FINAL REPORT

On

Out Patient Dept. (OPD)

AT

ANGUL, GAJAPATI & PURI

For

P&C DEPARTMENT, GOVT. OF ODISHA
ODISHA SECRETARIAT

by

NATIONAL PRODUCTIVITY COUNCIL

NATIONAL PRODUCTIVITY COUNCIL

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1.0 INTRODUCTION:

Health systems worldwide are recognizing the need to improve quality. Such systems are increasingly adopting evidence-based guidelines, giving attention to reducing medical errors, and safeguarding patient safety. Concern with quality is also expressed in efforts to reduce waste and inefficiency, to ensure that scare resources for healthcare are used to derive their full impact.

Why is quality of healthcare important?

Quality of care is not a luxury that only wealthy countries can afford; it is an imperative for healthcare organizations worldwide. Complex health problems that know no national boundaries, such as HIV/AIDS and antibiotic-resistant tuberculosis, demand careful attention to well-designed processes of care, based on clinical evidence of effectiveness. The very limited resources available for publicly funded health services in many low-income countries demand that those resources be channelled into effective processes of care and those wasteful or ineffective practices are eliminated.

During the last decade, quality of health care has received increasing political and public health attention, fuelled in part by growing local autonomy and democratization, decentralization of health systems, and health sector reform. World- wide, significant efforts are underway to improve the quality systems in their quest for sustainable quality.

The government have been gradually moving from an “inside-out” approach—basing service delivery on what the organization saw as important—to an “outside-in” approach – basing service delivery on citizen’s needs and expectations. It includes step-by-step descriptions of suggested activities, with associated tools to develop citizen-centred service strategies that respond to citizen needs and priorities for service improvement.

Patient satisfaction regarding health care is a multidimensional concept that now becomes a very crucial health care outcome. A meta-analysis of

satisfaction with medical care revealed the following aspects for patient satisfaction and overall performance of an organization: overall quality, trust, reputation, continuity, competence, information, organization, facilities, attention to psychosocial problems, and outcome of care. All of these factors have high influence on service quality of health care organizations and at the same time can influence the satisfaction level.

The Five Key Drivers of Citizen Satisfaction:

Driver	Survey Measure
Timeliness	Satisfaction with the amount of time it took to get the service
Knowledge	Staffs were knowledgeable
Support	Staff went to help me to get what I needed
Fairness	I was treated fairly
Outcome	In the end, I got what I needed

1.1 HEALTH CARE IN INDIA

Health care in India is delivered through a three tier structure of health services comprising the primary, secondary and tertiary health care facilities with the objective of bringing health care services within the reach of the people of both the rural and urban areas. The primary tier would have three types of health care institutions, namely, a Sub-centre (SC) for a population of 3000-5000, a Primary Health Centre (PHC) for 20000 to 30000 populations and a Community Health Centre (CHC) as referral centre for every four PHCs for 80000(vulnerable or hard to reach blocks) to 120000. The district hospitals are to function as the secondary tier for the urban population. The tertiary health care is to be provided by health care institutions in urban areas which are well equipped with sophisticated diagnostic and investigative facilities.

However, in spite of a vast network of health care institutions in India, there exist wide gap between the rural and urban areas in terms of availability and accessibility of health care infrastructure, as the urban areas are found better equipped with these facilities. Moreover, health being a state subject,

there are imbalances and variations in availability and accessibility of these services in the rural areas across the states.

Since a disproportionate emphasis has been laid on the establishment of curative health centres between the rural and urban areas as majority of these centres are located in the urban areas, the people residing in the rural areas have to travel a long distance to reach the nearest curative health centre for seeking relief from ailments which could have otherwise been readily handled at the CHC level. Besides, for want of a well-established referral system, those seeking curative care have the tendency to visit various specialised health care centres, thus further contributing to congestions, duplication of efforts and wastage of resources.

For the purpose of analysis, the various components of the infrastructure of CHCs can be broadly categorised under appropriate groups and sub -heads, like, man-power, physical facilities, machines and apparatus and medicines. While the Government of India have prescribed norms for essential facilities required at CHCs, the implementation of the norms and actual provision of such facilities are made by the concerned State Governments. The man-power at a CHC includes medical specialists, Para-medical staff and supportive staff, while physical facilities include outpatient department (OPD), operation theatre, labour room, pathology laboratory and safe drinking water. Other essential complementary facilities, like, refrigerator, X-Ray machine, ECG apparatus and generator are included under equipment.

TABLE 1 : Worldwide Physician Density

S. N.	Countries	Nurses and midwives density per 1000	Physicians density per 1000
Developed countries			
1	USA	9.37	2.56
2	France	7.50	3.37
3	Germany	9.82	3.37
4	Japan	7.98	1.98
5	UK	12.75	2.30
Developing countries			
1	India	1.27	0.60
2	Sri Lanka	1.74	0.55
3	Pakistan	0.46	0.74
4	Bangladesh	0.32	0.26
5	China	1.08	1.06
6	Malaysia	1.69	0.70
7	Indonesia	0.82	0.13

However, the inadequacies in the policy measures and planning have been recognised and attempts have been made to address this imbalance in access to health care services by strengthening the rural health infrastructure. The creation of CHC as a referral centre equipped with modern facilities is an attempt to bring down the disparity in access to public health care services between the urban and rural areas and to make the facilities available in the tertiary health care hospitals to the rural people by improving the physical accessibility of such services. As a result, substantial resources have been flown into the programming and implementation of health and family welfare programmes since beginning of the Planning Process in India.

2.0 OBJECTIVE OF THE STUDY:

The main objective of the study is to investigate health care facility and patient satisfaction in the context of rural health care organization. This will be an approach to understand how the relationship is affected between the patient

and health care service provider. This study will further investigate the satisfaction level of patients from hospital, how they perceive the service dimensions and its responsiveness. It will enable us to test, if the mentioned factors affect in health care organization.

The results of the study will be useful and can contribute to the health care organization to improve their overall performance in the areas like service quality dimensions, trust and reputation, which are the key factors in our point of view. These factors can lead the organization in getting high level of patient satisfaction.

Key objectives:

- To understand the efficacy/capacity to deliver important services
- To understand the resource requirement and planning in order to achieve the patient/ citizen satisfaction
- To identify the reason and/or intervention for achieving the success or failure in the service delivery.
- To improve the quality of care from the healthcare user perspective.

2.1 Defining the Problem:

Supplementing to the transparency, reliability, responsiveness and accountability in delivering the public service with exercising the right over the services meant for the Citizens, Government of Orissa has enacted the Right to Public Services Act-2012. The law enables the citizens to demand public services as a right and also includes a provision for penal action against the public officials failing to provide the service within the stipulated time. However with the uneven demand in the public service by the citizens and also with the not so streamlined planning of the supply side resources for providing the time bound service there exist a standard deviation from the desired quality level of service delivery to the actual service delivery level.

In view of the above, it is imperative to get insight into the functioning of the Community Health Centres (CHCs) which were established at the Block

Level with the objectives of minimizing the hardships of the rural people arising out of lack of specialised medical services in the nearby areas and their inability to have access to district and other rural referral hospitals which are already overcrowded. Hence, the need to evaluate the scheme was felt. The study would provide useful inputs to the policy makers and the implementers for taking corrective measures on bottlenecks, disparities, if any, in the functioning of CHCs.

At the instance of Department of Planning & Coordination, Government of Odisha, Bhubaneswar; the National Productivity Council (NPC), Bhubaneswar undertook the study to evaluate the functioning of the Community Health Centre (CHC) and their effectiveness in bringing the specialised health care within the reach of rural people and would provide an insight in improving the process capability and opportunities for continuous improvement. We have identified Gumma, Chendipada & Nimapara block of Gajapati, Angul and Puri district respectively as sample CHC to evaluate the service.

3.0 SCOPE OF STUDY:

Healthcare quality has two distinct facets, namely technical quality and functional quality. Technical quality refers to the accuracy of medical diagnosis and procedures, and is generally comprehensible to the professional community but not to the patients. Patients essentially perceive functional quality as the manner in which the services are being delivered.

The study was conducted at Community Health Centre (CHC) of Gumma, Chendipada, Nimapara to ascertain any technical failure and perceived service gap between citizen expectations and perceptions about quality of the Outpatient Department (OPD) services being offered by that CHC.

4.0 METHODOLOGY:

The present study was conducted at selected Community Health Care centres which cover the villages in Gumma Block, Chendipada Block and

Nimapara Block for the citizen and health care professionals. As requirement under the study, both the primary and secondary data were obtained.

A detailed appointment was made for collecting the opinions of the CHC staffs. Personal interviews were conducted in order to understand the existing process. Process Mapping was carried out to map the various activities, process & its interactions. Series of discussion & meeting have been held for collection of feedbacks & comments for the study. Both secondary and primary data had to be analysed to test the various hypotheses relating to the above mentioned objectives of the study. While the information available in published sources was obtained and used wherever necessary, the most part of the data required for the study was generated through a sample survey, observation and interviews with stakeholders.

Visits were made randomly to different villages under health sectors for citizen survey. Visit has been made to CHC's, District Headquarter Hospitals (DHH), to get an overview of the existing operating mechanism. Citizen's problems were discussed through Focussed Group Discussions (FGD). Direct Interview with existing staff of CHC and DHH, to understand better about the existing process.

The secondary data have been collected mainly through recorded data available at the CHC, DHH and National Health Mission (NHM), Bhubaneswar and published works in the form the books, articles, and internet resources. Through this secondary data, we could scrutinize and extract that information which was significant for the evaluation study. In each selected village the views of senior and knowledgeable person were also taken for preparation of qualitative notes regarding the functioning of health care institutions.

The identity of the key persons has been kept anonymous to ensure confidentiality. Both Qualitative and Quantitative techniques of research has been used in this study. Interviews have been qualitatively analyzed and interpreted. The questionnaire was designed and developed by the NPC team with focussed discussions. Due to shortage of resources and geographical

constraints of different block a sample study of 100-150 persons per block was carried out about the patient satisfaction at CHC.

5.0 AN OVERVIEW OF OPD SERVICES:

An outpatient (or out-patient) is a patient who is not hospitalized for 24 hours or more but who visits a hospital, clinic, or associated facility for diagnosis or treatment. Treatment provided in this fashion is called ambulatory care. OPD is a facility, associated with a hospital that is devoted to the diagnosis and care of outpatients.

5.1 IMPORTANCE OF OPD:

- OPD is a very important wing of hospital serving as mirror.
- OPD is visited by large section of community.
- First point of contact between patient and hospital staff.
- The human relation skill/ Public relation functions are of utmost importance.

