



Submitted by- Dr Lunika Tak

MBA-HM 24



PART-1

SUMMER TRAINING REPORT

ABOUT THE ORGANISATION



VISION

“Attainment of Universal Access to Equitable, Affordable and Quality health care services, accountable and responsive to people’s needs, with effective inter-sectoral convergent action to address the wider social determinants of health.”

The National Health Mission (NHM) was launched on 1st May 2013 by Government of India that circumscribes two sub-mission as National Rural Health Mission (NRHM launched in 2005) and National Urban Health Mission (NUHM launched in 2013).

It is a national effort at ensuring provision of effective healthcare through a range of interventions at individual, household, community, and critically at the health system levels.

OBJECTIVES

- Reduction in Infant Mortality Rate (IMR) and Maternal Mortality Ratio (MMR).
- Universal access to public health services such as Women’s health, child health, water, sanitation & hygiene, immunization, and Nutrition.
- Prevention and control of communicable and non-communicable diseases, including locally endemic diseases.
- Access to integrated comprehensive primary healthcare.
- Population stabilization, gender, and demographic balance.
- Revitalize local health traditions and mainstream.
- Promotion of healthy lifestyles.

ORGANISATIONAL LEARNINGS

A training plan was made through which we were provided with the knowledge related to different departments working under the organisation that would help us in selecting the projects according to our area of interest.

Training plan includes the following components as-

- Maternal Health
- Child Health
- Immunisation
- RBSK
- Family Welfare
- ASHA
- Quality Assurance
- UHC/HWC
- Integrated Ambulance
- NUHM
- NCD



HWC Portal and NCD software of Ayushman Bharat Program : A Review of Data Reporting.

INTRODUCTION

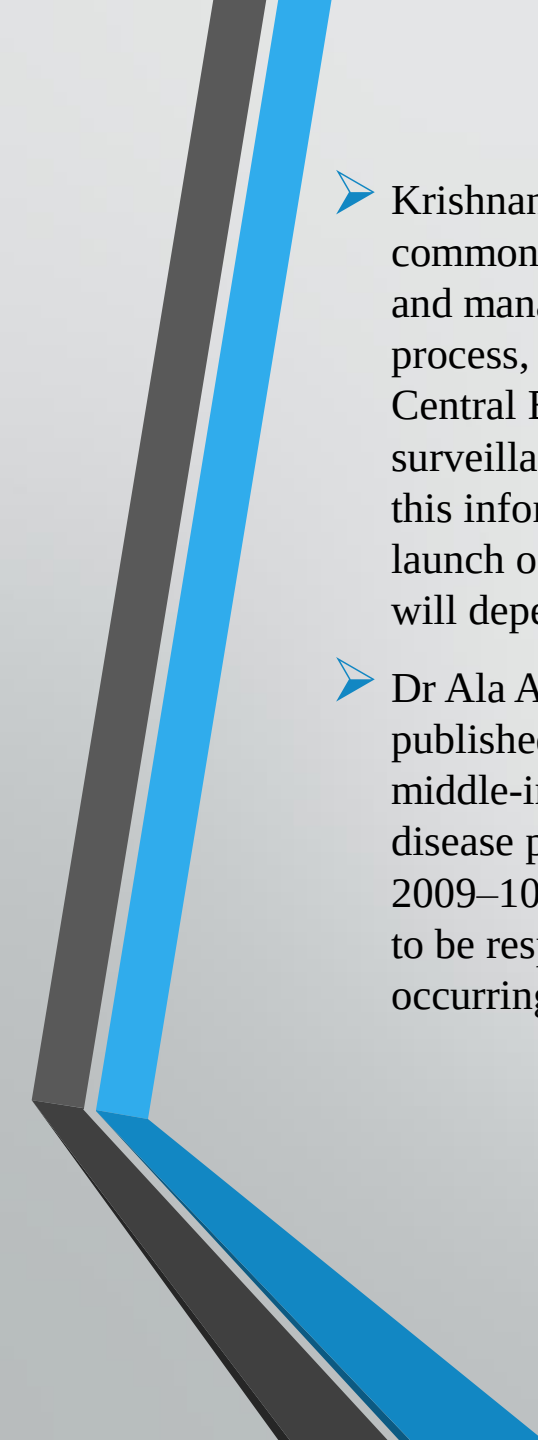
- India is experiencing a rapid health transition with a rising burden of Non-Communicable Diseases (NCD) surpassing the burden of Communicable diseases.
- The Non-Communicable Diseases like Cardiovascular diseases, Cancer, Chronic Respiratory Diseases, Diabetes, etc. are estimated to account for around 60% of all deaths.
- In order to prevent and control major NCDs, the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) was launched in 2010 with focus on strengthening infrastructure, human resource development, health promotion, early diagnosis, management and referral.
- During the period 2010-2012, the programme was implemented in 100 districts across 21 States. Review of the initial phase of programme implementation helped to identify the bottle-necks and accordingly the programme was re-strategized and scaled-up. The programme aims to cover the entire country by March 2017.
- The modified strategies are as follows:
 1. Health promotion through behaviour change with involvement of community, civil society, community-based organizations, media etc.
 2. Outreach Camps are envisaged for opportunistic screening at all levels in the health care delivery system from sub-centre and above for early detection of diabetes, hypertension, and common cancers.
 3. Management of chronic Non-Communicable diseases, especially Cancer, Diabetes, CVDs and Stroke through early diagnosis, treatment and follow up through setting up of NCD clinics.
 4. Build capacity at various levels of health care for prevention, early diagnosis, treatment, IEC/BCC, operational research, and rehabilitation.
 5. Provide support for diagnosis and cost-effective treatment at primary, secondary and tertiary levels of healthcare.
 6. Provide support for development of database of NCDs through a robust Surveillance System and to monitor NCD morbidity, mortality, and risk factors.

RECENT INITIATIVES UNDER NPCDCS

1. Inclusion of guidelines for prevention and management of Chronic Obstructive Pulmonary Disease (COPD) and Chronic Kidney Disease (CKD) under NPCDCS, to prevent and manage the chronic respiratory and kidney diseases respectively, which are also major causes of death due to NCDs.
2. For early detection of Diabetes, Hypertension and common Cancers in the community, guidelines are being issued to the States for **initiating “Population-based Screening of common NCDs”** utilizing the services of the Frontline-workers and Health-workers under the existing Primary Healthcare System, which is also implementing as a one of the basic service under HWC as mentioned in
3. Pilot project on ‘Integration of AYUSH with NPCDCS’ has been initiated in six districts in the country. AYUSH facilities and methodologies are being integrated with NPCDCS services for prevention and management of common NCDs, wherein the practice of Yoga is an integral part of the intervention.
4. Pilot intervention has been initiated for the prevention and control of Rheumatic Fever and Rheumatic Heart Disease under the platforms of NPCDCS and RBSK (Rashtriya Bal Swasthya Karyakram), in three select districts (Gaya - Bihar, Firozabad - Uttar Pradesh and Hoshangabad - Madhya Pradesh). This intervention would be scaled up to other districts in a phased manner.
5. Another initiative is the integration of RNTCP with NPCDCS, wherein the “National Framework for Joint Tuberculosis-Diabetes collaborative activities” has been developed to articulate a national strategy for ‘bi-directional screening’, early detection and better management of Tuberculosis and Diabetes comorbidities in India.

LITERATURE REVIEW:

- Erastus in 2019, in his research paper with his main objective of this study was to assess the quality of Non communicable disease data. The assessment utilized secondary data collected by the Non-communicable disease program and stored in the 'Non communicable disease database'. The study used a cross sectional study design to answer to its study objectives. This study used quantitative data. Data on age, sex, type of Non-communicable disease, creatinine result counts and date of enrolment into Non-communicable disease programme was extracted. Document review, especially patient files was used to allow for verification of information. Descriptive analysis was the main analysis. The assessment focused on three aspects of data quality: data completeness, data timeliness and data validity. The findings of the study revealed that there were data quality gaps in the Noncommunicable disease data. These gaps included discrepancies in data completeness and data timeliness. The database had 4893 individual patient records entered it with 1886 of those having been entered before the beginning of the year 2012. More than 40% of the total 4893 records entered in the 'Non communicable diseases database', had data incompleteness and data timeliness gaps. Data validity was the only data quality principle that passed the test of good quality data. Based on the findings of the study, assessment concluded that the NCD data at Medicines Sans Frontiers project was not of good quality. The study recommends a systematic review of the programmatic data collection system to address data quality gaps identified in the study.

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- Krishnan, Gupta¹, Ritvik, Baridalyne Nongkynrih, JS Thakur in a research paper for prevention and control of common noncommunicable diseases (NCDs) through behaviour and lifestyle changes, and to provide early diagnosis and management of common NCDs. M and E of program requires identification of indicators that measure inputs, process, outputs, and outcomes. However, the routine data collection and compilation could be the responsibility of Central Bureau of Health Intelligence. Integrated population-based surveys with existing disease and behaviour surveillance could be undertaken by National Centre for Disease Control. The national NCD cell should compile all this information into a meaningful policy brief so that appropriate programmatic interventions can be identified. The launch of a national program to tackle the burden of NCDs is just the beginning, and the final success of the program will depend on how effectively we monitor and evaluate it.
 - Dr Ala Alwan , Prof David, colin Douglas-in 2010 wrote a research paper showed data from WHO data sources and published work for prevalence of tobacco use, overweight, and cause-specific mortality in 23 low-income and middle-income countries with a high burden of non-communicable disease. Data for national capacity for chronic disease prevention and control were generated from a global assessment that was done in WHO member states in 2009–10. Although reliable data for cause-specific mortality are scarce, non-communicable diseases were estimated to be responsible for 23·4 million (or 64% of the total) deaths in the 23 countries that we analyzed, with 47% occurring in people who were younger than 70 years.

