

District Women's Hospital

Allahabad

MITHUN DUTTA
POST GRADUATE PROGRAMME IN
HOSPITAL AND HEALTH MANAGEMENT
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INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT RESEARCH
NEW DELHI

Estimation of waiting time in Out-Patient department of a Public Health Facility and installation of patient calling system.

A dissertation submitted in partial fulfillment of the requirements

for the award of

Post-Graduate Diploma in Health and Hospital Management

By

Mithun Dutta

Roll no. PG/08/027



International Institute of Health Management Research

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under the guidance of

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May, 2010.

Certificate of Internship Completion

Date:……..

TO WHOM IT MAY CONCERN

This is to certify that Mithun Dutta has successfully completed his 3 months internship in our organization from February 1, 2010 to April 30, 2010. During this intern she has worked on ……Hand Holding…….(task performed) under the guidance of me and my team at …….IMACS. …….(any positive/negative comment)

We wish him/her good luck for his/her future assignments

(Signature)

_____(Name)DR.(COL)Sajal Sen.

___AGM_____Designation

Certificate of Approval

The following dissertation titled "**Estimation of waiting time in Out Patient Department and installation of the Patient Calling System in A public Health Facility** " is hereby approved as a certified study in management carried out and presented in a manner satisfactory to warrant its acceptance as a prerequisite for the award of **Post- Graduate Diploma in Health and Hospital Management** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

Dissertation Examination Committee for evaluation of dissertation

Name	Signature
_____	_____
_____	_____
_____	_____

Certificate from Dissertation Advisory Committee

This is to certify that **Mithun Dutta** a participant of the **Post- Graduate Diploma in Health and Hospital Management**, has worked under our guidance and supervision. He/She is submitting this dissertation titled " **Estimation of waiting time in Out Patient Department and installation of the Patient Calling System in A public Health Facility.**" in partial fulfillment of the requirements for the award of the **Post- Graduate Diploma in Health and Hospital Management**.

This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.

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Organisation
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Date

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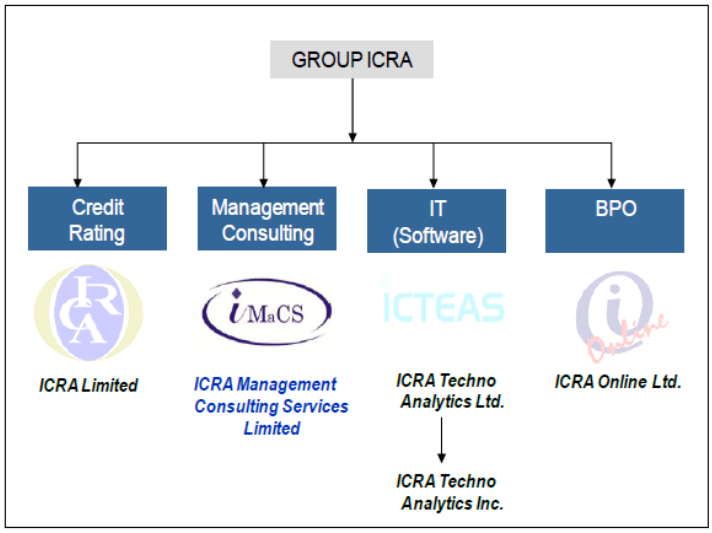
LIST OF ABBREVEATIONS

	ABBREVIATIONS
SIC	SUPRITENDENT IN CHEIF
IIHMR	International Institute of Health Management Research
ISO	International Organization for standardisation
QMS	Quality Management System
BMW	Bio Medical Waste
NRHM	National Rural Health Mission
DPC	District Programme Coordinator
WHO	World Health Organization
OPD	Out Patient Department
CD	Comprehensive
DOTS	Directly Observed
IPD	Indoor Patient Department
MRD	Medical Record Department
REG.	Registration
BPL	Below Poverty Line
IV	Intra Venous
BP	Blood Pressure

MCI	**Medical Council Of India**
CH	**Children**
MRI	**Magnetic Resonance Imaging**
CT	**Computerized Tomography**
BMD	**Bone Mineral Density**
USG	**Ultra Sonography**
IVP	**Intravenous Pyelography**
CD	**Compact Disc**
ENT	**Ear, Nose and Throat**
ICTC	**Integrated Counseling and Testing Centre**
TPA	**Third Party Administration**
MLC	**Medico Legal Cases**
CMS	**Chief Medical Supritendent**

IMaCS - an introduction

ICRA Management Consulting Services Limited (IMaCS) is a multi-line management/development consulting firm headquartered in India. We have an established track record of 14 years in consulting and a diversified client base across various sectors and countries. IMaCS has completed over 700 consulting assignments and has worked in over 25 countries across the globe.

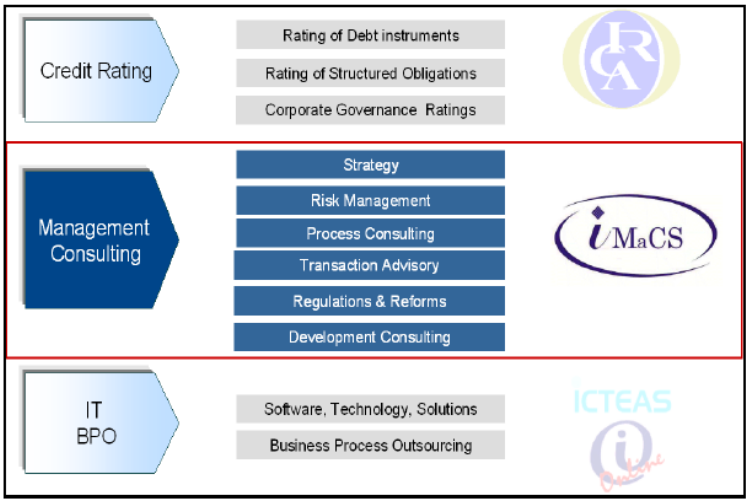


ICRA Management Consulting Services Limited (IMaCS) is a fully-owned subsidiary of ICRA Limited (ICRA), one of India's leading credit rating agencies. IMaCS operated as a division of ICRA till March 2005, when it was de-merged from ICRA and became a standalone company. Our clientele includes multilateral and bilateral agencies, banks & financial institutions, manufacturing and service organisations, Governments, Government-owned organisations, investors, and regulators.

About Group ICRA

Launched in 1991 in India, ICRA has been set up by a number of prominent Indian financial institutions, banks, and insurance companies. In September 2001, Moody's Investment Company India (Private) Limited, a 100% subsidiary of Moody's Investors Service, USA, became the single largest shareholder in ICRA.

Group ICRA comprises three businesses: Credit Rating, Management Consulting and IT/BPO services, offered by four different companies comprising ICRA and its three subsidiaries, namely, IMaCS, ICRA Techno Analytics Ltd. (ICTEAS) and ICRA Online Limited. ICRA is listed on the National Stock Exchange and the Bombay Stock Exchange in Mumbai, India.



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DEVELOPMENT CONSULTING PRACTICE

IMaCS' Development Consulting Practice has emerged out of a clear understanding across its four groups that the principles and practices of commercial business are essential for the further evolution of the spheres of economic and social development. IMaCS works with governments at various levels – national, state or local government in a bid to help them achieve their objectives. Our clients include Government institutions at central, state and local levels, bilateral and multilateral aid agencies in India and overseas.

Typical areas of our intervention include

- Sector reform and restructuring studies
- Policy formulation and programme design
- Improving public service delivery processes
- Improving governance – information systems, e-governance, and administrative reforms
- Benefit monitoring and evaluation of government programmes and initiatives
- Creating better investment climate
- Fiscal reform and expenditure management

We cover the following sectors

- Health
- Education
- Agriculture and Rural Development
- Rural water supply and Sanitation
- Natural resource management
- Livelihood

IMaCS provides high quality consulting services across the entire development spectrum by drawing on the expertise of its four thematic consulting groups. Its main areas of work are spread across multiple domains: economic, environmental, energy and human development and social sub-spheres of development. The Practice is particularly attuned to working across multiple domains of knowledge and uses its multidisciplinary outlook and experience to formulate solutions that are context specific.

