in GB, and 20% in AJK are unfunctional owing to non availability of soap. As a result, the National average of being unfunctional owing to this reason works out to 23%.

Again, a high percentage (58%) of HH facilities at KPND, 39% in KP, 24% in KP, and 21% in GB are considered unfunctional, owing to their location at a distance greater than 5m from toilets. The National average of non functionality HCFs with unfunctional toilets due to this reason is 21%.

5.1.2 Percent of Secondary HCFs with Functional / Unfunctional Hand Hygiene Facilities

Situation is markedly better at the secondary level. Interestingly, all (100%) of the HCFs surveyed in KPND and GB had functional hand hygiene facilities. 97% of secondary HCFs in Punjab, 85% in KP, 77% in Sindh, 75% in Balochistan have functional hand hygiene facilities. However, the functional hand hygiene facilities in AJK is 60%. This generates a National average of 86%, (Table-5.2).

Table – 5.2 Hand Hygiene Facility at HCFs (Secondary Level)

Presence and Functionality of Hand Hygiene Facilities	Percent of HCFs in Various Provinces / Territories								
	ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Presence of a Hand Hygiene Facility	-	100	100	100	100	100	100	100	**100**
Percent Functional	-	97	77	85	100	75	60	100	86
Unfunctional Due to Lack of Water	-	0	0	0	0	0	0	0	0
Unfunctional Due to Lack of Soap	-	3	14	8	0	25	40	0	**12**
Unfunctional for the HH Facility being away from the Toilet(s).	-	0	9	7	0	0	0	0	**2**

As water is available at all secondary facilities, in all the provinces / territories, non-availability of soap is the major reason for the hand hygiene facilities not working. Hand hygiene facilities in 40% of the secondary HCFs in AJK, 25% in Balochistan, and 14% in Sindh remain unfunctional due to this reason. The percent of secondary HCFs having unfunctional hand hygiene facilities due to this reason is 15% and 3% respectively.

5.1.3 Percent of Tertiary HCFs with Functional ? Unfunctional Hand Hygiene Facilities

The percent of tertiary HCFs for all provinces and territories, with the exception of Balochistan. In the latter case, only one tertiary facility could be accessed. The percent functional in this case therefore represents the number of functional / unfunctional HH facilities in that HCF, (Table-5.3).

The percent of tertiary HCFs with functional HH facilities is significant in Punjab (90%), KP (67%), and Sindh (66%). However, in the case of AJK the tertiary HCFs with functional hand hygiene facilities is 50%. The percent of functional HCFs in the only tertiary HCF surveyed in Balochistan is 75%. The National average of tertiary HCFs with functional HH facilities thus works out to 70%.

Table – 5.3 Hand Hygiene Facility at HCFs (Tertiary Level)

Presence and Functionality of Hand Hygiene Facilities	Percent of HCFs in Various Provinces / Territories								
	ICT	Punjab	Sindh	KP	KPND	Balochis-Tan	AJK	GB	NATIONAL
Presence of a Hand Hygiene Facility	-	100	100	100	-	100	100	-	**100**
Percent Functional	-	90	66	67	-	75	50	-	70
Unfunctional Due to Lack of Water	-	0	0	0	-	0	0	-	0
Unfunctional Due to Lack of Soap	-	5	33	33	-	25	25	-	**20**
Unfunctional for the HH Facility being away from the Toilet(s).	-	5	0	0	-	0	25	-	**5**

As water availability is not an issue at the tertiary level, 10% of tertiary HCFs in Punjab, 33% in KP and Sindh, and as many as 25% in AJK remain unfunctional owing to unavailability of soap. The percent of hand hygiene facilities in the only tertiary HCF surveyed in Balochistan, (Bolan Medical College, Quetta), remaining unfunctional is 25%., (Table-5.3).

5.2 Functional Hand Hygiene Facility at the Point of Care

Presence of a functional hand hygiene facility at the point of care is critical to the safety of the care givers. The hand hygiene facility is considered to be functional only if water from an improved source and soap is available, with safe drainage of waste water. A hot air blower or disposable napkins will be an additional requirement at the point of care, particularly at the secondary and tertiary levels. If the hands are soiled, the ABHR is not a substitute for washing hands with soap[19].

[19] WHO, "Minimum Requirements for Infection Prevention and Control Programmes," 2019

Results of the assessment survey with regards to the presence of a functional hand hygiene facility, at the point of care, are given in Table-5.4.

Table-5.4 Functional Hand Hygiene Facility at the Point of Care

HCF Level	Functional hygiene facility at HCF								
	ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	13%	90%	60%	30%	11%	44%	66%	40%	60%
Secondary Level	-	97%	77%	85%	100%	75%	60%	100%	86%
Tertiary Level	-	90%	67%	100%	-	100%	50%	-	85%
Weighted Average - All HCFs	13%	91%	61%	35%	27%	45%	65%	54%	62%
Standard Deviation	0.00	3.85	8.78	36.86	62.93	28.25	7.96	42.69	24.51

5.2.1 Inter Entity Comparative Analysis

Table 5.4, points to a desperately poor situation in the KPND and ICT, where only 11% and 13% of the primary HCFs have a functional hand hygiene facility at the point of care. Nevertheless, there is room for improvement in all provinces and territories, particularly in KPK, Balochistan and GB.

The percent of secondary and tertiary level HCFs having this facility, are reasonably high (approaching 100% in case of the HCFs in Balochistan (Only one tertiary facility surveyed), and GB. However, all HCFs at this level must have a functional hand hygiene facility, at the point of care, as the health staff is involved in performing relatively major surgical interventions.

5.2.2 Situation at the National Level

The National average of functional hygiene facilities at the point of care in the primary HCFs is 60%, (despite poor situation in ICT and KPND, and the conditions in KP, as well as that in Balochistan and GB remaining less than satisfactory). However, the National averages at secondary and tertiary levels are good to excellent.

The National weightage average of all HCFs thus works out to 62%, with a standard deviation of 24.51.

5.3 Functional Hand Hygiene Facility In / Near the Toilets

5.3.1 Inter Entity Comparative Analysis

In order to be considered 'functional' a toilet must have, (besides other requirements, discussed earlier), a functional hand hygiene facility within a radius of 5 meter. The results of the assessment survey in this regard are presented in Table-5.5.

Table-5.5 Presence of a Functional Hand Hygiene Facility In / Near the Toilets

HCF Level	Functional Hand wash facility at HCF								
	ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	88%	94%	61%	33%	12%	40%	71%	42%	92%
Secondary Level	-	97%	86%	75%	100%	100%	100%	100%	88%
Tertiary Level	-	90%	100%	75%	-	100%	50%	-	90%
Weighted Average - All HCFs	88%	94%	62%	36%	28%	42%	72%	55%	91%
Standard Deviation	0.00	3.39	20.03	24.25	62.23	34.69	25.12	41.36	23.88

Although the toilet areas appear to be better served in this regard, (in comparison with the point of care), situation in KPND, KP, Balochistan, and GB require improvement. Again, certain facilities in all the provinces and territories need interventions to have or make these facilities functional. The situation at the primary level in KPND is particularly alarming.

5.3.2 Situation at the National Level

Although the hand hygiene facilities near the toilet need to be augmented in KP, KPND, Balochisan, and GB, (at the primary level), the overall National situation is quite good. The National weighted average works out to 91%, with a standard deviation of 23.88.

5.4 Availability of Hand Hygiene Material

5.4.1 Inter Entity Comparative Analysis

The assessment results indicate that other than Punjab, where the hand hygiene material is often available, and some cases in Sindh and GB, the availability of hand hygiene material is generally unsatisfactory. As shown in Table-5.6, (on next page), the situation is particularly alarming in Balochistan, and needs to be rectified as a high priority.

5.4.2 Situation at the National Level

The availability of hand hygiene facility near the toilets, though needing amelioration at all levels, (particularly in primary HCFs[20], appears to be reasonably satisfactory. The weighted National average works out to 54%, with a standard deviation of 27.42.

[20] The state of affairs is dismal in Balochistan, and far short of being satisfactory in the case of ICT, KPK, KPMD, and GB.

Table-5.6 Availability of Hand Hygiene Material

HCF Level	Appropriate hygiene material available at HCF								
	ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	25%	90%	61%	22%	21%	5%	39%	26%	52%
Secondary Level	-	97%	86%			50%	60%	100%	75%
Tertiary Level	-	90%	100%			0%	50%	-	85%
Weighted Average - All HCFs	25%	90%	62%	20%	17%	6%	40%	43%	54%
Standard Deviation	0.00	3.99	20.03	12.70	14.85	27.54	10.50	52.33	27.42

5.5 Hand Hygiene Sessions in HCFs

Although COVID-19 has prompted UN agencies and INGOs to sponsor hand hygiene promotion messages on the print and electronic media, the effectiveness of these messages would substantially increase by having interactivity sessions on this subject. And HCFs are definitely the most appropriate venue for such sessions Based on the assessment survey, the percent of HCFs having the practice of organizing these sessions is presented in Table-5.7.

Table-5.7 Having Hand Hygiene Sessions in HCFs

HCF Level	Appropriate hygiene promotion Session at HCF Conducted								
	ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	13%	87%	69%	17%	46%	19%	6%	4%	52%
Secondary Level	-	97%	73%	45%	100%	0%	40%	100%	71%
Tertiary Level	-	90%	100%	0%	-	0%	50%	-	70%
Weighted Average - All HCFs	13%	88%	69%	19%	56%	18%	8%	26%	53%
Standard Deviation	0.00	5.17	16.94	22.72	38.18	10.97	23.07	67.88	29.72

5.5.1 Inter Entity Comparative Analysis

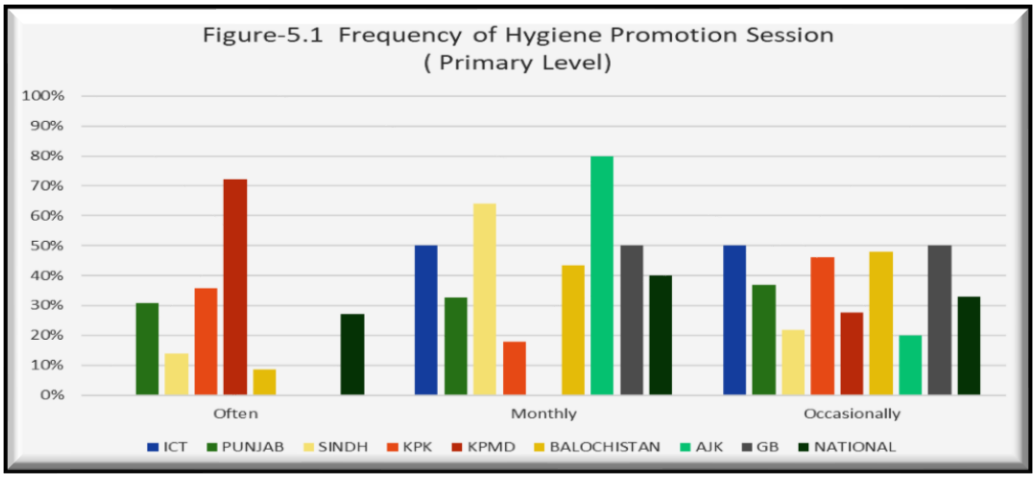
The results of the assessment survey presented in the Table above point to the need of scaling up of the practice of having hand hygiene promotional sessions in all the provinces and territories. This is particularly critical at the primary level in ICT, KPK, Balochistan, AJK and GB, where this practice is limited to a very small percent of HCFs. The situation at the secondary and tertiary levels in Balochistan is even worse than the primary level and requires immediate intervention by the higher authorities, as this critical in the wake of prevailing COVID-19 pandemic.

5.5.2 Situation at the National Level

In the interest of avoiding oversimplification, the grossly apathetic situation at the primary level in GB, AJK, ICT, and KPK, requiring immediate intervention by the concerned authorities needs to be highlighted. Nevertheless, the National scenario is not bleak, with a National weighted average of 53% and standard deviation of 29.72.

5.6 Frequency of Hand Hygiene Sessions

From among the primary level HCFs, where the promotional sessions do take place, it happens in most of them at a one month interval, (Figure-5.1).

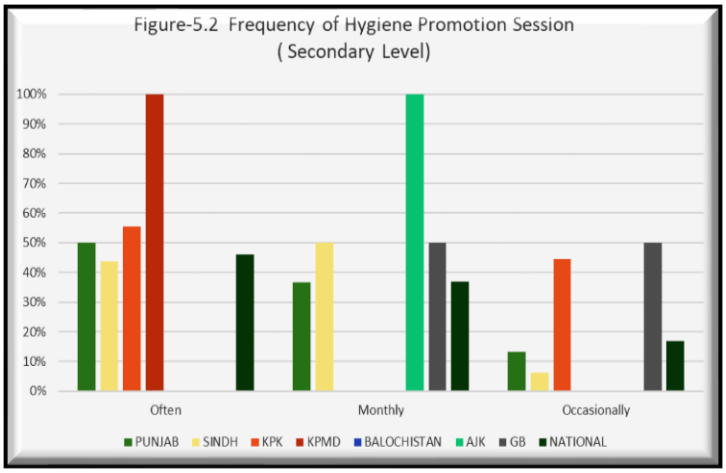


5.5.1 Inter-Entity Comparative Analysis

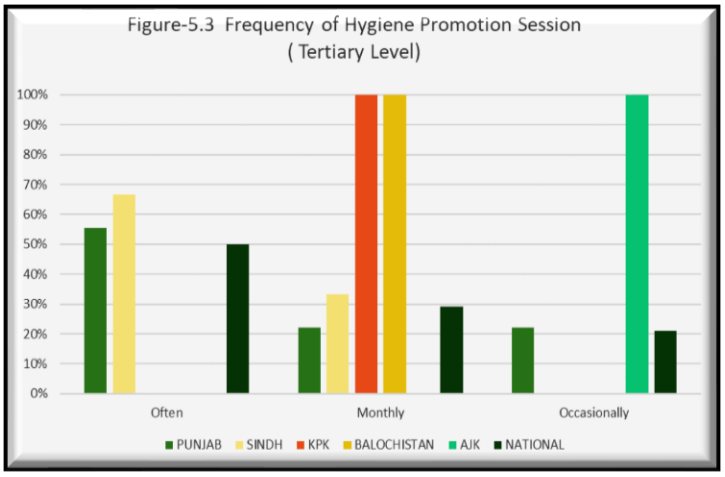
From 30% of HCFs in Punjab, to 80% in AJK follow this practice. From 20% in Sindh and AJK, to 50% in ICT do it occasionally, while 30% in Punjab, 10% in Sindh, and 5% of respondents in Balochistan report happening it more often than a month.

The frequency of organizing such events is more evenly distributed, at a secondary and tertiary level.

In case of the former (Figure-5.2), in 50 % of the HCFs in Punjab and 40% in Sindh, it takes place more often than a month. From about 38% in Punjab, 50% in Sindh, and 100% in AJK it happens on a monthly basis. Less than 10% secondary HCFs in Sindh, up to 100% in GB conduct these sessions occasionally.



The pattern of frequency is identical at the tertiary level, (Figure-5.3) . 58% of the tertiary HCFs in Punjab and 62% in Sindh conduct these sessions more often than a month. On the other hand, 20% in Punjab, 30% in Sindh, and 100% in Balochistan do it on a monthly basis, while 20% in Punjab, and 100% in AJK have them occasionally.



This analysis indicates that in the absence of a coherent WASH in HCFs policy, various provinces / territories perform these functions on an ad hoc basis, probably owing to induced motivation / facilitation.

5.6.2 Situation at the National Level

At the primary level, owing to low frequency (Occasional / never) in GB, AJK, and ICT, the National average of having hygiene promotional sessions at monthly intervals, or reasonably often (quarterly or bimonthly basis) works out to 52% of HCFs. The National average of HCFs following the practice of organizing the sessions on a monthly or quarterly basis stands in the vicinity of 70%.,

Chapter-6 SOLID WASTE MANAGEMENT

Although both the wastewater and solid waste generated at an HCF demand appropriate handling, the latter is critical with regard to IPC and HAI (Healthcare Associated Infections). A research based advice appearing in the social media, in October 2020, warned to be "extremely careful while visiting hospitals," as 80% of the COVID-19 cases appearing in the second surge of the viral disease, in Islamabad, were found to be associated with healthcare facilities. The importance of appropriately handling, treating and disposing of solid waste has therefore, never been as critical as it is now, in the backdrop of COVID-19 pandemic.

The Assessment Survey investigated the practices followed at different HCF levels, with regard to waste handling, treatment, and disposal. A discussion of the assessment survey results follow.

6.1 Solid Waste Segregation – At Source

Segregation of the waste at the point of generation is extremely important for efficient and safe handling of solid waste in the entire waste management process. Discussed below, is the situation found in this regard in the Consultation Areas, In-Patient Facilities, and Out-patient areas, at the primary, secondary, and tertiary levels.

6.1.1 Segregation in Consultation Area

- ***Inter Entity Comparative Analysis***

The percentage of the HCFs surveyed, segregating solid waste in three color coded / labelled bins in consultation areas is presented in Table-6.1.

Table-6.1 Availability of Coded Bins in Consultation Area

HCF Level	Three Coded Bins are Available in the Consultation Area								
	ICT	Punjab	Sindh	KP	KPND	Balochis-Tan	AJK	GB	NATIONAL
Primary Level	13%	96%	23%	20%	11%	9%	4%	8%	41%
Secondary Level	-	100%	50%	80%	100%	75%	40%	100%	78%
Tertiary Level	-	100%	100%	100%	-	100%	50%	-	95%
Weighted Average - All HCFs	13%	82%	24%	25%	19%	11%	5%	9%	43%
Standard Deviation	0.00	9.32	25.71	30.41	70.00	13.40	23.63	2.67	26.04

With the exception of Punjab, where the use of color coded bins is widespread, (96%), this practice is being followed only in a small percent of the HCFs, at the primary level, in all other provinces and territories, (From 4% of the HCFs in AJK to 23% in Sindh).

The situation improves significantly at the secondary level, with all (100%) of the HCFs surveyed in Punjab, KPMD, and GB, 80% in KPK, and 75% in Balochistan follow the practice of waste segregation in the consultation area. However, the situation in Sindh (50%) and AJK (40%), still need improvement.

All (100%) of the HCFs surveyed in Punjab, KPK, Sindh, and Balochistan follow the segregation practice in consultation area. . However, only 50% are doing this in AJK.

As bulk of the HCFs are primary in nature, the inter level weighted in all provinces and territories, (with the conspicuous exception of Punjab, is very low, (in single digits in Balocistan, AJK, and GB). This also adversely affects the weighted National average, which works out to 26%. The extremely high standard deviation (70) in KPMD reflects the marked inter level variations in these districts of KPK.

- ***Situation at the National Level***

Owing to the dismal situation in AJK, GB, KPMD, Balochistan, and ICT, and low percent of HCFs having coded bins in the consultation area in Sindh and KPK, the National average at the primary level works out to 41%. (The credit going to Punjab as the only province which has the practice of having color coded bines in 96% of HCFs at primary level). However, the National average of HCFs following this practice at secondary and tertiary levels is 78% and 95% respectively.

The weighted National average for all HCFs works out to 45%, with a standard deviation of 26.