RATIONALE:

Seeking and receiving health information are critical aspects. However, many informational sources lack accurate content. This study explores the challenges and the gap between information desired and information received from different portals of Ayushman Bharat Program aiming at maintaining the authenticity and transparency in the data for Non-Communicable Diseases.

RESEARCH QUESTION:

What are the gaps in Data Reporting with respect to Health and wellness center Portal and Non-Communicable diseases software of Ayushman Bharat Program?

OBJECTIVE:

- To review and identify the gaps in data reporting with respect to HWC Portal and NCD software.
- To recommend interventions that can be implemented strategically to overcome the gaps among NCD portals.

METHODOLOGY:

Followings are the description of indicators chosen and tools used for study:

1)Population Enumeration: To ensure equitable population coverage to address issues of marginalization, the frontline workers would create population -based household lists and undertake registration of all individuals and families residing within the catchment area of an HWC. The ASHA is responsible for undertaking the Population Enumeration of all those aged 30 years and above through home visits. She will register or list all eligible adults, (women and men) fill in details specific to Non-Communicable Diseases and it will be updated every 6 months. She will be given a specific register to record this information. ASHA will also fill a health card for everyone, which will have a unique ID/ AADHAR number issued by the state/district. The card will record health events (screening/diagnosis/treatment/complications, etc.). This would enable follow-up by the medical officer at the PHC level, or at a higher level of facility. They will also record their treatment decisions and other findings on the card. This will help us to know the treatment plan for the individual thus help in ensuring continuity of care. The format to be filled by the ASHA is attached at Annexure- 1. ANM support the ASHA through field visits in completing this enumeration. ANM will be responsible for cross verification of 10% population.

2) Total Individuals Enumerated: In case of NDC's only 30+ individuals are registered for population -based household listing within the catchment area.

3) CBAC forms- Community Based Assessment checklist for early detection of NCD's, The CBAC is designed to collect details related to history of symptoms and Behavioural factors. They include tobacco and alcohol consumption, amount of physical activity, measurement of waist circumference, family history of high blood pressure, diabetes, heart disease and presence of common symptoms for common cancers, epilepsy, and respiratory diseases. The ASHA is responsible for filling the CBAC (Annexure-for all women and men aged 30 years and above. CBAC is helpful to the ASHAs to remember the key risk factors, helps identify those who must be prioritized to attend the screening day and refer the individuals. People with a CBAC score of 4 and above will need to be prioritized for screening. ANM's task is to review the completed CBAC filled by the ASHA in your coverage area to ensure that it is filled and correct. The ASHA facilitator can also undertake this task

4) Screening: is a process of identifying a disease condition among apparently healthy individuals, who may be at increased risk of a disease or condition. Screening Programmes can be undertaken for a population at large or targeting high-risk groups. Screening serves a platform of increasing awareness in the community about common Non-Communicable Diseases, risk factors and the need for periodic screening. It also enables an understanding of better health and the need to avoid risk factors in the general community. Screening requires careful planning and implementation. An important thing to remember is that once you suspect that an individual has a disease condition, the individual should be motivated to go the PHC or CHC and meet the concerned medical officer to confirm the diagnosis and start treatment. The health system should be ready to take care of those who are screened positive through diagnosis, treatment, and care. Otherwise people will lose confidence in the process of screening.

5) General considerations:

- ♦ Approx.37%of the population is over 30years
- ♦ In a normative village of 1000: Total case load:370
- ♦ No. of men over 30years=51%of the total case load:188
- ♦ No. of women over 30years=49%of the total case load:182
- ♦ For Hypertension and Diabetes:370- (annual screening)
- ♦ For Oral Cancer:370–every five years.
- ♦ For Breast and Cervical Cancer:182–every five years.

6) NCD Software: This software is used by districts and state for entering the data from facility level, Here, the data is entered in the form of line list and not in numbers. Some information from CBAC forms (filled by ASHAs) are updated from facility level, every month and that can be seen at state.

7) HWC portal: This portal works under the scheme of Ayushman Bharat for NCDs, Data for NCD is in the form of only numbers and no added information is added hence is less time consuming and gives the data in compiled form for every month.

8) NCD report: Report which is formed at the state taking into consideration all the necessary indicators and their data from gained from districts.

9) NN – represents that this data source does not provide information regarding this indicator.

Study Design	Descriptive study
Study Area	7 zones of Rajasthan State-Ajmer, Bikaner, Bhilwara, Jaipur, Jodhpur, Kota, Udaipur.
Study Period	April 2019 to March 2020
Study Tool	NCD-Software, HWC-Software, NCD Report

DATA COLLECTION:

State level secondary data of financial year April 2019-March 2020, collected from NCD-Software, HWC Software, NCD report provided by government authority stationed at Non-Communicable diseases department heading NCD Program.

RESULTS AND ANALYSIS:

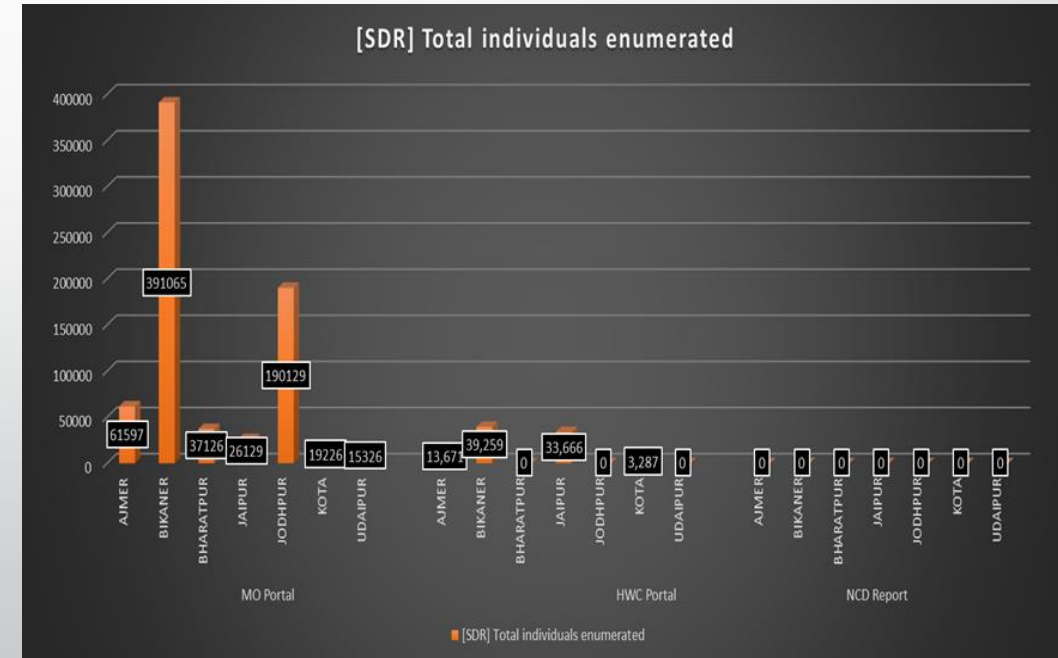
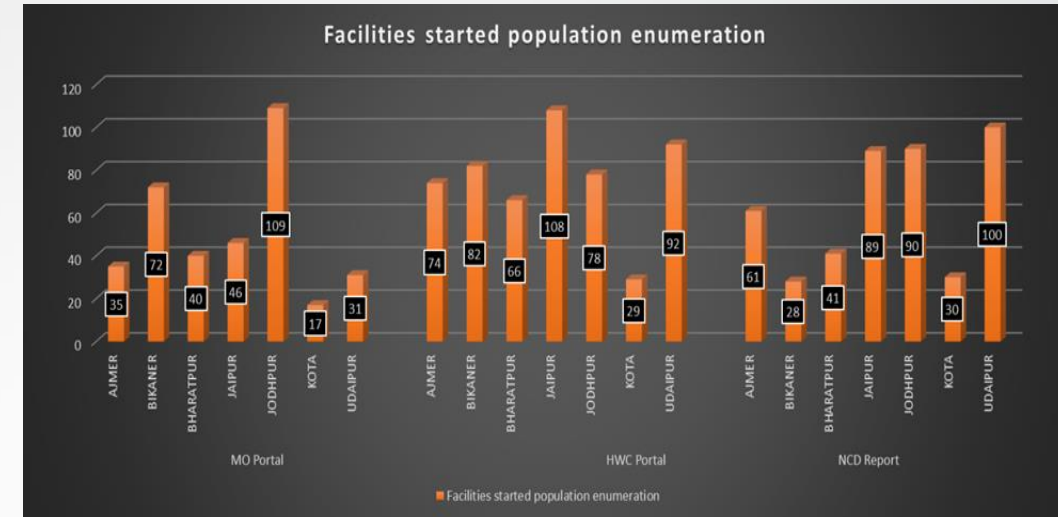
The routine data collection and compilation pinned under the responsibility of Central Bureau of Health Intelligence. Integrated population-based surveys with existing disease and behaviour surveillance pushed forward by National Centre for Disease Control. The national NCD cell compiles all this information into a meaningful policy brief so that appropriate programmatic interventions can be identified. The launch of a national program to tackle the burden of NCDs is just the beginning, and the final success of the program will depend on how effectively we input the data in all three portals to conduct flawless monitoring and evaluation. The results from this study will assist in identifying the gaps and simultaneously appropriate suggestions can be stated as per the case concern.