The Practice is highly interdisciplinary, bringing together expertise from natural and social sciences, engineering and management, to provide clients with cutting-edge consulting solutions and contextually relevant advice. Its research and consulting assignments cover both rural and urban areas across the public and private sectors. The Practice is also focusing on developing expertise on climate change, knowledge management and corporate social responsibility.

As a contractual consultant for IMACS the work allotted to me at District Women hospital Allahabad included the following :

As the hospital has received the ISO certificate the hospital is in the hand holding phase as per the contract with NHSRC new Delhi. Hand holding phase may be defined as the time period after the certification process is over the Consultant at base assists the Medical Superintendent of the hospital in the quality control activities which were initiated during the phase of ISO Certification.

The main activities to be performed include the following:

1. Documentation and Data Management
2. Control of quality records
3. Control of Non- conforming hospital services
4. Internal quality audit
5. Corrective and preventive action management for the non – conformities found during internal audit.
6. Data acquisition, analysis and continual improvement in hospital performance.
7. Hospital performance management review meetings.

1.DOCUMENTATION AND DATA MANAGEMENT:

1.0 Purpose: To establish a procedure that all documents are documented, numbered and managed in a controlled manner.

2.0 Scope: The scope of this procedure covers codification and proper documentation of the used planned documents within the scope of Quality System Manual established in the hospital.

3.0 Reference: Quality System Manual, QSM: 01, Section 1.0

4.0 Details:

S#	ACTIVITY	RESPONSIBILITY	DOCUMENT REFERENCE
4.1	**Document & Data Control**		
4.1.1	All documents are issue-controlled by the issuing authorities identified in clause 4.1.5 of this procedure. The issue control authority maintains a **master list of documents formats & work instructions** and updates it to reflect current issue status.	MR	F/UP/ALD/DWH/ DUFFERIN/HIM-01/01
4.1.2	A **master list of applicable external standards and specifications** are maintained and updated by the controlling	HOD	F/UP/ALD/DWH/ DUFFERIN/HI

	authorities. The authorities include M.R, Doctor's & government etc.		M-01/02
4.1.3	All documents, which exist in manual form, are allocated an edition number beginning from 01. Edition number of manuals is changed in case of 10 revisions to the part or whole of the manual. Revision numbers begin at 00 and are incremented by one for every revision to a document. Revision status of manual forms a part of the manual itself.	M.R.	-
4.1.4	Documents are identified & coded under following categories & each such category by unique document numbering system as follows: Quality System Manual (QSM) Hospital Improvement Manual (HIM) Hospital Administration Manual (HAM) Hospital Clinical Manual (HCM) Manuals (MNL) Standard Operating Procedures (SOP)	M.R.	

S#	**ACTIVITY**	**RESPONSIBILITY**	**DOCUMENT REFERENCE**
	Work Instructions (WI) Guideline (GDL) Formats (F) Records (R) Management Representative Office (MR.O) The document numbering system is as follows: a. SOP of Hospital Improvement Manual is identified as **SOP.HIM.01** and SOP is Standard Operating Procedure, HE is manual name, & 01 denotes the serial number of SOP under that manual. b. Work Instruction under particular SOP is identified as **WI/AA/BB/CC/DD/Manual-Serial/01**, where WI denotes work instruction, AA denotes the State, BB denotes the City, CC denotes the Category of the Hospital, DD denotes the hospital		-

	name & manual denotes the manual name, serial denotes the first SOP within the manual and 01 denotes the serial number of the work instruction within that SOP. c. Format under particular SOP is identified as **F/AA/BB/CC/DD/Manual-Serial/01**, where F denotes format, AA denotes the State, BB denotes the City, CC denotes the Category of the Hospital, DD denotes the hospital name & manual denotes the manual name, serial denotes the first SOP within the manual and 01 denotes the serial number of the format with in that SOP. d. Record under particular SOP is identified as **R/AA/BB/CC/DD/Manual-Serial/01**, where R denotes record, AA denotes the State, BB denotes the City, CC denotes the Category of the Hospital, DD denotes the hospital name & manual denotes the manual name, serial denotes the first SOP within the manual and 01 denotes the serial number of the record with in that SOP.		

S#	ACTIVITY	RESPONSIBILITY	DOCUMENT REFERENCE
4.2	**Codification of Documents**		
4.2.1	All documents bear a unique document number, which clearly identifies the document. DOCUMENT NUMBER- **F/AA/BB/CC/DD/Manual-Serial/01** F-FORMAT AA-STATE BB-City (District) CC-Category of the Hospital DD-Hospital Name Manual-Manual Name SERIAL :- SOP number under that manual 01 :- FORMAT/WI/STP under that SOP F/UP/ALD/DWH/DUFFERIN/HIM-01/01 Rev 00 **Explanation**	Head of Departments / MR	-

	Format/Uttar Pradesh/Allahabad/District Women Hospital/Dufferin/Hospital Improvement Manual-Serial Number of SOP/Serial No of Format		
4.2.2	All document issue and modifications are controlled through Document Modification Note named as DMNs, by the issuing authority.		-

5.0 List of Work Instructions: Nil

6.0 List of Formats:

F/UP/ALD/DWH/DUFFERIN/HIM-01/01	Master List of Control Formats & Manuals
F/UP/ALD/DWH/DUFFERIN/HIM-01/02	Master List of External Standards

7.0 List of Records:

S #	Record Number	Record Name	Type	Retention Period
1	R/UP/ALD/DWH/DUFFERIN/ HIM-01/01	Master List of Control Formats & Manuals	File	
2	R/UP/ALD/DWH/DUFFERIN/ HIM-01/02	Master List of External Standards	File	

2.CONTROL OF QUALITY RECORDS:

8.0 Purpose: To establish a procedure that all documents are issued modified, changed and withdrawn in a controlled manner.

9.0 Scope: The scope of this procedure covers issue control of all documents, retention & disposal of documents used in the laid down Quality System Manual established in the hospital.

10.0 Reference: Quality System Manual, QSM: 01, Section 1.0

11.0 Details:

S#	Activity	Responsibility	Document Reference
4.1	**Identification of Quality Records**		
4.1.1	The compulsory records defined for hospital are the following: a) Patient Registration and Admission Records b) Patient Medical Records	MR/Co-coordinators	-

	c) Education, training, skills and experience d) Records required to provide evidence that the healthcare service realization processes and resulting service meet the patient requirements e) Records of the results of evaluations and any necessary actions arising from the evaluation of the Purchase Process f) Records for planning and conducting Internal Audits g) Management Reviews h) Records of evidence of conformity with acceptance criteria i) Records of the nature of nonconformities and any subsequent actions taken, including complaints obtained j) Records of the results of corrective actions k) Records of the results of preventive actions l) Records which are necessary in hospital		

S#	ACTIVITY	RESPONSIBILITY	DOCUMENT REFERENCE
4.1.2	Staff members in each area with the assistance of the coordinator, identify the need of a record and after its creation assign the corresponding coding. Records are kept in different functional areas of the hospital. Each staff member defines the level or restriction to access them, retention time and disposition of them according to the instructions	MR/Co-coordinators	-
4.2	**Control of QMS Records**		
4.2.1	The scope of this procedure covers the following records under various manuals:- Level I Document • **Quality System Manual** Level II Documents • **Hospital Improvement Manual** • **Hospital Administration Manual** • **Hospital Clinical Manual**	M.R	-
4.2.2	All documents related with the above mentioned manuals are retained as per	MR	Master List Ok Records & Retention Plan

	retention plan for each type of documents in that function by the respective process owner. **The retention plan is described at the end of each standard operating procedure as list.**		F/UP/ALD/DWH/ DUFFERIN/HIM-02/01
4.2.3	A list of quality records used across the hospital are maintained with M.R. centrally and ensure all such records are generated and kept in a way that they are easily available, retrievable and safe from damage and tampering.	M.R	-