6.1.2 Segregation in In-Patient Facility

Segregation in the in-patient areas exhibits pattern, identical to the consultation area, (However, all provinces and territories, other than Punjab, have poorer situation at all levels, in comparison with the consultation area,). Situation at the primary level in KPMD. Balochistan, AJK, and GB IS particularly alarming, (Table-6.2)

Table-6.2 Availability of Coded Bins in In-Patient Facility

HCF Level	Color-coded bins available for Out-Patient facility								
	ICT	Punjab	Sindh	KP	KPND	Balochis-Tan	AJK	GB	NATIONAL
Primary Level	13%	82%	15%	20%	1%	4%	3%	4%	33%
Secondary Level	-	94%	45%	70%	100%	25%	20%	0%	67%
Tertiary Level	-	100%	67%	75%	-	0%	50%	-	80%
Weighted Average - All HCFs	13%	82%	18%	24%	19%	5%	4%	3%	35%
Standard Deviation	0.00	9.32	25.71	30.41	70.00	13.40	23.63	2.67	26.04

6.1.3 Segregation in Out-Patient Area

- ***Inter Entity Comparative Analysis***

With minor variations, the segregation practices in the out-patient area are similar to those followed in the other two places discussed above. This is true for all the provinces and territories, and at all HCF levels, (Table-6.3).

Table-6.3 Availability of Coded Bins in Out-Patient Area

HCF Level	Color-coded bins available for Out-Patient facility								
	ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	13%	82%	15%	20%	1%	4%	3%	4%	33%
Secondary Level	-	94%	45%	70%	100%	25%	20%	0%	67%
Tertiary Level	-	100%	67%	75%	-	0%	50%	-	80%
Weighted Average - All HCFs	13%	82%	18%	24%	19%	5%	4%	3%	35%
Standard Deviation	0.00	9.32	25.71	30.41	70.00	13.40	23.63	2.67	26.04

- ***Situation at the National Level***

Analogous to, but poorer than the pattern discussed for consultation area, the National averages for primary, secondary, and tertiary HCFs turn out to be 36%, 72% and 85% respectively. This generate a national weighted average of 39%, with standard deviation of 27.99%.

6.2 Frequency of Emptying the Waste Bins

6.2.1 Inter Entity Comparative Analysis

The survey results indicate that at the primary level, a higher percentage of dust bins are emptied once a day in ICT, Punjab, and AJK. This trend is further strengthened at the secondary level HCFs in all the provinces and territories, other than Sindh, KP, and KPND. At the tertiary level, the practice tilts more in favor of emptying on filling, in all provinces and territories, other than Punjab, (Table-6.4)

Table-6.4 Frequency of Emptying of Waste Bins

HCF Level	Frequency	Frequency of Waste collection inside facility								
		ICT	Punjab	Sindh	KP	KPND	Balochis-Tan	AJK	GB	NATIONAL
Primary Level	Once a Day	69%	70%	35%	5%	9%	11%	65%	38%	41%
	Upon Filling	31%	30%	65%	95%	91%	89%	35%	62%	59%
Secondary Level	Once a Day	-	77%	32%	20%	0%	100%	100%	100%	54%
	Upon Filling	-	23%	68%	80%	100%	0%	0%	0%	46%
	Once a Day	-	80%	0%	100%	-	0%	50%	-	65%
Tertiary Level	Upon Filling	-	20%	100%	0%	-	100%	50%	-	35%
Weighted Average – All HCFs		Not Applicable								
Standard Deviation		Not Applicable								

This analysis indicates that with the exception of Sindh and Punjab, where waste bins are emptied once a day, and when full respectively, there is no consistent policy to empty the bins. It is important that where the bin is full and overspills, before the time of emptying, once a day practice will be harmful. Again, if the cleaning staff waits for several days, when

the bin is full is equally hazardous, as the waste my decompose and develop bacteria. It is therefore important that the waste bins are emptied when full but at least once a day.

6.2.2 Situation at the National Level

With the exception of the primary level, where the practice of emptying the bins on filling is more common (59%), the National average tilts in favor of emptying once a day at secondary (54%) and tertiary (65%) levels. In order to avoid the decay of the contents for retaining them for a longer practice, it is advisable that the bins are emptied when full, or once a day, whichever is earlier.

6.3 Frequency of Waste Disposal from the HCF

In all the HCFs surveyed, at all levels, there is dominant practice of waste disposal on a daily basis. (This situation prevails in all entities, and hence at the National level).

percent of facilities disposing of the waste every day increases with the level of the facility, approaching 100% at the tertiary level. (Table-6.5).

Table-6.5 Frequency of Solid Waste Disposal from HCFs

HCF Level	Frequency	Collection /Disposal of Hospital Waste from HCFs								
		ICT	Punjab	Sindh	KPK	KPMD	Balochis-tan	AJK	GB	NATIONAL
Primary Level	Once a Day	56%	61%	74%	69%	50%	56%	54%	89%	63%
	Once in a Week	6%	15%	18%	17%	2%	16%	24%	6%	16%
	Twice in a Week	38%	23%	7%	13%	29%	17%	22%	2%	17%
	Once in Month	0%	1%	1%	1%	19%	11%	1%	4%	4%
Secondary Level	Once a Day	-	71%	73%	85%	100%	100%	80%	100%	78%
	Once in a Week	-	13%	23%	10%	0%	0%	20%	0%	14%
	Twice in a Week	-	16%	5%	5%	0%	0%	0%	0%	8%
	Once in Month		0%	0%	0%	0%	0%	0%	0%	0%
Tertiary Level	Once a Day	-	100%	100%	100%	-	100%	100%	-	100%
	Once in a Week	-	0%	0%	0%	-	0%	0%	-	0%
	Twice in a Week	-	0%	0%	0%	-	0%	0%	-	0%
	Once a Month	-								
Weighted Average - All HCFs		Not Applicable								
Standard Deviation		Not Applicable								

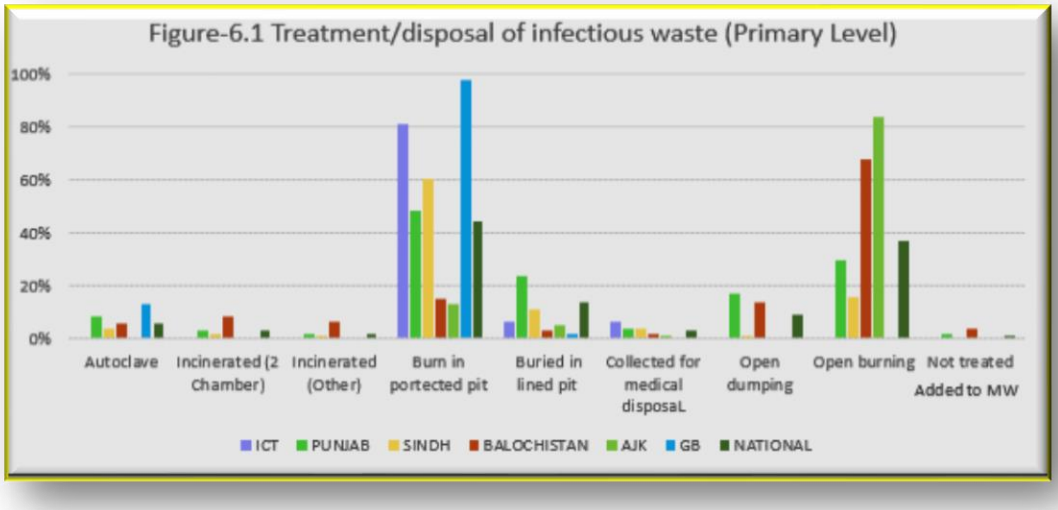
6.4 Infectious Waste Treatment and Disposal Practices

The HCFs surveyed tend to follow a variety of waste treatment /disposal practices. These practices vary significantly among the HCF levels; and among provinces / territories.

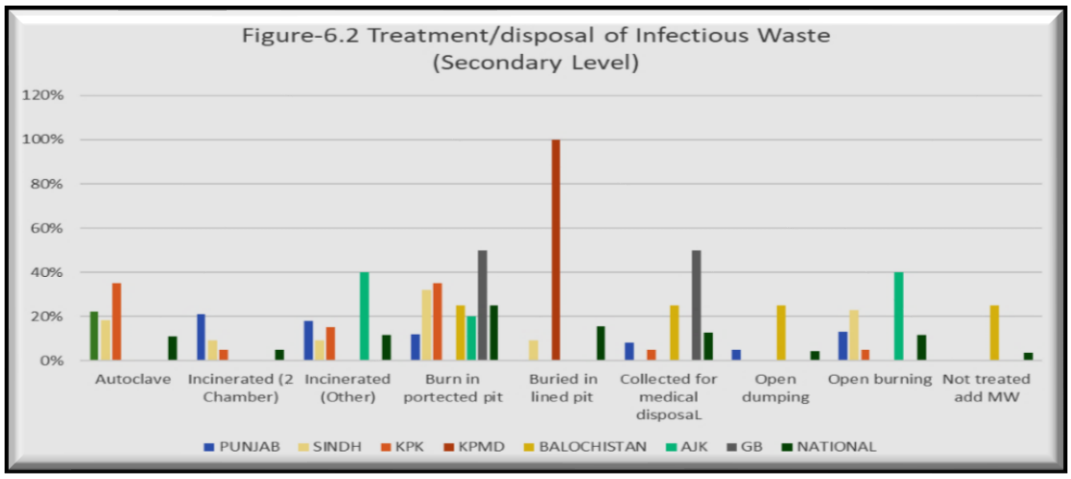
6.4.1 Waste Treatment & Disposal Practices at Primary level

- ***Inter Entity Comparative Analysis***

Burning in a protected pit is the most followed practice at the primary level. 96%of the HCFs surveyed in GB, and 80% in ICT follow this practice. Protected burning is also practiced by 60% of primary HCFs in Sindh, and 50% in Punjab, and about 15% each in Balochistan and AJK. However, Most HCFs in AJK (82%), Balochistan (67%), resort to open burning, while about 30% in Punjab also follow this practice, A smaller percent of the HCFs follow a number of other practices, (Figure-6.1).



6.4.1 Waste Treatment & Disposal Practices at Secondary Level



In Punjab, 22% of the secondary HCFs autoclave the infectious waste, 18% burn it in a double chamber incinerator, 5% is burned in a single chamber incinerator, 12% is burned in a protected pit,

and 18% is lifted by service providers for medical treatment. However, the remaining HCFs resort to open dumping / burning.

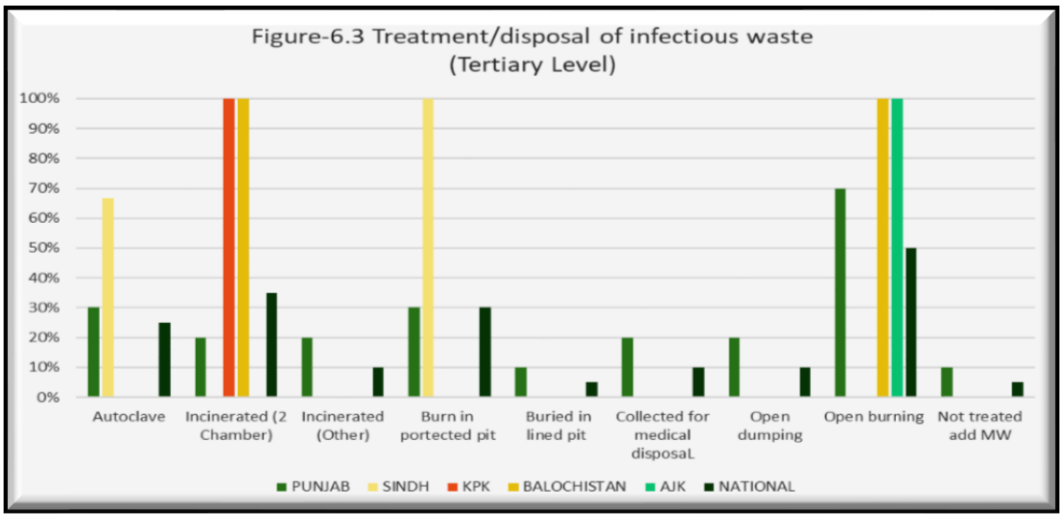
30% of HCFs in Sindh burn their waste in protected pits, 18% autoclave, 10% burn in a double chamber incinerator, and 10% in single chamber incinerator. However, 22% resort to open burning.

Practices in secondary HCFs in AJK are equally divided in single chamber incineration and open burning. In Balochistan, the HCFs are equally divided in four types of practices. Three of them include: Burning in protected pit and lifting for medical treatment outside the facility. The other two include open dumping and mixing with the municipal waste.

A policy of enforcing phased elimination of open dumping, open burning, and mixing with the municipal waste needs to be prepared and enforced on a high priority basis.

6.4.1 Infectious Waste Treatment & Disposal Practices at Tertiary Level

At the tertiary level, the infectious waste treatment / disposal practices are less diversified, in comparison with the primary and secondary levels, (Figure-6.3).



Infectious waste at 57% of the Tertiary HCFs in Punjab is collected by the service provider for medical treatment[21], and 43% is burnt in the double chamber incinerator. 65% of the tertiary facilities in Sindh, have autoclaves in place. However, owing to lack of technical capacity, most of them remain un-operational. In such cases, all the infectious waste is burnt in protected pits.

All tertiary facilities in KPK are equipped with a double chamber incinerator. Again, at the only one tertiary facility surveyed in Balochistan, has a double chamber incinerator, with the capacity to burn

[21] The collection and treatment of the infectious waste by the service provider seems to be a good practice. However, the environmental security and public safety during the transportation, and treatment at a supposedly centralized location, needs to be studied.

all (100%) of the infectious waste. It is however, important that owing to O&M issues, the burner often remains un-operational. The HCF is then resorted to open burning of the infectious waste.

This is a serious issue which needs to be addressed at a senior decision making level.

In the case of AJK an effort is made to transport all the infectious waste to the double chamber incinerator, installed in the CMH, (Combined Military Hospital). However, some of it (about 30%) is burnt in open, owing to transportation constraints.

- ***Situation at the National Level***

In primary HCFs, burning the infectious waste in a protected pit is most common (45%), closely followed by open burning (39%). At the secondary level the practice of burning in a protected pit (29%), is closely followed by the use of an autoclave. However, in the case of tertiary HCFs as many as 50% of the HCFs burn the infectious waste in open, although the use of a double chamber(35%) and autoclave (21%) is also practiced. 30% of tertiary HCFs burn the waste in protected pits[22].

[22] The percentages do not add up to 100, as many tertiary HCFs follow several practices. As explained earlier, either due to capacity shortfalls of the incinerators / autoclaves, or due to these high tech devise remaining un-operational owing to lack of technical support, the HCFs have no option but to resort to other practices, commonly open burning. The urgency and need to address this issue as a very high priority cannot be overemphasized.

CHAPTER-7 ENVIRONMENTAL CLEANING AND IPC
(WITH SPECIAL FOCUS ON COVID-19)

Environmental cleaning covers the cleaning and upkeep of all internal and external spaces, within a Health Care Facility. In the case of HCFs the WASH and IPC requirements and intertwined, the prevention of HAI has assumed a paramount importance in the backdrop of the COVID-19 pandemic. This chapter presents the practices being followed in this regard, by different levels of the HCFs surveyed in various provinces and territories in Pakistan.

7.1 Cleaning Protocols and Training of the Staff Responsible for Cleaning

Depending upon the level of the HCF, certain managerial and supervisory staff and workers need to be specifically hired or assigned additional roles related to cleaning of all internal and external activity areas in the HCF. And for in this purpose a set of cleaning protocols need to be in place and the staff responsible for cleaning needs to be trained to follow these protocols.

7.1.1 Availability of Cleaning Protocols

The assessment surveys revealed that with the exception of Punjab and Sindh, the cleaning protocols are available only at a small fraction of HCFs at the primary level. The situation in Balochistan and ICT is particularly dismal, where on 6% and 13% of the HCFs have cleaning protocols at this service level, (Table-7.1).

Table-7.1 Availability of Cleaning Protocols

HCF Level	Cleaning Protocols Available								
	ICT	Punjab	Sindh	KP	KPND	Balochis-Tan	AJK	GB	NATIONAL
Primary Level	13%	92%	71%	35%	18%	6%	33%	28%	56%
Secondary Level	-	97%	82%	80%	100%	0%	40%	100%	81%
Tertiary Level	-	100%	100%	90%	-	100%	50%	-	90%
Weighted Average - All HCFs	13%	92%	72%	39%	33%	6%	34%	45%	58%
Standard Deviation	0.00	4.17	14.70	29.30	57.98	56.15	8.48	50.70	28.60

- ***Inter Entity Comparative Analysis***

While the situation in other provinces and territories is better at the secondary level, the state of affairs in Balochistan is even worse, where none of the secondary level HCFs surveyed had a cleaning manual. Nevertheless, all the tertiary level facilities in Punjab, Sindh, and Balochistan and 90% in KPK have the protocols in place. However only 50% of the tertiary HCFs in AJK reported of having them available.

As a result of the skewed inter level distribution, the inter level weighted average in Balochistan is as low as 6%, with a standard deviation of 58%. This, along with the poor situation in ICT and KPMD has pulled down the National weighted average to 58%.

- ***Situation at the National Level***

Despite the cleaning protocols being available in very low percent of primary HCFs in Balochistan, ICT, and KPMD, the National average is 56% at the primary level. It increases to 81% at secondary and 90% at tertiary level. The weighted National average works out to 58%, with a standard deviation of 28.6.

7.1.2 Training of the Staff Responsible for Cleaning

The results of the survey were grouped into four categories, (a) All the staff received training, (b) some staff received training (c) None of the staff assigned / employed received training, and (d) No staff was assigned or employed for cleaning purposes. The results of the survey are presented in Table-7.2.

Table-7.2 Training Received by the Staff Responsible for Cleaning

HCF Level	Training Received	Staff responsible for cleaning is Trained								
		ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	Yes, all Staff	6%	30%	12%	67%	66%	35%	16%	62%	33%
	Some Staff,	81%	8%	19%	20%	29%	49%	50%	21%	24%
	None	6%	1%	3%	1%	1%	15%	24%	0%	6%
Secondary Level	Yes, all Staff	-	3%	9%	5%	0%	50%	40%	0%	9%
	Some Staff	-	0%	0%	0%	0%	0%	0%	0%	1%
	None		0%	0%	0%	0%	0%	0%	0%	0%
Tertiary Level	Yes, all Staff	-	0%	0%	0%	-	100%	50%	-	10%
	Some, Staff	-	0%	0%	25%	-	0%	0%	-	5%
	None	-	0%	33%	0%	-	0%	0%	-	5%
Weighted Average		No Applicable								
Standard Deviation		No Applicable								

- **Inter Entity Comparative Analysis**

A review of Table-7.2 indicates that at the primary level, with the exception KPK, KPMD, and GB, only a small percent of the entire staff has received training. However, in majority of the primary HCFs in ICT, and 50% in AJK, and 49% in Balochistan, the training has been imparted to some staff members.

Again, with the exception of Balochistan and AJK, the situation is alarming at the secondary and tertiary levels, in all the provinces and territories. This underscores the need and urgency of a crash training program, on IPC and WASH, the importance of which cannot be overemphasized in the backdrop of the prevailing COVID-19, recurring with challenging

variants. Owing to changes in the staff responsible for the management, supervision, and implementation of WASH in HCFs, the training must be repeated on a quarterly basis.