INDICATOR	NCD SOFTWARE						
	AJMER	BIKANER	BHARATPUR	JAIPUR	JODHPUR	KOTA	UDAIPUR
Facilities started population enumeration	35	72	40	46	109	17	31
Facilities Started Hypertension Screening	35	72	40	46	109	17	31
Facilities started diabetes screening	35	72	40	46	109	17	31
Facilities started oral cancer screening	35	72	40	46	109	17	31
Facilities started breast cancer screening	35	72	40	46	109	17	31
Facilities started cervical cancer screening	0	0	0	0	0	0	0
[TR] Total MPW (F) Trained	NN	NN	NN	NN	NN	NN	NN
[TR] Total ASHA Trained	NN	NN	NN	NN	NN	NN	NN
[TR] Total MO Trained	NN	NN	NN	NN	NN	NN	NN
[TR] Total SN Trained	NN	NN	NN	NN	NN	NN	NN
[SDR] Total individuals enumerated	61597	391065	37126	26129	190129	19226	15326
[SDR] Total CBAC form filled	35763	389235	36683	24305	161995	18892	15218
[SDR] Total individuals screened for hypertension	18027	160281	726	5113	50186	8813	3443
[SDR] Total Diagnosed Positive for hypertension	477	4053	7	845	387	122	94
[SDR] Total Individuals on Treatment for hypertension	45	930	2	79	27	13	17
[SDR] Total individuals screened for diabetes	18027	160281	726	5113	50186	8813	3443
[SDR] Total Diagnosed Positive for diabetes	358	2508	4	791	446	48	42
[SDR] Total Individuals on Treatment for diabetes	28	454	1	26	24	5	19
[SDR] Total individuals screened for oral cancer	15338	135549	408	4079	30011	6170	3306
[SDR] Total Diagnosed Positive for oral cancer	0	0	0	0	0	0	0
[SDR] Total Individuals on Treatment for oral cancer	NN	NN	NN	NN	NN	NN	NN
[SDR] Total individuals screened for breast cancer	15338	135549	408	4079	30011	6170	3306
[SDR] Total Diagnosed Positive for breast cancer	0	0	0	0	0	0	0
[SDR] Total Individuals on Treatment for breast cancer	NN	NN	NN	NN	NN	NN	NN
[SDR] Total individuals screened for cervical cancer	15338	135549	408	4079	30011	6170	3306
[SDR] Total Diagnosed Positive for cervical cancer	0	0	0	0	0	0	0
[SDR] Total Individuals on Treatment for cervical cancer	NN	NN	NN	NN	NN	NN	NN

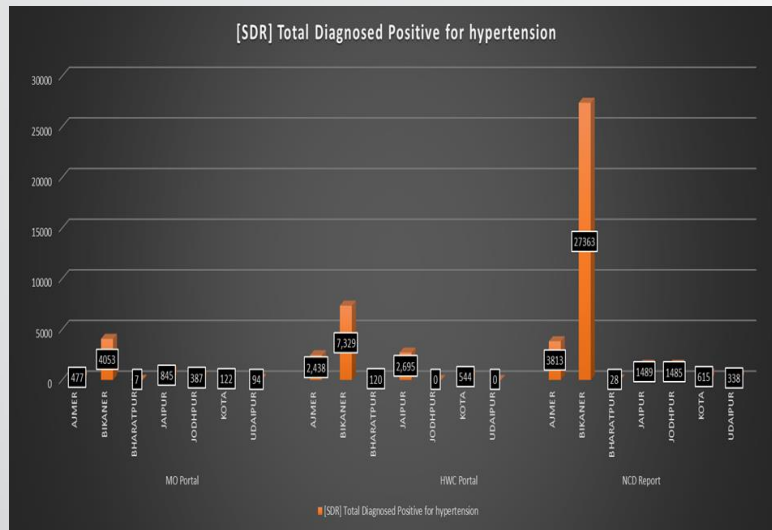
INDICATOR	HWC PORTAL						
	AJMER	BIKANER	BHARATPUR	JAIPUR	JODHPUR	KOTA	UDAIPUR
Facilities started population enumeration	74	82	66	108	78	29	92
Facilities Started Hypertension Screening	115	82	61	112	78	30	93
Facilities started diabetes screening	115	82	60	112	78	30	93
Facilities started oral cancer screening	87	79	61	111	65	30	55
Facilities started breast cancer screening	86	79	60	111	55	30	55
Facilities started cervical cancer screening	3	21	49	1	9	30	30
[TR] Total MPW (F) Trained	96	78	31	143	276	48	102
[TR] Total ASHA Trained	585	356	350	596	806	198	290
[TR] Total MO Trained	55	24	57	130	64	32	82
[TR] Total SN Trained	66	40	59	177	99	41	121
[SDR] Total individuals enumerated	13,671	39,259	0	33,666	0	3,287	0
[SDR] Total CBAC form filled	66,985	53,949	360	23,239	0	3,287	0
[SDR] Total individuals screened for hypertension	62,495	77,857	970	50,864	0	8,007	0
[SDR] Total Diagnosed Positive for hypertension	2,438	7,329	120	2,695	0	544	0
[SDR] Total Individuals on Treatment for hypertension	2,459	8,241	64	5,182	0	1,731	0
[SDR] Total individuals screened for diabetes	62,433	67,081	899	31,424	0	4,945	0
[SDR] Total Diagnosed Positive for diabetes	1,965	3,751	80	1,500	0	149	0
[SDR] Total Individuals on Treatment for diabetes	1,982	4,061	12	2,380	0	332	0
[SDR] Total individuals screened for oral cancer	57,863	33,550	543	11,043	0	3,025	0
[SDR] Total Diagnosed Positive for oral cancer	120	9	0	3	0	1	0
[SDR] Total Individuals on Treatment for oral cancer	120	8	0	10	0	0	0
[SDR] Total individuals screened for breast cancer	30,955	13,829	266	4010	0	1581	0
[SDR] Total Diagnosed Positive for breast cancer	1	13	0	0	0	1	0
[SDR] Total Individuals on Treatment for breast cancer	1	20	0	0	0	0	0
[SDR] Total individuals screened for cervical cancer	266	10,231	262	1,104	0	1581	0
[SDR] Total Diagnosed Positive for cervical cancer	0	7	87	1	0	0	0
[SDR] Total Individuals on Treatment for cervical cancer	0	2	0	1	0	0	0

INDICATOR	NCD REPORT						
	AJMER	BIKANER	BHARATPUR	JAIPUR	JODHPUR	KOTA	UDAIPUR
Facilities started population enumeration	61	28	41	89	90	30	100
Facilities Started Hypertension Screening	61	28	41	27	90	26	78
Facilities started diabetes screening	61	28	41	27	90	26	78
Facilities started oral cancer screening	61	28	41	27	90	26	78
Facilities started breast cancer screening	61	28	41	27	90	26	78
Facilities started cervical cancer screening	0	0	0	0	0	0	0
[TR] Total MPW (F) Trained	155	118	95	65	196	5	44
[TR] Total ASHA Trained	158	185	95	66	117	25	189
[TR] Total MO Trained	63	53	68	60	81	20	23
[TR] Total SN Trained	0	0	0	0	0	0	0
[SDR] Total individuals enumerated	0	0	0	0	0	0	0
[SDR] Total CBAC form filled	48415	192000	4269	36869	27635	19809	18975
[SDR] Total individuals screened for hypertension	42474	137160	747	21058	25343	6514	14526
[SDR] Total Diagnosed Positive for hypertension	3813	27363	28	1489	1485	615	338
[SDR] Total Individuals on Treatment for hypertension	3813	27363	28	1489	1485	604	338
[SDR] Total individuals screened for diabetes	42474	137160	747	21058	25343	6514	14526
[SDR] Total Diagnosed Positive for diabetes	3029	6779	8285	977	1255	529	247
[SDR] Total Individuals on Treatment for diabetes	3029	6779	8285	977	1255	526	247
[SDR] Total individuals screened for oral cancer	42474	137160	747	21058	25343	6514	14526
[SDR] Total Diagnosed Positive for oral cancer	5	0	0	0	0	0	1
[SDR] Total Individuals on Treatment for oral cancer	5	0	0	0	0	0	1
[SDR] Total individuals screened for breast cancer	19113	61722	336	9476	11404	2931	6537
[SDR] Total Diagnosed Positive for breast cancer	3	0	0	0	0	0	0
[SDR] Total Individuals on Treatment for breast cancer	3	0	0	0	0	0	0
[SDR] Total individuals screened for cervical cancer	19113	61722	336	9476	11404	2931	6537
[SDR] Total Diagnosed Positive for cervical cancer	0	0	0	0	0	0	NN
[SDR] Total Individuals on Treatment for cervical cancer	0	0	0	0	0	0	0

- Graph 1 representing data discrepancy input among NCD software, HWC portals and NCD report for ‘Indicator-1- Facilities started population enumeration’ in seven districts of Rajasthan.
- As per the data input, in the HWC portal ‘Indicator - 11- Total individuals enumerated’ are less than the total CBAC forms filled, which shows dilution of reporting pattern and the level of awareness among the individuals working at different districts.
- In all graphs, entries with “0” under any indicator represent lack of data which is due to unawareness or misreporting and difficulty in interpreting peculiarities of portals.