4.1.5 Approving & issuing authorities pertaining to the Quality management system documents are indicated below:

S#	Document Type	Issuing Authority	Approval Authority
1	Quality System Manual	MR	SIC
2	Hospital Improvement Manual	MR	MR
3	Hospital Administration Manual	MR	Administration HODs
4	Hospital Clinical Manual	MR	HODs
3	Work Instructions	MR	HODs
4	Formats	MR	HODs
6	External Documents (STPs and Government Orders)	MR	SIC

S#	ACTIVITY	RESPONSIBILITY	DOCUMENT REFERENCE
4.1.6	The controlled versions of the Quality System Manual and all hospital workgroup manuals exist in a hard & soft copy and are available with all persons listed in respective distribution matrix of that manual. These manuals are also available to the other people of the hospital for reference only.	M.R	-
4.1.7	A master copy of all above-mentioned manuals & other documents are duly approved by the approving authorities stamped **"MASTER COPY"** in **green color**, are available as hard copies with M.R for respective management systems.	M.R	-
4.1.8	The control of issue and revision in any of the manual lies with the M.R only. If hard copies are to be issued, the procedure mentioned in the next clause is followed.	M.R	-
4.1.9	If current version of the document in hard copies is to be issued to places of use, it is done by the Issue Control Authorities on **Document Distribution Sheet** and the signatures of recipients are obtained. All documents issued	M.R	Document Distribution Sheet F/UP/ALD/DWH/ DUFFERIN/HI

	under controlled manner are stamped **"CONTROLLED COPY"** in **blue ink** by the issue control authority. In case of ensuring latest revision soft copies on the intranet, M.R are responsible to ensure the latest version is same as the latest approved Master Copy available with him.		M-02/02
4.1.10	Obsolete copies of issue-controlled documents are withdrawn from places of use. Obsolete documents are marked **"OBSOLETE COPY"** in **red ink**. Obsolete documents are destroyed; only master copy stamped OBSOLETE is retained by the Issue Control Authority for future reference. Issue control authorities only at relevant locations maintain issue control records of documents issued at department levels.	M.R	-

S#	ACTIVITY	RESPONSIBILITY	DOCUMENT REFERENCE
4.1.11	Documents are modified on receipt of a valid **Document Modification Note**. The same authorities that initially approved the document change documents. Revised copies of the document are Circulated after withdrawal of the previous revision of the document as per the records of issue. The current copy stamped as MASTER COPY is appended in the master file.	MR	Document Modification Note F/UP/ALD/DWH/ DUFFERIN/HIM-02/03

12.0 List of Work Instructions: Nil

13.0 List of Formats:

F/UP/ALD/DWH/DUFFERIN/HIM-02/01 Master List of Control Records & Retention Plan

F/UP/ALD/DWH/DUFFERIN/HIM-02/02 Document Distribution Sheet

F/UP/ALD/DWH/DUFFERIN/HIM-02/03 Document Modification Note

14.0 List of Records:

S #	Record Number	Record Name	Type	Retention Period
1	R/UP/ALD/DWH/DUFFERIN/ HIM-02/01	Master List of Control Records & Retention Plan	File	
2	R/UP/ALD/DWH/DUFFERIN/ HIM-02/02	Document Distribution Sheet	File	
3	R/UP/ALD/DWH/DUFFERIN/ HIM-02/03	Document Modification Note	File	

3.CONTROL OF NON-CONFORMING HOSPITAL SERVICE

1.0 Purpose: To establish a procedure that management system to deal with hospital operations is understood, established, implemented & monitored.

2.0 **Scope:** The scope of this section of manual covers the non conformity of service of the hospital.

3.0 Reference: Quality System Manual, MNL: QSM: 01, Section 4.0

4.0 Details:

S#	Activity	Responsibility	Reference Document
4.1	**CONTROL OF NON-CONFORMING HEALTHCARE SERVICES**		
4.1.1	The healthcare service non–conformities observed during handling of patients during admission process, patients in OPD and admitted patients in IPD by various clinical and non-clinical staff members including complaints received by patient relatives are recorded and is communicated to central	Patient Relations Officer	Service NC Register F/UP/ALD/DWH/ DUFFERIN/HIM-03/01

	Patient Relations Officer. These non-conformities are categorized into minor, major and critical and are discussed during the special and routine meetings and subsequent actions are decided accordingly by the SIC of the hospital.		
4.1.2	Based on the identified causes, the respective clinical or non-clinical person responsible for the compliant or feedback initiates corrective and preventive action and monitors its implementation. Based on the reports of analysis of records, the preventive actions are determined to eliminate causes of potential non-conformities.	Doctors/ Non-clinical staff	-
4.1.3	If required, changes are incorporated in the respective procedure to deal with the non-conformity better.	Doctors/ Non-clinical staff	-
4.1.4	All corrective and preventive actions are verified for effectiveness during scheduled quarterly management reviews. All corrective and preventive actions are verified for effectiveness.	Doctors/ Non-clinical staff	-

5.0 Work Instructions Nil

6.0 Standard Formats

F/UP/ALD/DWH/DUFFERIN/HIM-03/01 Healthcare Service NC Register

7.0 Records

S #	Record Number	Record Name	Type	Retention Period
1	R/UP/ALD/DWH/DUFFERIN/ HIM-03/01	Healthcare Service NC Register	File	

15.0 Purpose: To establish a procedure to ensure that internal audits are performed to verify the continuing adequacy and suitability of Quality Management System in the hospital.

16.0 Scope: The scope of this standard operating procedure includes departments/ functions / under established quality management systems.

17.0 Reference: Quality System Manual, QSM: 01, Section 5.0

18.0 Details:

S#	ACTIVITY	RESPONSIBILITY	DOCUMENT REFERENCE
4.1	**INTERNAL QUALITY AUDIT PLANNING MANAGEMENT**		
4.1.1	Identified personnel of hospital are trained towards compliance verification of quality management system in the hospital covering all activities. These internal auditors are trained for the reasons of clarity and to enhance their skills of audits. Management Representative maintains a **list of trained auditors.**	MR	List of Trained Internal Auditor's F/UP/ALD/DWH/ DUFFERIN/HIM-04/01
4.1.2	Function is covered at least once per audit cycle. Auditors in un-related departments conduct audits and report the observations for corrective actions.	MR	-

4.1.3	Management Representative plans an annual internal quality audit covering all functional audit areas and ensures audits are conducted quarterly. This **annual plan** is further monitored & updated regularly for planned, executed, CAPA taken & closure status of audits conducted.		Annual Audit Plan F/UP/ALD/DWH/ DUFFERIN/HIM-04/02
4.1.4	A common **Quarterly Internal Audit Schedule** is prepared covering **Quality management system** specific documents & activities and distributed by MR at the beginning of the quarter to enable all audited / auditors to schedule their activities to undergo the planned audit.	MR	Quarterly Audit Plan F/UP/ALD/DWH/ DUFFERIN/HIM-04/03
4.1.5	Any change in the quarterly audit cycle is incorporated & approved by M.R and is informed to the same auditors and audited through revised audit schedule in writing for that quarter.	MR	Do

