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The General Service Readiness in Health Facilities: Evidence based on Bangladesh Health Facility Survey, 2017 Data

By Tazia Hossain
Notre Dame University

Abstract- Although health outcomes have improved in the past few decades, still Bangladesh is working towards the target of sustainable goal 3 (SGD 3). In the recent age, anew insight is at hand that having access to the health care is not that having the quality care. Increasing people expectations, health need and determined new health goals are raising the agenda for health systems to insure better health outcomes and bigger social value. The objective of the study is to give center attention to the percentage attended in basic amenities as well as the average percentage of general service readiness to ensure high quality health systems for Bangladesh in the SDG era. IN this study different domains of general service readiness of high quality care are explored, found different resource constrains and suggestions are given to improve quality care. This study found that the average general service readiness score of health facilities in Bangladesh is 47.202 %(basic amenities= 47.1667 %, basic equipment =78.55%, diagnostic capacity = 10.7833%, for standard precaution is 53.712% and essential medicine = 45.8%). Main concern should be given for the healthcare in the primary level especially for the community clinics and the rural public facilities.

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Abstract- Although health outcomes have improved in the past few decades, still Bangladesh is working towards the target of sustainable goal 3 (SDG 3). In the recent age, a new insight is at hand that having access to the health care is not that having the quality care. Increasing people expectations, health need and determined new health goals are raising the agenda for health systems to insure better health outcomes and bigger social value. The objective of the study is to give center attention to the percentage attended in basic amenities as well as the average percentage of general service readiness to ensure high quality health systems for Bangladesh in the SDG era. In this study different domains of general service readiness of high quality care are explored, found different resource constrains and suggestions are given to improve quality care. This study found that the average general service readiness score of health facilities in Bangladesh is 47.202 % (basic amenities= 47.1667 %, basic equipment =78.55%, diagnostic capacity = 10.7833%, for standard precaution is 53.712% and essential medicine = 45.8%). Main concern should be given for the healthcare in the primary level especially for the community clinics and the rural public facilities. Policymakers should give insights to quality care by improving the facilities up to 100% in health services.

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I. INTRODUCTION

Last 20 years is known as the golden age for the global health care system. The major achievement acquired in health determinants (eg, clean water, and sanitation) and health services (eg, vaccination and antenatal care).⁹⁻¹¹ High quality care involves diagnosis, appropriate and treatment. High quality health systems require strong financing, trained service providers, service delivery, and also community involvement. Poor-quality care can cause adverse health outcomes, health-related suffering even if it builds lack of trust and confidence in health systems.

Bangladesh Government is giving continuously effort and working hard to achieve SDG 3. The Government has taken many initiatives to improve the health condition of our people. Government has established many community clinics from corner to corner the country to ensure better health and give free access to health care to the people. These community clinics provide free health care and free medicines to the people.

Service Provision Assessment (SPA) or health facility surveys have been conducted throughout East and South Asia as well as sub-Saharan Africa to determine primary health care readiness. SPA survey is carried out in Bangladesh named as Bangladesh Health Facility Survey (BHFS) .⁴ To add the Bangladesh Demographic and Health Survey (BDHS) data by providing useful descriptive

information on health system focus on reproductive, maternal, child health services, non-communicable diseases etc to measure the quality care and health services at the national level.⁶

II. OBJECTIVES OF THE STUDY

The main objectives of the study are to:

- Find out the average percentage of basic amenities, basic equipments, standard precautions for infection prevention, diagnostic capacity and essential medicines given by health facility service.
- Determine the average percentage of general service readiness in health facility care
- Give recommendations to improve or develop the existing strategies to ensure 100% general service readiness in a quality health care.

III. LITERATURE REVIEW

The Lancet Global Health Commission is working for the High Quality Health Systems in this SDG Era. The word Quality of care is a insightful theme. This Commission is focus on improving the quality of care of people.

According to The Lancet Global Health Commission almost 9 million lives are lost in every year for lack of good quality care and that a shocking 60% of those deaths were among them who actually had got access to care. That is why having access to the health care is not that much enough?