- According to the data pulled from portals for hypertension, diabetes, and cancer treatment (Indicator-15, 18, 21, 24, 27) shows that all the individuals diagnosed with the disease mentioned are availing treatment with regular follow-ups, again presenting gap in the reporting.



- HWC and NCD trainings are given separately resulting in breach among the entries under “Indicator -7- Total MPW(F) Trained”.

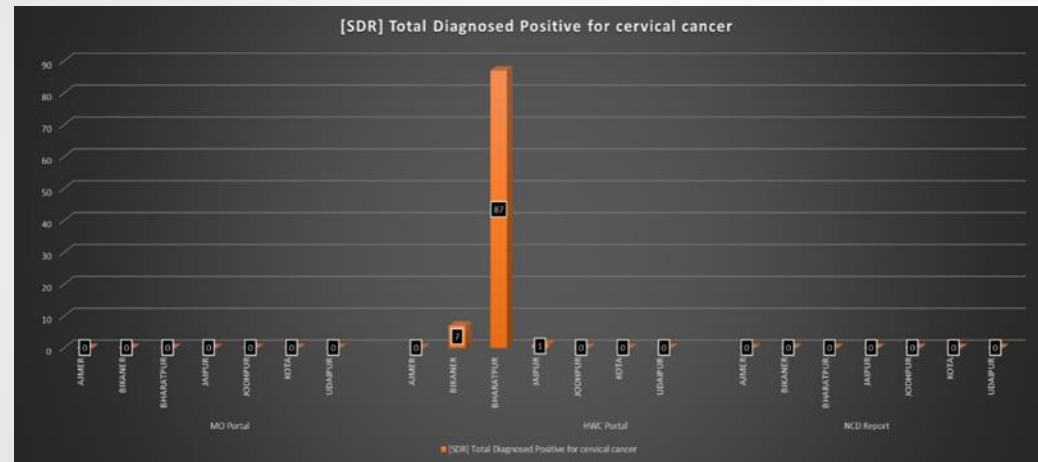


- As a result of hierarchical unawareness, the data input under “Indicator -8-Total number of ASHA’s trained” is more in HWC than in NCD report.



- Poor orientation and training are remarked for the same indicators are handled by distinct supporting teams which stipulates a great contrast in data of almost every indicator, express less coordination between the teams under one roof.
- Due to lack of peripheries screening and constant observing the under emphasis of “Indicator -18 to 27- Facilities providing Screening, diagnosis, and treatment for all the three types of cancers” are subsequently overlooked.

- Reliability of source is put under question as the diagnostic service is not functional at facility level showing “0” data input in NCD software and NCD report but few entries can be viewed in HWC portal for “Indicator-26- Total diagnosed positive for cervical cancer”.



- State NCD cell being misguided by districts as the data input is lacking with regards to training in NCD software.
- As per population-Based Screening guidelines given by the state, disease wise treatment and follow-up should be observable on NCD software but is not the add -on feature hence showing dilution of thoughts.

RECOMMENDATIONS:

GAP IDENTIFIED	RECOMMENDATIONS
1. Discrepancy in data inputs.	1. Use of third-party verification systems They can do this by independent logging page load events via their own tracking pixels, provided with additional verification metrics in their respective dashboards and reporting systems.
2. Some indicators are overlooked	2. Identifying a process owner and to provide employees with training that covers all the aspects of data entry practices.
3. Difficulty in interpretation due to unawareness and multiple proficiency level among data entry operators	3. Standardized, consistent, nationally acceptable outcomes of training through skill enhancement program.

4.Reporting of MO portal in form of line list is done at the facility level and reporting of HWC portal in compiled form is done at the district level, so in the view of this concern a single point of contact should be authorized to reduce perplexity and misreporting pattern.

5.Homogenized portals should be designed keeping it systemized and separate sub headers for MO at facility level and HWC at district level.

6. Data Quality management practices are required to maintain a high-quality information that can be measured from five main criteria namely: Accuracy, relevancy, completeness, timeliness, and consistency. The standard for good data quality can differ depending upon the requirement and nature of data itselves.

7. Disciplined data governance should be performed through rigorous management of incoming data and thorough regression testing for change management and careful design of data pipelines, resulting in much easier and less costly to prevent the data issue from happening in the first place rather than relying on defending systems

FIELD VISIT:



CANCER CARE PROGRAMME CLINIC AT SATELLITE HOSPITAL AJMER



SOMALPUR SUBCENTER (AJMER)

REFERENCE:

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NCD COUNSELLING AND DATA ENTRY ROOM



PART-2

ONLINE COURSE REPORT



CERTIFICATE COURSE ON HEALTH CARE QUALITY MANAGEMENT

COURSE DESCRIPTION

- Quality management is a crucial need for healthcare organizations such as hospitals, nursing homes, clinics, and laboratories. Healthcare institutions must ensure that they constantly evaluate their internal processes and service delivery to ensure that the quality of healthcare delivered is of top standard. Quality in healthcare delivery is important because it has a direct impact on human lives and wellbeing.
- Ensuring patient safety and healthcare quality is critical and should be a key focus of everyone in healthcare practice. This course provides healthcare practitioners and others with an introduction to the knowledge and skills needed to lead patient safety and quality improvement initiatives at the micro and macro levels.
- The course gives the insight of the foundations of health care quality and the science underlying patient safety and quality improvement, theories, Accreditation in the healthcare organization, consumer protection act, design and select effective health care measures, analyse patient safety problems and processes using tools, applying systematic approaches including the Plan-Do-Check-Act (PDCA) model to address quality improvement challenges and learn strategies to lead a culture of change.
- The Certificate Course in Healthcare Quality Management provides comprehensive coverage of the theoretical and practical aspects of quality at different levels of healthcare delivery. The aim of this course is to enable healthcare managers and other health professionals in the implementation of quality management and continuous quality improvement in their settings

Broad Objective

- To help understand the basic concepts of quality in health care and develop skills to implement sustainable quality assurance/management program in the hospital and health services.

Specific Objectives

- To familiarize and understand the concepts of Quality Assurance/Management and its importance in the context of health care
- To understand the scope of QA
- To understand the importance of standards, indicators, and benchmarks in QA
- To learn basic skills of assessment of the quality
- To understand the QA process and develop skills to use quality improvement tools
- To develop skills in monitoring and supervising the quality of services
- To plan and implement a QA program in health and hospitals
- To apprise of National Accreditation Program and Process

Learning Objectives

- Define quality and describe dimensions of quality
- Assess and measure quality using a set of standards and indicators
- Define QA Problems and develop solutions
- Use selected quality improvement tools
- Develop a plan of action for quality improvement in their settings
- Preparing for Accreditation

LEARNING METHODOLOGY:

- Courses consist of interactive lessons including reading material, images, and graphical representations.
- Different instructional techniques are used such as Storytelling, videos, case studies, examples, questions and practice sessions with reinforcement feedback.

INTRODUCTION TO HEALTHCARE QUALITY

What is Quality?

- "Doing the right thing right, right away."
- Quality can be interpreted as meeting both the clients expressed standards and when standards (e.g. program) are fully met.
- A widely accepted definition of quality, as given by the Institute of Medicine, is "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge" (Lohr 1990).

Different Approaches to Defining Quality

- The strategic concept of order qualifiers and order winners that developed during the 1990s.
- Order qualifiers: are minimum characteristics that a product or service must have to be of acceptable quality.
- Order winners: are those enhancements that exceed the minimum characteristics

Quality Assurance

- A quality assurance (QA) approach involves eliminating defects. In an assembly line, defects refer to damages found intangible products; in a service industry, like healthcare, defects refer to those performers who carry out a task or service poorly.
- Figure 1. illustrates this manager's QA approach. The bell-shaped curve on the left, which demonstrates a normal distribution, represents the combined productivity of all the employees in the department; it shows the result of many employees carrying out the same process over and over. A measure of central tendency is shown by the vertical line in the middle of the curve and may be represented as a mean, median, or mode (average number of pre-authorisations per employee). Besides, performance varies, with several data points at the "better" tail of the curve (the speedy employees) and some data points at the "worse" tail of the curve (the dawdlers).