S#	ACTIVITY	RESPONSIBILITY	DOCUMENT REFERENCE
4.1.6	Unplanned audits are also conducted based on the status and importance of the activity under audit. M.R schedule these audits in his area in cases on recurrent non-compliance in function, patients complaints of major nature, change in key personnel, lowering of performance levels within the function or any other reason which justifies a closer look at the function.	MR	-
4.2	**CONDUCTING INTERNAL AUDITS:**		
4.2.1	Non-conformances observed vis-à-vis standard operating procedures; STPs/ STGs, Formats & Records are reported on **System Non-conformity Report** by the internal auditor(s). A comprehensive Internal Quality Audit Checklist is also used by the respective internal quality auditor for effective compliance verification.	Auditor(s) / Audi tees(s)	System Non Conformity Report F/UP/ALD/DWH/ DUFFERIN/HIM-04/04
4.2.2	All observations on improvement areas as well as comments on adequacy of procedures and other conformances / commendations are reported through an **IQA Summery Report.**	Auditor(s) / Audi tees(s)	IQA Summery Report F/UP/ALD/DWH/ DUFFERIN/HIM-04/05

4.3	**INTERNAL AUDIT REPORTING MANAGEMENT**		
4.3.1	NCR,s are distributed as follows: • One copy to the auditee for monitoring corrective action. • One copy to the auditor for follow-up on corrective action • One copy to the management representatives for crosschecking actions subsequent to the audit conducted.	Auditor(s)	System Non Conformity Report F/UP/ALD/DWH/ DUFFERIN/HIM-04/04
4.3.2	Corrective and Preventive Action on observed non-conformance is planned by the auditee and he/she is responsible for the completion of the planned corrective / preventive action.	MR	System Non Conformity Report F/UP/ALD/DWH/ DUFFERIN/HIM-04/04
4.3.3	The internal auditor verifies satisfactory completion of planned corrective / preventive action as per target dates given by the auditee. M.R finally verifies closure of NCRs on sample basis & formally closes all NCRs after he / she cross checks the completion of corrective action	MR	Do

	against those sample NCRs by the internal auditor and auditee.		

S#	ACTIVITY	RESPONSIBILITY	DOCUMENT REFERENCE
4.3.4	Internal Audit Report, details of NCRs and Corrective Actions thereafter are compiled by M.R and presented to the MRM on this report. The management reviews the occurrences of the non-conformance in every function and the actions taken thereupon to prevent its re-occurrence.	MR	Do
4.3.5	The management views all non-conformances not closed by the target dates extremely seriously. Management representatives verify the closure of each NCR against target date & evaluate the status before MRM. In case of any open NCR reported during MRM, respective HODs take suitable action on a case-to–case basis.	MR/ HODs	Audit Report/ Management Review Minutes

19.0 List of Work Instructions:

GDL/UP/ALD/DWH/DUFFERIN/HIM-04/01 IQA Checklist (Department/ Process Specific)

20.0 List of Formats:

F/UP/ALD/DWH/DUFFERIN/HIM-04/01 List of Internal Quality Auditors

F/UP/ALD/DWH/DUFFERIN/HIM-04/02 Annual Internal Audit Plan

F/UP/ALD/DWH/DUFFERIN/HIM-04/03 Quarterly Internal Audit Schedule

F/UP/ALD/DWH/DUFFERIN/HIM-04/04 System Non-Conformity Report

F/UP/ALD/DWH/DUFFERIN/HIM-04/05 IQA Summery Report

21.0 List of Records:

S #	Record Number	Record Name	Type	Retention Period
1	R/UP/ALD/DWH/DUFFERIN/ HIM-04/01	Internal Quality Audit File	File	

5.CORRECTIVE AND PREVENTIVE ACTION MANAGEMENT:

22.0 Purpose: To establish a procedure for handling non-compliances emanating from various activities through a structured corrective action management.

23.0 Scope: This standard operating procedure is applicable to all non-compliances/ non-conformities evolved under Quality Management system in Dufferin Female Hospital are:-

- Internal audits
- Patient Satisfaction Surveys
- Patient Suggestion/Feedbacks
- Medical Audit
- Mortality Audit
- Prescription Audit
- Death Audits
- Medical Record audit

24.0 Reference: Quality System Manual, QSM: 01, Section 5.0

25.0 Details:

S#	ACTIVITY	RESPONSIBILITY	DOCUMENT REFERENCE
4.1	All non-compliances observed during various activities described in the scope of this procedure are handled in a structured manner immediately after identification of the cause of that non-compliance.	HOD	-
4.2	Once the non-compliance is investigated for the cause through any of the following cause investigation method such as: • Fish Bone (Ishikawa) Diagram • Histogram • Pareto Analyses	HOD	-
4.3	The cause investigation is a multi-disciplinary approach and is performed by a team responsible for closure of observed non-compliance. Immediately after cause is identified, following steps are taken to close that non-compliance:	HOD/ Team	-
4.3.1	**Correction Management**		
4.3.1.1	First correction is taken for the observed	HOD/ Observer	-

	non-compliance as an immediate response to handle that non-compliance.		

S#	ACTIVITY	RESPONSIBILITY	DOCUMENT REFERENCE
4.3.1.2	This is carried out by ensuring that the non-compliance is quarantined or disposed of for the purpose such as moving an injured person to the dispensary for first aid.	HOD/ Observer	-
4.3.2	**Corrective Action Management**		
4.3.2.1	Then suitable corrective action is proposed by the observer for the short-term fix to ensure that observed non-compliance is closed.	HOD/ Observer	CAPA Report F/UP/ALD/DWH/ DUFFERIN/HIM-05/01
4.3.2.2	Towards ensuring appropriate corrective action is taken on the observed non-compliance, responsibilities of the people are fixed with the date & time of closure in cases of corrective action taking some time as proposed.	HOD/ Observer	CAPA Report F/UP/ALD/DWH/ DUFFERIN /HIM-05/01
4.3.2.3	The correction action once taken on that non-compliance is treated as closed for that purpose.	HOD/ Observer	CAPA Report F/UP/ALD/DWH/

			DUFFERIN /HIM-05/01
4.4	**Preventive Action Management**		
4.4.1	Finally, preventive action is proposed by the observer & the multidisciplinary team towards ensuring that similar non-compliance is not repeated in the future.	HOD/ Observer	CAPA Report F/UP/ALD/DWH/ DUFFERIN /HIM-05/01
4.4.2	A suitable & practicable preventive action is taken in the form of training, awareness, preparation of procedure or instruction, new format design to ensure prevention & policy decisions to counter similar non-compliances.	HOD/ Observer	CAPA Report F/UP/ALD/DWH/ DUFFERIN /HIM-05/01
4.4.3	At last after ensuring all steps are taken into account & non-compliance is thoroughly investigated, corrected, corrective action & preventive action is taken, the observer formally closes the non-compliance with signatures.	HOD/ Observer	CAPA Report F/UP/ALD/DWH/ DUFFERIN/HIM-05/01
4.4.5	Various records are maintained for the activities described above in the form of: a. **System NCR Form** used during	HOD/ Observer/ Auditor	Patient Complaint Register

	internal audits b. **CAPA Form** used during healthcare Non-conformity, patient Complaints & during any deviation from Safe Work Practice & Legal Requirement.		F/UP/ALD/DWH/ DUFFERIN /HIM-05/02

26.0 List of Work Instructions: Nil

27.0 List of Formats

F/UP/ALD/DWH/DUFFERIN/HIM-05/01	Corrective and Preventive Action Report
F/UP/ALD/DWH/DUFFERIN/HIM-05/02	Patient Complaint Register

28.0 List of Records:

S #	Record Number	Record Name	Type	Retention Period
1	R/UP/ALD/DWH/DUFFERIN/ HIM-05/01	Corrective & Prevention Action Report	File	
2	R/UP/ALD/DWH/DUFFERIN/ HIM-05/01	Customer Complaint Register	Register	

6.DATA ACQUISITION, ANALYSES AND CONTINUAL IMPROVEMENT IN HOSPITAL PERFORMANCE:

1.0 Purpose: To establish a procedure to acquire data from various areas of activities towards ensuring continual improvement in all aspects of the hospital performance in line with the laid down objectives.