5.2 TYPE OF OPD SERVICES:

- To provide for the community a major source of diagnostic medical opinion by mixing the knowledge, skills and ability of the physician and supported by the resources of the hospital.
- These include not only the physical resources but also the materials and machines, which facilitates early diagnosis with support of paramedical staff and other allied health profession.
- To treat on ambulatory and domiciliary basis in the Outpatient Department.
- To refer patients for admission to the hospital of those who need it.
- To promote health of the individuals under care in the Outpatient Department by means of health education.
- To carry out after care and medical rehabilitation, when necessary, after discharge from hospital.

- To compile and analyze records of patients using outpatient services.
- To carry out preventive and primitive services through provision of immunization, antenatal care, post natal care, counselling family welfare clinics etc.

6.0 FMEA in OPD SERVICES:

Failure Mode and Effects Analysis (FMEA) is a proactive risk assessment tool used to identify potential vulnerabilities in complex, high-risk processes and to generate remedial actions to counteract them before they result in adverse events. FMEA was developed outside of health care and is now being used in health care to assess risk of failure and harm in processes and to identify the most important areas for process improvements. In particular, the use of FMEA is now recommended widely in healthcare as an appropriate tool for proactive safety analysis.

FMEA is a systematic group of activities intended to do three things:

1. Recognize and evaluate the potential failures of a product or process and the effects of those failures.
2. Identify actions that could eliminate or reduce the chance of the potential failures' occurring.
3. Document the entire process.

There are several variants, but FMEA generally entails the following analytic steps:

4. Mapping the process in a flow diagram to identify its component steps.
5. Identifying failure modes (potential errors) for each step.
6. Numerically scoring the failure modes for their likelihood of occurrence and severity of consequences.
7. Identifying possible causes for the failure modes.
8. Generating corrective actions to address the failure modes.

These actions are then implemented, and their effect is evaluated using appropriate outcome measures to determine the success (for example, improved safety) of the redesigned process. Because complex processes typically involve numerous individuals, no one individual is likely to possess sufficient knowledge (of the process) to conduct FMEA. Furthermore, FMEA is a qualitative methodology that is based on the knowledge, experience, and opinions of those who carry out the process under evaluation, so the input of several individuals is necessary to guard against bias.

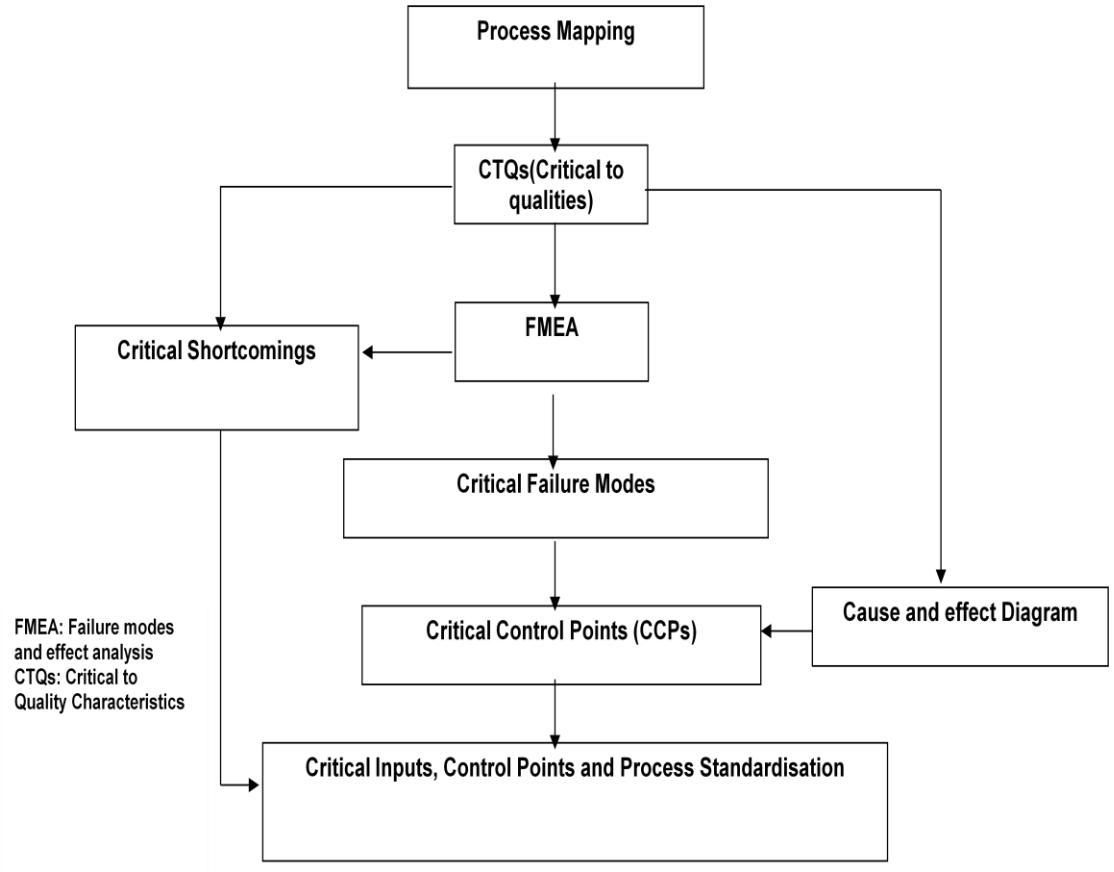


FIGURE 1: FMEA IMPLEMENTATION

input of several individuals is necessary to guard against bias.

KEY CONCEPTS:-

CTQ (Critical-To-Quality) are the key measurable characteristics of a product or process whose performance standards or specification limits must be met in order to satisfy the customer.

Failure Mode: -Physical description of a failure. It is the manner in which the process fails to perform its intended function.

Failure Effect: - It is an impact of failure on process, system. It is an adverse consequence that the customer / user might experience.

Failure Cause: - It refers to the cause of failure.

FMEA VARIABLES:

• **Severity of effect (S)**:- Severity measures the seriousness of the effects of a failure mode. Severity categories are estimated using a 1 to 10 scale.

• **Occurrence (O):-**Occurrence is related to the probability of the failure mode and cause.

• **Detection (D):-** The assessment of the ability of the "design controls" to identify a potential cause.

Detection scores are generated on the basis of likelihood of detection by the review, observations, or control measures.

• ***Risk Priority Number (RPN)*:-** The Risk Priority Number is the product of the Severity (S), Occurrence (O), and Detection (D) ranking. The RPN is a measure of design risk and will compute between "1" and "1000."

$$RPN = S \times O \times D$$

6.1 DATA COLLECTION:

- *Step One:*

Before design and implementation of FMEA to OPD services it is required to have careful knowledge of the process, therefore the same is studied by using process flow chart. The first phase of the work was to collect the data, information about OPD services, existing manpower and infrastructure through visits to the CHC. Evaluation using FMEA works best on processes that do not have too many sub processes. Instead of doing an FMEA on a large and complex process, here we tried to do FMEA on sub processes or variants.Figure3 illustrates the different processes in OPD services.

- *Step Two:*

Everyone who is involved at any point in the process was included. Some people may not need to be part of the team throughout the entire analysis, but they are included in discussions of those steps in the process in which they are involved. Once data was gathered the areas where concentration is required are finalized. Accordingly efforts have been put to reduce the failure modes .We started analysis of the data to identify causes of occurrence of each problem and effects of these problems on quality of services. The numerical scales are shown in the **Table 4**.The cause having higher RPN is given priority.

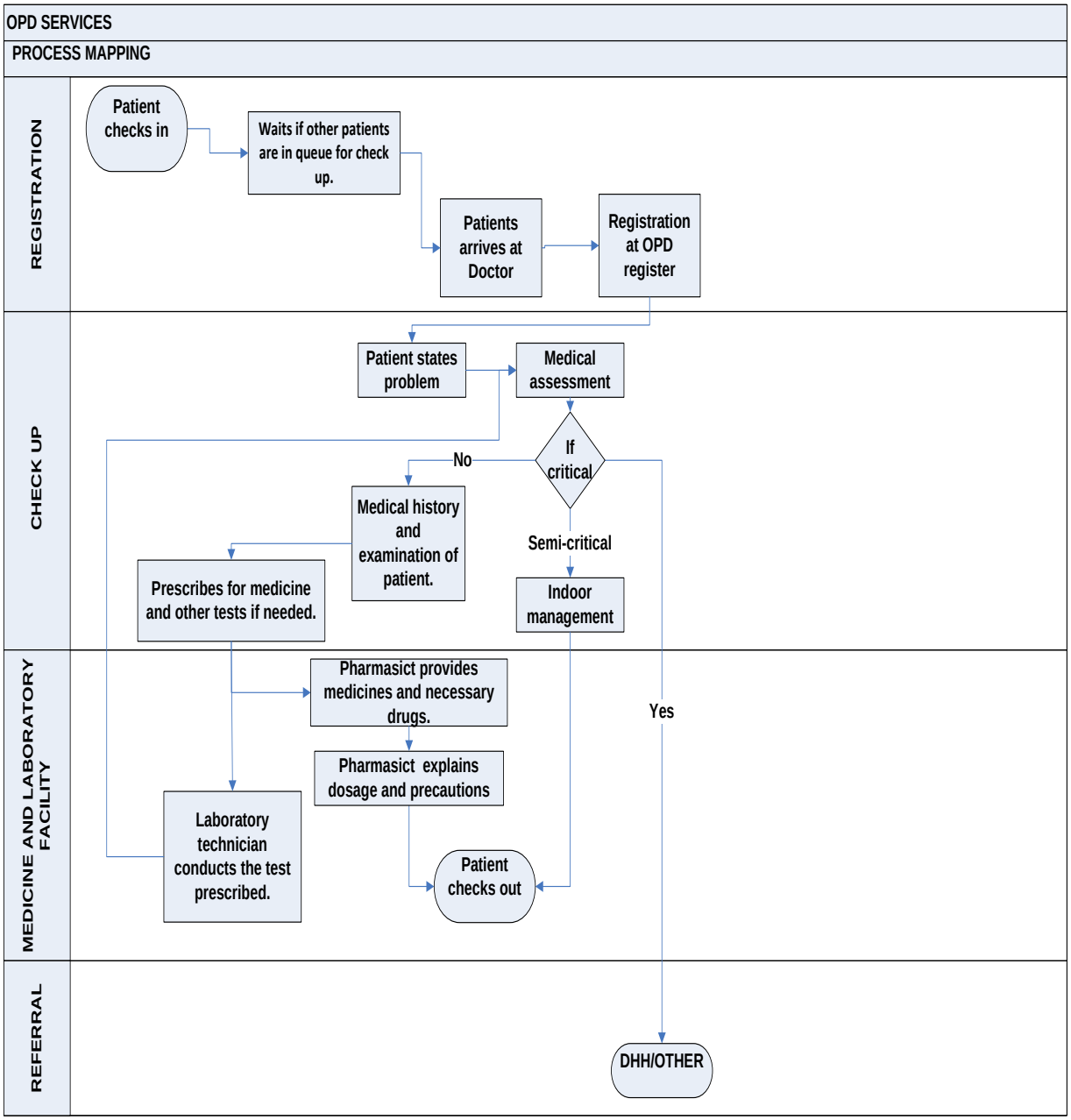


FIGURE 2: PROCESS MAPPING OF OPD SERVICES

Following the process mapping activity described above in Figure 2, further meetings were organised to identify failure modes and to perform the risk analysis. As healthcare staffs tend to have limited time available to participate in such activities, the meetings started with a quick review of the process map and a discussion around which steps should be looked at in more detail.