- ***Situation at the National Level***

Training of the staff responsible for cleaning does not appear to be an important intervention in the HCFs in Pakistan. Surprisingly, the situation goes from bad to worse from primary (33%) to secondary (9%) and tertiary (10%) levels. As mentioned earlier in the second and third waves of COVID-19 in Pakistan, 80% of the patients seemed to have fallen pray to the disease in the HCFs. In this backdrop, the cleaning of toilets and overall HCF environment is of paramount importance, which requires rigorous technical and motivational training of the staff responsible for cleaning.

7.2 Service Provision Area Disinfection

7.2.1 Practice of Service Area Disinfection

- ***Inter Entity Comparative Analysis***

Results of the survey reveal, (Table-7.3), that disinfecting the service area is practiced at all (100%) HCFs at tertiary level in all provinces, and at all levels in GB, the practice of disinfecting the service provision area is practiced. However, the situation needs to be substantially improved at the primary level in ICT, KPMD, AJK, and Balochistan.

Table-7.3 Service Provision Area Disinfection Practiced

HCF Level	Service Provision Area Disinfected								
	ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	25%	91%	69%	63%	16%	35%	13%	100%	66%
Secondary Level	-	94%	77%	90%	100%	75%	80%	100%	87%
Tertiary Level	-	100%	100%	100%	-	100%	100%	-	100%
Weighted Average - All HCFs	25%	91%	69%	65%	31%	36%	17%	100%	68%
Standard Deviation	0.00	4.55	16.14	19.14	59.40	33.02	45.29	0.00	31.46

Under the present challenging situation, marred with the stubborn presence of COVID-19, frequent disinfection of the service provision area in every HCF, needs to be practiced.

- ***Situation at the National Level***

National averages with regard to the practice of service area disinfection appear to be encouraging. Despite the low percent of primary HCFs following this practice in AJK and KPMD, the National average at this level works out to 66%. 87% of HCFs at secondary and 100% at tertiary level, follow the practice of service area disinfection. The national weightage average thus works out to 68%, with a standard deviation of 31.46.

7.2.2 Frequency of Service Area Disinfection

The assessment survey responses regarding the frequency of disinfection, (in the HCFs where it is practiced), have been reported in three time intervals – hourly, daily, and weekly, (Table-7.4).

Table-7.4 Sanitization Frequency of Service Provision Area

HCF Level	Frequency of Disinfection	Frequency of Area disinfection								
		ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	Every Hour	0%	15%	2%	1%	4%	9%	0%	2%	8%
	Every Day	100%	58%	72%	89%	83%	40%	58%	96%	66%
	Every Week	0%	27%	26%	10%	13%	51%	42%	2%	26%
Secondary Level	Every Hour	-	42%	0%	11%	100%	0%	0%	0%	20%
	Every Day	-	34%	53%	89%	0%	33%	50%	100%	54%
	Every Week	-	24%	47%	0%	0%	67%	50%	0%	26%
Tertiary Level	Every Hour	-	40%	33%	0%	-	0%	0%	-	25%
	Every Day	-	60%	33%	25%	-	0%	100%	-	50%
	Every Week	-	0%	33%	75%	-	100%	0%	-	25%
Weighted Averages		Not Applicable								
Standard Deviation		Not Applicable								

- ***Inter Entity Comparative Analysis***

As shown in Table-7.4, most primary, secondary and tertiary HCFs sanitize the service area on once a day basis. ICT (100%), KPK (89%), KPMD (83%), and GB (96%), stand out in this regard, at the primary level.

A significant percent of the secondary HCFs in KPMD (100%), and Punjab (42%), have a practice of disinfecting on an hourly basis. 33% HCFs in Sindh also follow this practice. 40% of tertiary HCFs in Punjab, and 33% in Sindh also follow this practice.

Although disinfecting the service area, at least every day, should be mandatory, the frequency may be increased to an hourly basis in HCFs where the patient load is greater.

- ***Situation at the National Level***

Once a day sanitizing of the service provision is most common in the HCFs at all levels. National averages of daily sanitization at primary, secondary, and tertiary level are, 66%. 54%. And 50% respectively. A small percent (8%) of primary, but a significant percent of secondary (20%) and tertiary (25%) HCFs follow hourly sanitization of service provision area. Again 26% of primary and secondary, and 25% of tertiary HCFs do it only on a weekly basis.

While hourly sanitization of the service provision area is preferable, daily may be acceptable at HCFs where the patient load is small. Weekly sanitization is definitely inadequate and should not be allowed to continue. .

7.3 Availability of Cleaning Budget

As the maintenance of a clean environment is the key to IPC, the importance of an adequate amount needs to be allocated for this purpose, as an independent 'Head Item' in the annual budget. However, there is a general practice of clubbing this expenditure with other non-salary items, particularly at the primary level. Owing to competing priorities, the amount available for this purpose, at the primary level is often adequate. However, the situation tends to be better at the secondary and tertiary levels. The results of the assessment survey indicate that at the primary level the provision of funds for cleaning is generally inadequate. However inter-provincial / territory variations are substantial (Table-7.5).

Table-7.5 Availability of Cleaning Budget

HCF Level	Availability of Adequate Cleaning Budget								
	ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	56%	77%	79%	4%	3%	36%	27%	2%	54%
Secondary Level	-	90%	90%	85%	100%	100%	40%	50%	87%
Tertiary Level	-	100%	100%	100%	-	100%	50%	-	95%
Weighted Average - All HCFs	56%	78%	80%	11%	20%	38%	28%	13%	56%
Standard Deviation	0.00	11.53	10.50	51.64	68.59	36.95	11.53	33.94	27.76

- ***Inter Entity Comparative Analysis***

The proportion of primary HCFs with adequate cleaning budget is as low as 2% in GB, 3% in KPMD, and 4% in KPK, with significant shortfalls in AJK and Balochistan. However, although still in deficit, the situation is better in other provinces and territories, with ICT, Punjab and Sindh, meeting 56%, 77% and 79% of the expenditure.

The budgetary provisions continue to be ominously inadequate in GB, (where no funds are specifically allocated for cleaning, at the secondary level), and cleaning expenditure in AJK exhibit a shortfall of 60% at the secondary and 50% at the tertiary level.

However, the situation is by far better in Punjab, Sindh and Balochistan, where 90% to 100% of the cleaning expenditure is met by the budgetary provisions.

- ***Situation at the National Level***

With the conspicuous exception of GB, KPK, and KPMD, the cleaning budget is available some or most HCFs at the primary level, yielding a National average of 54%. The National

averages at secondary and tertiary levels are 87% and 95% respectively. The national weightage average thus works out to 45%, with a standard deviation of 27.76.

7.4 Confronting COVID-19, and Preventing Corona Transmission

HCFs are at the fore front in the battle against COVID-19, and must therefore be well prepared to take all necessary measures to help those contracting the virus and effectively prevent its transmission to others. For this purpose, the HCF staff needs to be well aware of the ways and means of controlling the virus, and ensure high quality WASH provisions and strict application of IPC and HAI Control SOPs. The assessment surveys thoroughly investigated the prevailing situation at the primary, secondary, and tertiary level, with regard to the HCF preparedness to cope with the situation.

7.4.1 Awareness of COVID 19 Prevention

Awareness of the health staff regarding prevention and control of the virus is the fundamental requirement for its containment and elimination. The results of the assessment survey in this regard are summarized in Table-7.6.

Table-7.6 Awareness of COVID 19 Prevention Among Health Workers

HCF Level	Health Workers Aware of the Importance of COVID-19 Prevention								
	ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	81%	87%	95%	96%	86%	79%	87%	2%	86%
Secondary Level	-	90%	95%	100%	100%	100%	100%	50%	95%
Tertiary Level	-	100%	100%	100%	-	100%	100%	-	100%
Weighted Average - All HCFs	81%	87%	95%	96%	88%	79%	88%	13%	87%
Standard Deviation	0.00	6.92	2.74	2.33	10.03	12.35	7.46	34.02	27.10

- ***Inter Entity Comparative Analysis***

With the exception of GB at the primary level, the percentage of the health staff having awareness of the prevention and control of COVID-19 appears to be reasonably good in all the provinces and territories.

- ***Situation at the National Level***

The awareness of COVID 19 prevention protocols among HCF staff is generally encouraging at all HCF levels in Pakistan, from 86% at primary to 95% at secondary and 100% at tertiary level. The National weighted average works out to 87% with a standard deviation of 27.

7.4.2 Corona Transmission Control

Corona transmission is controlled primarily by isolating the Corona patients and suspects, the staff wearing PPE, the visitors wearing masks, and keeping a social distance of 2 meters.

The assessment survey took an account of all these practices. An inter provincial / territory comparison of the extent of following these practices, at different HCF levels follows.

(a) Availability of Corona Cohort Rooms

To isolate / quarantine the Corona patients from others is a key to prevent the transmission of the Virus. The availability of Corona Cohort Rooms at different HCF levels, in various provinces / territories is presented in Table-7.7.

Table-7.7 Availability of Corona Cohort Rooms with Toilets

HCF Level	Corona Cohort Rooms Available with Toilet								
	ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	6%	25%	9%	3%	1%	5%	2%	2%	14%
Secondary Level	-	84%	55%	80%	100%	100%	40%	50%	74%
Tertiary Level	-	90%	67%	100%	-	100%	50%	-	85%
Weighted Average - All HCFs	6%	29%	12%	9%	19%	8%	4%	13%	18%
Standard Deviation	0.00	35.60	30.71	51.14	70.21	55.12	25.18	34.02	8.11

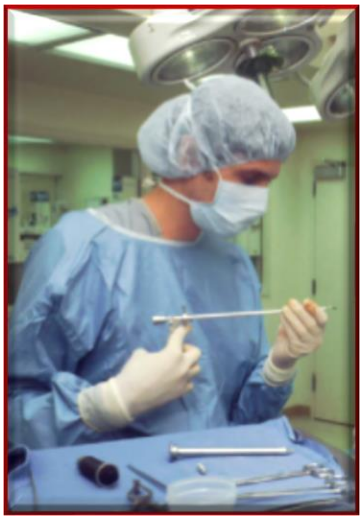
- ***Inter Entity Comparative Analysis***

As such a facility can only be expected to be made available at the highest primary level, i.e. Rural Health Centers, (RHCs), the percentage of such rooms at the primary level remains low, (From 1% in KPMD, 2% in GB and AJK, 3% in KPK, 5% in Balochistan, to 25% in Punjab). However, at the secondary and tertiary level, the Coronal isolation rooms have been found in a good percent in AJK, and in abundance in most other provinces and territories.

- ***Situation at the National Level***

With the exception of the primary level, Corona cohort rooms are available in most of the secondary (74%), and tertiary (85%) HCFs. This generates a low National weighted average of 18%, which may be read in the perspective that such a facility cannot be expected to exist at the primary level, except in RHCs, which are only a small percent of primary HCFs.

(b) Staff Wearing Protection Gear



- ***Inter Entity Comparative Analysis***

The percent of primary HCFs where staff wears personal protection equipment is extremely low in GB (2%), KPMD (6%), and KPK (7%). With the exception of Balochistan, (where only 17% of primary HCFs have their staff in protection gear), the majority of primary HCFSs in other provinces and territories have the practice of the staff wearing PPE. Again, at the secondary level, the majority of HCFs have staff in PPE, with the exception of Balochistan, Amazingly at the tertiary level, Punjab lags behind other

provinces behind all other provinces and territories, having tertiary facilities. While all, (100%) , of tertiary HCFs in Sindh, KPK, Balochistan, and AJK have the PPE wearing protocol in place, only 70% of the tertiary HCFs in Punjab follow this protocol. The National weighted average thus works out to 53%, with a standard deviation of 27.53, (Table-7.8).

Table-7.8 Percent of HCFs with Staff Wearing PPE

HCF Level	Staff equipped with personal protection Equipment								
	ICT	Punjab	Sindh	KP	KPND	Balochistan	AJK	GB	NATIONAL
Primary Level	56%	76%	66%	7%	6%	17%	66%	2%	52%
Secondary Level	-	90%	59%	70%	100%	25%	80%	50%	73%
Tertiary Level	-	70%	100%	100%	-	100%	100%	-	80%
Weighted Average - All HCFs	56%	77%	66%	13%	23%	17%	67%	13%	53%
Standard Deviation	0.00	10.40	21.86	47.37	66.70	12.75	17.21	34.02	27.53

- ***Situation at the National Level***

Majority of HCFs at all levels have the staff wearing PPE. With 52% at the primary level to 73% at secondary and 80% at tertiary level come in the protection gear. The National weighted average thus works out to 53% with a standard deviation of 27.53.

(c) Visitors Wear Masks

Wearing a mask is the most cost-effective method of protecting yourself, as well as, others. The countries who have almost eliminated the pandemic, have promoted the moto of, "I Protect You – You Protect Me."

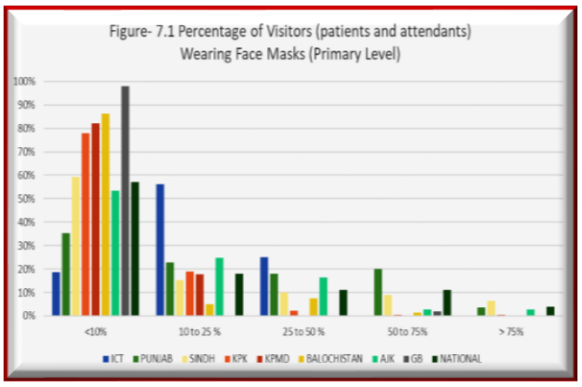
While the current COVID-19 situation demands that the mask is worn at all public places, wearing it at the HCFs is most critical. Many HCFs in Pakistan, do not allow any body to enter their premises, without wearing a mask.

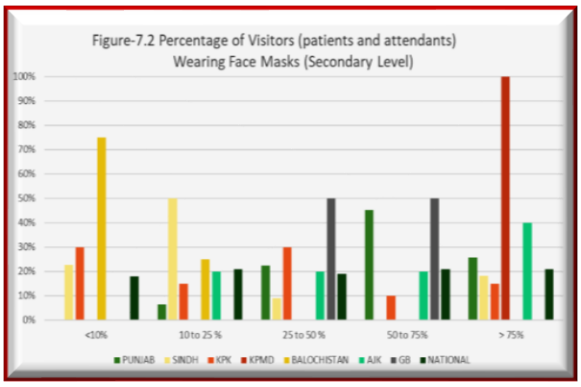
- **Inter Entity Comparative Analysis**

A brief discussion of the percentage of visitors wearing masks at different level of HCFs in various provinces and territories is presented below.

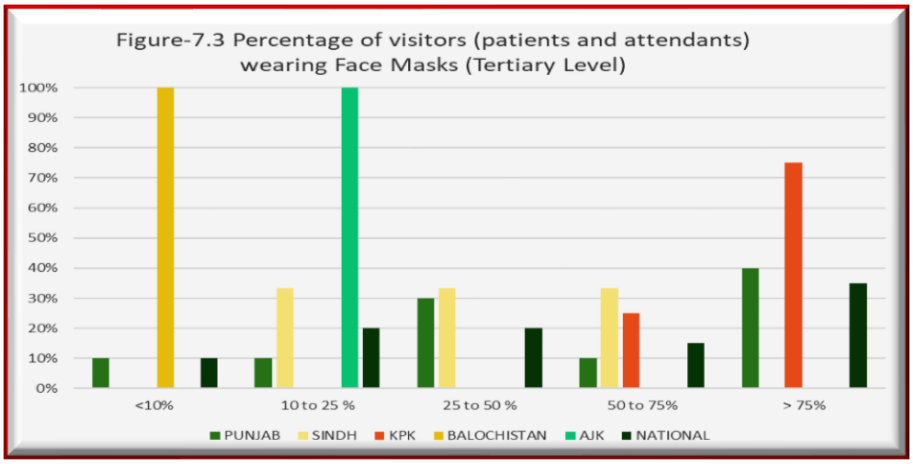
- **Primary Level:** Less than 10% of the visitors in GB, Balochistan, KPMD, KPK, and Sindh wear masks at the primary HCFs. The situation is marginally better in ICT, Punjab, Sindh and AJK, (Figure-7.1)

- **Secondary Level:** Situation at the secondary level is marginally different. While the practice remains unchanged in GB, it exhibits some improvement in Balochistan. AJK registers significant improvement, with higher percentage of visitors wearing masks. Upwards shift in Punjab and Sindh are noticeable, but not dramatic. But, KPMD stands out in this regard, where all (100%) visitors to secondary HCFs wear masks, (Figure-7.2).





- **Tertiary Level:** At majority of the Tertiary HCFs, visitors do not wear mask in most provinces and territories. With the exception of KPK, where 75% of visitors in 75% of tertiary HCFs wear masks, the situation is alarming in all provinces and territories, (Figure-7.3). Strict enforcement mechanism at the HCFs needs to be in place, disallowing the entry of visitors without masks.



7.4.3 Maintaining Social Distance

.People have a tendency to crowd up at the hand washing facilities, which can be hazardous in the COVID-19 perspective. The assessment survey portrayed a dismal situation in GB, KPMD, and KPK, at the primary level, where social distancing is practiced only in 2% and 6% and 7% of the HCFs. However, Punjab, Sindh and AJK present a satisfactory situation. The HCFs Management needs to exercise greater discipline in Balochistan, where social distance is maintained only at 17% of primary HCFs, (Table-7.10).

Table – 7.9 Social Distance at Hand Washing Facility Maintained

HCF Level	Social Distance at Hand Washing Facility Maintained								
	ICT	Punjab	Sindh	KP	KPND	Balochis-Tan	AJK	GB	NATIONAL
Primary Level	56%	76%	66%	7%	6%	17%	66%	2%	52%
Secondary Level	-	90%	59%	70%	100%	25%	80%	50%	73%
Tertiary Level	-	70%	100%	100%	-	0%	100%	-	80%
Weighted Average - All HCFs	56%	77%	66%	13%	23%	17%	67%	13%	53%
Standard Deviation	0.00	10.40	21.86	47.37	66.70	12.75	17.21	34.02	27.53

With KPMD , Punjab, and AJK standing out, the situation is satisfactory at the hand washing stations at secondary HCFs in all provinces / territories, with the exception of Balochistan.

At the tertiary level, the situation is satisfactory in Punjab and excellent in Sindh, KPK, and AJK. However, the hand washing stations in Balochistan are overcrowded, as the capacity of the hand washing facilities are far below the patient load requirement.

- ***Situation at the National Level***

Following the analysis of inter entity situation, discussed above, the National averages of the HCFs observing social distance at hand washing facilities are 52% at primary, 73% at secondary, and 80% at tertiary level. The weighted national average works out to 53%, with a standard deviation of 27.53.

Owing to substantial inter entity variations, the corrective actions have to be undertaken by the provincial government by increasing the number of handwashing facilities and disciplining the users.

7.4.4 Practice of Sanitizing Door Knobs

Door knobs at all public places, but especially at the HCFs, can be contaminated even with a single use by a Corona positive person, underscoring the need of adopting door knob sanitization practice, at the entrance, consultation rooms, service provision areas, and toilets. Table-7.10 gives the percentage of knob sanitization, at different levels of HCFs.