2.0 Scope: The scope of this procedure covers all activities conducted in the hospital.

3.0 Reference: Quality System Manual, QSM: 01, Section 5.0

4.0 Details:

S#	ACTIVITY	RESPONSIBILITY	DOCUMENT REFERENCE
4.1	**Data Acquisition and Analyses Procedure:**		
4.1.1	The significant indicators of the performance of the hospital and of the QMS is specified by Doctors as below:		Hospital Performance MIS Sheet F/UP/ALD/DW

	A. QMS Performance Indicators: a) Patient Satisfaction Index (Compiled from Patient Satisfaction Surveys- Inpatient & Out Patient) b) Number of Patient Complaints **B. Hospital-wide Management Information / Performance Indicators:** 1. Hospital Acquired Infection Rate 2. Average length of stay 3. Bed Occupancy Rate 4. Waiting Time fir Doctor Consultation 5. No of Surgeries per month 6. Death Rate 7. No of Consultation per month		H/ DUFFERIN/HIM-06/01 KPI Sheet F/UP/ALD/DWH/ DUFFERIN/HIM-06/02

4.1.2	The identified indicators of QMS and the hospital performance are reviewed every quarter by SIC of the hospital, in that quarter's MRM and are suitably modified to reflect current hospital concerns.	SIC	Hospital Performance MIS Sheet F/UP/ALD/DWH/ DUFFERIN/HIM-06/01

S#	ACTIVITY	RESPONSIBILITY	DOCUMENT REFERENCE
4.1.3	All data pertaining to the indicators mentioned in 4.1.1 are collected on a monthly basis except 1a, which is done annually, and 1e, which is done every six months. All this data is submitted to the MR prior to the MRM for him to compile and present data analyses in MRMs. The responsibilities for data collection and analyses are as per 4.1.4.	Clinical & No-clinical Staff	-
4.1.4	Analyses of hospital performance and QMS performance data is primarily done by a group comprising of the following: a) SIC b) Doctors c) Management Representative These analyses are done prior to the MRM and the results of analyses communicated to the personnel during the MRM for them to	-	-

	be able to undertake improvement in their areas.		
4.1.6	Records of analyses are maintained by MR.	MR	-
4.2	**Procedure for Continual Improvements:**		
4.2.1	Continual Improvement is a committed goal of the hospital and a part of its policy. Continual improvement is sought to be performed in all aspects of the hospital.	All Heads of Functions	-
4.2.2	The hospital pursues continual improvement on a project basis. The hospital through analyses of critical data and the overall objectives of the hospital identify continual Improvement Projects.	All Heads of Functions	-
4.2.3	All continual improvement projects are identified to facilitate meaningful and effective improvement in aspects of the hospital's operations. Continual improvement projects identified are allocated teams with a definite team leader. As far as possible the CII teams are cross-functional in line with the hospital's declared multi-disciplinary approach to improvements.	All Heads of Functions	-

4.2.4	The SIC approves continual improvement teams. Continual improvement teams submit the project summary to the MR within one week of the appointment of the team and team leader. This summary contains the following details: a. Title of the project b. Project goal and objectives c. Name of team members d. Proposed activity plan including target dates and review frequency e. Resource plans and requirements f. Validation plan for improvement activity results.	SIC	Continual Improvement Initiative Sheet F/UP/ALD/DWH/ DUFFERIN/HIM-06/03
S#	**ACTIVITY**	**RESPONSIBILITY**	**DOCUMENT REFERENCE**
4.2.5	The MR maintains a list of current CIPs.	MR	
4.2.6	CII teams function as a self-regulating team with its own reviews and meetings convened by the team leader. The team leader is responsible for adherence to the	Team Leader	-

	time schedule submitted to the MR.		
4.2.7	The team leader or his designated person presents progress and status report of the CII to the MRM for review. All delays, problems and other constraints experienced by the team during the project are discussed and sorted out during the MRM.	MR	-
4.2.8	The CII is closed by the team leader upon achievement of the objectives of the project. The team leader gives this information to the MR. The MR then schedules the validation of the project results by an independent authority.	Team Leader	Continual Improvement Initiative Sheet F/UP/ALD/DWH/ DUFFERIN/HIM-06/03
4.10	The team leader and the MR, upon successful completion to the MRM, present results of the CII. After discussions, the MR through changes in appropriate documents institutionalizes the improvement into the system.	MR	-
4.11	All records of the CII papers are handed over to the MR as a file, who maintains	MR	-

	them for a specific retention period as per Procedure for Document and Data Control and control of quality records.		

5.0 List of Work Instructions: Nil

6.0 List of Formats:

F/UP/ALD/DWH/DUFFERIN/HIM-06/01	Organizational Performance MIS Sheet
F/UP/ALD/DWH/DUFFERIN/HIM-06/02	Key Performance Indicators
F/UP/ALD/DWH/DUFFERIN/HIM-06/03	CII Form

7.0 List of Records:

S #	Record Number	Record Name	Type	Retention Period
1	R/UP/ALD/DWH/DUFFERIN/ HIM-06/01	Data Acquisition & CII File	File	

7.HOSPITAL PERFORMANCE MANAGEMENT REVIEW:

29.0 Purpose: To establish a procedure of Management Review to monitor the performance of the hospital on a continuous basis

30.0 Scope: The scope of this procedure covers following management review meetings:

a. Hospital Management (QMS) Committee Review Meeting

b. Rogi Kalyan Samiti (RKS) Review Meeting

c. Hospital Infection Control Management Committee Review Meeting

31.0 Reference: Quality System Manual, QSM: 01, Section 2.0

32.0 Details:

S#	ACTIVITY	RESPONSIBILITY	DOCUMENT REFERENCE
4.1	Management Representative is primarily responsible for convening Hospital Management (QMS) Review Meeting once every quarter at the minimum and intimate and ensure participation of all doctors, SIC & other key department heads, who are required with regard to particular issues being reviewed. Accountant is responsible for convening RKS Advisory and Working Committee	M.R	-

	Management Review Meeting once every month and once six months for working and advisory committee respectively. HICC Review Meeting is convened by head of committee once every month and participated by all members of committee.		
4.2	All management reviews are chaired by the SIC and conducted with multi-disciplinary approach to ensure continuing suitability and effectiveness in satisfying the requirements of Quality Management System, hospital performance with respect to identified agendas.	SIC	-
4.3	Quarterly QMS Management Review Meeting by Hospital Management Committee is conducted to review the overall hospital performance of the quarter including important points of various RKS and HICC meetings. Therefore, this quarterly meeting is critical to the performance review.	SIC	-
S#	**ACTIVITY**	**RESPONSIBILITY**	**DOCUMENT REFERENCE**

4.4	SIC chairs all QMS review meetings and reviews the corrective actions taken at various stages of healthcare delivery system and administrative services. SIC reviews the performance of each department during this management review meeting. This meeting being an internal meeting of the hospital members facilitates a bonding among the employees towards achievement of hospital objectives.		