According to The Lancet Global Health Commission, high-quality health systems could save more than 8 million lives each year and 2.5 million deaths due to cardiovascular disease, 1 million newborn deaths and 50% of all maternal deaths in each year in the low and middle countries.¹

In low and middle income countries, over 8 million people per year are dying from situation that could be treated by the health system. These deaths causes in US\$6 trillion in economic losses in year 2015. Poor health quality care becomes the barrier for reducing mortality.¹

A global report on quality of health care is published earlier in 2018 by WHO, the World Bank, and the Organization for Economic Co-operation and Development (OECD).¹²

According to WHO the overall capability of health facilities to provide general health services is defined as the general service readiness. People-centred health systems is a system where all people should have the same access to quality health services they actually needed in their life.¹³

The availability of components essential to provide services is known as Readiness, for example, basic amenities, basic equipment, standard precautions for infection prevention, diagnostic capacity and essential medicines. In this study, the general service readiness is defined by five general service readiness domains provided by WHO tracer.¹⁴

IV. DATA AND METHODOLOGY

a) Data

The data is extracted from Bangladesh Health Facility Survey (2017 BHFS) which is nationally representative health facility survey. The information is collected on general facility readiness. A stratified random sample of 1600 observations (health facilities) are selected from 8 division of Bangladesh which includes district hospitals

(DH), mother and child welfare center(MCWCs), upazila health complexes (UHCc), union health and family welfare centers (UHFWCs), union subcenters or rural dispensaries (US or RD), and community clinics (CCs). The survey was conducted under the management of the National Institute of Population Research and Training (NIPORT) of the Ministry of Health and Family Welfare (MOHFW) funded by the Government of Bangladesh and the U.S. Agency for International Development (USAID).

b) Methodology

This study data has been extracted data from the 2017 Bangladesh Health Facility Survey (BHFS).The 2017 BHFS is successfully collected a stratified random sample of 1,524health facilities from all formal-sector health facilities in Bangladesh. It is not possible to measure general service readiness directly .The WHO identifies specific tracers or items to measure the readiness indices. By WHO tracer the domains of general service readiness are basic amenities, basic equipments, standard precautions for infection prevention, diagnostic capacity and essential medicines. A percentage is a number or ratio which is calculated as a fraction of 100. A percentage of facilities in each domain are observed. Then the average of each domain is calculated by adding the percentage of indicators dividing by the number of indicators. Using the average of five domains, the average general service readiness is calculated. The domains are:

Table 1: The domain with corresponding indicators for measuring general service readiness

Serial No.	Domain	Indicators
a.	Basic amenities	improved water supply, emergency transport , computer with internet, regular electricity availability , separate latrine or toilet for female clients, room with privacy, communication equipment thermometer, stethoscope, blood pressure apparatus, adult scale, child scale, light source availability
b.	Basic equipment	appropriate storage of sharps waste and safe ultimate disposal of sharps, appropriate storage of infectious waste and safe ultimate disposal of infectious wastes, disinfectant and guidelines for standard precautions, single-use disposable/auto-disable syringes, soap and running water or alcohol-based hand rub, latex gloves
c.	Standard precautions for infection prevention	haemoglobin, blood glucose , urine dipstick for protein, urine dipstick for glucose, syphilis rapid diagnostic test, urine pregnancy test amitriptyline tablet, amoxicillin (tablets capsules), Atenolol tables, Captopril tablets, Ceftriaxone injectable, Ciprofloxacin tablets, Cotrimoxazole oral suspension, Diazepam tablets, Diclofenac tablets, Glibenclamide
d.	Diagnostic capacity	
e.	Essential medicines	



Average General Service Readiness	(a+b+c+d+e) / 5	tablets, Omeprazole or cimetidine tablets, Paracetamol oral suspension, Salbutamol inhaler, Simvastatin or atorvastatin tablets.
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V. ANALYSIS AND FINDINGS

The 2017 BHFS collected several types of health facilities. The seven amenities have been observed in the study. The amenities are: separate latrine or toilet for female clients, emergency transport, computer with internet, regular electricity availability, improved water supply, room with privacy, communication equipment.

Notes

Table 2: Frequency distribution of basic amenities and equipment for client services

Basic amenities	Percentage (N= 1524)	Basic equipments	Percentage (N= 1524)
improved water supply	90	thermometer	86.3
emergency transport	5	stethoscope	94.2
computer with internet	58	blood pressure apparatus,	85.4
regular electricity availability	43	adult scale	85.9
room with privacy	70	child scale	61.6
separate latrine or toilet for female clients	17	light source availability	51.9
communication equipment	11	All basic equipment	28

The availability of at least 5 basic amenities in health facilities is only 19% (BDHS 2017) which is improved from 11% (BDHF 2014).

The communication equipments (land line or mobile phone) is highest in private hospital (95%), upazila and district level (82%) but very low in community clinics (3%) and overall it is 11%. Available emergency transport is high in district hospital (97%), upazila district level (79%), private hospital (62%) Including all community clinics and NGO facility clinics this percentage is very low (5%). Still the facilities of emergency transport, communication equipment have to be improved in huge scale. The percentage has to be improved to regular electricity availability, computer internet, and separate female latrine for the client's satisfaction with health services.