Table – 7.10 Practice of Sanitizing Door knobs Followed

HCF Level	Practice of Sanitizing Door Knobs Followed								
	ICT	Punjab	Sindh	KP	KPND	Balochis-Tan	AJK	GB	NATIONAL
Primary Level	25%	60%	16%	4%	4%	11%	9%	2%	29%
Secondary Level	-	94%	32%	80%	100%	25%	80%	50%	68%
Tertiary Level	-	100%	67%	100%	-	100%	100%	-	95%
Weighted Average - All HCFs	25%	62%	17%	10%	22%	34%	13%	13%	32%
Standard Deviation	0.00	21.51	26.02	50.88	67.70	6.42	47.83	34.02	17.25

- ***Inter Entity Comparative Analysis***

With the exception of Punjab, the practice of door knob sanitization is seldom practiced in the primary HCFs. However, the situation improves at the higher level HCFs, by varying degrees, in all provinces and territories, approaching 100% at the tertiary level in Punjab, KPK, Balochistan and AJK, with Sindh registering a 67% mark at this level.

- ***Situation at the National Level***

Owing to extremely low percent of primary HCFs in some provinces / territories practicing door knob sanitization, (Table-7.10), the national average at this level is only 29%. However, the situation is better at the secondary (66%), and tertiary (95%) levels. The National weightage average works out to 32%, with a standard deviation of 17.25.

7.4.5 Frequency of Door Knob Sanitization

The frequency of knob sanitization in the facilities practicing knob sanitization is presented in Table-7.11. on the following page.

- ***Inter Entity Comparative Analysis***

As given in Table-7.11, even at the primary level, 100% of HCFs practicing door knob sanitization do it after every use in KPMD and ICT. This practice is followed by a small percent of primary HCFs in Punjab (24%) and Sindh (14%). Majority of the rest do it on an hourly basis.

Table-7.11 Frequency of Sanitizing Door Knobs

HCF	Frequency of Sanitization	Sanitization frequency for door knob and bolts								
		ICT	Punjab	Sindh	KP	KPND	Balochis-Tan	AJK	GB	NATIONAL
Primary Level	After Every Use	100%	31%	12%	63%	100%	78%	0%	2%	32%
	After 30 Minutes	0%	16%	1%	13%	0%	7%	0%	0%	13%
	After 60 Minutes	0%	53%	87%	25%	0%	15%	100%	98%	55%
Secondary Level	After Every Use	-	24%	14%	50%	100%	0%	0%	0%	24%
	After 30 Minutes	-	10%	0%	0%	0%	0%	0%	0%	14%
	After 60 Minutes	-	66%	86%	50%	0%	100%	80%	100%	62%
Tertiary Level	After Every Use	-	20%	0%	0%	-	0%	0%	-	10%
	After 30 Minutes	-	0%	0%	25%	-	0%	0%	-	10%
	After 60 Minutes	-	80%	100%	75%	-	100%	100%	-	80%
Weighted Average		Not Applicable								
Standard Deviation		Not Applicable								

At the tertiary level in Punjab, 20% of the HCFs do it after every use, while others repeat the process on an hourly basis. All tertiary facilities in Sindh, Balochistan, and AJK, follow an hourly sanitization regime.

- ***Situation at the National Level***

The National average of the majority (55%) of the HCFs practicing door knob sanitization at the primary level, do it on an hourly basis. The National averages for secondary and tertiary HCFs practicing door knob sanitization, are 62% and 80% respectively, (on an hourly basis).

This may be borne in mind that hourly sanitization of door knobs is of little use, unless hand sanitization is practiced frequently. For this purpose, it is important that hand sanitizer dispensers are installed at various spots in the HCFs, for the use of staff and visitors.

7.4.5 Awareness and Practice of Referral for Corona Treatment

Staff at all the HCF, not handling Corona patients, are expected to refer them to the facilities, where they can be easily transported and treated. The interviewee responses in this area of the assessment survey are presented in Table-7.12.

- ***Inter Entity Comparative Analysis***

This is unfortunate that in all the provinces and territories, including ICT, Punjab, KPK, KPMD, Balochistan, and AJK, a high percentage of the primary level staff is aware of the referral protocols, but are not practicing them. There is a need to take an immediate action to change this behavior. Sindh is the only exception in this regard.

Table-7.12 Practice of Referral Protocols

HCF	Practice of Referring Protocol	Health Staff aware of and practicing the referral protocols								
		ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	Aware but not practicing	88%	65%	21%	96%	96%	69%	71%	2%	63%
	Aware and practicing	13%	32%	69%	2%	4%	14%	12%	0%	30%
	Not aware/ Not Practicing	0%	3%	10%	1%	1%	16%	17%	98%	7%
Secondary Level	Aware but not practicing	-	23%	18%	35%	0%	75%	60%	0%	28%
	Aware and practicing	-	77%	77%	65%	100%	25%	40%	100%	69%
	Not aware/ Not Practicing	-	0%	5%	0%	0%	0%	0%	0%	3%
Tertiary Level	Aware but not practicing	-	30%	33%	0%	-	100%	0%	-	25%
	Aware and practicing	-	70%	67%	100%	-	0%	100%	-	75%
	Not aware/ Not Practicing	-	0%	0%	0%	-	0%	0%	-	0%
Weighted Average		Not Applicable								
Standard Deviation		Not Applicable								

At the secondary level, the situation is marginally better, but there is a lot of room for improvement. However, in all the provinces and territories, other than in Balochistan, the practice of referral is practiced in all tertiary facilities. As despite being well aware of the need of referral to other better equipped HCFs, it is not practiced at the only tertiary HCF surveyed in Balochistan, apparently for the reason that this facility, (Bolan Teaching Hospital) is best equipped to handle COVID in the Province.

- ***Situation at the National Level***

Resulting from the disappointing situation in some of the entities, the National averages of the HCFs with the staff having the awareness of the importance of referring the COVID patients, (to conveniently located HCFs equipped to treat them), and practicing the referral protocols, are generally lower than required. The National averages for primary, secondary, and tertiary levels work out to 30%, 69% and 75% respectively.

CHAPTER-8 IPC AND WASTE MANAGEMENT IN GYNECOLOGY SERVICE AREA

In gynecological service areas, we have expecting mothers who need to be protected from HAIs including viruses and allergies, Again, the newborns, who are very fragile and susceptible to infections need to be handled and kept in a germ free environment. Moreover, the procedure itself requires the use of sterilized instruments, and there has to be a hand hygiene facility inside the service area, fully equipped with water. soap, and hand drying facility[23]. Finally, the staff involved must wear adequate personal protection equipment. It is also important, that the medical and surgical waste, as well as human placenta is disposed of in an environmentally safe manner. Following is a discussion of the results of the assessment survey related to WASH and IPC in the gynaecological service area.

8.1 Staff Protection in Gynecological Care Area

8.1.1 Inter Entity Comparative Analysis

It is interesting to note that, perhaps owing to the COVID-19, even at the primary level, a higher than expected percentage of the gynae staff wears PPE, (Table-8.1). It was noted in all provinces and territories, other than ICT and Balochistan, (From 59% in AJK to 96% in GB).

In contrast, situation at GB is worse at the secondary level, with the staff in AJK needing to be more careful. However, the situation is marginally satisfactory in Sindh (55%), with Punjab and Balochistan doing reasonably good. All the gynae staff at the tertiary level are found in PP gear, (Table-8.1).

Table-8.1 Staff Wearing PPE in Gynecological Care Area

HCF LEVEL	Provinces / Territories						
	ICT	PUNJAB	SINDH	BALOCHIS-TAN	AJK	GB	NATIONAL
Primary	19%	93%	74%	19%	59%	96%	70%
Secondary	-	84%	55%	100%	40%	0%	70%
Tertiary	-	100%	100%	100%	100%	-	100%

[23] As mentioned already ABHS are not a substitute for washing hands with soap, particularly when they are soiled, as it is often the case in a gynaecological procedures. Again, hot air blowers

8.1.2 Situation at National Level

Although there is ample room for improvement at the primary and secondary levels, where 70% of the staff in the gynecological care area wears PPE. All (100%) of the staff, at the tertiary level, follows this practice.

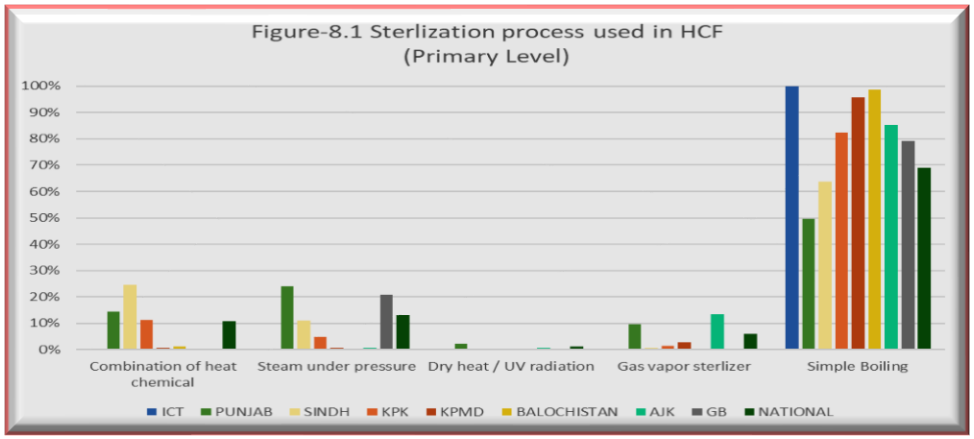
8.2 Sterilization of Instruments

Satisfactory sterilization of instruments is the key to a safe gynaecological procedure, with the objective of preventing HAIs.

A variety of processes and equipment are used to sterilize instruments used in in gynecological procedure, as for any other purpose, with varying degree of reliability. A brief discussion of the results of the assessment survey regarding sterilization processes and equipment used at primary, secondary, and tertiary levels is presented below.

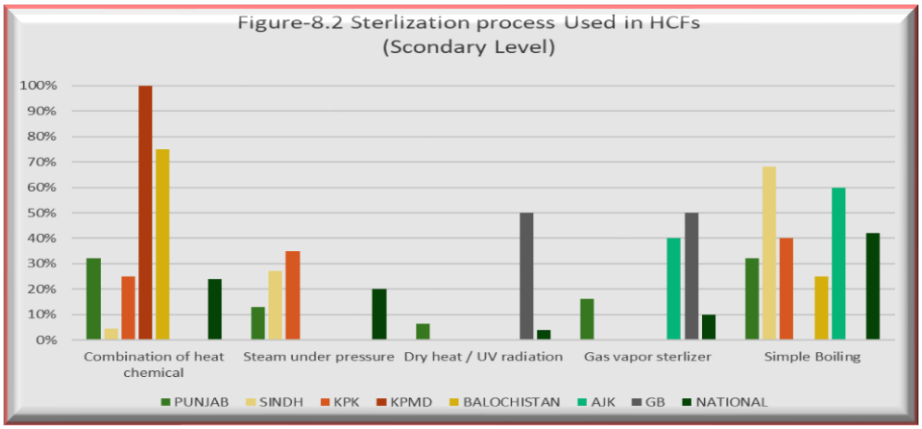
8.2.1 Inter Entity Comparative Analysis

- **Primary Level:** In vast majority of primary HCFs, (including all (100%) ICT, 98% in Balochistan, 96% in KPMD, 86% in AJK, 82% in KPK, 62% in Sindh, and 50% in Punjab), instruments are sterilized by simple boiling. However, in a small percent of the HCFs at the primary level, in Punjab, Sindh, KPK, AJK, and GB, the instruments are sterilized through a combination of heating with the addition of chemicals, high pressure steam treatment**,** and gas vapor sterilization**,** (Figure-8.1)

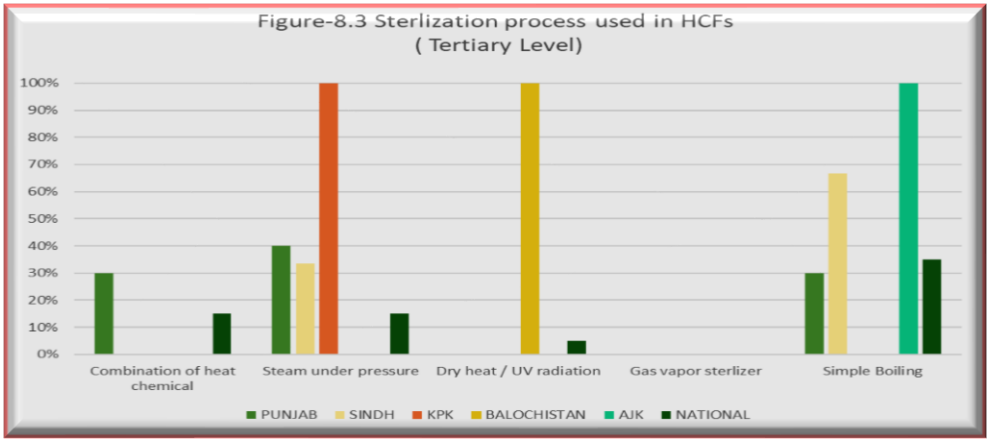


- **Secondary Level:** At the secondary level, 100% of HCFs in KPMD, and 74% in Balochistan use a combination of heating with chemical mixed solution. However, 50% of the secondary HCFs in GB use a gas vapor sanitizer, while the other 50% use gas vapor sterilizer. Maximum number of facilities in Sindh (65%) and AJK (60%), and KPK (50%), continue using simple boiling. Various secondary HCFs in Punjab, use all these

techniques in varying percentages, including heating with chemical mixed solution, (30%) and simple boiling (32%), (Figure-8.2)



- **Tertiary Level:** The only tertiary facility surveyed in Balochistan, uses dry-heat, UV radiation method. Majority of the tertiary facilities in Sindh use simple boiling for sterilization of gynae related instruments. All the tertiary HCFs in KPK use steam under pressure, and Balochistan uses dry heat / UV radiation. All tertiary HCFs in AJK, and 68% of Sindh use simple boiling. Punjab follows the same pattern, with different tertiary HCFs using different techniques, including steam under pressure (40%), and boiling with chemical solution, and simple boiling, (30% each), (Figure-8.3).



8.2.2 Situation at the National Level

Although a variety of sterilization techniques are used at different level of HCFs in various provinces and territories, the majority, (National average of 69%), of primary HCFs use simple boiling for this purpose. 42% of the HCFs at secondary level resort to simple boiling. With significant percent use combination of heating with chemical solution (24%), and steam under pressure, (20%). Equal percent (35% each) of HCFs at tertiary level use steam under pressure, and simple boiling.

It is important to taper of simple boiling at all levels, to give way to more effective sterilization techniques. It is particularly important at secondary and tertiary level, where patients are subjected to long and complex surgical operations.

8.3 Medical Waste Disposal from the Procedure Room

The medical waste in the gynae service area includes contaminated gloves, swabs, absorbent paper and surgical masks. Like all other waste, the medical waste is temporarily disposed of in the dust bins placed in the gynae service area, carried in identifiable bags or bins of appropriate material to a specific or central burning facility. The residual of the burning units / incinerators is stored and disposed of in an environmentally safe manner.

8.3.1 Types of Bags / Bins Used for Temporary Storage of Gynae Waste

- ***Inter Entity Comparative Analysis***

Majority of the primary HCFs, with the exception of GB, use labelled dust bins for temporary storage and transport of medical waste. GB uses polythene bags for this purpose. Percentage of primary HCFs using dust bins also relatively small in KPK and KPMD, (42% and 37%). In these three entities the use of polythene bags is more common[24].

The situation is similar at the secondary and tertiary levels. However, the use of labelled dustbins is more common, some of which are airtight, (10% in Punjab, and 25% in Sindh). These bins are safer for storage and transport of infectious waste, (Table-8.2).

Table-8.2 Types of Bags / Bins Used for Storage of Gynae Waste in Procedure Room

	Disposal of Medical Waste	Types of Bags / Bins Used for Carrying Medical Waste								
		ICT	Punjab	Sindh	KP	KPND	Balochistan	AJK	GB	NATIONAL
Primary Level	Polythene Begs	31%	14%	18%	46%	55%	16%	23%	96%	26%
	Labelled Dustbins	63%	82%	80%	42%	37%	73%	58%	4%	67%
	Airtight Labelled Bin	6%	4%	2%	12%	8%	11%	19%	0%	7%
Secondary Level	Polythene Begs	-	35%	59%	37%	100%	25%	0%	100%	42%
	Labelled Dustbins	-	61%	41%	52%	0%	75%	100%	0%	55%
	Airtight Labelled Bin	-	3%	0%	6%	0%	0%	0%	0%	3%
Tertiary Level	Polythene Begs	-	50%	25%	25%	-	0%	0%	-	30%
	Labelled Dustbins	-	40%	50%	75%	-	100%	100%	-	65%
	Airtight Labelled Bin	-	10%	25%	0%	-	0%	0%	-	5%
Weighted Average - All HCFs	Not Applicable									
Standard Deviation	Not Applicable									

[24] As polythene bags are not biodegradable, the dumping or open burning of waste in these bags is environmentally hazardous. However, this practice is acceptable at HCFs equipped with double chamber incinerators.

It is preferable to use dust bins equipped with automatically closing covers, with a lever, operated by foot. airtight dust bins, which are duly labeled. Again, the bins must be washed with disinfectants before putting to the next use after emptying. covers tertiary facilities in Punjab (10%), and Sindh (25%) use Given that gynecological care is offered only at a small percent of primary HCFs, the situation there is better of than that at secondary and tertiary levels.

- ***Situation at the National Level***

National average for the use of labelled bins for storage of gynae waste at the primary level is 66%, compared to 55% at the secondary, and 65% at the tertiary level. Similarly, (although small at all levels), the national average for the use of airtight bins is 7% at the primary, in comparison with 3% at secondary, and 5% at tertiary level. At all other HCFs, at all levels, simple polythene bags are used for this purpose.

8.3.2 Transport of Gynecological Procedure Waste

Three types of bags are used for the temporary storage (in or near the procedure room), and its transportation to the disposal site, (Table-8.3).

Table-8.3 Intermediate Disposal and Internal Transport of Procedure Waste

HCF Level	Surgical Waste Disposal	Intermediate Disposal and Internal Transport of Procedure Waste								
		ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	Biohazard bags yellow in color	0%	41%	7%	7%	13%	0%	4%	2%	20%
	Biohazard bag black in color	13%	6%	5%	10%	19%	0%	1%	62%	7%
	No Color-Coded bag	88%	52%	88%	83%	68%	100%	95%	36%	73%
Secondary Level	Biohazard bags yellow in color	-	68%	9%	20%	100%	0%	0%	0%	35%
	Biohazard bag black in color	-	3%	0%	15%	0%	0%	20%	50%	7%
	No Color-Coded bag	-	29%	91%	65%	0%	100%	80%	50%	58%
Tertiary Level	Biohazard bags yellow in color	-	50%	33%	0%	-	0%	0%	-	32%
	Biohazard bag black in color	-	20%	0%	75%	-	0%	0%	-	26%
	No Color-Coded bag	-	30%	67%	25%	-	100%	100%	-	42%
Weighted Average	Not Applicable									
Standard Deviation	Not Applicable									

- ***Inter Entity Comparative Analysis***

Majority of HCFs, (except GB), at the primary level do not use any color coded bag for this purpose. With the exception of Punbjab, same is the situation at the secondary level. Even at the tertiary level, majority of the HCFs use non color coded bags. However 50% of tertiary HCFs in Punjab use yellow biohazard bags, with another 20% using black biohazard bags.