4.5	In addition to review of departmental key performance indicators, following inputs & agendas under quarterly management reviews are discussed: a) Follow-up action on pending issues of the previous meeting b) Issues related to the Internal Audit findings during the previous quarter with closure status c) Patient related issues including patient complaints d) Hospital performance (MIS Report) and service conformity Status of preventive & corrective actions e) Status on Continual Improvement Initiatives f) Departmental Key Performance Indicators g) Overall training status & performance monitoring h) Changes that could affect the Quality management system and recommendations for improvement. i) New developments & improvement Plans j) Janine Surakshan Yojna Status k) Rogi Kalyan Samiti Issues	M.R	-
4.6	The output from the management review	MR	-

	includes any decisions and actions related to a) Improvement of the effectiveness of the quality management system and its processes b) Improvement of service quality performance related to patient requirements c) Resource needs d) Reviewed objectives		

S#	ACTIVITY	RESPONSIBILITY	DOCUMENT REFERENCE
4.7	Records of this management review meeting are circulated to all concerned by M.R office for necessary review and follow-up regarding the work done. Management Representative Office prepares minutes of all Management Reviews with responsibility and target date for completion of the discussed agenda point on prescribed format. Attendance of all members participating in all review meetings is maintained by M.R	M.R/ Accountant	Minutes of Meeting F/UP/ALD/DWH/ DUFFERIN/ HIM-07/01

	Office and minutes are prepared against each agenda is also maintained.		
4.8	Management representative Office monitors the progress of implementation of agendas discussed in their respective areas towards corrective and preventive actions decided to ensure timely completion and inform HODs/ SIC periodically about the progress through e-mails. All records of MRM are maintained by M.R office.	M.R	MOM
4.9	Management Review Meetings are convened for extra-ordinary situations like: a) Major changes in QMS b) Patient Complaints of serious nature endangering hospital. c) Problems related to government of serious nature.	M.R	-
4.10	Such MRMs are occasion based and are convened by either M.R under instructions from SIC.	SIC	-

33.0 List of Work Instructions: Nil

34.0 List of Formats:

F/UP/ALD/DWH/DUFFERIN/HIM-07/01 Minutes of Meeting

35.0 List of Records:

S #	Record Number	Record Name	Type	Retention Period
1	R/UK/ALD/DWH/DUFFERIN /HIM-07/01	Minutes of Meeting	Register	
2	R/UK/ALD/DWH/DUFFERIN /HIM-07/02	Attendance Record	Register	

Department of Medical, Health and Family Welfare, Government of Uttar Pradesh, is playing a vital role in improving the health status & quality of living of the People of Uttar Pradesh.

The department has been involved in service of Mankind since its very inception in 1921. The Department initially provided its services under the name of "Provincial Subordinate Medical and Provincial Medical Services (PMS)".

In 1946 it was divided into "PMS - I and PMS - II Services and Provincial Health Services (PHS). In 1964 P.M.S- I and P.M.S- II were unified to form the Provincial Medical Services (PMS). On 26 June 1973 the PMS and PHS were unified to form the present "Provincial Medical and Health Services".

This department is responsible for providing Medical, Health and Family Welfare related services to the densely populated state of Uttar Pradesh (166,05,2859) spread over a vast area of 2,40,982 sq. Km.

With the objective of providing health services in Urban and Remote areas, the department provides three tier medical services in the state of Uttar Pradesh. Under this, at the first level, Health Services are provided in urban areas. Health services at the second and third level are provided in rural areas.

First level Health Services are provided in urban areas through District Male and Female or Combined Hospitals and are at district level. These hospitals are generally 100 – 500 bedded Hospitals, where various comprehensive healthcare services is offered in all the broad specialties and select sub-specialties depending upon the need of the community. At present there are 80 District Level Hospitals, 6 Combined Hospitals and 63 Female Hospitals in the State.

Second level, health services are provided through Community Health Centers (CHC) established at the Tehsil and Block Level levels, the number of which is a factor of the size of population (As-Is details of PHC and HCHs in Allahabad given in Annexure 10). For each one Lac population in rural areas one CHC is set

up. Each CHC is set up with the objective of providing standard Health services to the public in the rural areas. Accordingly, CHC also acts as 'referral unit' in the rural areas. Each CHC has 30 beds. Operationalisation of CHC requires expenditure of Rs. 20 lac approximately towards the cost of equipment / infrastructure and salary etc. At present in the state there are 308 CHCs operational. At present as per standard laid from May, 1999 following 5 specialties are required at CHC – Physician, Surgery, Gynecologist, Anaesthetist, Radiologist.

Third level Health Services are provided in Remote Rural areas through the Primary Health Centers, Additional Primary Health Centers and Sub Centre. PHCs/ Additional PHCs are established level at the village Level, having 4 beds each. There are presently 18,565 sub-centers, 810 Block level PHCs and 2830 additional PHCs operational. Mainly Mother and Child care programmed is implemented using Sub Centre. Apart from these there are few rural women hospitals where safe delivery facility is provided. Around 20,000/- sub centers on 5000 village population are functioning manned by ANMs

The State coordinates the implementation of National Health Program in each District. Important programmers like Family Planning, Immunization, Malaria eradication, Prevention from AIDS, Filarial eradication, Blindness control, and Iodine Deficiency Disorders being run and monitored by the department officials.

The department also provides Medical facilities in hospitals created in Police Jails, Central Prisons and PAC. In all, there are 4304 medical units in the State providing the above services with a total Bed strength of 53,247.

Uttar Pradesh Health Systems Development Project (UPHSDP) is also working in the state with commitment to improve the delivery system through institutional and human resource development initiatives and to build partnerships in order to provide high quality, affordable, accountable, responsive & integrated health care in the state of Uttar Pradesh. The organ gram of the UP health system is as follows:

ORGANOGRAM: UTTAR PRADESH HEALTH SYSTEM GOVERNANCE

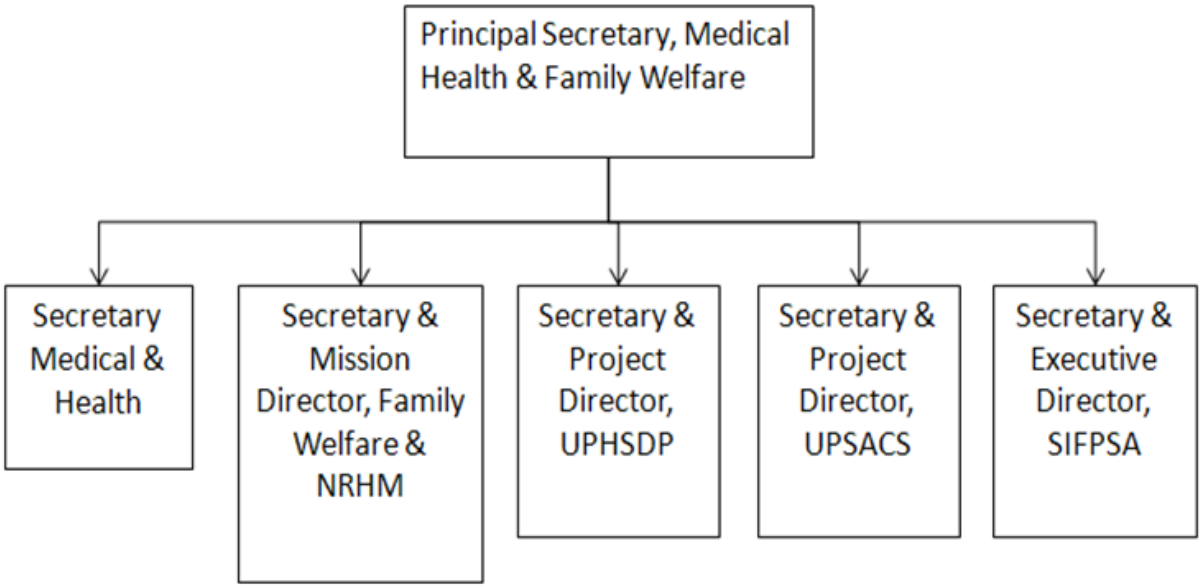


Figure 1: Organogram: Uttar Pradesh Health System governance

RCH PROGRAMME IN UTTAR PRADESH

The Reproductive and Child Health (RCH) Programmed was started in the State of Uttar Pradesh in April 1998. The objectives of the programmed were to ensure small family norm, to have a stabilized population at a level consistent with the requirement of national development and to assure good health, longevity of the children and complete care of maternal health.

The second phase of this programmed started from April 2005 with necessary modifications based on the lessons learnt in the first phase, in the State. A comprehensive integrated Programmed Implementation Plan (PIP) for RCH phase II approved by Government of India started in October '05 after getting the first release of funds from GoI.

USAID assisted SIFPSA and World Bank funded AIDS Control societies are also functioning to augment Family Welfare & Reproductive Child Health CFW & RCH and AIDS program.