TABLE 2: FMEA VARIABLES RATING

RATING	Occurrence scale "scoring"	Severity scale "scoring"	Detection scale "scoring"
1	No known occurrence; or happens < 10 % of the time	No effect	Almost Certain
2	Occurrence =<20% of time	Slight disturbance in system	Very High
3	Occurrence =<30% of time	Slight irritation in patient	High
4	Occurrence =<40% of time	May financially affect the patient only	Moderately High
5	Occurrence=<50% of time	Difficult to diagnose	Moderate
6	Occurrence=<60% of time	May affect the patient illness	Low
7	Occurrence =<70% of time	Patient illness may increase	Very Low
8	Occurrence=<80% of time	Temporary patient harm	Remote
9	Occurrence=<90% of time	Highly critical	Very Remote
10	Occurrence= <100% of time	Death	Detection not possible at any point

6.2 ANALYSIS OF THE DATA:

6.2.1 Identification of the causes:

Once the data is collected, the priority areas or focus areas are finalised so as to target the failures. The data analysis is done to identify causes of occurrence of each problem and effects of these problems on qualitative delivery of the service. Problem solving techniques such as Why & Why Analysis, Brainstorming and Cause & Effect Diagram have been used to find the probable causes and their effects. A Cause and Effect Diagram was drawn as shown in the Figure 3 is the most important activity here. This is the most important step in Problem Solving.

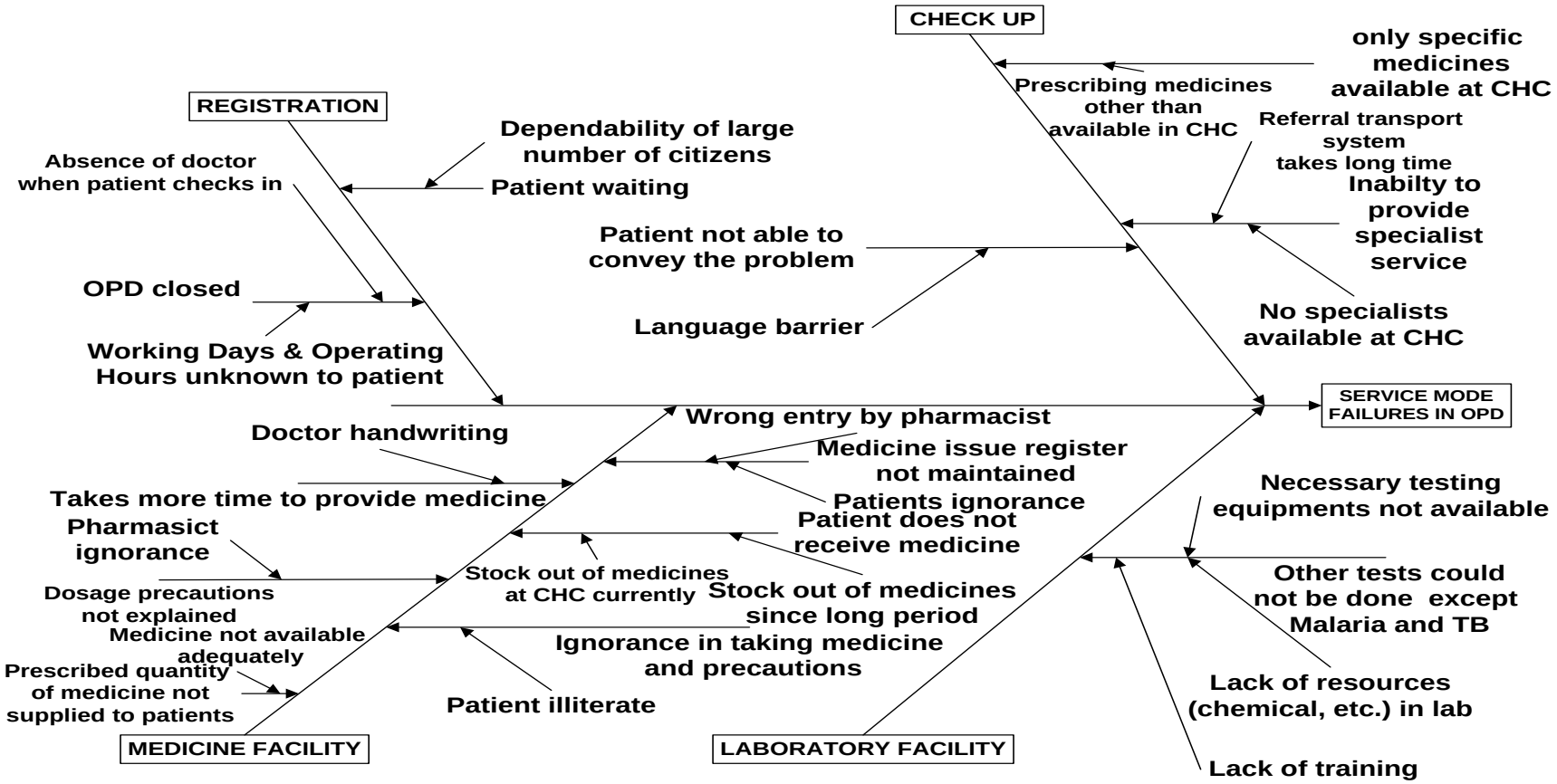


FIGURE 3: CAUSE AND EFFECT DIAGRAM

6.2.2 Calculation of Risk Priority Number (RPN):-

The evaluation of the three risk parameters is done on the numerical scale/rating defined by the NPC team created on the basis of assumptions through discussions, observations, and sample survey and analysis.

The Table 3 & Table 4 shows the detected failure modes and some additional information associated with them: potential causes, failure effects, and description of line controls that detect the failures, evaluation of three risk parameters and calculation of RPN of each cause of the problem.

TABLE 3: OCCURRENCE RATING OF GUMMA BLOCK

Code	Potential causes of failure	Evaluation criteria	Occurrences max = 10	Reference for assumption
A1	working days & operating hours unknown to patient	Survey	1	17% of people are not aware of OPD timing and days. (3 out of 60 samples)
A2	Absence of doctor when patient checks in	Survey and Observation	2	Visiting to CHC, late arrival of doctor(1day out of 6 days) from observation of 1 week, 20% of people said so.(12 out of 60 samples)
A3	Dependability of large number of citizens on OPD resulting in long queues	Observation	7	1 week observation=4 days out of 6days, large queues
A4	Language barrier	Discussion with CHC staff	2	2 out of 10 cases are difficult to understand on an average as stated by Doctor.
A5	Prescribing medicines other than available in CHC	Discussion with doctors	4	4 out of 10 cases on an average based on observation in a week (30 patients) and discussion with Doctor.
A6	No Specialists available at CHC	Manpower status and referral case	1	referral cases=8 out of 296 OPD (weekly average)
A7	referral transport system takes long time	analysis of service time and referral case	1	Referral cases=8 out of 296 OPD cases (weeks average) and average service time was calculated and found around 1 hour and 40 minutes .
A8	stock out of medicines at CHC currently	stock records	1	Observation
A9	stock out of medicines	survey and stock records	7	40 out of 196 medicines and drugs are out of stock for an average period of 5 months (Source: observation and analysis of ledger book) 65% of people complaint (39 out of 60 sample) about non availability of medicines
A10	doctor handwriting	feedback from pharmacist	2	2 out of 10 cases on an average take more time
A11	patient illiterate	survey	5	literacy rate of district =53.49%

Poor management of Drugs/ medicine inventory

Poor management of Drugs/ medicine inventory

Code	Potential causes of failure	Evaluation criteria	Occurrences max = 10	Reference for assumption
A12	pharmacist ignorance	survey	1	5% people said so(3 out of 60 samples)
A13	pharmacist wrong entry	observation from issue register	1	Observation
A14	patients ignorance	survey	2	20% of people are ignorant about medicines prescribed and medicine received (12 out of 60 samples)
A15	medicine not available adequately	survey	6	55% of people complained(33 out of 60 samples)
A16	necessary testing equipments not available	discussion with lab technician	3	45 tests comes for testing, 296 OPD cases on an average(weekly),30% of people complained for non-availability of tests(18 out of 60 samples)
A17	lack of resources(chemical, etc.) in lab	discussion with lab technician	3	45 tests comes for testing, 296 OPD cases on an average(weekly),30% of people complained for non-availability of tests (18 out of 60 samples)
A18	lack of training	discussion with lab technician	3	45 tests comes for testing,296 OPD cases on an average (weekly), 30% of people complained for non-availability of tests (18 out of 60 samples)

Poor infrastructure at CHC Gumma, Gajapati

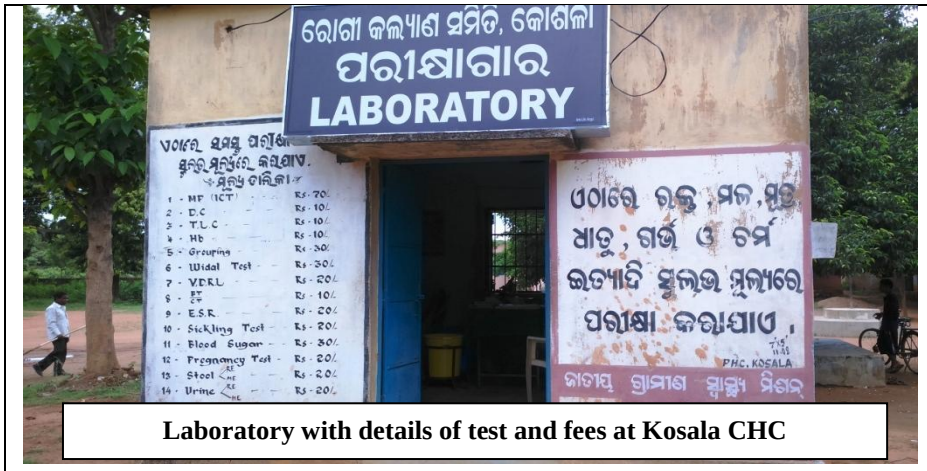
TABLE 4: OCCURRENCE RATING OF CHHENDIPADA BLOCK