- ***Situation at the National Level***

Majority of the HCFs at primary, (73%), and secondary (58%), level use unidentifiable bags for the transportation of gynae waste to disposal site. Even at the tertiary level, in 42% of the HCFs, the gynae waste if transported in unidentifiable bags. Such bags are generally of polythene material which is environmentally hazardous to burning or burry. Practice of identifiable (Usually ellow), biodegradable bags needs to be promoted to systematically replace the polythene bags.

8.4 Cleaning of Labor and Procedure Rooms

8.4.1 Inter Entity Comparative Analysis

Majority of HCFs at all levels, in all the provinces and territories surveyed, use water and antibacterial solution for cleaning of the labor and procedure rooms. However, 50% of the secondary HCFs and 100% of the tertiary HCF survyed in Balochisan use aerosole for this purpose, (Table-8.4).

Table-8.4 Cleaning of Labor and Procedure Rooms

HCF Level	Means of Cleaning	Cleaning of Procedure or Labor Room								
		ICT	Punjab	Sindh	KP	KPND	Balochis-tan	AJK	GB	NATIONAL
Primary Level	Water and antibacterial	100	92	86	85	81	88	100%	100%	92
	Using aerosols	0%	8%	14%	15%	19%	12%	0%	0%	8%
Secondary Level	Water and antibacterial	-	100%	64%	80%	100%	50%	100%	100%	85%
	Using aerosols	-	0%	36%	20%	0%	50%	0%	0%	15%
Tertiary Level	Water and antibacterial	-	80%	100%	75%	-	0%	100%	-	80%
	Using aerosols	-	20%	0%	25%	-	100%	0%	-	20%
Weighted Average - All HCFs	Not Applicable									
Standard Deviation	Not Applicable									

8.4.2 Situation at the National Level

The prevalence of using Water mixed with antibacterial compunds is a common practice at all levels, which tends to reduce in favor of aerols as one moves from primary to tertiary level. The National average of primary HCFs using water based antibacterial solution is 92%, while it reduces to 85% at the secondary and 80% at the tertiary level. At the same time the use of aerolos increases from 8% at primary, to 15% at secondary, and 20% at tertiary level.

8.4 Linen and Towel Hygiene

Linen and towels are invariably washed and sun-dried in a vast majority of HCFs in all provinces and territories. However, about 38% of the HCFs at primary level, and 48% at tertiary level use aerosols for this purpose.

Sheets and towels are sun-dried in all (100%) primary HCFs surveyed. However, about 8% of the secondary HCFs and 50% of the tertiary HCFs in Punjab, use a spin dryer for this purpose. 38% of tertiary facilities in Sindh also use a spin dryer.

With a few exceptions, sheets and towels are stored in cupboards in majority of HCFs, at all levels. However, at the primary level, 42% of the HCFs in Balochistan and 20% in Sindh store them in open shelves. 28% of secondary HCFs in Sindh and 20% in AJK, keep these items in open shelves, while 5% of the HCFs surveyed in Punjab also store them in open shelves.

8.5 Handling and Disposal of Human Placenta

Placenta is a natural 'waste' product delivered, following the baby. Although not immediately hazardous, it can decay rapidly and spread can render the other waste septic, if not kept separate, and disposed of in an environmentally safe manner.

In view of the above the temporary storage in the procedure room, its safe transportation to the disposal site, and environmentally safe disposal was investigated thoroughly in the assessment survey. Findings of the survey are discussed below.

8.5.1 Temporary Storage and Transportation of Human Placenta

It is desirable to dispose of the placenta in an identifiable / coded bag or bin, immediately on its delivery. However, the use of a coded bin is advantageous, because it can be transported directly to the disposal site.

- ***Inter Entity Comparative Analysis***

Results of the assessment survey indicate that the all the primary HCFs in ICT, all secondary HCFs in KPND, and all tertiary HCFs in Sindh, Balochistan, and AJK use coded dust bins to dispose of the placenta in the procedure room and its transportation to the disposal site.

Table-8.5 Placenta Storage and Transport of Placenta to Disposal Site

HCF Level	Coded Dustbin Used for Placenta Disposal in the Procedure Room & Transport to Disposal Site								
	ICT	Punjab	Sindh	KPK	KPND	Balochis-Tan	AJK	GB	NATIONAL
Primary Level	100%	65%	20%	10%	63%	34%	88%	10%	49%
Secondary Level	-	65%	64%	20%	100%	87%	80%	50%	67%
Tertiary Level	-	70%	100%	50%	-	100%	100%	-	84%
Weighted Average - All HCFs	100%	65%	23%	11%	70%	36%	88%	19%	50%
Standard Deviation	0.00	2.89	40.07	20.82	26.16	34.96	10.07	28.28	33.58

Although not in all HCFs, but the use of coded dust bins is most prevalent among the HCFs of all levels in Punjab. (Table-8.5).

- ***Situation at the National Level***

The national averages show that the use of coded dust bins for the storage of human placenta in the procedure room and its transportation to disposal site increases with the level of HCFs – from 49% at primary to 67% at secondary, and 84% at tertiary HCFs. The weighted national average works out to 50%, with a standard deviation od 33.58.

8.5.2 Mode of Disposal of Placenta

- ***Inter Entity Comparative Analysis***

It is a common practice to burry or incinerate the placenta. Results of the assessment survey reveal that in vast majority of the HCFs surveyed, placenta is buried, in lined or unlined pits

in all provinces and territories. It is either done in the premises, or by a third party, at a designated site outside HCF. Only in a small number of facilities it is incinerated, (Table-8.6).

Table 8.6 Mode of Disposal of Human Placenta

HCF	Disposal of Human Placenta	Mode of Disposal of Human Placenta								
		ICT	Punjab	Sindh	KPK	KPMD	Balochis-tan	AJK	GB	NATIONAL
Primary Level	Buried	19%	87%	43%	31%	7%	10%	52%	40%	95%
	Incinerated	0%	1%	11%	11%	4%	0%	0%	0%	5%
	No gynae Facility	81%	12%	46%	60%	89%	89%	48%	60%	42%
Secondary Level	Buried	-	84%	87%	80%	100%	33%	80%	0%	86%
	Incinerated	-	16%	9%	0%	0%	67%	20%	100 %	14%
	No gynae Facility	-	0%	4%	20%	0%	0%	0%	50%	6%
Tertiary Level	Buried	-	80%	100%	75%	-	100%	100 %	-	72%
	Incinerated	-	20%	0%	0%	-	0%	0%	-	28%
	No gynae Facility	-	0%	0%	0%	-	0%	0%	-	0%
Weighted Average - All HCFs	Not Applicable									
Standard Deviation	Not Applicable									

- ***Situation at the National Level***

The burying of human placenta is followed at large percentage of HCFs, at all levels. However, the percent of HCFs having the practice of burying the placenta, decreases with the level of HCF – From 95% at primary level, to 86% at secondary, and 672% at tertiary. This makes room for incinerating, which increases from 5% at primary to 14% at secondary, and 28% at tertiary level.

8.5.3 Location of Placenta Disposal

- ***Inter Entity Comparative Analysis***

Placenta is either disposed of within the HCF or taken to an external designated site for disposal. Placenta disposal mechanism varies among the three levels of HCFs and among various provinces and territories, (Table-8.8).

The variations in the disposal mechanism appear to be owing to the (non) availability of space, and the extent of outsourcing practiced by the HCF. With the exception of Balochistan, majority of the HCFs at the primary level, dispose of the placenta, within the facility. In

Punjab and Balochistan, there appear to be a clear the tendency to increase the externalization of placenta disposal as we move from primary to tertiary level, (Table-8.7)

Table-8.7 Location of Placenta Disposal

HCF Level	Location of Placenta Disposal	Location of Placenta Disposal								
		ICT	Punjab	Sindh	KPK	KPMD	Balochis-tan	AJK	GB	NATIONAL
Primary Level	Inside the HCF	67%	53%	79%	21%	31%	19%	92%	95%	59%
	At Designated Site	33%	47%	21%	79%	69%	81%	8%	5%	41%
Secondary Level	Inside the HCF	-	55%	95%	40%	0%	33%	80%	50%	62%
	At Designated Site	-	45%	5%	60%	100%	67%	20%	50%	38%
Tertiary Level	Inside the HCF	-	40%	67%	0%	-	0%	100%	-	40%
	At Designated Site	-	60%	33%	100%	-	100%	0%	-	60%
Weighted Average - All HCFs	Not Applicable									
Standard Deviation	Not Applicable									

- ***Situation at the National Level***

Majority of primary and secondary HCFs, (59% and 62% respectively), dispose of the placenta within their premises. However, in the case of majority (60%) of tertiary facilities, it is either transported to other hospitals for incineration, or outsourced for burying at designated places.

5.5.4 Distance of Water Source from Placenta Disposal Site

- ***Inter Entity Comparative Analysis***

Although, it is prescribed, to keep the placenta disposal site at least 10 meters away from the water source, this might not always be possible owing to space constraints, due to their location in congested city centers or topography. (See Table-8.7, on the next page).

It is alarming to note that at primary level, this distance is less than 10 meters, in Punjab, (56%), AJK (60%) and GB (86%). At the secondary level, 100% of the HCFs in KPMD, and

Baochistan have the burying sites within 10m of the water source. Again, at the tertiary level, this distance is less than 10m in all the HCFs in Balochistan.

This is a serious situation, and demands intervention on a top priority basis. As the space is generally limited, relocation of the water source or placenta disposal sites is not recommended. Instead, it needs to be ensured that the placenta disposal pits are lined in a watertight fashion. It is also important that the water is abstracted from deep aquifer, and water quality checked on a regular basis.

Table-8.9 Distance of Drinking Water Source from Placenta Disposal Site

HCF Level	Distance	Distance of Drinking Water Source from Placenta Disposal Site								
		ICT	Punjab	Sindh	KPK	KPMD	Balochis-tan	AJK	GB	NATIONAL
Primary Level	5 m or less	0%	22%	10%	8%	0%	12%	1%	0%	15%
	5 to 10 m	0%	34%	24%	22%	19%	35%	59%	86%	34%
	>10 m	100 %	43%	67%	70%	81%	54%	40%	14%	51%
Secondary Level	5 m or less	-	26%	0%	5%	0%	33%	0%	0%	15%
	5 to 10 m	-	16%	27%	25%	0%	67%	25%	50%	24%
	>10 m	-	58%	73%	70%	100%	0%	100%	50%	61%
Tertiary Level	5 m or less	-	10%	0%	0%	-	0%	0%	-	5%
	5 to 10 m	-	20%	0%	0%	-	100%	100%	-	25%
	> 10 m	-	70%	100%	100%	-	0%	0%	-	70%
Weighted Average - All HCFs	Not Applicable									
Standard Deviation	Not Applicable									

- ***Situation at the National Level***

Despite alarming situation in certain provinces and territories, the National averages present a satisfactory picture, (thanks to excellent averages in Sindh, KPK, and KPMD). National average of the distance between the water source and placenta disposal site being >10m, at primary, secondary, and tertiary levels is 51%, 61% and 70% respectively. This underscores the need of a coherent National policy for WASH in Healthcare facilities, and stringent monitoring mechanisms at the design and construction stages of HCFs, as a second layer of the departmental superintendence by the C&W and/or PHED.

9 – WASH INFRASTRUCTURE ASSESSMENT THROUGH PHYSICAL OBSERVATIONS

In order to complement the information generated through interviews with HCF representatives, a section of system assessment through physical observations has been included in the assessment survey. This technique uses a walk through the facility, to systematically observe the efficacy and condition of WASH infrastructure. As toilets are the most visible component of WASH infrastructure, the observation checklist includes maximum inquiries on various aspects of the condition and functionality of the toilets.

Presented below is a brief discussion of the observation based ranking / assessment in different provinces and territories.

9.1 Ranking of WASH Infrastructure

The field investigators ranked various aspects of WASH infrastructure, as (a) very good, (b) good, and (c) poor. The percentages of the HCFs grouped under these categories have been tabulated and discussed below.

9.1.1 Ranking of the Water Supply System

- **Ranking Criteria:**

Ranking was done by taking into consideration the quality and availability of water at all points (including water dispensers, hand sanitation facilities, and toilets). Also taken into consideration was the condition of the storage tank and water network, with regard to leakages, rusting etc.

- **Synopsis of Observations**

  - At the primary level, water infrastructure has been ranked mainly in good, and poor categories, with Punjab (80% Good)and Balochistan (80% Poor), exhibiting opposite results.
  - Conditions improve at the secondary level, where 10% of HCFs in Punjab, 18% in Sindh, and 20% in AJK fall in the Very Good. All (100%) HCFs have been placed in good category, along with Punjab(80%), AJK (60%), and Sindh and Balochistan (50%).
  - At the tertiary level, the water network remains in the Very Good, and Good categories. 30% of the HCFs surveyed in Punjab, and 50% in AJK have been ranked as Very Good. All the HCFs surveyed (100%) in Sindh and Balochistan fall in Good category, followed by Punjab (30%), and AJK (50%).

The percentage of HCF in the three categories is presented in Table-9.1.

Table-9.1 Ranking of Water Supply System

HCF Level	Rank	Ranking of Water Supply System								
		ICT	Punjab	Sindh	KPK	KPMD	Balochis-tan	AJK	GB	NATIONAL
Primary Level	V. Good	6%	9%	5%	3%	0%	0%	4%	0%	5%
	Good	75%	84%	42%	37%	18%	16%	61%	49%	52%
	Poor	19%	7%	54%	60%	82%	84%	35%	51%	43%
Secondary Level	V. Good	-	10%	18%	0%	0%	0%	20%	0%	9%
	Good	-	81%	55%	80%	100%	50%	60%	100%	72%
	Poor	-	10%	27%	20%	0%	50%	20%	0%	19%
Tertiary Level	V. Good	-	30%	0%	0%	-	0%	50%	-	20%
	Good	-	70%	100%	100%	-	0%	50%	-	75%
	Poor	-	0%	0%	0%	-	100%	0%	-	5%

9.1.2 Ranking of Wastewater Management

- ***Ranking Criteria:*** Wastewater Management was ranked by taking into consideration the working of the wastewater treatment and disposal components, primarily by observing the signs of overflow / leakages.

- ***Synopsis of Observations:*** Wastewater Management acquires a ranking pattern identical to water supply, with regard to the placement of HCFs in the three levels, and in different provinces / territories, (Table-9.2).

Table-9.2 Ranking of Wastewater Management

HCF Level	Rank	Ranking of Wastewater Management								
		ICT	Punjab	Sindh	KPK	KPMD	Balochis-tan	AJK	GB	NATIONAL
Primary Level	Very Good	0%	7%	4%	1%	1%	0%	6%	0%	4%
	Good	25%	78%	44%	34%	16%	17%	44%	47%	48%
	Poor	75%	15%	53%	65%	83%	82%	50%	53%	48%
Secondary Level	Very Good	-	6%	18%	0%	0%	0%	0%	0%	7%
	Good	-	77%	55%	80%	100%	0%	60%	100%	68%
	Poor	-	16%	27%	20%	0%	100%	40%	0%	25%
Tertiary Level	Very Good	-	20%	0%	0%	-	0%	50%	-	15%
	Good	-	70%	100%	100%	-	0%	50%	-	75%
	Poor	-	10%	0%	0%	-	100%	0%	-	10%
Weighted Average - All HCFs	Not Applicable									
Standard Deviation	Not Applicable									

9.1.3 Ranking the Solid Waste Management

- ***Ranking Criteria:*** The solid waste management was observed by noticing the presence of color coded bins, presence or otherwise of the waste around the bins, the staff following the practice of disposing of the type of waste in relevant bins, the condition of the transport vehicle, and waste disposal site /equipment.

- ***Synopsis of Observations:*** As shown in Table-9.3, the ranking pattern in various provinces and territories is analogous to the water supply and wastewater management presented in the preceding sections.

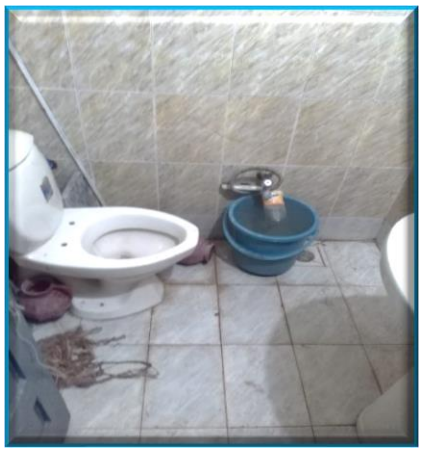
Table-9.3 Ranking of Solid Waste Management

HCF Level	Rank	Ranking of Solid Waste Management								
		ICT	Punjab	Sindh	KPK	KPMD	Balochis-tan	AJK	GB	NATIONAL
Primary Level	Very Good	0%	8%	4%	1%	0%	0%	7%	0%	4%
	Good	75%	78%	38%	33%	9%	13%	52%	45%	47%
	Poor	25%	14%	58%	65%	91%	87%	41%	55%	49%
Secondary Level	Very Good	-	10%	14%	5%	0%	0%	40%	0%	11%
	Good	-	90%	59%	80%	0%	0%	20%	100%	71%
	Poor	-	0%	27%	15%	100%	100%	40%	0%	19%
Tertiary Level	Very Good	-	40%	0%	0%	-	0%	100%	-	30%
	Good	-	16%	100%	100%	-	100%	0%	-	60%
	Poor	-	10%	0%	0%	-	0%	0%	-	10%
Weighted Average - All HCFs	Not Applicable									
Standard Deviation	Not Applicable									

9.2 Condition, Functionality and Cleanliness of Toilets

9.2.1 Functionality and Approach

- **Functionality Criteria:** This included the privacy and ease of operation of the toilet door, lighting and ventilation of toilets, presence of water for flushing anal cleaning, and working of sanitary fittings, with no signs of leakage.



- ***Synopsis of Observations***: With the exception of Balochistan, where most of the toilets (67%) at the primary level and 50% at secondary level are not functional, the situation in all other provinces and territories is generally satisfactory, (Table-9.4).

Table-9.4 Condition of the Toilet Structure and Sanitary Fittings

HCF Level	Condition of Toilet Structure	Condition of the Toilet Structure and Sanitary Fittings								
		ICT	Punjab	Sindh	KPK	KPMD	Balochis-tan	AJK	GB	NATIONAL
Primary Level	Functional	100%	97%	75%	78%	74%	33%	94%	91%	79%
	Damaged	0%	3%	25%	22%	26%	67%	6%	9%	21%
Secondary Level	Functional	-	97%	95%	100%	100%	50%	100%	100%	95%
	Damaged	-	3%	5%	0%	0%	50%	0%	0%	5%
Tertiary Level	Functional	-	100%	100%	100%	-	100%	100%	-	100%
	Damaged	-	0%	0%	0%	-	0%	0%	-	0%
Weighted Average - All HCFs (Functional Toilets)		100%	97%	76%	80%	79%	34%	94%	93%	80%
Standard Deviation		0.00	1.73	13.23	12.70	18.38	34.83	3.46	6.36	21.36

In terms of all-weather access, the condition and design[25] of the passage to the toilets need to be in good condition. At the primary level, there is a room for improvement in all the provinces and territories, particularly in ICT, Sindh, and Balochistan, (Table-9.5). However, situation is generally satisfactory at the secondary and tertiary level, with the exception of Balochistan, where it is worse than the primary level.