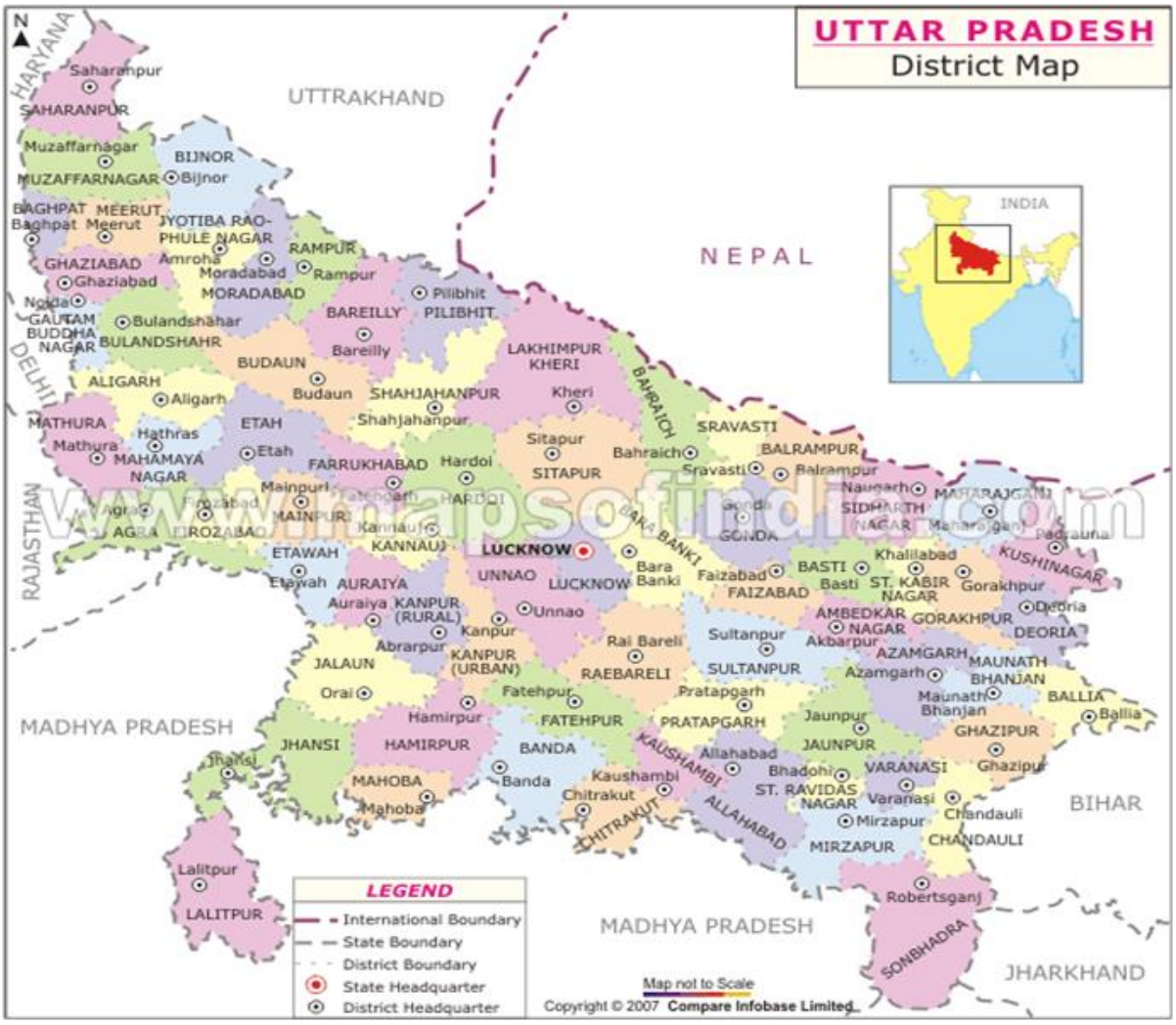


FIGURE 2:MAP OF UTTAR PRADES

INTRODUCTION TO DUFFERIN HOSPITAL

The District Women's Hospital, also known as the Dufferin Hospital (DH) started with an idea of a Maternal & Child Health Hospital by A.V. Peterson in 1884, who was the then collector for the province of Awadh. The proposal for the hospital building was submitted on 1st October, 1887 and on 9th March 1888; the hospital commenced its services.

Located in the heart of the city of Allahabad, this facility is amongst the oldest institutions in the city and prides itself to be the best in its specialty for the district of Allahabad. It is a women's hospital, offering comprehensive secondary level services in Obstetrics and Gynaecology. The hospital today stands as a 142 bedded unit, equipped to offer Out Patient, In Patient, Emergency, Delivery, Surgical, Laboratory and Dietary Services.

Besides serving for Obstetrics & Gynaecology, the hospital also contributes towards the various **National Health Programmes**:

National Health Programme	Services Provided
Maternal & Child Health Programme	Under the **'Janani Suraksha Yojana'** mothers with successful deliveries are given bank cheques for an absolute assured sum, from the state government (Rs. 1000 for urban areas and Rs. 1400 for rural areas)
AIDS Control Programme	Through **'Integrated Counseling & Testing' program** HIV clients are identified and counseled about modifications in their social and personal behavior to ensure reduced risk of transmission of AIDS from the mother to the child.

Pulse Polio Programme	The hospital extends its manpower and OPD facilities for the same.
TB Control Programme	The sputum collection & testing centre assists in diagnosis of TB in patients.
National Immunisation Programme	The hospital takes part in immunization of infants and children with the vaccines for DPT, TT, DT and Measles.
Filaria Control Programme	The hospital provides a free 15-day course of the Di Ethyl Carbamazine (DEC) pills (for Filaria prevention) to the patients at their homes (community outreach).
Family Planning Programme	Tubectomy is performed on the patients. Also, the patients are taught about barrier and other contraceptive methods.
Leprosy Eradication Programme	The hospital provides outpatient care to the leprosy patients.

Apart from the National Health Programmes, the hospital is actively involved in other community service activities:

- For the primary schools of the government, the hospital organizes immunization programmes at the school campus.
- Organizes health camps for the slums, under its purview (40 in number)
- For the national/state sports events for girls, 1 lady doctor and a nurse provide free first aid services.
- In case of general sports events, a male doctor along with a nurse, provide first aid service. Regular check-up for the residents and female prisoners in the district, absolutely free of any charges.
- Offers VIP services to the Central and State dignitaries visiting the district.

PATIENT VOLUME AND PROFILE

Being a government referral hospital for the community, the hospital not only receives referrals from the PHCs and CHCs in the district but also from other parts of the State, like suburbs Naini, Kaushambi. The hospital, owing to its government status, and its broad service profile, attracts a large volume of patients predominately from the lower social economic strata.

Dufferin Hospital (DH) has catered to around 71,000 outpatients, 9,300 inpatients and more than 2,100 births in CY 2007. To offer ***comprehensive care to the entire community without refusing care to anyone, whether the system is able to handle it or not,*** continuous reinforcement with effective signage and verbal reinforcement at various stages during patient care delivery is a real challenge to the management of patient care delivery system at DH.

PATIENT CARE SERVICES AT DUFFERIN HOSPITAL

DH offers preventive, promotive, and curative services to women in the community in the domain of obstetric and gynaecological (OBG) services. For other medical and surgical ailments the women are treated in combined hospitals in the district. However, level III Nursery services and Paediatric care are offered as an ancillary support to the maternal care as Mother and Child Health form one integral unit as far as care delivery is concerned.

Care delivery is offered through its clinical, supportive, and utility service areas, mostly through in-house facility except for security services which is outsourced.