Code	Potential causes of failure	Evaluation criteria	Occurrences max = 10	Reference for assumption
A1	working days & operating hours unknown to patient	Survey	2	15% of people are not aware of OPD timing and days and working hours not mentioned in CHC (23 out of 150 samples)
A2	Absence of doctor when patient checks in	Survey and Observation	8	Visiting to CHC, late arrival of doctor(5 day out of 6 days) from observation of 1 week
A3	Dependability of large number of citizens on OPD resulting in long queues	Observation	9	1 week observation=5 days out of 6days ,large queues
A5	Prescribing medicines other than available in CHC	Discussion with citizens	4	4 out of 10 cases
A6	Support system to Specialists not available at CHC	Infrastructure status & referral case	1	referral cases=428 in 52 weeks, 2013-14 (weekly average of 8)

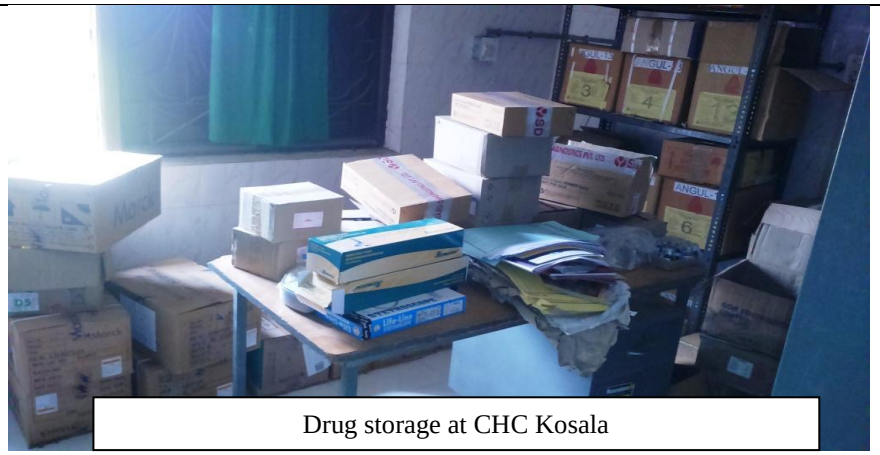
No waiting hall at CHC Chhendipada, people waiting outside

No citizen's charter/ patient information display at CHC kosala

Code	Potential causes of failure	Evaluation criteria	Occurrences max = 10	Reference for assumption
A7	referral transport system takes long time	Analysis of service time & referral case	1	Referral cases = 8 cases (weeks average) and average service time was calculated and found around 1 hr and 23 mins.
A8	stock out of medicines at CHC currently	stock records	1	Observation
A9	stock out of medicines	Survey and stock records	2	20 out of 305 medicines are out of stock (Source: observation and analysis of ledger book) 22% of people complaint (33 out of 150 sample) about non availability of medicines
A10	doctor handwriting	feedback from pharmacist	1	1 out of 20 cases on an average take more time
A11	patient illiterate	Survey	3	literacy rate of district = 68.8%
A12	pharmacist ignorance	Survey	1	3% people said so (5 out of 150 samples)
A13	Entry of distribution	observation during distribution	8	Observation (almost)
A14	Patients ignorance	Survey	1	5% of people are ignorant about medicines prescribed and medicine received (8 out of 150 samples)
A15	medicine not available adequately	Survey	3	25% of people complained (37 out of 150 samples)



Laboratory with details of test and fees at Kosala CHC



Drug storage at CHC Kosala

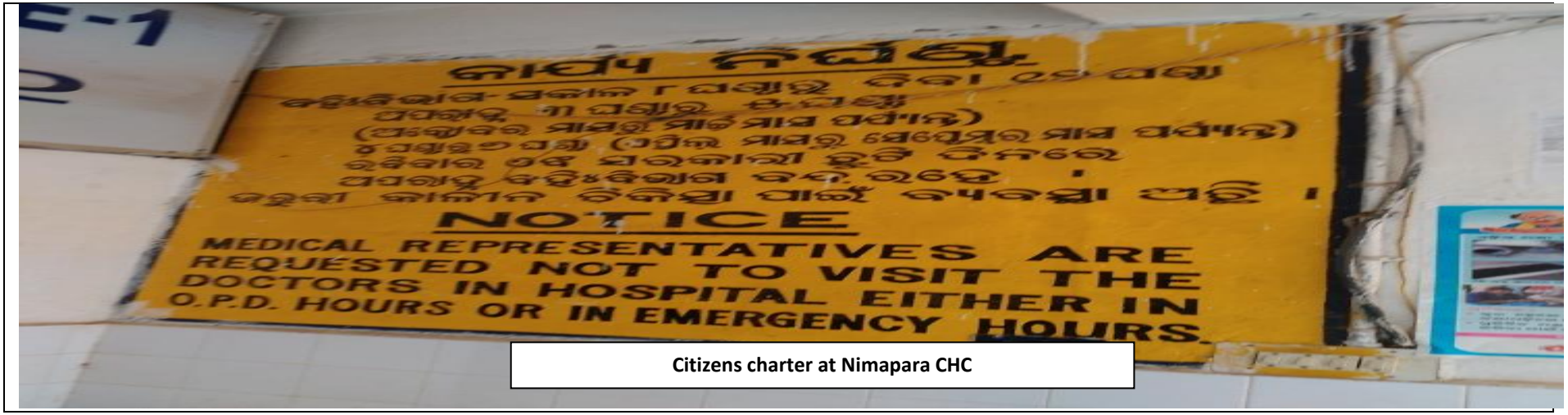
TABLE 5 : OCCURRENCE RATING OF NIMAPARA BLOCK

Code	Potential causes of failure	Evaluation criteria	Occurrences (max = 10)	Reference for assumption
A1	working days & operating hours unknown to patient	Survey	1	11% of people are not aware of OPD timing and days and working hours not mentioned in CHC (17 out of 150 samples)
A2	Absence of doctor when patient checks in	Survey and Observation	1	Visiting to CHC, punctuality of doctor from observation of 1 week, 10% of people said so.(15 out of 150 samples)
A3	Dependability of large number of citizens on OPD resulting in long queues	Observation	9	1 week observation=5 days out of 6days ,large queues
A5	Prescribing medicines other than available in CHC	Discussion with citizens	2	2 out of 10 cases
A6	Support system to Specialists not available at CHC	Infrastructure status and referral case	1	referral cases =165 cases (68 weeks) in 2014-2015 , 2 per week on an average

Suggestion box at CHC Nimapara


Drug storage at Nimapara CHC

Code	Potential causes of failure	Evaluation criteria	Occurrences (max = 10)	Reference for assumption
A7	referral transport system takes long time	analysis of service time and referral case	1	Referral cases=2 cases (weeks average) and average service time was calculated and found around 2 hour and 14 minutes.
A8	stock out of medicines at CHC currently	stock records	1	Observation
A9	stock out of medicines	survey and stock records	2	18% of people complaint (27 out of 150 sample) about non availability of medicines
A10	doctor handwriting	feedback from pharmacist	1	1 out of 20 cases on an average take more time
A11	patient illiterate	survey	1	literacy rate of district=84.67%
A12	pharmacist ignorance	survey	0	1% people said so(2 out of 150 samples)
A13	Non entry of medicine distribution	observation during distribution	0	Observation(almost)
A14	patients ignorance	survey	1	5% of people are ignorant about medicines prescribed and medicine received(8 out of 150 samples)
A15	medicine not available adequately	survey	3	25% of people complained(37 out of 150 samples)



Citizens charter at Nimapara CHC

TABLE 6: RPN CALCULATIONS OF FAILURES FOR GUMMA BLOCK

S. N.	SERVICE	Process activity	Potential failure mode	Potential effects of failure	Severity (a) Max = 10	Potential causes of failure	Evaluation Criteria	Occurrences (b) Max = 10	Detection (c) Max = 10	RPN Risk Priority Number (axbxc)	Code	PROPOSED ACTION
1	REGISTRATION	Patient checks in	OPD closed	Patient disappointed Travel cost Illness may increase Returns back without treatment	6	Working Days & Operating Hours unknown to patient	Survey	1	6	36	A1	TO DISPLAY INFORMATION AT CHC ABOUT WORKING DAYS & OPERATING HOURS INCLUDING UPCOMING HOLIDAYS
						Absence of doctor when patient checks in	Survey and observation	2	8	96	A2	BIOMETRIC ATTENDANCE
		Patient waiting	Patient has to wait for long time	Patient dissatisfied	3	Dependability of large number of citizens on OPD resulting in long queues	Observation	7	2	42	A3	TO STRENGTHEN PHCS TO DECREASE THE LOAD ON CHC,TO PROVIDE WAITING HALLS/SHED AS PEOPLE HAVE TO WAIT OUTSIDE UNDER THE SUN.
2	CHECK UP	Patient states the problem	Patient not able to convey the problem	Difficult to diagnosis	5	Language barrier	Discussion with doctors	2	4	40	A4	OPD ATTENDANT TO SERVE AS LANGUAGE INTERPRETER.
		Doctor prescribes medicines on registration slip	only specific medicines available at CHC	Patient hesitates to purchase some specific medicine from outside	6	Prescribing medicines other than available in CHC	Discussion with doctors	4	8	192	A5	TO HAVE FACILITY OF GENERIC MEDICINE/JANA ASHAUDHI COUNTER AT BLOCK
		Managing critical cases	unable to provide specialist service	Patient not cured, severity may increase,critical case	9	No specialists available at CHC	Manpower status and refrerral case	1	1	9	A6	AVAILING SPECIALIST SERVICE FROM DHH
						Referral transport system takes long time	Analysis of service time and referral case	1	8	72	A7	MORE NO. OF AMBULANCE SHOULD BE PROVIDED TO REDUCE SERVICE TIME