Table-9.5 Design and Condition of the Passage Leading to Toilet Block

HCF Level	Design and Condition of the Passage Leading to Toilet Block								
	ICT	Punjab	Sindh	KPK	KPMD	Balochis-Tan	AJK	GB	NATIONAL
Primary Level	6%	69%	29%	15%	16%	11%	31%	58%	43%
Secondary Level	-	90%	73%	60%	100%	0%	100%	100%	75%
Tertiary Level	-	80%	100%	75%	-	0%	100%	-	80%
Weighted Average - All HCFs	6%	70%	32%	19%	31%	11%	35%	68%	45%
Standard Deviation	0.00	10.81	36.01	31.34	59.18	6.42	39.90	29.35	23.97

As per international practice sign board(s) need to be installed to point to the direction of toilets. Gender and wheel chair signs may also be displayed, as appropriate.

Observations reveal that such boards are generally missing at the primary level, particularly in Balochistan. The situation at the secondary and tertiary levels is good to very good, except in the case of Balochistan, where it continues to be poor, (Table-9.3).

[25] It is recommended that the passage should be at least 1.5 m wide. Well surfaced for walking by patients, and wheel chair movement, and It should also be covered, (say by a fiberglass roof) for protection against rain and sun.

Table-9.6 Presence of Sign Board(s) for Toilets

HCF	Presence of Sign Board(s) for Toilets								
	ICT	Punjab	Sindh	KPK	KPMD	Balochis-tan	AJK	GB	NATIONAL
Primary Level	31%	58%	29%	10%	12%	4%	21%	83%	32%
Secondary Level	-	87%	73%	40%	100%	25%	60%	100%	68%
Tertiary Level	-	80%	100%	75%	-	0%	100%	-	80%
Weighted Average - All HCFs	31%	60%	32%	13%	28%	5%	23%	87%	35%
Standard Deviation	0.00	15.13	35.84	32.53	62.23	13.43	39.50	12.02	26.59

9.2.2 Working of the Toilet Door

From privacy point of view, proper working of the toilet door is a prerequisite to the functionality of a toilet.

- ***Ranking Criteria:*** It included a visual assessment of the condition of the door frame and shutter, noting any signs of major rusting/decay, smooth working of hinges, and the presence of a working lock or bold, inside the door.

- ***Synopsis of Observations:***

Based on the above criteria, the percentage of HCFs with toilets having doors in working order IS presented in Table-9.4.

Table-9.7 Toilet Door in Working Order

HCF Level	Toilet Door in Working Order								
	ICT	Punjab	Sindh	KPK	KPMD	Balochis-tan	AJK	GB	NATIONAL
Primary Level	100%	92%	40%	78%	74%	22%	87%	87%	67%
Secondary Level	-	100%	68%	100%	100%	75%	100%	100%	91%
Tertiary Level	-	100%	67%	100%	-	100%	100%	-	95%
Weighted Average - All HCFs	100%	93%	42%	80%	79%	24%	88%	90%	69%
Standard Deviation	0.00	4.62	15.89	12.70	18.38	39.83	7.51	9.19	26.89

With the exception of Balochistan and Sindh, the toilet doors were observed to be in working condition in most of the HCFs surveyed.

9.2.3 Toilet Environment and Condition

- ***Observation Criteria:*** the investigators noted the presence of a gauzed ventilator, or a working exhaust fan. They also observed the presence of major cracks, as well as for any signs of dampness or leakage in walls or ceiling.

- ***Synopsis of Observations:*** With the exception of Balochistan and AJK at the primary level, toilets were found to be well-ventilated, (Table-9.8). Leakage and dampness is a

widespread problem, (Except at tertiary level in Sindh and Balochistan), and needs to be addressed as a high priority, (Table-9.9).

Table-9.8 Toilet Well Ventilated

HCF Level	Toilet Well Ventilated								
	ICT	Punjab	Sindh	KPK	KPMD	Balochis-tan	AJK	GB	NATIONAL
Primary Level	88%	89%	55%	61%	51%	27%	46%	98%	63%
Secondary Level	-	97%	82%	95%	100%	75%	80%	100%	91%
Tertiary Level	-	90%	100%	100%	-	100%	100%	-	95%
Weighted Average - All HCFs	100%	92%	43%	79%	79%	24%	87%	90%	69%
Standard Deviation	0.00	3.61	30.79	11.53	18.38	39.83	10.15	9.19	26.61

Table-9.9 Signs of Leakages and Dampness in the Roof and Wallls

HCF Level	Signs of Leakages and Dampness in the Roof and Walls								
	ICT	Punjab	Sindh	KPK	KPMD	Balochis-tan	AJK	GB	NATIONAL
Primary Level	6%	39%	55%	21%	13%	37%	8%	0%	34%
Secondary Level	-	26%	27%	15%	0%	50%	20%	100%	26%
Tertiary Level	-	50%	100%	0%	-	100%	0%	-	45%
Weighted Average - All HCFs	6%	38%	53%	20%	11%	38%	9%	23%	34%
Standard Deviation	0.00	12.01	36.83	10.82	9.19	33.26	10.07	70.71	16.91

9.2.4 Ranking the Cleanliness of Toilets

- ***Ranking Criteria:***

The cleanliness of floors, walls, and sanitary fittings, as well as water storage and anal washing utensil *(lota)* was observed.

- **Synopsis of Observations**

Although in the bulk of the HCFs surveyed at all levels, the Investigators have ranked the cleanliness of the toilets in Good category.

However, at the primary level the cleanliness toilets in as many as 57% of the HCFs surveyed have been ranked as Poor, followed by 47% in GB, and 36% in Balochistan, (Table-9.10).

Table-9.10 Ranking the Cleanliness of Toilets

HCF	Rank	Cleanliness of toilets								
		ICT	Punjab	Sindh	KPK	KPMD	Balochis-tan	AJK	GB	NATIONAL
Primary Level	Very Good	0%	7%	2%	1%	2%	14%	2%	0%	5%
	Good	88%	83%	41%	43%	45%	49%	83%	53%	61%
	Poor	13%	10%	57%	55%	53%	36%	15%	47%	34%
Secondary Level	Very Good	-	16%	9%	0%	0%	0%	20%	0%	9%
	Good	-	84%	59%	90%	100%	50%	80%	100%	78%
	Poor	-	0%	32%	10%	0%	50%	0%	0%	13%
Tertiary Level	Very Good	-	20%	0%	0%	-	100%	0%	-	15%
	Good	-	80%	33%	100%	-	0%	100%	-	75%
	Poor	-	0%	67%	0%	-	0%	0%	-	10%

9.3 Provision for Gender and Physically Challenged Persons

9.3.1 Separate Toilets for Men and Women

Owing to privacy consideration and their special needs, it is desirable to have separate toilets for women. The observations of Investigators in the different levels of HCFs in various provinces and territories is presented in Table-9.11. The practice of having separate toilets for women at the primary level is rare in HCFs in Pakistan. This is particularly alarming that other than AJK, a significant percent of tertiary HCFs also lack this facility.

Table-9.11 Separate Toilets for Men and Women

HCF Level	Separate Toilet Blocks for Men and Women								
	ICT	Punjab	Sindh	KPK	KPMD	Balochis-Tan	AJK	GB	NATIONAL
Primary Level	31%	39%	29%	8%	6%	7%	29%	4%	34%
Secondary Level	-	26%	50%	45%	100%	50%	80%	100%	65%
Tertiary Level	-	50%	67%	100%	-	0%	100%	-	90%
Weighted Average - All HCFs	31%	38%	30%	12%	23%	8%	32%	26%	36%
Standard Deviation	0.00	12.01	19.04	46.29	66.47	27.07	36.61	67.88	10.41

9.3.2 Women Friendly Toilets

From an MHM perspective, toilets for women need to have a water tap (or water stored in a bucket), and other facilities from privacy and comfort points of view.

Besides ensuring privacy by ensuring that that toilet door can be secured by having a working lock or drop bolt, there is a need to have a hook mounted inside the door for hanging clothes, and a coverable dust bin to dispose of the used sanitary pads. The situation on the ground, observed by the Investigators is presented in Table-9.12.

Table-9.12 Coverable Dust Bin and Hook for Hanging Clothes

HCF Level	Coverable Dust Bin and Hook for Hanging Clothes								
	ICT	Punjab	Sindh	KPK	KPMD	Balochis-tan	AJK	GB	NATIONAL
Primary Level	13%	59%	6%	4%	6%	3%	18%	4%	23%
Secondary Level	-	84%	64%	30%	100%	25%	60%	50%	61%
Tertiary Level	-	80%	100%	25%	-	0%	100%	-	60%
Weighted Average - All HCFs	13%	61%	10%	6%	23%	4%	20%	15%	26%
Standard Deviation	0.00	13.43	47.43	13.80	66.47	13.65	41.00	32.53	18.08

MHM also requires a facility for private disposal of sanitary pads, preferably in an attached burner. No such facility was seen in only a few of the HCFs surveyed. However, attached burning units were found with most toilets at primary and all the secondary level facilities in GB. In Balochistan, un-attached burning was found being practiced in most (80%) HCFs at primary level, and all facilities at secondary level. At the tertiary level, attached burning units were observed with the women toilets in Balochistan.

9.3.3 Toilets for Physically Challenged Persons

Most of the HCFs surveyed at all levels in AJK and Punjab, and secondary HCFs in KPND were found to have this facility. All secondary HCFs surveyed in GB and 100% of tertiary HCFs in Balochistan, also have this facility. However, the primary level facilities in KPMD, GB, Balochistan, Sindh, and ICT need to increase the coverage in a systematic manner. KPK requires special attention in this regard, as the situation is alarmingly poor at all HCF levels in the Province, (Table-9.13).

Table-9.13 Toilets for Physically Challenged Persons

HCF Level	Toilets for Physically Challenged Persons								
	ICT	Punjab	Sindh	KPK	KPMD	Balochis-tan	AJK	GB	NATIONAL
Primary Level	33%	94%	40%	7%	1%	14%	89%	2%	23%
Secondary Level	-	74%	41%	10%	100%	50%	80%	100%	51%
Tertiary Level	-	100%	0%	0%	-	100%	100%	-	65%
Weighted Average - All HCFs	33%	93%	40%	7%	19%	15%	89%	25%	25%
Standard Deviation	0.00	13.61	23.39	5.13	70.00	43.19	10.02	69.30	32.88

Scoping Study for WASH in Health Care Facilities in Pakistan

ANALYTICAL ASSESSMENT REPORT

PART TWO – APPENDICES

APPENDIX-I
HCF ASSESSMENT QUESTIONNAIRE

Scoping Study to Establish a Baseline for Reporting to SDGs for WASH in Health Care Facilities in Pakistan

Interview Code		**Province / Territory**			**District**	
HCF Type (Circle One)		**T / S / P**	**Name and Code of HCF**			
Name of Respondent				**Designation**		
Time				**Date**		

QUESTIONNAIRE FOR WASH IN HEALTH CARE FACILITIES			
	Note: Prior to the interview**, t**he Junior Investigator and enumerators will have thoroughly observation of the WASH facilities in HCF, and record their observations (Section-6)		
1	**CORE WATER QUESTIONS (BASIC SERVICE)**		
1.1	**What is the main source and water supply mechanism for the facility? (Tick one)**		
1.1.1	Is water available at the HCF? Circle One (**Yes / No**)	Working	Not Working
1.2	**If Yes, specify the source and supply / treatment mechanism**		
1.2.1	Connected directly to municipal piped water supply		
1.2.2	Tube well / Borehole with motorized lift pump / hand pump (Within the building)		
1.2.3	Protected dug well, spring (or Karez in case of Balochistan)		
1.2.4	Rain water Collector / harvesting		
1.2.5	Tanker truck		
1.2.6	Other (specify)		
	Note: Either any source or no source do not know is not an option If there is more than one source, the one used most frequently should be selected. If patients need to bring water from home because water is not available at the facility, “no water source” should be selected. Photos will be useful, where feasible.		
	On premises means within the building or boundary wall of the facility. □ This question refers to the location from where the water is accessed for use in the health facility (e.g. tap, borehole), rather than the source where it originates. □ In case collection from outside, please write a note how water is collected and for what specific purpose and how it is stored		
1.3	**Whether water was available from the main water supply at the time of the survey?**		
1.3.1	Yes	No	

1.3.2	If Yes where was water available at the time of the survey? (Tick on one or more relevant boxes)	Drinking Water Container	Toilet	Service Spot
	Note: if yes, please check where the water is available, drinking water container, (overhead / Ground Level Tank), latrine, and other places of water use in the facility.			
1.4	**Extended Questions for Safe Drinking water: Is water dispenser available in specific service areas for drinking purpose; Yes _____ No ____**			
1.4.1	If yes, type of water dispenser available (Tick in one or more columns as required).	Patients / Attendants	Staff	Both
1.4.2	Steel /plastic or baked mud containers, (Filled in with turbidity free fresh water for drinking).			
1.4.3	Electric water coolers –provide cooled water directly from tap or overhead tank.			
1.4.4	Other (Specify)			

1.5	**Is there any water quality test conducted in the last six months;**			
	Yes ---	**No ----**	**Don't Know----------**	
1.5.1	Bacteriological;	**Yes ---**	**No ----**	**Don't Know ------**
1.5.2	Priority chemical;	**Yes ---**	**No ----**	**Don't Know ------**

Note A water dispenser with a filter is the basic filter to ensure water is safely available in the health facility. For a filter it is necessary that filter cartage is replaced at least after every six months or earlier depending on the quality of available raw water.
Frequent sanitary inspections and water-quality testing, particularly for microbiological contamination, are essential elements in any surveillance programme aimed at ensuring that drinking-water meets the standards established. In rural areas, where water sources may not be exposed to industrial wastes or agricultural chemicals, testing for most micropollutants may not be necessary or feasible.
For microbiological impurities the water should be tested at least once in six months. For priority chemical test includes Arsenic, Fluoride, TDS, Alkaline one test to be conducted in a year time if the water is exposed to industrial or chemical waste or nitrate / pesticides percolation from agricultural fields.

In case of municipal tap the respondents may not be knowing for any water test, unless it is done at the tap by the facility. Residual chlorine may also be measured at the tap, comparing with EPA standards.

2	**CORE SANITATION QUESTIONS (BASIC SERVICE)**		
2.1	**What type of toilets/latrines are at the facility for patients?**		
	Type of Latrine	**Available**	**No of Units**
2.1.1	Flush / Pour-flush toilet to sewer connection		
2.1.2	Flush / Pour-flush toilet to septic tank and / or soakage pit		
2.1.3	Pit latrine with slab		
2.1.4	Composting toilet		
2.1.5	Flush / Pour-flush toilet to open drain		
2.1.6	Pit latrine without slab/open pit		
2.1.7	Bucket		
2.1.8	Hanging toilet/latrine		
2.1.9	No toilet/latrine		
2.1.10	Other (specify)		
	Note: If more than one type of toilet is used, the most common type of toilet/latrine in the HCF compound should be selected.		
2.2	**How many toilets are usable (available, functional, private) at Assessment Day**		

2.2.1	Number of toilets usable, functional private (With a door, which can be bolted /locked from inside)	
2.2.2	Number of toilets usable but not available to everybody.	
2.2.3	Reasons for not being available (Tick One) 1. Inadequate number of functional toilets 2. Kept locked by the sanitary staff 3 Kept locked by the HCF Management 4. Other (specify)	
	Note To be considered usable, a toilet should be available, functional and private at the time of the survey or questionnaire. Toilets are available when on premises, doors are unlocked or with a key available at all times. To be functional, the hole or pit is not blocked, water is available for flush/pour flush toilets, and there are no cracks or leaks in the toilet structure. To be considered private, the toilet stall have doors that can be locked from the inside and there are no large gaps or holes in the structure. If any of these criteria are not met, the toilet/latrine is not counted as usable.	

2.3	**Are there toilets that …(If 'Yes', give the number of toilets in that category, in the 'Yes' column)**	**Yes**	**No**
2.3.1	Are dedicated for staff?		
2.3.2	Are sex-separated or gender-neutral rooms / cabins		
2.3.3	Have menstrual hygiene facilities available? (Women Friendly Toilets)		
2.3.4	Are dedicated / accessible for people with limited mobility?		
2.3.5	Any other description of the available toilet.		

Notes

1. Staff toilets should be for the exclusive use of staff.
2. Toilets can be in a room with multiple stalls or in a private room cabin with a single toilet. Toilets in rooms with multiple stalls should all be dedicated for use by either women or men. A gender-neutral room with a single toilet is also considered as sex-separated, as it allows women and men to use toilets separately.
3. A toilet can be considered to have menstrual hygiene facilities if it
   - has a bin with a lid on it for disposal of used menstrual hygiene products,
   - water and soap available in a private space for washing.
4. A toilet can be considered accessible for people with limited mobility if it meets relevant national or local standards. In the absence of such standards, it should meet the following conditions:
   - can be accessed without stairs or steps, (through low gradient (1/3) slope
   - handrails for support are attached either to the floor or sidewalls,
   - the door is at least 91.5 cm / 36" wide, and
   - the door handle and seat are within reach of people using wheelchairs or crutches/sticks.

	Extended Sanitation Questions (Advance Service)	
2.4	**Has Your (Pit Latrine or Septic Tank) Ever been emptied Yes / No**	
2.4.1	If Yes, how frequently?	(a) Every year (b) 2 yearly (c) 3 yearly (d) Other (Specify) (e) When was the last time it was emptied? Month ----- Year----------
2.5	**Disposal of excreta from onsite sanitation facilities**	
2.5.1	Where and How were the contents disposed of	(a) To an in-house treatment unit (b) Buried in a covered pit (c) Don't know (d) Other (specify)

2.5.2	How it was emptied? (a) By HCF Sanitary Staff (b) By a Service Provider		
2.5.3	where were the contents disposed of?	(a) to a treatment plant	
		(b) buried in a covered pit	
		(c) don't know (d) (d) Other (specify)	
2.6	**What is the functional toilet to patient ratio; (To be calculated on the basis of following questions)**		
2.6.1	Total number of Toilets: _____ Total **In-patient** capacity of health facility:_____		
2.6.2	Total number of Toilets: _____ Total average number of registered **Out-Patient**s per day		
2.7	**Is a sanitary worker available on the facility payroll? Yes / No If Yes, answer the following questions**		
2.7.1	No of Sanitary Workers Permanent:		
2.7.2	No of Sanitary Workers Ad-hoc basis:		
2.8	**Cleaning Schedule is available**		
.8.1	Yes Written ---------- Unwritten----------Timing ----------		
2.8.2	No		
2.9	**Cleaning is done on schedule and inspected by sanitary inspector**		
2.9.1	Yes Sanitary Inspector:---------- Office In charge ----------		
2.9.2	No		
2.10	**Does the facility have necessary cleaning material available and a mechanism to track the stock;**		
2.10.1	Yes Available ---------- Irregular arrangement ----------		
2.10.2	No.		