Quality Improvement

- Quality Improvement (QI), also referred to as Continuous Quality Improvement (CQI), approach.
- Figure 2. illustrates the manager's QI approach. The baseline performance is represented by the bell-shaped curve on the left. However, how the higher average level of performance is achieved is very different than what is seen in Figure 1.

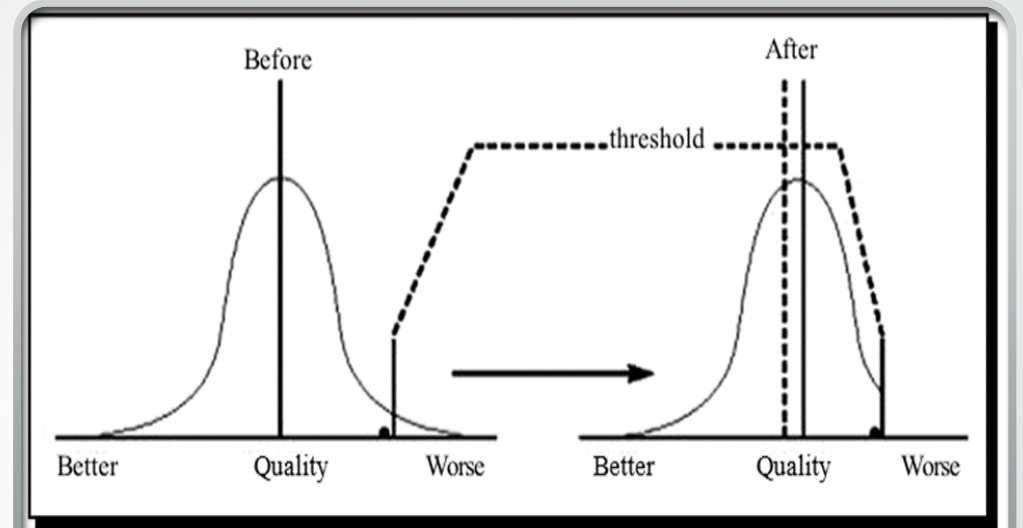


Figure 1: Quality Assurance

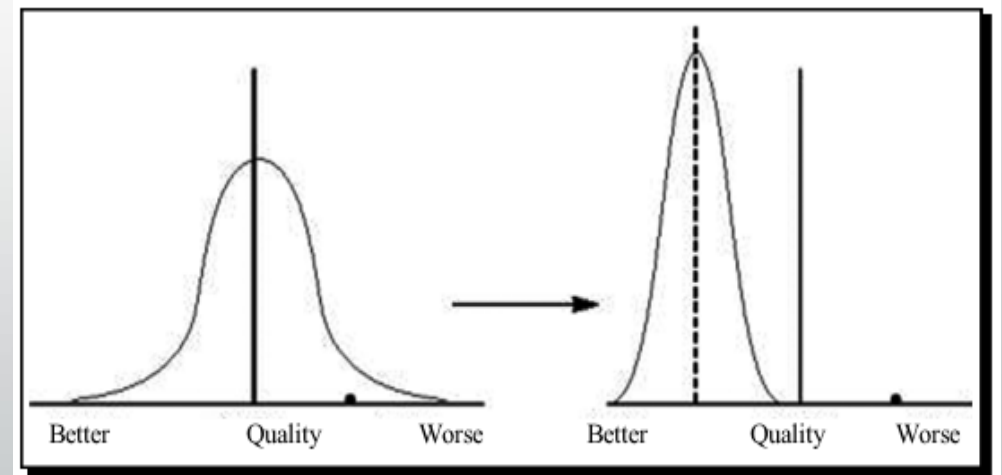


Figure 2: Quality Improvement

QUALITY MANAGEMENT THEORIES

FOCUS and PDCA

- Standards for Quality Improvement - The PDCA Methodology
- PDCA is a cyclic improvement/problem resolution tool. Each cycle moves closer to the objective. This approach builds on the fact that knowledge and skills are always limited but can improve as we go.

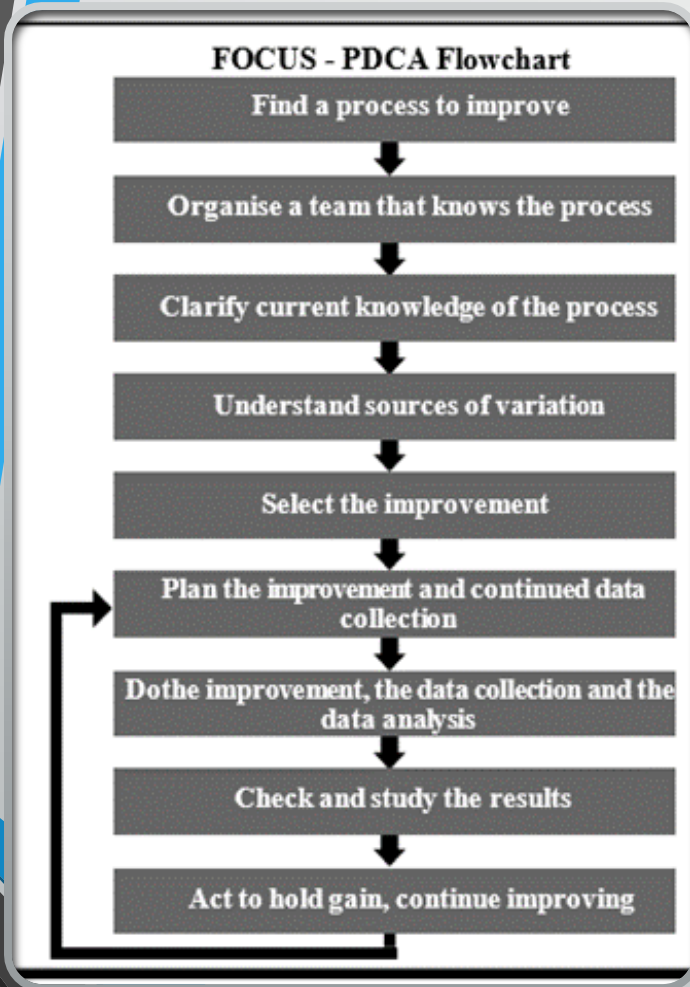
Cycles of Improvement

- Practitioners use PDCA as a guide to analysing processes. The goal is to identify errors or omissions that cause the output of the process to fall short of expectations.

The four steps of PDCA are:

1. Plan
2. Do
3. Check
4. Act

- PDCA provides a framework for the improvement of a process. It can guide the entire improvement project, or to aid in developing specific projects based on identified target improvement areas. PDCA is as a dynamic model. Completing one turn of the cycle flows into the beginning of the next.
- FOCUS is an acronym for Find, Organise, Clarify, Uncover, and Start. FOCUS sets the stage for PDCA. FOCUS PDCA is then a nine-step process with five FOCUS steps and 4 PDCA steps. Using the FOCUS method with PDCA can help you achieve higher quality results in less time.



The Lean Thinking

The concept called “lean management” or “lean thinking” is most associated with Japanese manufacturing, particularly the Toyota Production System (TPS). Lean thinking is not a manufacturing tactic or a cost-reduction program, but a management strategy that applies to all organisations because it has to do with improving processes. All organisations — including health care organisations — are composed of a series of processes or sets of actions intended to create value for those who use or depend on the customers/patients). The core idea of lean involves determining the value of any given process by Distinguishing value-added steps from non-value-added steps and eliminating waste (or muda in Japanese) so that ultimately every step adds value to the process.

Poka-Yoke

Poka-yoke was coined in Japan during the 1960s by Shigeo Shingo who was one of the industrial engineers at Toyota. Poka-yoke helps people and processes work right the first time. Poka-yoke refers to techniques that make it impossible to make mistakes. These techniques can drive defects out of products and processes and substantially improve quality and reliability. It can be thought of as an extension of FMEA. It can also be used to fine-tune improvements and process designs from six-sigma Define-Measure-Analyse-Improve-Control (DMAIC) projects. The use of simple poka-yoke ideas and methods in product and process design can eliminate both human and mechanical errors. Poka-yoke does not need to be costly.