S. N.	SERVICE	Process activity	Potential failure mode	Potential effects of failure	Severity (a) Max = 10	Potential causes of failure	Evaluation Criteria	Occurrences (b) Max = 10	Detection (c) Max = 10	RPN Risk Priority Number (axbxc)	Code	PROPOSED ACTION
3	MEDICINE FACILITY	Pharmacist provides medicines and necessary drugs.	Patient does not receive medicine	Patients have to purchase medicine from outside	4	Stock out of medicines at CHC currently	stock records	1	8	32	A8	TO MAINTAIN EFFICIENT INVENTORY MANAGEMENT WHICH LACKS IN CURRENT CHC
						Stock out of medicines since long period	survey and stock records	7	4	112	A9	TO MAINTAIN EFFICIENT INVENTORY MANAGEMENT WHICH LACKS IN CURRENT CHC
		Pharmacist explains dosage and precautions	Takes more time to provide medicine	Patient dissatisfied	2	Doctor handwriting	Feedback from pharmacist	2	2	8	A10	TRAINING AND MOTIVATION
			Ignorance in taking medicine and precautions	Patient not cured, illness may increase	6	Patient illiterate	survey	5	6	180	A11	AWARENESS ON HEALTH AT ASHA &ANM LEVEL
			Dosage precautions not explained	Patient confused	6	Pharmasict ignorance	survey	1	6	36	A12	AWARENESS AND MOTIVATION
		Medicines and other details registered by Pharmasict	Medicine issue register not maintained	Can not retrieve medicine history of patient	2	wrong entry by pharmacist	Observation from issue register	1	6	12	A13	MONITORING
						Patients ignorance	survey	2	8	32	A14	AWARENESS
		Patient takes medicine to get cured	Prescribed quantity of medicine not supplied to patients	Desired curability is not achieved	7	Medicine not available adequately	survey	6	6	252	A15	TO MAINTAIN EFFICIENT INVENTORY MANAGEMENT WHICH LACKS IN CURRENT CHC
4	LABORATORY FACILITY	TEST	Other tests could not be done except Malaria and TB	Diagnosis could not be done, patient has to test outside the CHC	4	Necessary testing equipments not available	discussion with lab technician	3	4	48	A16	AVAILING EQUIPMENTS TO CARRY OUT TESTS
						Lack of resources (chemical, etc.) in lab	discussion with lab technician	3	4	48	A17	AVAILING RESOURCES TO CARRY OUT TESTS
						Lack of training	discussion with lab technician	3	4	48	A18	PROVIDING TRAINING IN OTHER RELEVANT PATHOLOGICAL TESTS

TABLE 7: RPN CALCULATIONS OF FAILURES FOR CHHENDIPADA BLOCK

S. N.	SERVICE	Process activity	Potential failure mode	Potential effects of failure	Severity (a) Max = 10	Potential causes of failure	Evaluation Criteria	Occurrences (b) Max = 10	Detection (c) Max = 10	RPN Risk Priority Number (axbxc)	Code	PROPOSED ACTION
1	REGISTRATION	Patient checks in	OPD closed	Patient disappointed Travel cost Illness may increase Returns back without treatment	6	Working Days & Operating Hours unknown to patient	Survey	2	6	72	A1	TO DISPLAY INFORMATION AT CHC ABOUT WORKING DAYS & OPERATING HOURS INCLUDING UPCOMING HOLIDAYS
						Absence of doctor when patient checks in	Survey and observation	8	8	384	A2	BIOMETRIC ATTENDANCE
		Patient waiting	Patient has to wait for long time	Patient dissatisfied	3	Dependability of large number of citizens on OPD resulting in long queues	Observation	9	2	54	A3	TO STRENGTHEN PHCS TO DECREASE THE LOAD ON CHC,TO PROVIDE WAITING HALLS/SHED AS PEOPLE HAVE TO WAIT OUTSIDE UNDER THE SUN.
2	CHECK UP	Doctor prescribes medicines on registration slip	only specific medicines available at CHC	Patient hesitates to purchase some specific medicine from outside	6	Prescribing medicines other than available in CHC	Discussion with citizens	4	8	192	A5	TO HAVE FACILITY OF GENERIC MEDICINE/JANA ASHAUDHI COUNTER AT BLOCK
		Managing critical cases	unable to provide specialist service	Patient not cured, severity may increase,critical case	9	Support system to Specialists not available at CHC	Infrastructure status and referral case	1	1	9	A6	AVAILING SPECIALIST SERVICE FROM DHH
						Referral transport system takes long time	Analysis of service time and referral case	1	8	72	A7	MORE NO. OF AMBULANCE SHOULD BE PROVIDED TO REDUCE SERVICE TIME
3	MEDICINE FACILITY	Pharmacist provides medicines and necessary drugs.	Patient does not receive medicine	Patients have to purchase medicine from outside,	4	Stock out of medicines at CHC currently	stock records	1	8	32	A8	TO MAINTAIN EFFICIENT INVENTORY MANAGEMENT WHICH LACKS IN CURRENT CHC
						Stock out of medicines since long period	survey and stock records	2	4	32	A9	TO MAINTAIN EFFICIENT INVENTORY MANAGEMENT WHICH LACKS IN CURRENT CHC
		Pharmacist explains dosage and precautions	Takes more time to provide medicine	Patient dissatisfied	2	Doctor handwriting	Feedback from pharmacist	1	2	4	A10	TRAINING AND MOTIVATION
			Ignorance in taking medicine and precautions	Patient not cured, illness may increase	6	Patient illiterate	survey	3	6	108	A11	AWARENESS ON HEALTH
			Dosage precautions not explained	Patient confused	6	Pharmasict ignorance	survey	1	6	36	A12	AWARENESS AND MOTIVATION
		Medicines and other details registered by Pharmacist	Medicine issue register not maintained	Can not retrieve medicine history of patient	2	Non entry of medicine distribution	Observation from issue register	8	6	96	A13	MONITORING
						Patients ignorance	survey	1	8	16	A14	AWARENESS
		Patient takes medicine to get cured	Prescribed quantity of medicine not supplied to patients	Desired curability is not achieved	7	Medicine not available adequately	survey	3	6	126	A15	TO MAINTAIN EFFICIENT INVENTORY MANAGEMENT WHICH LACKS IN CURRENT CHC

TABLE 8: RPN CALCULATIONS OF FAILURES FOR NIMAPARA BLOCK

S. N.	SERVICE	Process activity	Potential failure mode	Potential effects of failure	Severity (a) Max = 10	Potential causes of failure	Evaluation Criteria	Occurrences (b) Max = 10	Detection (c) Max = 10	RPN Risk Priority Number (axbxc)	Code	PROPOSED ACTION
1	REGISTRATION	**Patient checks in**	OPD closed	Patient disappointed Travel cost Illness may increase Returns back without treatment	6	Working Days & Operating Hours unknown to patient	Survey	1	6	36	A1	TO DISPLAY INFORMATION AT CHC ABOUT WORKING DAYS & OPERATING HOURS INCLUDING UPCOMING HOLIDAYS
						Absence of doctor when patient checks in	Survey and observation	1	8	48	A2	BIOMETRIC ATTENDANCE
		Patient waiting	Patient has to wait for long time	Patient dissatisfied	3	Dependability of large number of citizens on OPD resulting in long queues	Observation	9	2	54	A3	TO STRENGTHEN PHCS TO DECREASE THE LOAD ON CHC,TO PROVIDE WAITING HALLS/SHED AS PEOPLE HAVE TO WAIT OUTSIDE UNDER THE SUN.
2	CHECK UP	**Doctor prescribes medicines on registration slip**	only specific medicines available at CHC	Patient hesitates to purchase some specific medicine from outside	6	Prescribing medicines other than available in CHC	Discussion with citizens	2	**8**	96	A5	TO HAVE FACILITY OF GENERIC MEDICINE/JANA ASHAUDHI COUNTER AT BLOCK
		Managing critical cases	unable to provide specialist service	Patient not cured, severity may increase,critical case	9	Support system to Specialists not available at CHC	Infrastructure status and referral case	1	1	9	A6	AVAILING SPECIALIST SERVICE FROM DHH
						Referral transport system takes long time	Analysis of service time and referral case	1	8	72	A7	MORE NO. OF AMBULANCE SHOULD BE PROVIDED TO REDUCE SERVICE TIME
3	MEDICINE FACILITY	**Pharmacist provides medicines and necessary drugs.**	Patient does not receive medicine	Patients have to purchase medicine from outside,	4	Stock out of medicines at CHC currently	stock records	1	8	32	A8	TO MAINTAIN EFFICIENT INVENTORY MANAGEMENT WHICH LACKS IN CURRENT CHC
						Stock out of medicines since long period	survey and stock records	2	4	32	A9	TO MAINTAIN EFFICIENT INVENTORY MANAGEMENT WHICH LACKS IN CURRENT CHC
		Pharmacist explains dosage and precautions	Takes more time to provide medicine	Patient dissatisfied	2	Doctor handwriting	Feedback from pharmacist	1	2	4	A10	TRAINING AND MOTIVATION
			Ignorance in taking medicine and precautions	Patient not cured, illness may increase	6	Patient illiterate	survey	1	6	36	A11	AWARENESS ON HEALTH
			Dosage precautions not explained	Patient confused	6	Pharmasict ignorance	survey	0	6	0	A12	AWARENESS AND MOTIVATION
		Medicines and other details registered by Pharmacist	Medicine issue register not maintained	Can not retrieve medicine history of patient	2	Non entry of medicine distribution	Observation from issue register	0	6	0	A13	MONITORING
						Patients ignorance	survey	1	8	16	A14	AWARENESS
		Patient takes medicine to get cured	Prescribed quantity of medicine not supplied to patients	Desired curability is not achieved	7	Medicine not available adequately	survey	3	6	126	A15	TO MAINTAIN EFFICIENT INVENTORY MANAGEMENT WHICH LACKS IN CURRENT CHC

Pareto Diagram:-

The collected data was further studied and analysed using Pareto analysis technique

FIGURE 4: PARETO CHART (GUMMA BLOCK)

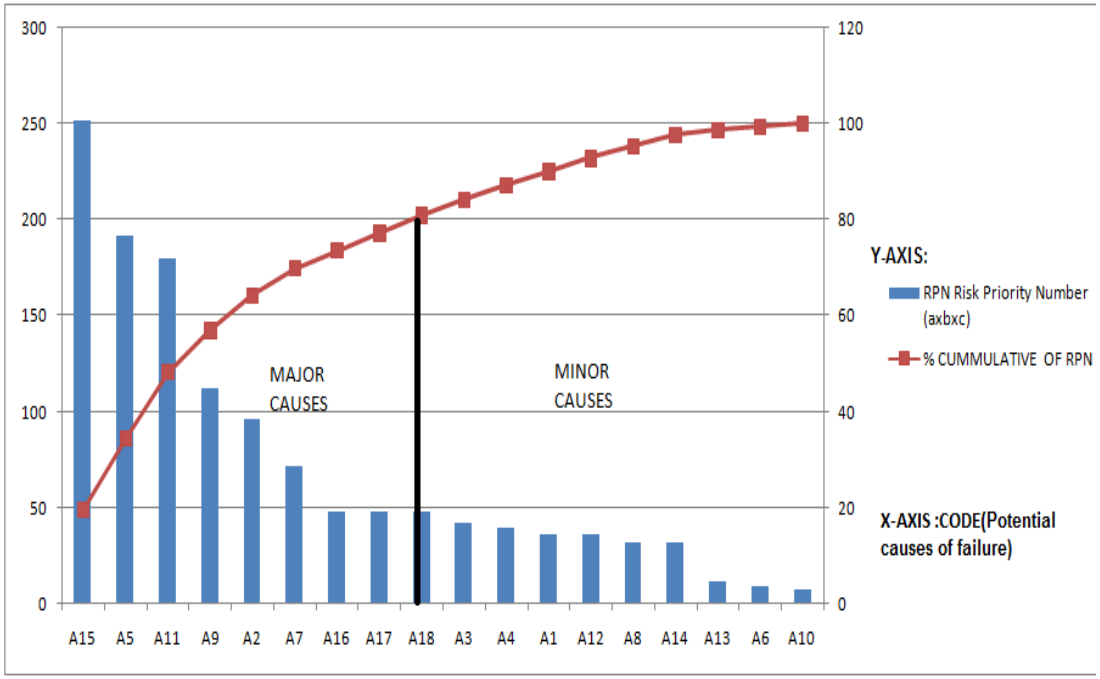


FIGURE 5: PARETO CHART (CHHENDIPADA BLOCK)