3	**CORE HYGIENE QUESTIONS**
3.1	**Is there a functional hand hygiene facility at points of care ?** **Yes ---------- No----------**
3.1.2	No, there are hand hygiene facilities at points of care but not functional, or lacking soap and water.--------
3.1.3	No, no hand hygiene facilities at points of care ----------
	Note For facilities with multiple consultation rooms or areas, select one at random and observe if a functional hand hygiene facility is present. A functional hand hygiene facility is any device that enables staff, patients and visitors to clean their hands effectively. It may consist of soap and water with a basin/pan for washing hands, Points of care are any location in the health care facility where care or treatment is delivered (e.g. consultation/exam rooms). The term "hand hygiene" is used in place of "handwashing", because this is an umbrella term
3.2	**Is there a functional handwashing facility at one or more toilets on the day of the survey?**
3.2.1	Yes----------
3.2.2	No, there are handwashing facilities near the toilets but lacking soap and/or water
3.2.3	No, no handwashing facilities near toilets (within 5 meters)
	Note Handwashing facilities at toilets must include water and soap, Check "yes" if at least one toilet has a handwashing facility with soap and water within 5 meters
	Extended hygiene Questions (Advance Service)
3.3	**Is appropriate hygiene promotion material available at hand hygiene facility?**
3.3.1	Yes,
3.3.2	No

	Note: Mark "Yes '" only if enumerator finds some material pasted on the wall or placed nearby at the time of survey			
3.4	**Is hygiene promotion session conducted for " in" and "out" patients and how often.**			
3.4.1	Yes, If yes State Frequency	Often	Monthly	Occasionally
3.4.2	No			
3.5	**Is the facility care-giver provide an infection prevention and control training?**			
3.5.1	Yes			
3.5.2	No			

4	**CORE HEALTH CARE WASTE MANAGEMENT QUESTIONS**		
4.1	**Is waste correctly segregated into at least three labelled and / or color coded bins in the consultation area?**	Yes----------	No----------
4.1.1	Yes, waste is segregated into three labelled and / or color coded bins		
4.1.2	No, bins are present but do not meet all requirements or waste is not correctly segregated		
4.1.3	No, bins are not present		
	Note For facilities with multiple consultation rooms, select one at random and observe whether sharps waste, infectious waste and non-infectious general waste are segregated into three different bins. The bins should be colour-coded and/or clearly labelled, no more than three quarters (75%) full, and each bin should not contain waste other than that corresponding to its label. Bins should be appropriate to the type of waste they are to contain; sharps containers should be puncture-proof and others should be leak-proof. Bins for sharps waste and infectious waste should have lids. Has all the staff been trained to dispose of waste in the correct bin, and patients are guided for this purpose??		
4.2	**How does this facility usually treat/dispose of infectious waste?**		
4.2.1	Autoclaved		
4.2.2	Incinerated (two chamber, 850-1000 °C incinerator)		
4.2.3	Incinerated (other Type) Specify		
4.2.4	Burning in a protected pit / chamber		
4.2.4	Not treated, but buried in lined, protected pit		
4.2.5	Not treated, but collected for medical waste disposal off-site		
4.2.6	Open dumping without treatment		
4.2.7	Open burning		
4.2.8	Not treated and added to general municipal waste		
4.2.9	Other (specify)		
	Note: If more than one applies, select the method used most often. Methods considered to meet the basic service level include autoclaving; incineration; burial in a lined, protected pit; and collection for medical waste disposal off-site, (as separate from general municipal waste).		
	Extended waste management Questions (Advance Service)		
4.3	**Are separate color coded bins available for in-Patient facility;**		
4.3.1	Yes		
4.3.2	No		
4.4	Are separate color coded bins available for out-Patient facility and are out of reach of children;		
4.4.1	Yes		
4.4.2	No		
4.5	**Frequency of Waste collection at facility;**		
4.5.1	Once a day		
4.5.2	Upon filling of bin		
4.6	**Frequency of Waste disposal;**		
4.6.1	Every day		
4.6.2	Twice a week		

4.6.3	Once a week	
4.6.4	Once a month	
4.7	**Hygiene and Waste Management Related to Pregnancy / Gynecological Procedures**	
4.7.1	(a) Are the health staff provided with PPE? in PPE (Personal Protection Equipment) ? Yes / No	
	(b) If Yes, what is included as a part of the PPE? **(**Tick one or more, as applicable) b.1. Gloves b.2. Facemask b.3 Face Shield b.4. Apron e. Shoe covers	
4.7.2	How do they dispose of the contaminated gloves, swabs, absorbent paper?, a. Polythene bags (b). labelled dustbins (c). Airtight labelled dustbins d. Other (specify)	
4.7.3	How are used needles, used syringes, disposable blades and sanitary napkins disposed of? (a) Polythene bags b. Labelled dustbins c. Airtight labelled dustbins (d). Other (Specify)	
4.7.4	What sterilization techniques do they use ? (a) Combination of heat chemicals, irradiation, high pressure (b). Steam under pressure (c). Dry heat /ultraviolet radiation (d). Gas vapor sterilizers, (e). Simple boiling (f.) Other (Specify)	
4.7.5	How are the items like sheets or towels washed, dried, and stored? (a) Washing: a.1 with water and antibacterial detergents a.2. Washed using aerosols a.3. Other (Specify) (b) Drying: b.1. dried in sun b.2 dried in spinner (c). Storage: c.1 Cupboards c.2 Open air shelves	
4.7.6	How is the labour and procedure rooms cleaned? And / or aerosols used for cleaning the surfaces? a. Washed with water and antibacterial detergents b. Washed using aerosols c. Other (Specify)	
4.7.7	How is the procedure related waste disposed of? Tick as applicable Biohazard bags, yellow in color b. Biohazard bags, black in color c. No color coded bag d. Other (specify)	
4.7.8	How is Human placenta disposed? a. Buried b. Incinerated c. Other (specify)	
4.7.9	(a) Are the same or separate dustbins used for disposal of human placenta? Same / Separate (b) If Separate dustbins, are they labelled / color coded? Yes / No	
4.7.10	Where is the placenta buried or incinerated? (a) Within the health care facility b. A designated place outside HCF premises (specify)	
4.7.11	How far is the drinking water source from the disposal area? (Tick as applicable)) (a) Less than 5m (b) 5 to 10m (c) > 5m	

5	**CORE ENVIRONMENTAL CLEANING QUESTIONS**	
5.1	**Are cleaning protocols available?**	
5.1.1	Yes	
5.1.2	No	
	Note: Protocols should include: • Step-by-step techniques for specific tasks, such as cleaning a floor, cleaning a sink, cleaning a spillage of blood or body fluids, and • A cleaning roster or schedule specifying responsibility for cleaning task sand frequency at which they should be performed. The term for protocols may differ according to local practice; they may be referred to as Standard Operating Procedures (SOPs), guidelines, instructions, etc. Where possible, protocols should be observed by the enumerator.	
5.2	**Have all staff responsible for cleaning received training?**	
5.2.1	Yes, all have been trained	
5.2.2	No, some but not all have been trained	
5.2.3	No, none have been trained	
5.2.4	No, there are no staff responsible for cleaning	

	Note" Staff responsible for cleaning" refers to non-health care providers such as cleaners, orderlies or auxiliary staff, as well as health care providers who, in addition to their clinical and patient care duties, perform cleaning tasks as part of their role. Training refers to structured training plans or programs led by a trainer or appropriately qualified supervisor				
	Extended environmental cleaning Questions (Advance Service)				
5.3	**Is service provision area disinfected?**				
5.3.1	Yes				
5.3.2	No				
5.4	What is the frequency of disinfection?				
5.4.1	Every hour				
5.4.2	Every day				
5.4.3	Every week				
6	**Additional Inquiries for COVID-19 Pandemic Management**				
6.1	Are there Separate Corona Cohort Rooms for outdoor COVID 19 patients with toilets?				
6.1.1	Yes. If yes, how many?				
	only one for both genders ☐ Two, separate for Men and Women ☐ Any other please specify Make a special note if there is a toilet for physically challenged persons too.				
6.1.2	No. There are no separate Corona Cohort Patients Rooms / Toilets				
6.2	Are the health workers aware of prevention on COVID-19? Yes / No				
6.3	Are the health care and sanitary staff equipped with personal protection gear including face mask (surgical or N95) / face shield, gloves, and gum boots? (Tick as applicable)				
6.3.1	Yes (If only some staff is wearing it, give a percent of those wearing). Gum boots are required for sanitary staff only. What is the frequency of changing this equipment??				
6.4	What is the percentage of visitors (patients and attendants) wearing face masks? (Tick one)				
6.4.1	< 10% 10% to 25% 25% to 50% 50% to 75% 75%				
6.5	Does the hand washing facility maintain the social distance of 6 feet? Yes / No				
6.6	Is there a mechanism in place to frequently sanitize door knobs / handle / drop bolts?				
6.6.1	If yes, then what is the frequency of sanitization? Tick One After every use Every 30 minutes Every 60 minutes Other (specify)				
6.6.2	No. No such mechanism is in place				
6.7	Does the HCF have budget line for required cleaning supplies? Yes / No				
6.8	If yes, which of the following supplies were available at the time of visit? (Tick one after observation. Don't ask) Soap Detergent Hand Sanitizer Cleaning disinfectant (sodium hypo chlorite bleach Other branded disinfectants				
6.9	Any COVID related IEC / BCC messages displayed as posters displayed or appropriately placed brochures, found in the HCF? Yes / No				
6.9.1	If yes, take pictures or ask for a copy.				
6.10	If this HCF is not treating COVID-19, are health staff aware of and practicing the referral protocols? (Tick One)				
6.10,1	Yes, they are aware, but not practicing Yes, they are aware and practicing				
6.10.2	No. They are neither aware, nor practicing				
7	**General Observations**				
7.1	Condition of the Toilet Structure and Fittings	Functional-------		Damaged-------	
7.2	What is the distance of the toilet block from the main building? (Attached to the building / within 30 Ft. rom the building / 30 to 50 ft---------- / > 50 Ft----------				
7.3	If the toilet block is not attached, is there a paved passage connecting the toilets to the main building?	Yes----------		No----------	
7.4	Is there a sign board pointing to the toilet block? Yes / No	Yes----------		No----------	
7.5	What is the general condition of the toilet Structure?	V, good	Good	Fair	Poor
7.6	Is the condition of the toilet door in working order	Yes----------		No----------	
7.7	Is the toilet well ventilated? Has a Ventilator / exhaust fan??	Yes----------		No----------	
7.8	Any signs of leakages and dampness in the roof and walls	Yes----------		No----------	

7.9	Are there separate toilet blocks for men and women?	Yes----------	No----------	
7.10	Do the ladies' toilets have a water tap, and a coverable dust bin, inside the toilet?	Yes----------	No----------	
7.11	How are the sanitary pads disposed of? (a) Attached burning unit (b)unattached burning unit (c) Mixed in general waste			
7.12	If the toilet is cistern flushed, is the flushing tank in working condition?	Yes----------	No----------	
7.13	(a) Is there a dedicated toilet for physically challenged persons?	Very good	Good	poor
	(b) If yes, is it approachable through a ramp (1:3 slope)	Very good	Good	poor
	(c) Is the toilet wide enough to allow the rotation of the wheel chair?	Very good	Good	poor
	(d) The toilet door wide enough (should not be less than 36" wide)	Very good	Good	poor
7.14	Rank the cleanliness of the toilets	Very good	Good	poor
7.15	Rank the condition of the water supply system, including water tank / container, pipelines, and hand washing facilities. .	Very good	Good	poor
7.16	Rank the condition of wastewater / excreta disposal and drainage system	Very good	Good	poor
7.17	Rank the condition of solid waste management system (dust bins, collection vehicles / mechanism, and disposal.	Very good	Good	poor
AND DO TAKE PICTURES (WHILE RESPECTING THE SOCIAL NORMS)				

Interview & Observations Checked and Verified Seen and Approved

Enumerator **Joint Investigator** **Principal Investigator**

Thank you for your Time and Cooperation

INNOVATIVE DEVELOPMENT CONSULTANTS (PVT) LIMITED, LAHORE, PAKISTAN

INNOVATIONS IN DEVELOPMENT

APPENDIX-II

HCFs Assessment Surveys:

BACK UP TABLES FOR FIGURES

Chapter 3- Water Supply

Figure -3.1 Backup Table for Major Source of Water in Health Facilities (Primary Level)

Territory	Municipal Connection	Pipe Supply	Dug Well	Spring	Collect Rain Water	Tanker	Water Source (River/Lake)	Tube well
ICT	36%	0%	0%	0%	0%	0%	0%	64%
PUNJAB	21%	4%	2%	2%	3%	2%	0%	66%
SINDH	30%	2%	39%	0%	0%	1%	12%	16%
KPK	17%	0%	22%	0%	0%	2%	0%	4%
KPMD	18%	0%	5%	0%	0%	1%	0%	49%
BALOCHISTAN	10%	18%	6%	12%	12%	14%	12%	17%
AJK	27%	20%	1%	3%	7%	24%	2%	17%
GB	79%	0%	0%	4%	0%	6%	11%	0%
NATIONAL	28%	8%	14%	4%	5%	7%	6%	46%

Figure -3.2 Backup Table for Major Source of Water in Health Facilities (Secondary Level)

Territory	Municipal Connection	Pipe Supply	Dug Well	Spring	Collect Rain Water	Tanker	Water Source (River/Lake)	Tube well
PUNJAB	22%	5%	7%	3%	3%	7%	5%	48%
SINDH	56%	3%	25%	3%	3%	0%	0%	9%
KPK	15%	0%	10%	0%	0%	0%	0%	75%
KPMD	0%	0%	0%	0%	0%	0%	0%	100%
BALOCHISTAN	40%	20%	0%	0%	0%	0%	20%	20%
AJK	60%	40%	0%	0%	0%	0%	0%	0%
GB	100%	0%	50%	0%	0%	0%	100%	0%
NATIONAL	48%	8%	18%	4%	4%	5%	7%	58%

Figure -3.3 Backup Table for Major Source of Water in Health Facilities (Tertiary Level)

Territory	Municipal Connection	Pipe Supply	Dug Well	Spring	Collect Rain Water	Tanker	Water Source (River/Lake)	Tube well
PUNJAB	18%	6%	6%	6%	6%	6%	0%	53%
SINDH	75%	0%	0%	0%	0%	0%	0%	25%
KPK	0%	0%	0%	0%	0%	0%	0%	100%
BALOCHISTAN	0%	0%	0%	0%	0%	0%	100%	0%
AJK	100%	0%	0%	0%	0%	0%	0%	0%
NATIONAL	40%	5%	5%	5%	5%	5%	5%	70%

Figure -3.4 Backup Table for Availability of Drinking water at various spots (Primary Level)

Territory	Drinking Container	Washroom/Toilet	Service Spot
ICT	88%	81%	25%
PUNJAB	90%	63%	52%
SINDH	92%	56%	49%
KPK	95%	76%	45%
KPMD	100%	42%	22%
BALOCHISTAN	88%	77%	29%
AJK	99%	81%	80%
GB	100%	100%	100%
NATIONAL	93%	65%	51%

Figure -3.5 Backup Table for Availability of Drinking water at various spots (Secondary Level)

Territory	Drinking Container	Washroom/Toilet	Service Spot
PUNJAB	100%	81%	61%
SINDH	80%	75%	90%
KPK	95%	95%	75%
KPMD	100%	100%	100%
BALOCHISTAN	75%	75%	50%
AJK	100%	100%	40%
GB	100%	100%	100%
NATIONAL	93%	84%	71%

Figure -3.6 Backup Table for Availability of Drinking water at various spots (Tertiary Level)

Territory	Drinking Container	Washroom/Toilet	Service Spot
PUNJAB	100%	90%	90%
SINDH	67%	67%	100%
KPK	100%	100%	0%
BALOCHISTAN	100%	100%	100%
AJK	100%	100%	100%
NATIONAL AVERAGE	95%	89%	79%

Chapter 4 - Sanitation

Figure -4.1 Backup Table for Type of Toilets/latrine for All groups in HCF (Primary Level)

Territory	Sewer Connection	Septic/Soakage Pit	Pit with slab	Compost Toilet	Flush to open drain	Pit latrine without slab	Availability of Bucket
ICT	56%	44%	0%	0%	0%	0%	0%
PUNJAB	35%	51%	5%	3%	3%	2%	1%
SINDH	31%	57%	13%	0%	0%	0%	0%
KPK	17%	74%	0%	0%	1%	0%	0%
KPMD	7%	91%	0%	0%	1%	0%	0%
BALOCHISTAN	25%	39%	26%	0%	1%	6%	2%
AJK	2%	96%	1%	0%	0%	0%	0%
GB	0%	100%	0%	0%	0%	0%	0%
NATIONAL	22%	69%	6%	0%	1%	1%	0%

Figure -4.2 Backup Table for Type of Toilets/latrine for All groups in HCF (secondary Level)

Territory	Sewer Connection	Septic/Soakage	Pit latrines with slab	Compost Toilet	Flush to open drain	Pit without slab	Availability of Bucket
PUNJAB	84%	10%	1%	1%	4%	0%	0%
SINDH	66%	27%	6%	0%	0%	0%	0%
KPK	66%	35%	5%	0%	0%	0%	0%
KPMD	0%	100%	0%	0%	0%	0%	0%
BALOCHISTAN	25%	75%	0%	0%	0%	2%	0%
AJK	0%	100%	0%	0%	0%	0%	0%
GB	0%	100%	0%	0%	0%	0%	0%
NATIONAL	34%	64%	2%	0%	1%	0%	0%

Figure -4.3 Backup Table for Type of Toilets/latrine for All groups in HCF (tertiary Level)

Territory	Sewer Connection	Septic/Soakage Connect	Pit latrines with slab	Compost Toilet	Flush toilet to open drain	Pit latrine without slab	Availability of Bucket
PUNJAB	90%	10%	0%	0%	0%	0%	0%
SINDH	90%	13%	0%	0%	0%	0%	0%
KPK	100%	0%	0%	0%	0%	0%	0%
BALOCHISTAN	100%	0%	0%	0%	0%	0%	0%
AJK	0%	100%	0%	0%	0%	0%	0%
NATIONAL	76%	25%	0%	0%	0%	0%	0%

Figure -4.4 Backup Table for Functional Toilets on the Day of Assessment (Primary Level)

Territory	0 to 4	5 to 8	9 to 12	12 or More
ICT	63%	31%	0%	6%
PUNJAB	76%	19%	3%	2%
SINDH	88%	8%	1%	3%
KPK	81%	13%	4%	2%
KPMD	90%	9%	1%	0%
BALOCHISTAN	96%	3%	1%	0%
AJK	75%	20%	4%	0%
GB	77%	15%	6%	2%
NATIONAL	83%	13%	2%	2%

Figure -4.5 Backup Table for Functional Toilets on the Day of Assessment (Secondary Level)

Territory	0 to 20	21 - 50	51 to 80	80 or More
PUNJAB	48%	29%	19%	3%
SINDH	82%	14%	5%	0%
KPK	50%	45%	5%	0%
KPMD	100%	0%	0%	0%
BALOCHISTAN	75%	25%	0%	0%
AJK	80%	0%	0%	20%
GB	50%	50%	0%	0%
NATIONAL	61%	26%	9%	4%

Figure -4.6 Backup Table for Functional Toilets on the Day of Assessment (Tertiary Level)

Territory	0 to 30	31 to 70	71 to 150	150 or More
PUNJAB	20%	20%	10%	50%
SINDH	67%	33%	0%	0%
KPK	0%	75%	0%	25%
BALOCHISTAN	0%	0%	0%	100%
AJK	50%	0%	50%	0%
NATIONAL	30%	30%	10%	30%

Figure -4.7 Backup Table for Distribution of Toilets/latrine for All groups (Primary Level)