ISO 9000 and ISO 14000

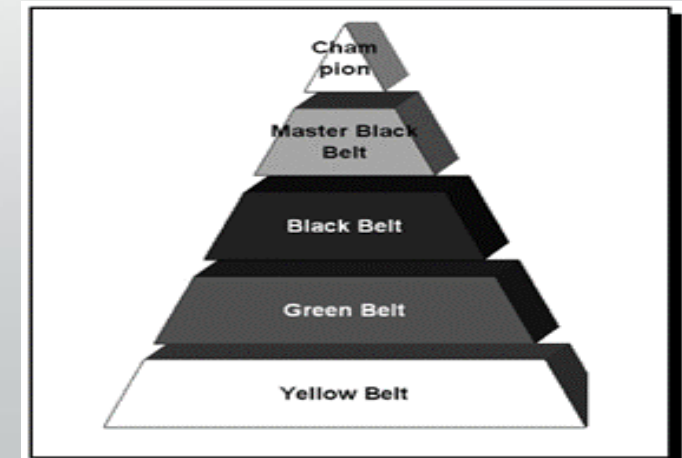
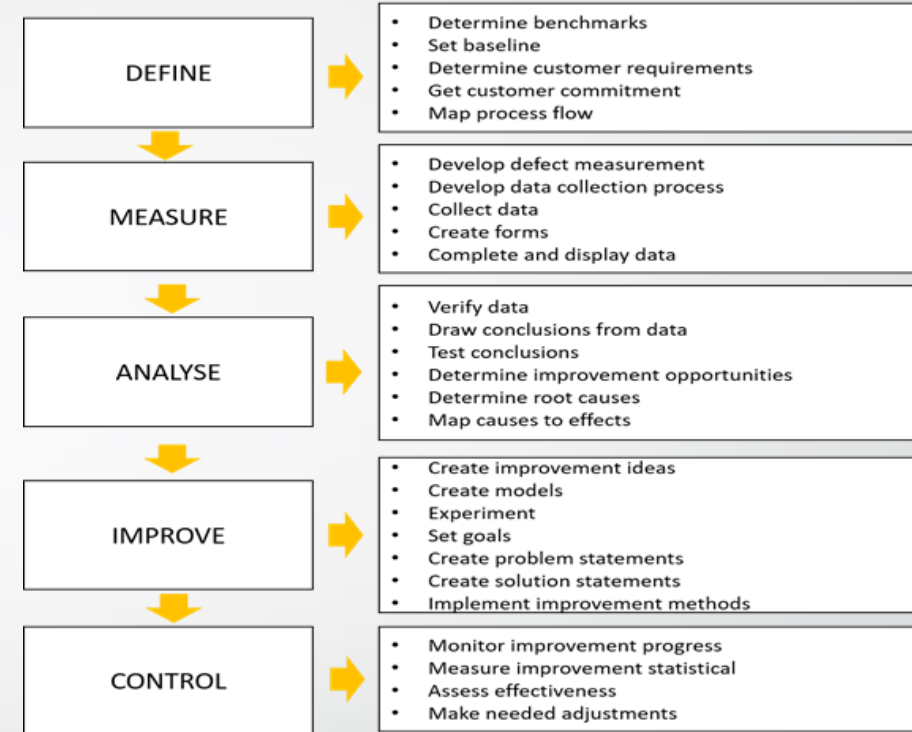
The International Organisation for Standardisation (ISO) is an international organisation whose purpose is to establish agreement on international quality standards. ISO 9000 consists of a set of standards and a certification process for companies. By receiving ISO 9000 certification, companies demonstrate that they have met the standards specified by the ISO. To receive ISO certification, a company must provide extensive documentation of its quality processes. This includes methods used to monitor quality, methods and frequency of worker training, job descriptions, inspection programs, and statistical process-control tools used. High-quality documentation of all processes is critical.

The need for standardisation of quality created an impetus for the development of other standards. In 1996 the International Standards Organisation introduced standards for evaluating a company’s environmental responsibility. These standards, termed ISO 14000. With greater interest in green manufacturing and more awareness of environmental concerns, ISO 14000 may become an important set of standards for promoting environmental responsibility.

Six-Sigma

A Six Sigma defect is defined as anything outside of customer specifications. A Six Sigma opportunity is then the total quantity of chances for a defect. Process sigma can easily be calculated using a Six Sigma calculator. The fundamental objective of the Six Sigma methodology is the implementation of a measurement-based strategy that focuses on process improvement and variation reduction through the application of Six Sigma improvement projects. This is accomplished using two Six Sigma sub-methodologies: DMAIC and DMADV. The Six Sigma DMAIC process (define, measure, analyse, improve, control) is an improvement system for existing processes falling below specification and looking for incremental improvement. The Six Sigma DMADV process (define, measure, analyse, design, verify) is an improvement system used to develop new processes or products at Six Sigma quality levels. The primary goal of Six Sigma is to improve customer satisfaction, and thereby profitability, by reducing and eliminating defects. Defects may be related to any aspect of customer satisfaction: high product quality, schedule adherence, cost minimisation.

Six Sigma Process



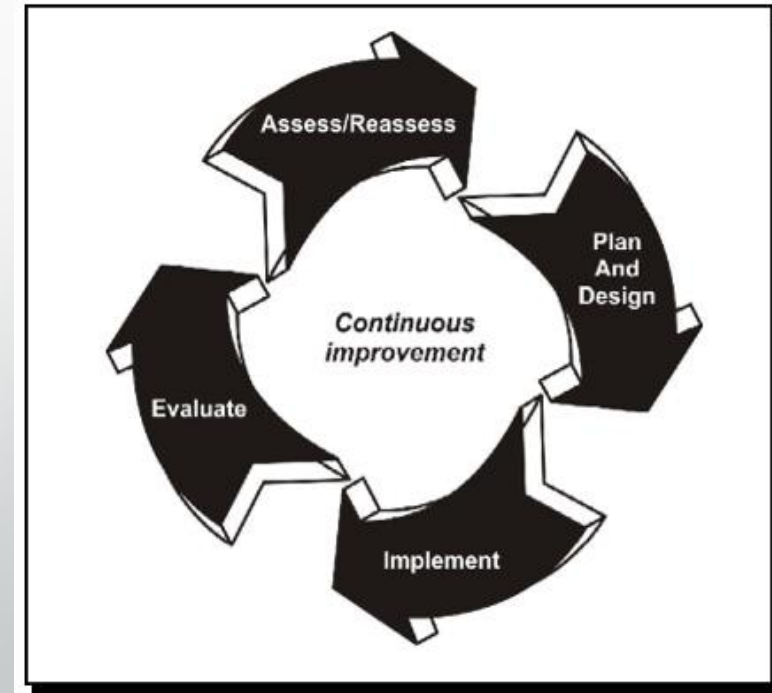
Kaizen

Kaizen was created in Japan following World War II. The word Kaizen means "continuous improvement". Kaizen is a system that involves every employee - from upper management to the cleaning crew. Everyone is encouraged to come up with small improvement suggestions regularly. This is not a once a year, or monthly activity. It is continuous. Adoption of KAIZEN involves the creation of a culture of sustained continuous improvement focusing on eliminating waste in all systems and processes of an organisation.

Kaizen and Management

has two major components:

1. Maintenance
2. Improvement



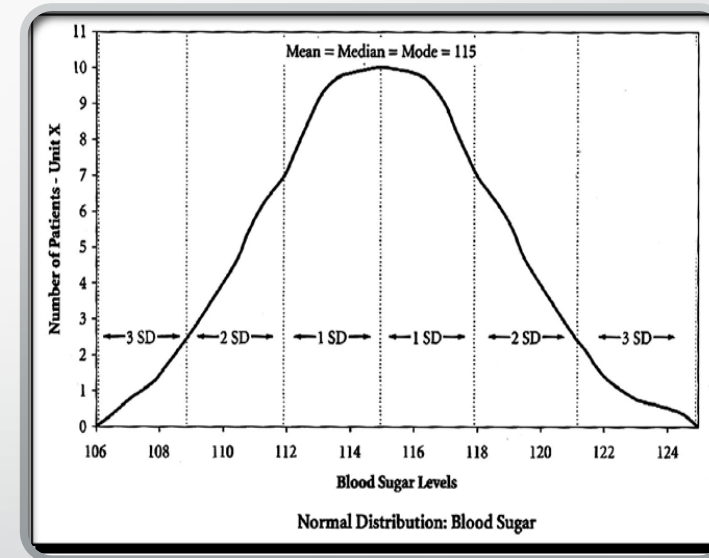
STATISTICS IN QUALITY

Introduction

- Statistics are an essential element of quality improvement and every quality professional must understand the basic statistical tools.
- Statistical quality control (SQC) is the term used to describe the set of statistical tools used by quality professionals. Statistical quality control can be divided into three broad categories:
 1. Descriptive statistics
 2. Statistical process control (SPC)
 3. Acceptance sampling

Standard Deviation

- The range gives you some sense of the big picture, but it is very general. Often you might like a little more information regarding the range, a kind of fine-tuning that would tell you how far away from the mean, on average, a set of data points is. You can calculate this by calculating the standard deviation (SD). That is what SD is, the average distance from the mean. The larger the SD, the farther the average data point is from the mean. Understanding the formula, even in theory, is not a bad idea. since people in health care services tend to talk about standard deviation.
- Where: S is the standard deviation
- $\sum$ (sigma) tells you to find the sum of what follows the symbol X represents each data point
- X (called X-bar) is the mean of the data set n is the number of data points being analysed
- Bell Curve.
- A bell curve, or *normal distribution*, is perfectly symmetrical-high in the middle and trailing off evenly to both sides. Many phenomena are normally distributed: blood sugar levels, body temperatures, the height of the population. Extremes are rare (which is why they are called extreme) and fall at the ends of either side of the bell curve.
- The middle of the curve, where most of the results are, represents the average (the mean, median, and mode). Interestingly, almost all normal distributions fall into the value of plus or minus 3 SDs from the mean. Therefore, if you know the mean and the SD, you can compute 3 SDs in each direction from the mean on a graph. Normal data will fall within this range.



ACCREDITATION IN HEALTHCARE ORGANISATIONS

ACCREDITATION BODIES

Accreditation is not new to the health system. Broadly there exist two types of hospital accreditation

- 1) International healthcare accreditation
- 2) Hospital and healthcare accreditation which takes place within national borders

Quality Council of India (QCI)

QCI is an autonomous body set up by Govt. of India along with the partners like CII, FICCI and ASSOCHAM to establish and operate accreditation structure in the country.