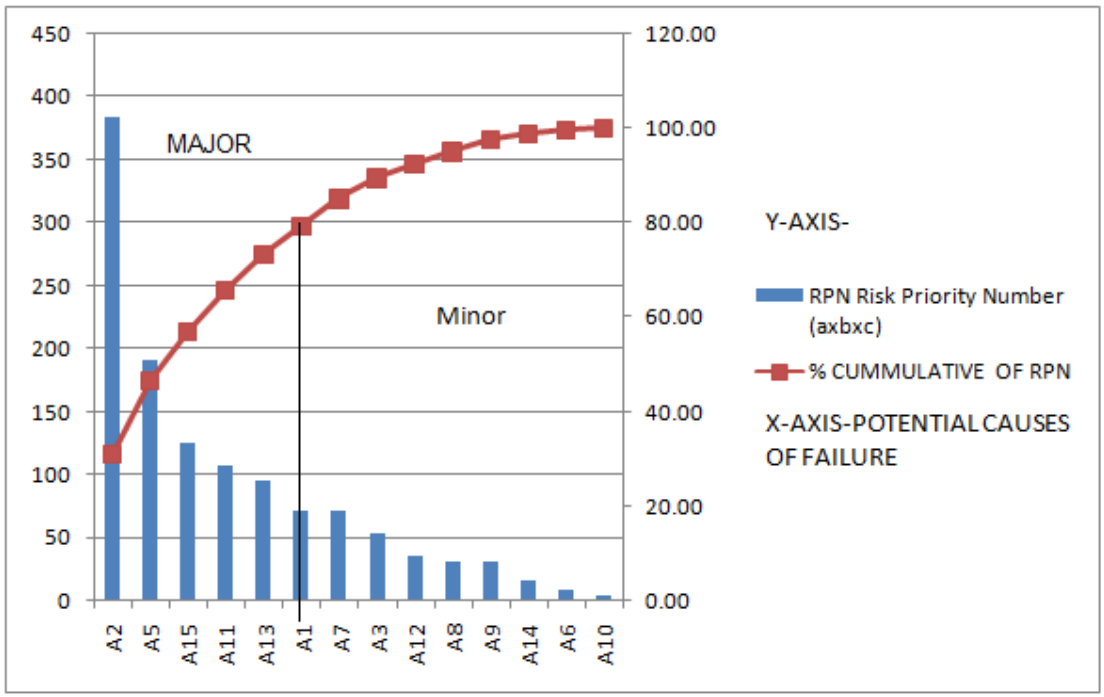
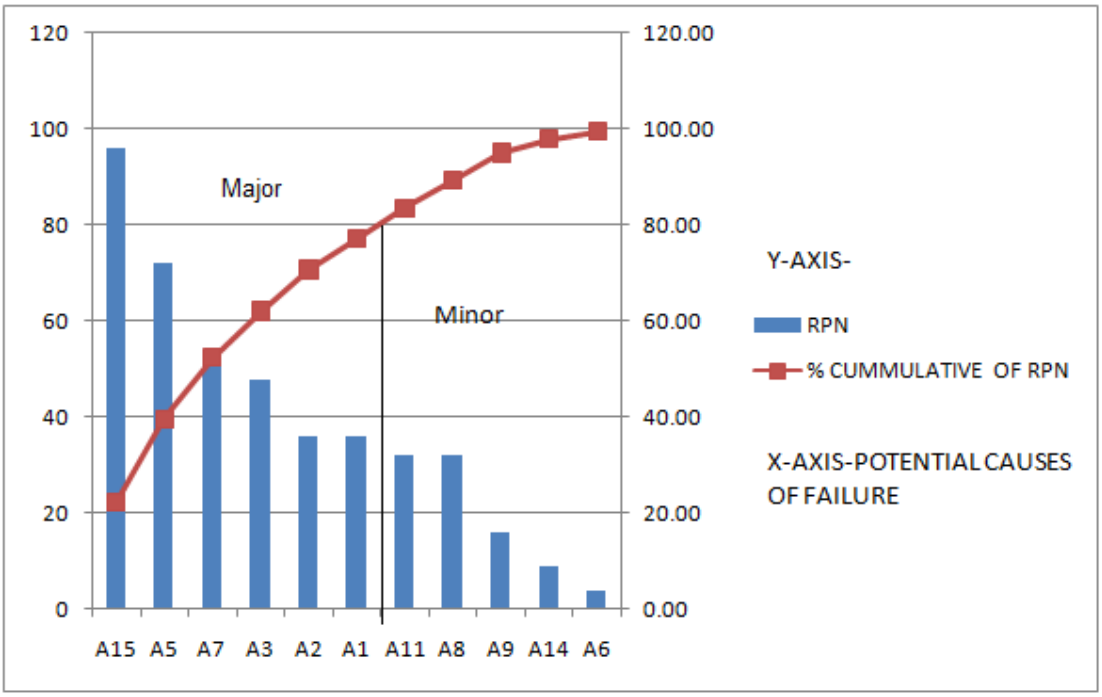


FIGURE 6: PARETO CHART (NIMAPARA BLOCK)



The Pareto analysis helps to focus on the major causes that represent at least 80% of the failure of OPD service. The most significant problem areas are (A15, A5, A11, A9, A2, A7, A16, and A17), (A2, A5, A15, A11, A13, A1) and (A15, A5, A7, A3, A2, A1) for Gumma block, Chhendipada block and Nimapara block respectively

6.3 RESULTS AND DISCUSSION

The design and subsequent implementation of FMEA in this OPD service has permitted to detect which were the most probable and serious problems in the failure and bottlenecks in providing services. The criteria used to evaluate these problems or causes are the amount of effect caused to the patient satisfaction and availability of service.Critical Control Points (CCPs) found for OPD are provided in Table 9 to 11.

TABLE 9 : CRITICAL CONTROL POINTS (CCPS) FOR OPD (GUMMA BLOCK)

RPN	CODE	POTENTIAL CAUSES OF FAILURE	PROPOSED ACTION
252	A15	Medicine not available adequately	Proper inventory management, MIS & monitoring of store
192	A5	Prescribing medicines other than available in CHC	Facility of generic medicine/Jana-Ausaudhi counter at block level
180	A11	Patient illiterate	Awareness and motivation at lower level by ASHA & Health Worker
112	A9	Stock out of majority of medicines since long period	Proper inventory management, MIS & monitoring of store
96	A2	Absence of doctor when patient checks in	Biometric attendance of CHC staffs
72	A7	Referral transport system takes long time	Improving accessibility of referral service (More no. of ambulance and fulfilling the vacant specialist post)
48	A16	Necessary testing equipments not available	Facilitate necessary equipments to carry out tests
48	A17	Lack of resources (Chemical, etc.) in lab	Facilitate necessary resources to carry out tests
48	A18	Lack of training	Providing training in other relevant pathological tests

TABLE 10: CRITICAL CONTROL POINTS (CCPS) FOR OPD (CHHENDIPADA BLOCK)

RPN RISK PRIORITY NUMBER (A X B X C)	CODE	POTENTIAL CAUSES OF FAILURE	PROPOSED ACTION
384	A2	Absence of doctor when patient checks in	Biometric Attendance
192	A5	Prescribing medicines other than available in CHC	To have facility of generic medicine/jana ashaudhi counter at block
126	A15	Medicine not available adequately	To maintain efficient inventory management which lacks in current CHC
108	A11	Patient illiterate	Awareness on health
96	A13	Non entry of medicine distribution	Monitoring
72	A1	Working Days & Operating Hours unknown to patient	To display information at CHC about working days & operating hours including upcoming holidays

TABLE 11: CRITICAL CONTROL POINTS (CCPS) FOR OPD (NIMAPARA BLOCK)

RPN	CODE	POTENTIAL CAUSES OF FAILURE	PROPOSED ACTION
126	A15	Medicine not available adequately	To maintain efficient inventory management which lacks in current CHC
96	A5	Prescribing medicines other than available in CHC	To have facility of generic medicine/Jan Ashaudhi counter at block
72	A7	Referral transport system takes long time	More no. of ambulance should be provided to reduce service time
54	A3	Dependability of large number of citizens on OPD resulting in long queues	To strengthen PHCs to decrease the load on CHC, to provide waiting halls/shed as people have to wait outside under the sun.
48	A2	Absence of doctor when patient checks in	Biometric Attendance
36	A1	Working Days & Operating Hours unknown to patient	To display information at CHC about working days & operating hours including upcoming holidays

6.4 PROPOSED ACTIONS (A1, A2, A3, A5, A7, A9, A11, A13, A15, A17 and A18)

- ***Citizen' charter (for A1):***

  To maintain regularly Citizen' charter about operations and facilities available, about working days & operating hours of OPD including upcoming holidays.

- ***Biometric Attendance System(for A2):***

  Presently check-up facility is available at CHC, but there are some irregularities and discrepancies in staffs which can be further streamlined by introduction of biometric attendance system. It will make an attempt to improve attendance of hospital staffs. All employees are required to come to the hospital on time and register their attendance through the biometric roll call. This attendance system will digitise information about the timing of the employees' entry and exit from the hospital.

- ***Improving infrastructure (for A3):***

  In order to balance the load of patients on CHCs, it's urgent to strengthen the current PHCs. Most of the CHCs lack waiting hall and have only limited capacity of indoor sitting arrangements if any. So, adequate arrangements should be made to facilitate the patients during rain and summer seasons.

- ***Jan Ausaudhi stores/Generic medicine stores (for A5):***

  Some of the essential medicines prescribed other than those available in CHC by the doctor may be highly priced in the market, which adversely affect the buying decision of the poor patients in tribal populated region. Jan Ausaudhi stores could be set up at block level to provide generic drugs, which are available at lesser prices but are equivalent in quality and efficacy as against the expensive branded drugs.