Territory	Dedicated to Staff	Sex separated	Having Menstrual hygiene facilities	Dedicated for people with little mobility
ICT	38%	13%	13%	88%
PUNJAB	93%	65%	48%	35%
SINDH	74%	13%	2%	2%
KPK	68%	29%	17%	2%
KPMD	52%	16%	4%	1%
BALOCHISTAN	33%	0%	0%	0%
AJK	87%	30%	18%	43%
GB	81%	15%	2%	0%
NATIONAL	74%	32%	20%	17%

Figure -4.8 Backup Table for Distribution of Toilets/latrine for All groups (Secondary Level)

Territory	Dedicated to Staff	Sex separated	Having Menstrual hygiene facilities	Dedicated for people with little mobility
PUNJAB	100%	68%	77%	84%
SINDH	68%	59%	23%	18%
KPK	90%	85%	50%	10%
KPMD	100%	100%	70%	100%
BALOCHISTAN	100%	100%	0%	0%
AJK	100%	40%	40%	60%
GB	100%	50%	50%	50%
NATIONAL	89%	65%	51%	44%

Figure -4.9 Backup Table for Distribution of Toilets/latrine for All groups (Tertiary Level)

Territory	Dedicated to Staff	Sex separated	Having Menstrual hygiene facilities	Dedicated for people with little mobility
PUNJAB	100%	100%	80%	50%
SINDH	100%	33%	0%	0%
KPK	100%	100%	50%	25%
BALOCHISTAN	100%	100%	0%	0%
AJK	100%	100%	100%	100%
NATIONAL	100%	90%	70%	60%

Figure -4.10 Excreta from onsite sanitation facility emptied by (Primary Level)

Territory	Service Provide	Sanitary Staff
ICT	31%	69%
PUNJAB	86%	14%
SINDH	79%	21%
KPK	78%	22%
KPMD	99%	1%
BALOCHISTAN	92%	8%
AJK	35%	65%
GB	100%	0%
NATIONAL	81%	19%

Figure -4.11 Backup Table for Excreta from onsite sanitation facility emptied by (Secondary Level)

Territory	Service Provide	Sanitary Staff
PUNJAB	55%	45%
SINDH	41%	59%
KPK	95%	5%
KPMD	0%	100%
BALOCHISTAN	100%	0%
AJK	80%	20%
GB	50%	50%
NATIONAL	64%	36%

Figure -4.12 Backup Table for Excreta from onsite sanitation facility emptied by (Tertiary Level)

Territory	Service Provide	Sanitary Staff
PUNJAB	80%	20%
SINDH	67%	33%
KPK	100%	0%
BALOCHISTAN	100%	0%
AJK	100%	0%
NATIONAL	85%	15%

Figure -4.13 Backup Table for Disposal of content of these disposed Excreta (Secondary Treatment) (Primary Level)

Territory	Often	Monthly	Occasionally
ICT	0%	50%	50%
PUNJAB	31%	33%	37%
SINDH	14%	64%	22%
KPK	36%	18%	46%
KPMD	72%	0%	28%
BALOCHISTAN	9%	43%	48%
AJK	0%	80%	20%
GB	0%	50%	50%
NATIONAL	27%	40%	33%

Figure -4.14 Backup Table for Disposal of content of these disposed Excreta (Secondary Treatment) (Secondary Level)

Territory	Often	Monthly	Occasionally
PUNJAB	50%	37%	13%
SINDH	44%	50%	6%
KPK	56%	0%	44%
KPMD	100%	0%	0%
BALOCHISTAN	0%	0%	0%
AJK	0%	100%	0%
GB	0%	50%	50%
NATIONAL	46%	37%	17%

Figure -4.15 Backup Table for Disposal of content of these disposed Excreta (Secondary Treatment) (Tertiary Level)

Territory	Often	Monthly	Occasionally
PUNJAB	56%	22%	22%
SINDH	67%	33%	0%
KPK	0%	100%	0%
BALOCHISTAN	0%	100%	0%
AJK	0%	0%	100%
NATIONAL	50%	29%	21%

Chapter 5 - Hand Hygiene

Figure -5.1 Backup Table for Appropriate hygiene promotion Session at HCF (Primary Level)

Territory	Yes	No
ICT	13%	88%
PUNJAB	87%	13%
SINDH	69%	31%
KPK	17%	83%
KPMD	46%	54%
BALOCHISTAN	19%	81%
AJK	6%	94%
GB	4%	96%
NATIONAL	52%	48%

Figure -5.2 Backup Table for Appropriate hygiene promotion Session at HCF (Secondary Level)

Territory	Yes	No
PUNJAB	97%	3%
SINDH	73%	27%
KPK	45%	55%
KPMD	100%	0%
BALOCHISTAN	0%	100%
AJK	40%	60%
GB	100%	0%
NATIONAL	71%	29%

Figure -5.3 Backup Table for Appropriate hygiene promotion Session at HCF ((Tertiary Level)

Territory	Yes	No
PUNJAB	90%	10%
SINDH	100%	0%
KPK	0%	100%
BALOCHISTAN	0%	100%
AJK	50%	50%
NATIONAL	70%	30%

Figure -5.4 Backup Table for Appropriate hygiene promotion Session at HCF (Primary Level)

Territory	Yes	No
ICT	13%	88%

PUNJAB	87%	13%
SINDH	69%	31%
KPK	17%	83%
KPMD	46%	54%
BALOCHISTAN	19%	81%
AJK	6%	94%
GB	4%	96%
NATIONAL	52%	48%

Figure -5.5 Backup Table for Appropriate hygiene promotion Session at HCF (Secondary Level)

Territory	Yes	No
PUNJAB	97%	3%
SINDH	73%	27%
KPK	45%	55%
KPMD	100%	0%
BALOCHISTAN	0%	100%
AJK	40%	60%
GB	100%	0%
NATIONAL	71%	29%

Figure -5.6 Backup Table for Appropriate hygiene promotion Session at HCF (Tertiary Level)

Territory	Yes	No
PUNJAB	90%	10%
SINDH	100%	0%
KPK	0%	100%
BALOCHISTAN	0%	100%
AJK	50%	50%
NATIONAL	70%	30%

Chapter 6 - Solid Waste Management

Figure -6.1 Treatment/disposal of infectious waste (Primary Level)

Territory	Autoclave	Incinerated (2 Chamber)	Incinerated (Other)	Burn in protected pit	buried in lined pit	Collected for medical Disposal	Open dumping	Open burning	Not treated add MW
ICT	0%	0%	0%	81%	6%	6%	0%	0%	0%
PUNJAB	8%	3%	2%	48%	24%	4%	17%	30%	2%
SINDH	4%	2%	1%	60%	11%	4%	1%	16%	0%
KPK	6%	3%	4%	36%	2%	0%	3%	50%	1%
KPMD	0%	0%	0%	64%	0%	1%	0%	38%	0%
BALOCHISTAN	6%	8%	6%	15%	3%	2%	14%	68%	4%
AJK	0%	0%	0%	13%	5%	1%	0%	84%	0%
GB	13%	0%	0%	98%	2%	0%	0%	0%	0%
NATIONAL	5%	3%	2%	45%	11%	3%	8%	39%	1%

Figure -6.2 Treatment/disposal of infectious waste (Secondary Level)

Territory	Autoclave	Incinerated (2 Chamber)	Incinerated (Other)	Burn in protected pit	Buried in lined pit	Collected for medical Disposal	Open dumping	Open burning	Not treated add MW
Punjab	23%	39%	10%	23%	10%	19%	10%	13%	0%
Sindh	18%	9%	9%	32%	9%	0%	0%	23%	0%
KPK	35%	5%	15%	35%	0%	5%	0%	25%	0%
KPMD	0%	0%	0%	0%	100%	0%	100%	100%	0%
Balochistan	0%	0%	0%	25%	0%	25%	25%	0%	25%
AJK	0%	0%	40%	20%	0%	0%	0%	40%	0%
Gb	0%	0%	0%	100%	0%	50%	0%	0%	0%
NATIONAL	21%	18%	12%	29%	7%	11%	6%	20%	1%

Figure -6.3 Treatment/disposal of infectious waste (Tertiary Level)

Province / Territory	Autoclave	Incinerated (2 Chamber)	Incinerated (Other)	Burn in protected pit	Buried in lined pit	Collected for medical Disposal	Open dumping	Open burning	Not treated add MW
Punjab	30%	20%	20%	30%	10%	20%	20%	70%	10%
Sindh	67%	0%	0%	100%	0%	0%	0%	0%	0%
KPK	0%	100%	0%	0%	0%	0%	0%	0%	0%
Balochistan	0%	100%	0%	0%	0%	0%	0%	100%	0%
AJK	0%	0%	0%	0%	0%	0%	0%	100%	0%
National	25%	35%	10%	30%	5%	10%	10%	50%	5%

Chapter 7 - Environmental Cleaning and IPC

Figure -7.1 Percentage of visitors (patients and attendants) wearing face masks (Primary Level)

Territory	<10%	10 to 25 %	25 to 50 %	50 to 75%	> 75%
ICT	19%	56%	25%	0%	0%
PUNJAB	35%	23%	18%	20%	4%
SINDH	59%	15%	10%	9%	6%
KPK	78%	19%	2%	0%	0%
KPMD	82%	18%	0%	0%	0%
BALOCHISTAN	86%	5%	7%	1%	0%
AJK	53%	25%	16%	3%	3%
GB	98%	0%	0%	2%	0%
NATIONAL	57%	18%	11%	11%	4%

Figure -7.2 Percentage of visitors (patients and attendants) wearing face masks (secondary Level)

Territory	**<10%**	**10 to 25 %**	**25 to 50 %**	**50 to 75%**	**> 75%**
PUNJAB	0%	6%	23%	45%	26%
SINDH	23%	50%	9%	0%	18%
KPK	30%	15%	30%	10%	15%
KPMD	0%	0%	0%	0%	100%
BALOCHISTAN	75%	25%	0%	0%	0%
AJK	0%	20%	20%	20%	40%
GB	0%	0%	50%	50%	0%
NATIONAL	18%	21%	19%	21%	21%

Figure -7.3 Percentage of visitors (patients and attendants) wearing face masks (Tertiary Level)

Territory	**<10%**	**10 to 25 %**	**25 to 50 %**	**50 to 75%**	**> 75%**
PUNJAB	10%	10%	30%	10%	40%
SINDH	0%	33%	33%	33%	0%
KPK	0%	0%	0%	25%	75%
BALOCHISTAN	100%	0%	0%	0%	0%
AJK	0%	100%	0%	0%	0%
NATIONAL	10%	20%	20%	15%	35%

Chapter 8 - IPC and Waste Management in Gynaecological Service Area

Figure -8.1 Backup Table for Sterilization techniques Used in HCF (Primary Level)

Territory	Combination of heat chemical	Steam under pressure	Dry heat / UV radiation	Gas vapor sterilizer	Simple Boiling
ICT	0%	0%	0%	0%	100%
PUNJAB	14%	24%	2%	10%	50%
SINDH	25%	11%	0%	0%	64%
KPK	11%	5%	0%	1%	83%
KPMD	1%	1%	0%	3%	96%
BALOCHISTAN	1%	0%	0%	0%	99%
AJK	0%	1%	1%	13%	85%
GB	0%	21%	0%	0%	79%
NATIONAL	11%	13%	1%	6%	69%

Figure -8.2 Backup Table for Sterilization techniques Used in HCF (Secondary Level)

Territory	Combination of heat chemical	Steam under pressure	Dry heat / UV radiation	Gas vapor sterilizer	Simple Boiling
PUNJAB	32%	13%	6%	16%	32%
SINDH	5%	27%	0%	0%	68%
KPK	25%	35%	0%	0%	40%
KPMD	100%	0%	0%	0%	0%
BALOCHISTAN	75%	0%	0%	0%	25%
AJK	0%	0%	0%	40%	60%
GB	0%	0%	50%	50%	0%
NATIONAL	24%	20%	4%	10%	42%

Figure -8.3 Backup Table for Sterilization techniques Used in HCF (Tertiary Level)

Territory	Combination of heat chemical	Steam under pressure	Dry heat / UV radiation	Gas vapor sterilizer	Simple Boiling
PUNJAB	30%	40%	0%	0%	30%
SINDH	0%	33%	0%	0%	67%
KPK	0%	100%	0%	0%	0%
BALOCHISTAN	0%	0%	100%	0%	0%
AJK	0%	0%	0%	0%	100%
NATIONAL	15%	15%	5%	0%	35%

APPENDIX-III
HCFs Assessment Surveys:
COMPUTATION OF SAMPLE WEIGHTS
BY THREE HCF LEVELS

Appendis-3 Computation of Weights by Three Levels

Province / Territory	Type of Facility	Sub types of Facility	Selected (To be surveyed)	Covered (Actual Surveyed)	Frame	Sampling Weights by Facility Type
2. Islamabad Capital Territory – ICT						
ICT	Primary	BHU	15	14	17	1.214
ICT	Primary	RHC	3	2	3	1.500
ICT	Primary	Dispensary	-	-	-	-
ICT	Primary	MCH	-	-	-	-
ICT	Primary	SHC	-	-	-	-
ICT					**Primary Weighted Average**	**1.250**
ICT	Secondary		-	-	-	-
ICT					**Secondary Weighted Average**	**-**
ICT	Tertiary	-	-	-	-	-
ICT					**Tertiary Weighted Average**	**-**

Province / Territory	Type of Facility	Sub types of Facility	Selected (To be surveyed)	Covered (Actual Surveyed)	Frame	Sampling Weights by Facility Type
1. Punjab						
Punjab	Primary	BHU	539	537	2501	4.657
Punjab	Primary	RHC	68	67	313	4.672
Punjab	Primary	Dispensary	-	-	-	-
Punjab	Primary	MCH	-	-	-	-
Punjab	Primary	SHC	-	-	-	-
					Primary Weighted Average	**4.66**
Punjab	Secondary	DHQ	13	13	67	5.154
Punjab	Secondary	THQ	19	19	102	5.368
Punjab	Secondary	Spec/other Hosp				
Punjab	Secondary	Civil Hosp				
					Secondary Weighted Average	**5.280**
Punjab	Tertiary		7	10	27	2.700
					Tertiary Weighted Average	**2.700**

Province	Type of Facility	Sub types of Facility	Selected (To be surveyed)	Covered (Actual Surveyed)	Frame	Sampling Weights by Facility Type
3. Sindh						
Sindh	Primary	BHU	146	146	842	5.767
Sindh	Primary	RHC	28	28	164	5.857
Sindh	Primary	Dispensary	257	256	1477	5.770
Sindh	Primary	MCH	25	25	142	5.680
Sindh	Primary	SHC	-	-	-	-
	Primary Weighted Average					**5.77**
Sindh	Secondary	DHQ	-	-	-	-
Sindh	Secondary	THQ	-	-	-	-
Sindh	Secondary	Spec/other Hosp	18	20	158	7.900
Sindh	Secondary	Civil Hosp	2	2	19	9.500
	Secondary Weighted Average					**8.05**
Sindh	Tertiary		3	4	8	2.0
	Tertiary Weighted Average					**2.0**

Province	Type of Facility	Sub types of Facility	Selected (To be surveyed)	Covered (Actual Surveyed)	Frame	Sampling Weights by Facility Type
4. Balochistan						
Balochistan	Primary	BHU	130	129	680	5.271
Balochistan	Primary	RHC	19	16	101	6.313
Balochistan	Primary	Dispensary	103	95	538	5.663
Balochistan	Primary	MCH	18	16	91	5.688
Balochistan	Primary	SHC	4	4	19	4.750
	Primary Weighted Average					**5.503**
Balochistan	Secondary	DHQ	4	2	28	14.000
Balochistan	Secondary	THQ	1	1	4	4.000
Balochistan	Secondary	Spec/other Hosp	2	1	7	7.000
Balochistan	Secondary	Civil Hosp	1	0	4	
	Secondary Weighted Average					**10.750**
Balochistan	Tertiary		2	2	7	3.500
	Tertiary Weighted Average					**3.500**

Province	Type of Facility	Sub types of Facility	Selected (To be surveyed)	Covered (Actual Surveyed)	Frame	Sampling Weights by Facility Type
5. Khyber Pakhtunkhwa - KPK						
KP	Primary	BHU	127	127	776	6.110
KP	Primary	RHC	18	18	111	6.167
KP	Primary	Dispensary	66	67	405	6.045
KP	Primary	MCH	9	9	57	6.333
KP	Primary	SHC	4	4	24	6.000
KP					**Primary Weighted Average**	**6.10**
KP	Secondary	DHQ	3	3	15	5.000
KP	Secondary	THQ	3	3	16	5.333
KP	Secondary	Specd. Hosp	13	13	71	5.462
KP	Secondary	Civil Hosp	1	1	1	1.000
KP					**Secondary Weighted Average**	**5.15**
KP	Tertiary		4	4	16	4.000
KP					**Tertiary Weighted Average**	**4.00**
6. KPMD						
KPMD	Primary	BHU	77	60	100	1.667
KPMD	Primary	RHC	4	3	5	1.667
KPMD	Primary	Dispensary	97	78	127	1.628
					Primary Weighted Average	**1.65**
KPMD	Secondary	THQ	1	0	1	
KPMD	Secondary	Specd. Hosp	1	1	4	4.000
KPMD	Secondary	Civil Hosp	3	3	46	15.333
					Secondary Weighted Average	**12.75**

Province	Type of Facility	Sub types of Facility	Selected (To be surveyed)	Covered (Actual Surveyed)	Frame	Sampling Weights by Facility Type
7. Azad Jammu & Kashmir - AJK						
AJK	Primary	BHU	116	116	206	1.776
AJK	Primary	RHC	23	23	41	1.783
AJK	Primary	Dispensary	55	55	97	1.764
AJK	Primary	MCH	2	2	4	2.000
AJK	Primary	SHC	-	-	-	-
AJK					**Primary Weighted Average**	**1.78**
AJK	Secondary	DHQ	1	2	7	3.500
AJK	Secondary	THQ	2	3	9	3.000
AJK	Secondary	Spec/other Hosp	1	3	4	1.333
AJK	Secondary	Civil Hosp	-	-	-	-
AJK					**Secondary Weighted Average**	**2.50**
AJK	Tertiary	-	-	-	-	-
AJK					**Tertiary Weighted Average**	**-**

Province	Type of Facility	Sub types of Facility	Selected (To be surveyed)	Covered (Actual Surveyed)	Frame	Sampling Weights by Facility Type
8. Gilgit Baltistan						
GB	Primary	BHU	8	8	14	1.750
GB	Primary	RHC	2	2	3	1.500
GB	Primary	Dispensary	41	41	73	1.780
GB	Primary	MCH	2	2	3	1.500
GB	Primary	SHC	-	-	-	-
GB					**Primary Weighted Average**	**1.75**
GB	Secondary	DHQ	1	1	3	3.000
GB	Secondary	THQ				-
GB	Secondary	Spec/other Hosp			1	-
GB	Secondary	Civil Hosp	1	1	24	24.000
GB					**Secondary Weighted Average**	**14.00**
GB	Tertiary	-				-
GB					**Tertiary Weighted Average**	**-**

Summary of Sample Weights

Sr. No.	HCF Category	Provinces / Territories								National
		ICT	Punjab	Sindh	KPK	KPMD	Balochis-tan	AJK	GB	
1	Primary	1.25	4.66	5.76	6.10	1.65	5.50	1.78	1.75	4.61
2	Secondary	-	5.28	8.05	5.15	12.75	10.75	2.50	14.00	6.42
3	Tertiary	-	2.70	2.00	4.00	-	3.50	-	-	2.90