The facilities are most likely to have WHO and USAID proposed basic equipments such as thermometer, stethoscope, blood pressure apparatus, adult scale child scale light source availability.

The availability of all six basic equipments in health facilities is 28% (BDHS 2017) which is improved from 26% (BDHF 2014). This percentage is high in private hospitals and NGO facilities which are 80% or more. Community clinics (CCs) and union level public facilities are meager indicating 23%.

The average general service readiness score of health facilities in Bangladesh for basic amenities is 47.1667% and for basic equipments is 78.55 %.

Notes

Table 3: Frequency distribution of standard precautions for infection prevention and diagnostic capacity for client services

Standard precautions	Percentage (N= 1524)	diagnostic capacity	Percentage (N= 1524)
safe ultimate disposal of sharps	72.5	hemoglobin	17
and appropriate storage of sharps waste	64.1	blood glucose	19.7
safe ultimate disposal of infectious wastes	66.3	urine pregnancy test	12.4
appropriate storage of infectious waste and	32.9	urine dipstick for protein	10.8
disinfectant and guidelines for standard precautions,	17.3	urine dipstick for glucose	10
single-use disposable/auto-disable syringes	76.9	Syphilis rapid diagnostic test	4.8
soap and running water or alcohol-based hand rub	21.5		
latex gloves	78.2		

The average general service readiness score of health facilities in Bangladesh for diagnostic capacity is 10.7833% and for standard precaution is 53.712%.

Table 4: Frequency distribution of essential medicines for client services

Facility type	Percentage (N= 1524)				Notes
	District and upazila public facilities	Community clinic (CC)	Private hospital	Total	
Amitriptyline tablet	7.7	0	57.6	2.4	
Aamoxicillin (tablets capsules)	85	85.6	61.5	83.6	
Atenolol tables	30	0	61.6	3.9	
Captopril tablets	53.9	0	74.2	6.4	
Ceftriaxone injectable	66	2.8	77.8	9.4	
Ciprofloxacin tablets	96	95.6	78.2	94.8	
Cotrimoxazole oral suspension	73.8	86.7	73.8	82.7	
Diazepam tablets	77.4	6.4	75.1	22.8	
Diclofenac tablets	90.6	60.8	80.4	63.8	
Glibenclamide tablets	41.1	0	69.6	5	
Omeprazole or cimetidine tablets	95.5	93.5	80.7	92.7	
Paracetamol oral suspension	75.5	88.3	79.6	83.7	
Salbutamol inhaler	95.1	89.9	78.5	86.6	
Simvastatin or atorvastatin tablets	24.2	0.2	64.3	3.4	

Essential medicines are comparatively more available in private sector than district and upazila level and lower in community clinics. The average score of health facilities for essential medicines is 45.8%.

VI. FINDINGS

The average of general service readiness is calculated by adding the average percentage of 5 domains, dividing by the number 5 which is 47.202 % (average basic amenities = 47.1667 %, average basic equipment = 78.55%, average diagnostic capacity = 10.7833%, average standard precaution is 53.712% and average essential medicine = 45.8%) less than 50 %. By constantly improving existing facilities to

changing population needs a high-quality health system can enhanced in general health care.

Recommendation

Bangladesh government has incredible improved in health sector which is valued and trusted by the all over the country. To give 100% service facility Government should

- Develop our community clinics by improving basic amenities, diagnostic capacity, standard precautions and essential medicines.
- Give special attention to Union level public facilities as union health and family welfare centers (UHFWCs), union subcenters or rural dispensaries (US or RD), and community clinics (CCs) so that these facilities can follow IMCI guidelines properly.
- Ensure the adequacy of basic amenities, standard precautions, especially for improving the diagnostic capacity the authorities of the facilities should take necessary measures.
- Stringently supervise the performances of health providers.

Further study

There is enormous scope to work with this study by advanced analysis such as ordinal logistic regression model assuming proportional odds assumption i.e. proportional odds model could have been applied in the study.

VII. CONCLUSION

The study found the significant lacking of the general service readiness in basic amenities: emergency transport, communication equipment. Special attention should be given in different diagnostic capacity improving such as hemoglobin, blood glucose, urine pregnancy test, urine dipstick for protein, urine dipstick for glucose, Syphilis rapid diagnostic test. All the facilities should maintain the disinfectant and guidelines for standard precautions for quality care. Only half of the essential medicines are available in community clinics. Higher general service readiness in private hospitals is observed. This study finds that priority should be given for the healthcare in the primary level especially for the community clinics and the rural public facilities.

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