- ***Improving accessibility of referral service (for A7):***

  Service time of ambulance is the total time taken by an ambulance from receipt of complaint call from caller to dropping of patient to referred hospital and the response time is the time taken by ambulance to reach near the patient after the complaint is received. It was found that service time was more than 1 hour and 30 minutes and response time was 28 minutes on an average. These time parameters are large due to uphill travel, turn and twist among majority of roads and lack of road connectivity to some parts of Gumma block and higher travel distance in case in Chendipada block So, more number of ambulances should be provided to reduce the service time. Further the referral service can be reduced by filling up the vacant specialist post and/or by providing specialist service at CHC level, once or twice per week through sourcing from DHH. Due to load and higher travel distance, the Ambulance Service time (total time taken from calling/reporting time from caller to ambulance dropping (Patient Condition Report) at the hospital) is quite high and become unavailable for that area for time being. There is no increase in number of ambulances (108) for last three years. So, it is required to revise the norms and numbers of ambulance per 1 lakh population.

- ***Effective Drug Management(A13):***

It was observed that most of the medicine stock list, records for utilisation of stocks was not maintained properly and not up to date; due to lack of support staff, computer and training. This unsystematic management of stocks and record keeping in block warehouse had led to failure of timely delivery of medicine to citizens.

Inventory management is an important management tool which will be very useful in getting the right quality & quantity of supplies at right time. Having good inventory control & adopting sound methods of condemnation & disposal will improve the efficiency of the organization & also make the working atmosphere healthy.

- ***ASHA & HW (For A11):***

ASHA & HW (Health Worker) plays the crucial role in disseminating the awareness on Health & Family Welfare and also sensitize the people on significance of institutionalised health care facility. Thus the sensitization & counselling has huge imperative on taking people to the main stream of health care facility.

- ***Strengthening of MIS(for A9,A15):***

There is a large gap in information flow on planning and requirements between Central Warehouse (District Level) and Block Warehouse. As the Primary health centre (PHCs) and Sub-centres (SCs) totally depend on manual record keeping, Management Information System (MIS) should be systematically implemented and monitored. This System facilitates to manage the inventory of the drugs and consumables on a day to day basis for taking care of the supply chain management of drug accurately and efficiently. It keeps track of the purchases, stock, indents, and issues at different levels, transfers between warehouses and above all, the drugs to be expired. The various kinds of reports generated help to make timely decisions and appropriate actions towards smooth operation of drug distributions leading to the utmost satisfaction of the patients at the health institutions. The existing MIS at DHH level is not extended to block warehouse due to lack of resources i.e., computer system and internet facility at block warehouse, and trained personal to enter the data. There is requirement of support from state and district at real time to streamline the inventory management at block level. So, training in inventory management and implementation of MIS is necessary for pharmacist to improve the service facilities.

- ***Strengthening Testing facilities (For A16,A17,A18:***

Due to lack of resources i.e. equipments, chemicals, testing kits and training in other relevant pathological tests, currently only Malaria and TB test are available at CHC. So, required resources and training should be provided to lab technician to carry other essential pathological tests so that people would not depend on testing facilities available at Paralakhemundi which is 35kms away from CHC.

(A15, A5, A11, A9, A2, A7, A16, and A17), (A2, A5, A15, A11, A13, A1) and (A15, A5, A7, A3, A2, A1) for Gumma block, Chendipada block and Nimapara block respectively.

TABLE 12 : FAILURE MODE COMPARISION AMONG BLOCKS

CODE	MOST POTENTIAL CAUSES OF FAILURE	GUMMA	CHHENDIPADA	NIMAPARA
A2	Absence of doctor when patient checks in	96 (7.42%)	384 (31.14%)	48 (8.56%)
A5	Prescribing medicines other than available in CHC	192 (14.82%)	192 (15.58%)	96 (17.11%)
A15	Medicine not available adequately	252 (19.46%)	126 (10.21%)	126 (22.46%)
A11	Patient illiterate	180 (13.9%)	108 (8.76%)	
A1	Working days & operating hours unknown to patient		72 (5.84%)	36 (6.42%)
A7	Referral transport system takes long time	72 (5.55%)		72 (12.83%)
A3	Dependability of large number of citizens on OPD resulting in long queues			54 (9.63%)
A9	Stock out of medicines	112 (8.65%)		
A13	Pharmacist wrong entry		96 (7.79%)	
A16	Necessary testing equipments not available	48 (3.71%)		
A17	Lack of resources(chemical, etc.) in lab	48 (3.71%)		
A18	Lack of training	48 (3.71%)		

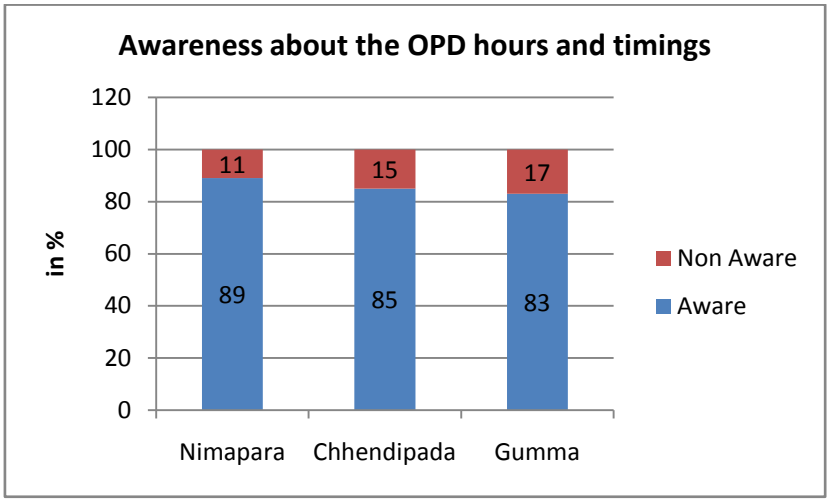
7.0 CITIZEN'SPERSPECTIVE

This cross-sectional study was conducted to understand the health services at the Out-Patient Department (OPD) CHC; Chendipada, Nimapara & Gumma. One hundred fifty respondents were interviewed at village level of different sectors. Results are hereby presented in tabular forms and descriptive form.

7.1 Awareness about the OPD hours and timings:

- In Nimapara and Chendipada block 89% and 85 % of the beneficiaries aware about the Working hours of CHC respectively, where as in Gumma 83% of the beneficiaries know about the CHC working hours.
- Gumma and Chendipada CHC does not have the display for the patient information/ citizen charter for the patients, which is a major reason for the patients non aware of the working hours of CHC/ OPD.

FIGURE 5: AWARENESS ABOUT WORKING HOURS OF CHC/OPD



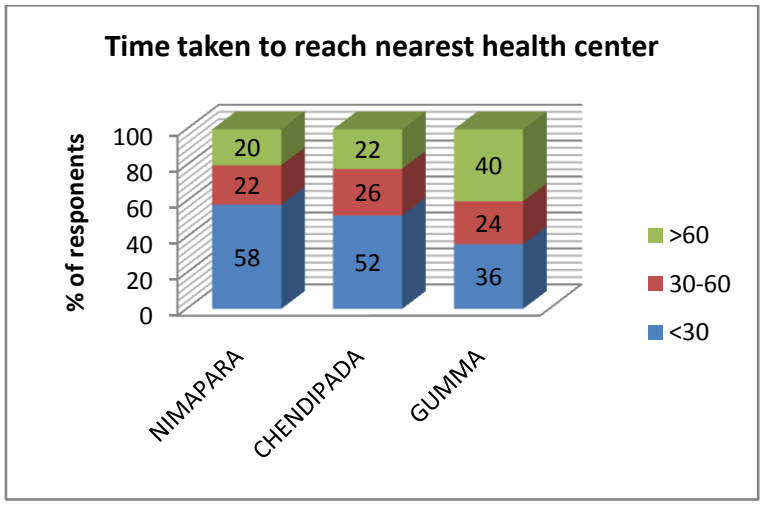
(Source: Primary data through FGD with the beneficiary)

Beneficiary interaction at Chhendipada

7.2 Time taken to reach nearest health centre:

- 58%, 52% and 36% of the beneficiaries responded that it takes less than 30 minutes to travel from their residence to OPD counter at Nimapara, Chendipada and Gumma Block respectively whereas 22%, 26% and 24% beneficiaries responded that it takes 30 to 60 minutes for Nimapara, Chendipada and Gumma respectively.
- However in Gumma major respondents i.e. up to 40% have opined that it takes more than an hour to reach the nearby health care centre i.e. the CHC.

FIGURE 6: TIME TAKEN TO REACH NEAREST HEALTH CENTER



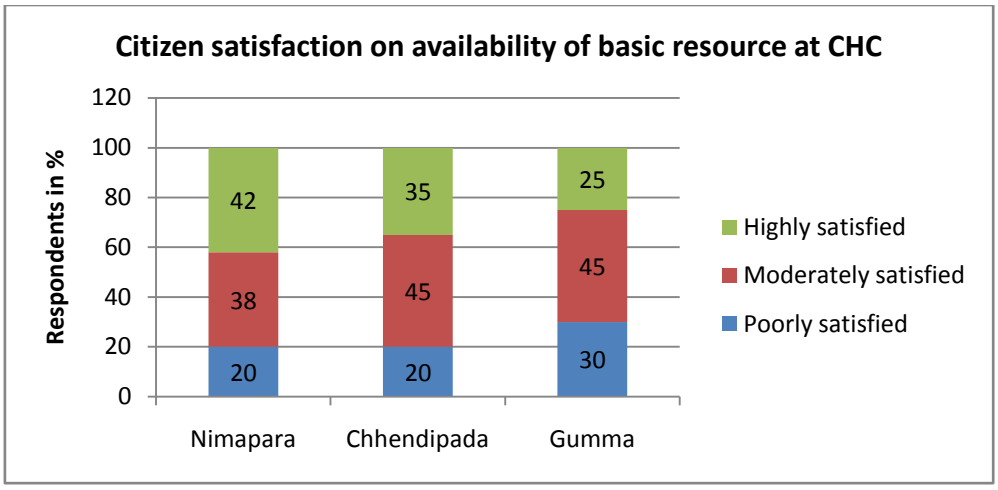
(Source: Primary data through FGD with the beneficiary)

7.3 Citizen satisfaction on availability of basic resource at CHC:

- 42%, 35% and 25% of the respondents have expressed that; they are highly satisfied with the resources available at Nimapara, Chendipada and Gumma CHC respectively.
- However majority of the respondents i.e. more than 50% in all the three blocks have opined that they are either moderately satisfied and/or poorly satisfied, thus opening opportunity for the health administration for improving of the same.