Objectives of QCI

1. Establish and operate an accreditation structure in the country for conformity assessment bodies
2. Provide right and unbiased information on quality and related standards
3. Promote quality in national perspective
4. Represent India's interest in international forums
5. Help establish brand equity of Indian products and service

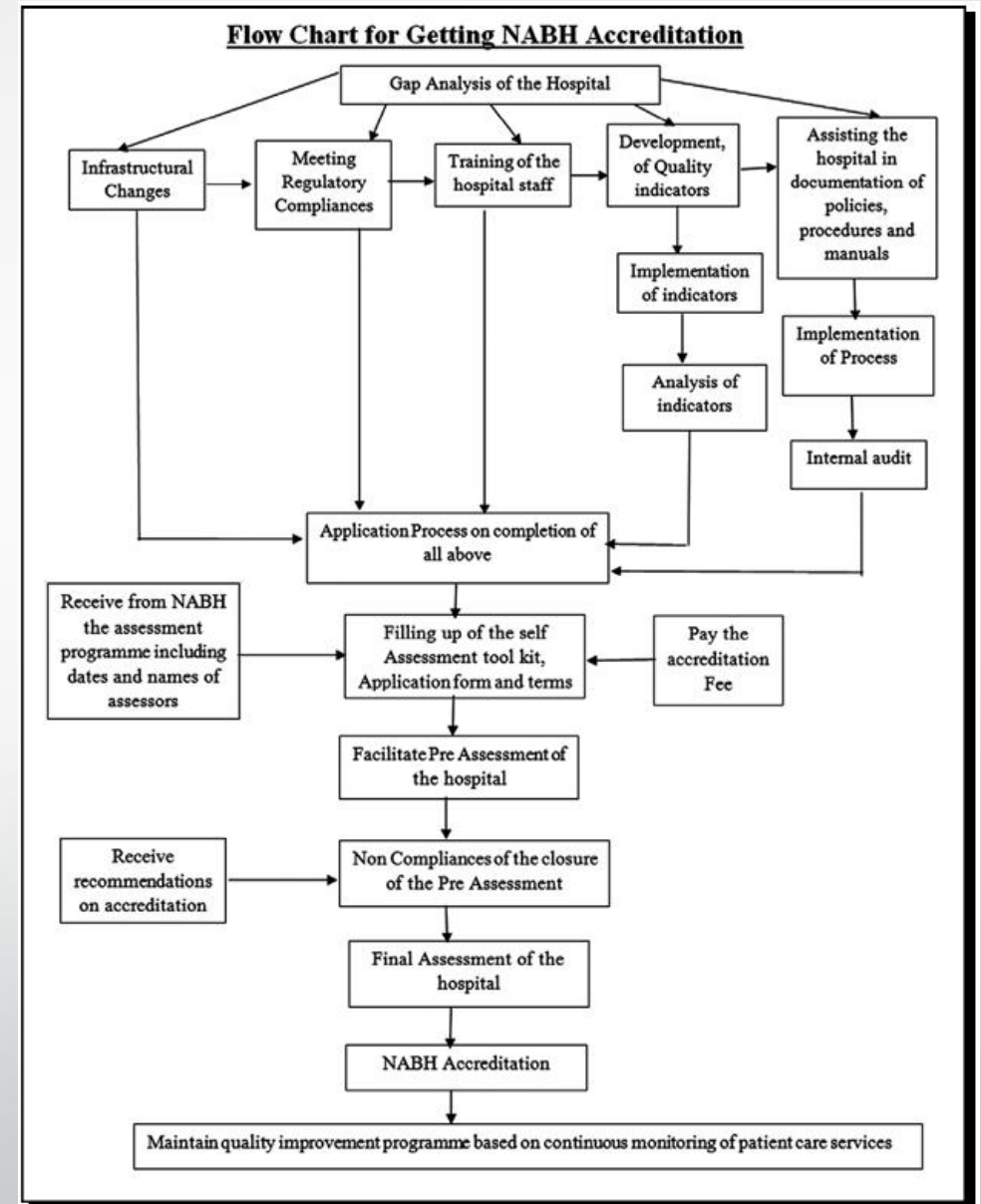
NATIONAL ACCREDITATION BOARD FOR HOSPITALS AND HEALTHCARE PROVIDERS (NABH)

- National Accreditation Board for Hospitals & Healthcare Providers (NABH), constituted as a constituent board of Quality Council of India, in the year 2006 to establish and operate accreditation programme for healthcare organisations. The board is structured to cater to much desired needs of the consumers and to set benchmarks for progress of the health industry. The board is functionally autonomous in its operation. Currently, it accredits Hospitals & Nursing homes, Blood Banks, Diagnostic Centres (Imaging), and has published new accreditation standards for Dental Centres, Wellness centres and AYUSH Hospitals/ Clinics. NABH has now published its 3rd edition of standards with 10 chapters, 102 standards and 636 objective elements.
- The structure of NABH is as follows:



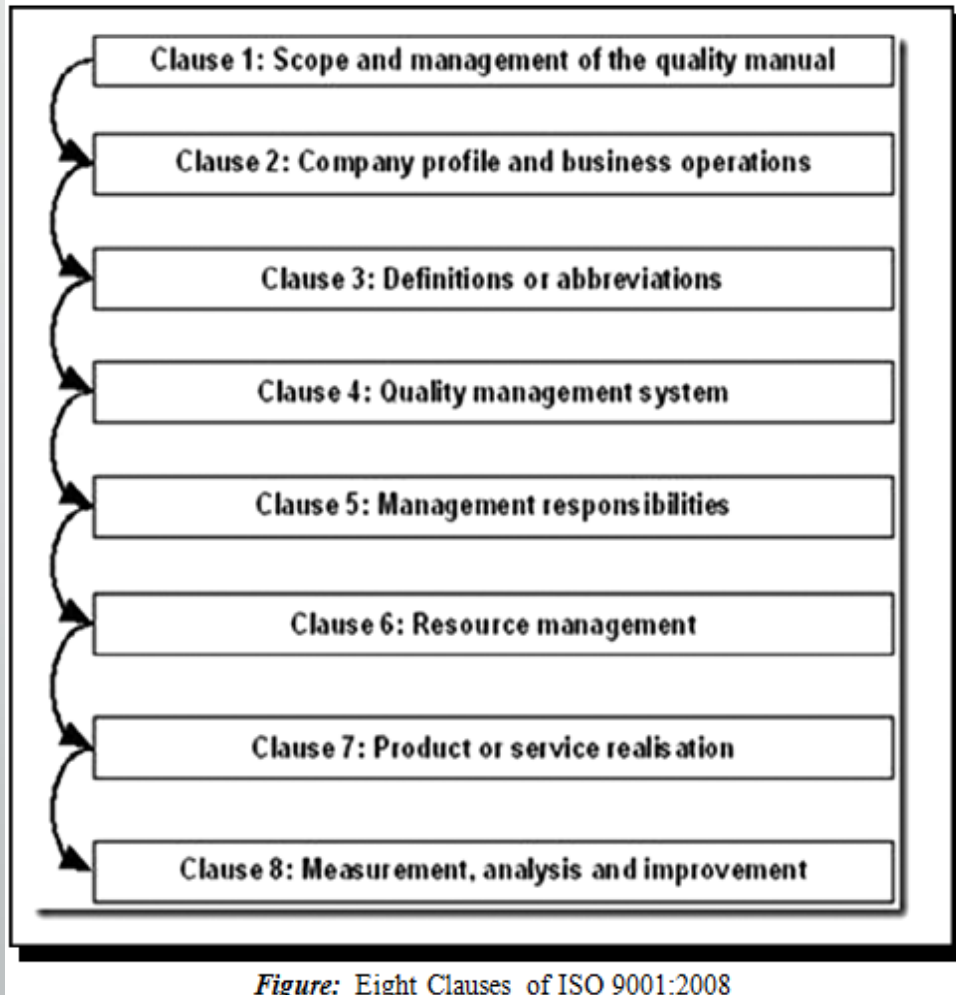
The Accreditation process involves a comprehensive review of the hospital's compliance with NABH's standards. Cardinal principles of assessment are:

- i. Hospital operations are based on sound principles of system-based organisation
- ii. NABH standards are implemented and institutionalise into hospital functioning.
- iii. Patient safety and quality of care, as core values, are established and owned by management and staff in all functions and at all levels.
- iv. There is a structured quality improvement programme based on continuous monitoring of patient care services.



ISO certification for healthcare organizations

International Organization for Standardization (ISO) is a network of National Standards Institute of 157 countries worldwide. ISO 9000 family of standards usually deals with quality management and ISO 9001:2008 applies to all healthcare organizations. The structure of ISO 9001:2008 has 8 clauses.