Beneficiary interaction at Khuntanali, Chhendipada

FIGURE 7: CITIZEN SATISFACTION ON AVAILABILITY OF BASIC RESOURCES AT CHC

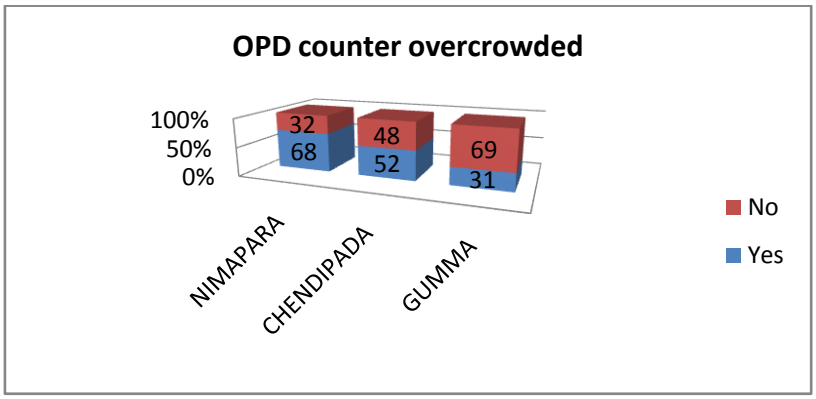


(Source: Primary data through FGD with the beneficiary)

7.4 OPD counter overcrowded:

- Majority of the respondents in each of the block is concerned about the long waiting hours at the OPD as the OPD is mostly crowded.
- The same is due to the non availability of the required no. of human resource at the CHC level.

FIGURE 8: OPD COUNTER OVERCROWDED

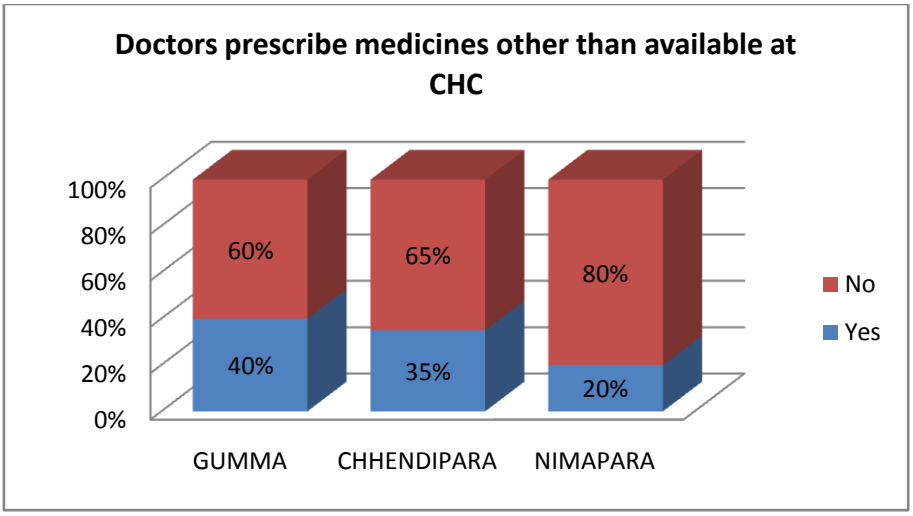


(Source: Primary data through FGD with the beneficiary)

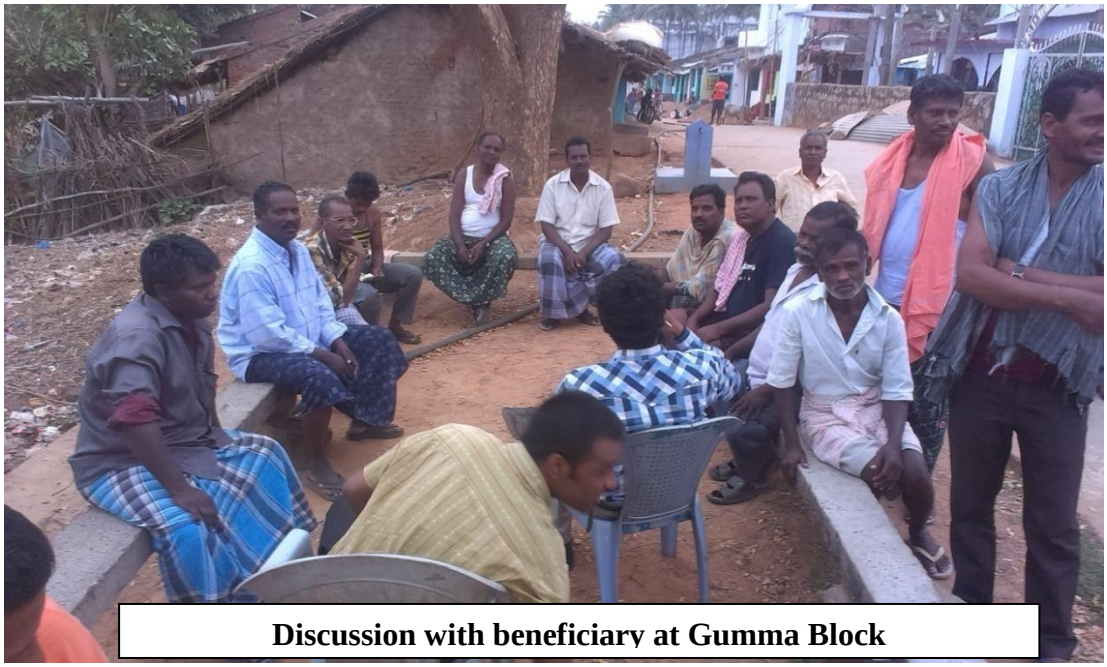
7.5 Doctors prescribe medicines other than available at CHC:

- 20%, 35%, 40% of the respondents have responded that doctors prescribe medicines other than available at Nimapara, Chendipada and Gumma CHCs respectively.
- The patients many a times discourage to buy the medicines due to their poor socio-economic profile and high price of the medicines.

Figure 9: Doctors prescribe medicines other than available at CHC



(Source: Primary data through FGD with the beneficiary)

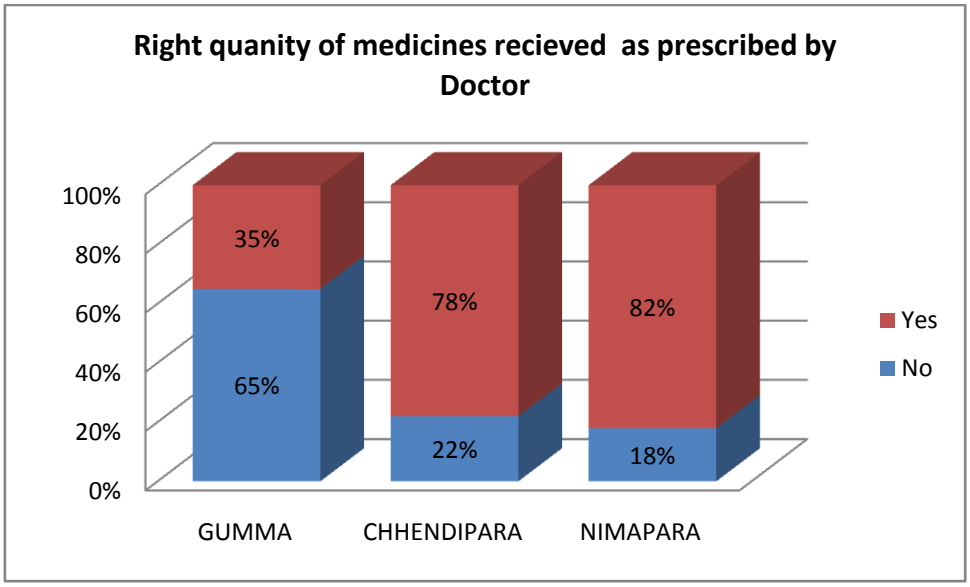


Discussion with beneficiary at Gumma Block

7.6 Right quanity of medicines recieved as prescribed by Doctor:

- 65%, 22% and 18% of respondents have shown their concern towards the non receipt of prescribed quantity of medicines as advised by doctors.
- The same is due to the non availability of the medicines and poor management of the supply chain of stocks resulting in stock out of medicine before the supply.

Figure 10: Right quanity of medicines recieved as prescribed by Doctor



(Source: Primary data through FGD with the beneficiary)

8.0 CONCLUSION & POLICY OPTION:

Interaction with both the stakeholders, i.e. CHC staffs and citizens has been done to understand the process and service delivery capacity of current health facility. The OPD service was evaluated by using the concept of FMEA and citizen's perspective was studied.

Irregularity in timing of OPD:

- Instructions should be given to maintain regularly in Citizen' charter about operations and facilities available, about working days & operating hours including upcoming holidays. ASHA, AWW and MPHW should be sensitised about the timings of OPD for creating further awareness amongst the citizen/ beneficiary.

Absence of doctors during OPD hours:

- The irregularities and discrepancies in the attendance of staffs can be further streamlined by introduction of biometric attendance system. Provision may be made by Govt. to digitise information about the timing of the employees' entry and exit from the hospital which will improve attendance.

Long waiting line of the patients:

- In order to decrease the load of patients on CHCs, it's urgent to strengthen the current PHCs under the CHCs by providing doctors/ Para medical staff. So, adequate infrastructural arrangements should be made to facilitate the patients during rain and summer seasons. Para Medical staff may also be engaged in selected PHCs.

Availability of Prescribed medicines:

- Steps should be taken for the availability of the medicine in Jan Ausaudhi stores .The Jan Asusaudhi stores could be set up at block level to provide generic drugs, which are available at lesser prices but are equivalent in quality and efficacy as against the expensive branded drugs.

Managing Critical/ Specialist Cases:

- The visit of the Specialist doctors can be planned on scheduled days of the week/ month to CHCs for managing all critical and/or cases requiring specialist service.

Non Awareness of patients on dosage of medicine:

- The pharmacist should be directed to sensitise and/or Health counsellor may be available at CHC level for counselling on the administration of the drugs and other precautions.

Poor management of Drug Inventory:

- Web based drugs management system should be implemented systematically and ensures the regular updation of the stock, which would improve the monitoring of the stock position of the drugs.

Non availability of facility:

- Required resources and training should be provided to lab technician at CHC level to carry other essential pathological tests so that people would not depend on testing facilities available at DHH and/or private establishments

Poor MIS management:

- MIS system should be developed and strengthened.

Grievance Management System:

- A centralized grievance handling system should be developed at the state level (Call centre/ toll free number) for reporting of discrepancy and/or failure in service delivery at PHC/CHC/ DHH level. The same would monitor the real time discrepancy and address the grievance for disposal.

Communication barrier:

- Health Counsellor may be engaged at the CHCs, where there is a communication barrier to work as an interface between the doctor and the patients.

However, the inadequacies recognised can be tackled by the policy measures and planning. In order to have a balance in assessment to health care services it is required to strengthen the rural health infrastructure.