The difference between accreditation and certification are listed in the table below:

	Accreditation	Certification
Definition	It is a procedure, which an authoritative body will give formal recognition to a healthcare organisation.	It is the action performed by a third-party agency to verify if the product, process, or service will fulfil all the particular needs of the pertinent standards, technical regulations or other normative acts that are in force.
Function	It is a formal recognition of competence, which is based on proven technical knowledge and so requires certification of the technical expert for the scope to be accredited.	It involves making sure that the organisations conform to a given set of rules.
Example	NABH	ISO9001

CONSUMER PROTECTION ACT AND QUALITY

Consumer Protection Act

(Act No. 68 of the Year 1986 dated 24th. December 1986)

An Act to provide for better protection of the interests of consumers and for that purpose to make provision for the establishment of consumer councils and other authorities for the settlement of consumers disputes and matters connected therewith. It extends to the whole of India except the State of Jammu and Kashmir.

- As a result of this judgment, the medical profession has been brought under the Section 2(1) (o) of CPA, 1986 and, it has included the following categories of doctors/ hospitals under this Section:

All medical/dental practitioners doing independent medical/dental practice unless rendering only free service.

Private hospitals charging all patients.

All hospitals having free as well as paying patients and all the paying and free category patients receiving treatment in such hospitals.

Medical/dental practitioners and hospitals paid by an insurance firm for the treatment of a client or employment for that of an employee.

Special features of CPA

- CPA has an overriding effect
- CPA is a Special and Unique Piece of Social Welfare Legislation
- No Court fee or stamp fee
- No need for a lawyer complainant himself can present his case
- Arbitration clause – no bar to CPA route

PATIENT SAFETY AND MEDICAL ERRORS

Medication-related errors occur frequently in hospitals and although not all result in actual harm, those that do, are costly.

Errors are also costly in terms of opportunity costs. A comprehensive approach to improving patient safety is needed. This approach cannot focus on a single solution since there is no "magic bullet" that will solve this problem, and indeed, no single recommendation in this report should be considered as the answer. Rather, large, complex problems require thoughtful, multifaceted responses.

The combined goal of the recommendations is for the external environment to create sufficient pressure to make errors costly to health care organisations and providers, so they are compelled to take action to improve safety. At the same time, there is a need to enhance knowledge and tools to improve safety and break down legal and cultural barriers that impede safety improvement. Given current knowledge about the magnitude of the problem, the committee believes it would be irresponsible to expect anything less than a 50 per cent reduction in errors over five years.

Safety is defined as freedom from accidental injury. This definition recognizes that this is the primary safety goal from the patient's perspective. Error is defined as the failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim. According to noted expert James Reason, errors depend on two kinds of failures: either the correct action does not proceed as intended (an error of execution) or the original intended action is not correct (an error of planning). Errors can happen in all stages in the process of care, diagnosis, to treatment, to preventive care.

Types of Errors

- The IOM defines medical error as "the failure to complete a planned action as intended or the use of a wrong plan to achieve an aim." An adverse event is defined as "an injury caused by medical management rather than by the underlying disease or condition of the patient."
- Most people believe that medical errors usually involve drugs, such as a patient getting the wrong prescription or dosage, or mishandled surgeries, such as amputation of the wrong limb. However, there are many other types of medical errors, including:
 1. Diagnostic error, such as misdiagnosis leading to an incorrect choice of therapy, failure to use an indicated diagnostic test, misinterpretation of test results, and failure to act on abnormal results.
 2. Equipment failure, such as defibrillators with dead batteries or intravenous pumps whose valves are easily dislodged or bumped, causing increased doses of medication over too short a period.
 3. Infections, such as nosocomial and post-surgical wound infections.
 4. Blood transfusion-related injuries, such as giving a patient the blood of the incorrect type. Misinterpretation of other medical orders, such as failing to give a patient a salt-free meal, as ordered by a physician.

DASHBOARDS AND SCORECARDS

Dashboards

Healthcare organisations are looking at Executive Dashboards—also referred to as key performance indicators (KPIs)—to ensure that diverse, key objectives are monitored. By aligning departmental and facility KPIs to overall health system KPIs, everyone in the organisation can work toward the strategy set out by the Board. Such a dashboard provides an at-a-glance review, saving hours of digging through reports. Moreover, communication of the strategic-based KPIs serves to reinforce positive behaviours.

- Healthcare Metric Categories for Dashboards
- Clinical Quality
- Satisfaction
- Operational
- Financial
- Growth
- Social Accountability
- Market
- Specialities

Balanced Scorecards

The balanced scorecard is a strategic measurement and management system. It translates an organisation's mission and strategy into a balanced set of integrated performance measures. It complements the traditional financial perspective with other non-financial perspectives such as customer satisfaction, internal business process, and learning and growth. It also mixes outcome measures, the lagging indicator, with performance drivers, the leading indicator, because "outcome measures without performance drivers do not communicate how the outcomes are to be achieved".

- The balanced scorecard can be used by hospitals to do the following:
- Clarify and gain consensus about strategy,
- Communicate the strategy throughout the organisation,
- Align departmental and personal goals to the strategy,
- Link strategic objectives to long-term targets and annual budgets,
- Identify and align strategic initiatives,
- Perform periodic and systematic strategic reviews, and
- Obtain feedback to learn about and improve strategy.

IT AND QUALITY

IT For Quality in Healthcare

Delivering quality health care requires providers and patients to integrate complex information from many different sources. Thus, increasing the ability of physicians, nurses, clinical technicians, and others to readily access and use the right information about their patients should improve care. The ability for patients to obtain information to better manage their condition and to communicate with the health system could also improve the efficiency and quality of care. This potential to improve care makes a broader diffusion of IT desirable.

Technology Standards in Healthcare

Health Care sector is an information-intensive sector with most of its sectors computerised. The extent of automation of information management functions affects the efficacy of health care operations.

- Automation of information management has
- Reduced paper processing,
- Improved cashing,
- Improved management of decision making,
- Improved clinical and ancillary services (bedside systems and patient-side systems),
- Enabled over-lifetime integration of information related to the delivery of health care to a patient (an electronic patient record)

HIPAA And Other Quality Acts

HIPAA or 'The Health Insurance Portability and Accountability Act of 1996 (HIPAA) Privacy and Security Rule' is one Act which covers the confidentiality clause of Medical Record or Medical Information transmission in the USA.

The Administrative Simplification provisions of this act reflect the National Standards for electronic medical records transactions. The HIPAA confers right to a patient to see his/her medical records anywhere in the USA when the patient visits any Health care provider. A timeline of 30 days is mentioned with pay for costs of MR incurred. Further, the patient has the right to modify the medical record if she/he so desires and brings this to the notice of the health care provider (HCP) with a period of 60 days (with additional 30 days extra time given to the HCP).

In India, two acts mention here are:

- *The Mental Health Act, (1987) (Vol. 14, Chapter 3, Section 13.1)*

The Act covers the confidentiality clause of Medical records for patients having a mental illness. The Mental Health Act, (1987) (Vol. 14, Chapter 3, Section 13.1) stipulates that the Inspecting officer must not disclose the personal medical records and health information of a patient so inspected who is having a mental illness.

Code of Ethics Regulations (2002) (Part III, Section 4, Chapter 1, Section 3.1) (Medical Council of India)

- This Act covers the need for Electronic Health records, Code of Ethics Regulations. (2002) (Part III, Section 4, Chapter 1, Section 3.1) (Medical Council of India) indicates that MR should be preferably stored and kept in a computerised format for quick retrieval.

KEY LEARNINGS:

The journey to improve quality begins with listening to or observing people with complaints and then working towards improving the processes involved. The different quality standards for hospitals include:

- PCDA methodology
- Poka –Yoke
- Focus PDCA
- Lean thinking
- Iso standards
- Six sigma
- Kaizen

Accreditation is the process of evaluating and recognising excellence of healthcare delivery for whole hospitals, integrated service delivery networks and other such systems as well as professional activities.

Certification is the process through which individual facilities are provided and the organisations will undergo the assessment by a third-party auditor.

JCI is an international accreditation system some of the hospitals opt for JCI because it helps to attract patients through medical tourism. The focus areas of JCI include: Assessment of patients, utmost care of the patients, patient and family rights, strict infection control for the safety of the patients, education, and documentation.

QCI is an autonomous body set up by Government of India along with the partners like CII, FICCI and ASSOCHAM to establish and operate accreditation structure in the country.

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- National Accreditation Board for Hospitals & Healthcare Providers (NABH) thus constituted as a constituent board of Quality Council of India, in the year 2006 to establish and operate accreditation programme for healthcare organisations.
 - CPA is an act to provide for better protection of the interests of consumers and for that purpose to make provision for the establishment of consumer councils and other authorities for the settlement of consumers disputes and for matters connected therewith.
 - Some of the medical errors are Diagnostic error, Equipment failure, Infections, Blood transfusion-related injuries, and Misinterpretation of other medical orders.
 - Some of the methods to reduce errors include Incident reporting, Root cause analysis, Automated medication dispensing systems, Bar coding technology, Aviation-style preoperative checklists for anesthesia equipment and so on
 - Direct Costs, indirect Costs and impact on health-care workers are some of the impacts of adverse events.
 - General Safety Strategies and System Design Principles helps in prevention of medical errors.
 - IT allows health care providers to collect, store, retrieve, and transfer information electronically. health IT also has the potential to address the problems presented by a fragmented delivery system.



Thank
you!