	Clinical Services	Support Services	Utility Services
In House	• Outpatient services • In-patient services • Emergency services • Surgical services: major and minor procedures in OBG	• Laboratory services: Haematology, Pathology, Microbiology, Clinical Pathology and Biochemistry • Prevention of Parent to Child Transmission • Immunisation • Integrated Counseling and Testing • Post Partum Care • Family Planning • Pharmacy services	• Laundry services • Dietary Services • Patient records • Housekeeping
Out			• Security

source d	services

The hospital has 142 beds in its IP area, which are distributed and utilized as follows:

DISTRIBUTION OF BEDS AT DUFFERIN HOSPITAL

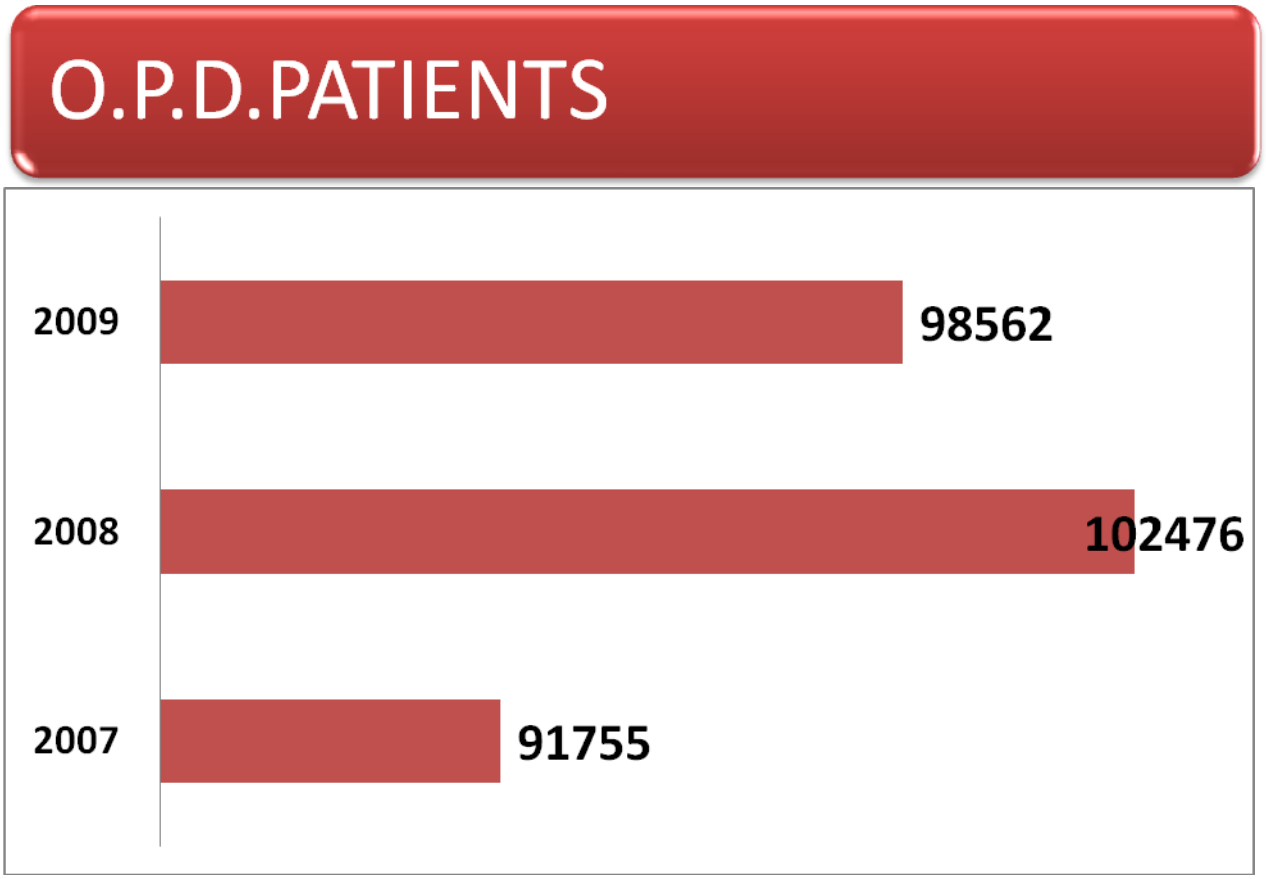
Ward	No. of Beds
Old surgical ward	20
General Ward	10
Emergency treatment ward	20
Magh mela Ward	23
Family Planning ward	15
Post Partum Care ward	3
Private Ward	7
Maternity ward	16
Pre-OP wards	5
New Surgical Ward – 1	9
New Surgical Ward – 2	8
New Surgical Ward – 3	4

With the present facilities ranging from Out Patient, Emergency, Delivery, Post Partum Care to Surgical Services, the entire service delivery structure of the hospital takes care of all the vital stages in the pregnancy, starting from the pre-natal, natal and post natal care.

Complex labour conditions, severe degree of eclampsia requiring ventilator support are referred from DH to the District Medical College (SRN Medical College). Thus the hospital maintains a referral process to ensure continuity of care under all circumstances.

OPERATIONAL STATISTICS OF DUFFERIN HOSPITAL

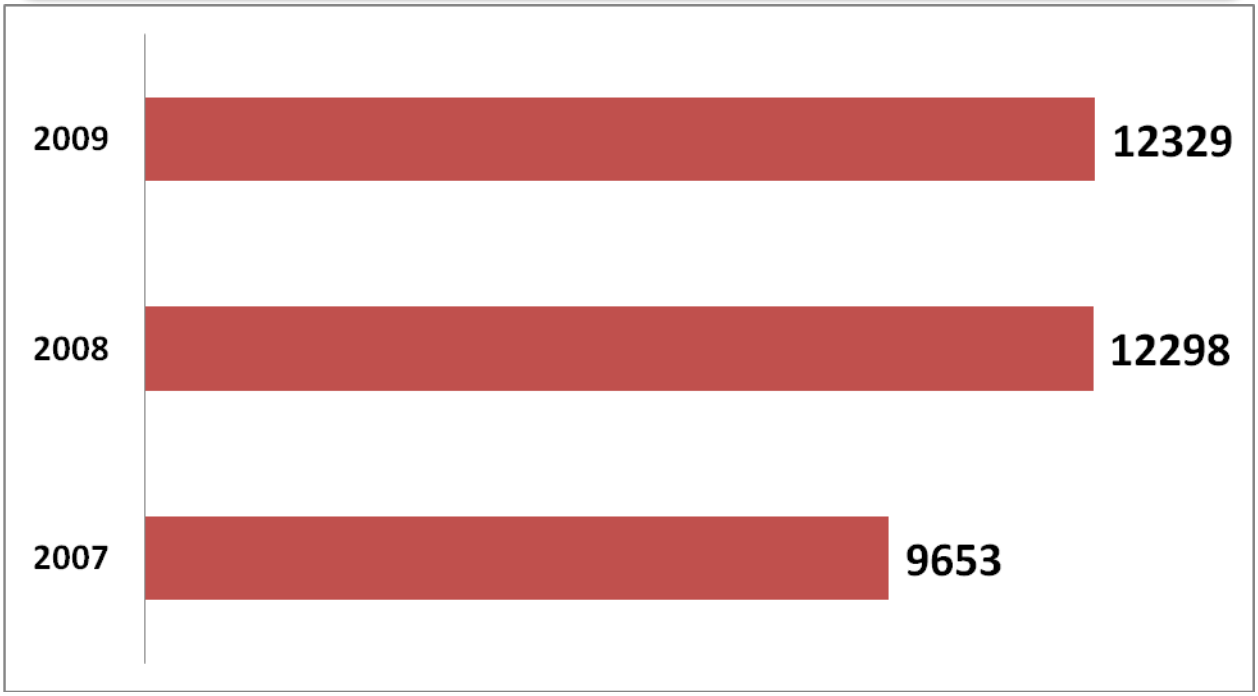
The hospital offers comprehensive secondary level services in OBG. The hospital's operations have been continuously growing over the years. The number of patients benefitting from the services of DH has been constantly rising over the years @ 10% on an annual basis, an industry trend witnessed for most secondary care settings,. The OP attendance reported has had a year on year growth of over 10% observed from CY 2007 to 2009(6 month statistics), as shown in the chart below.



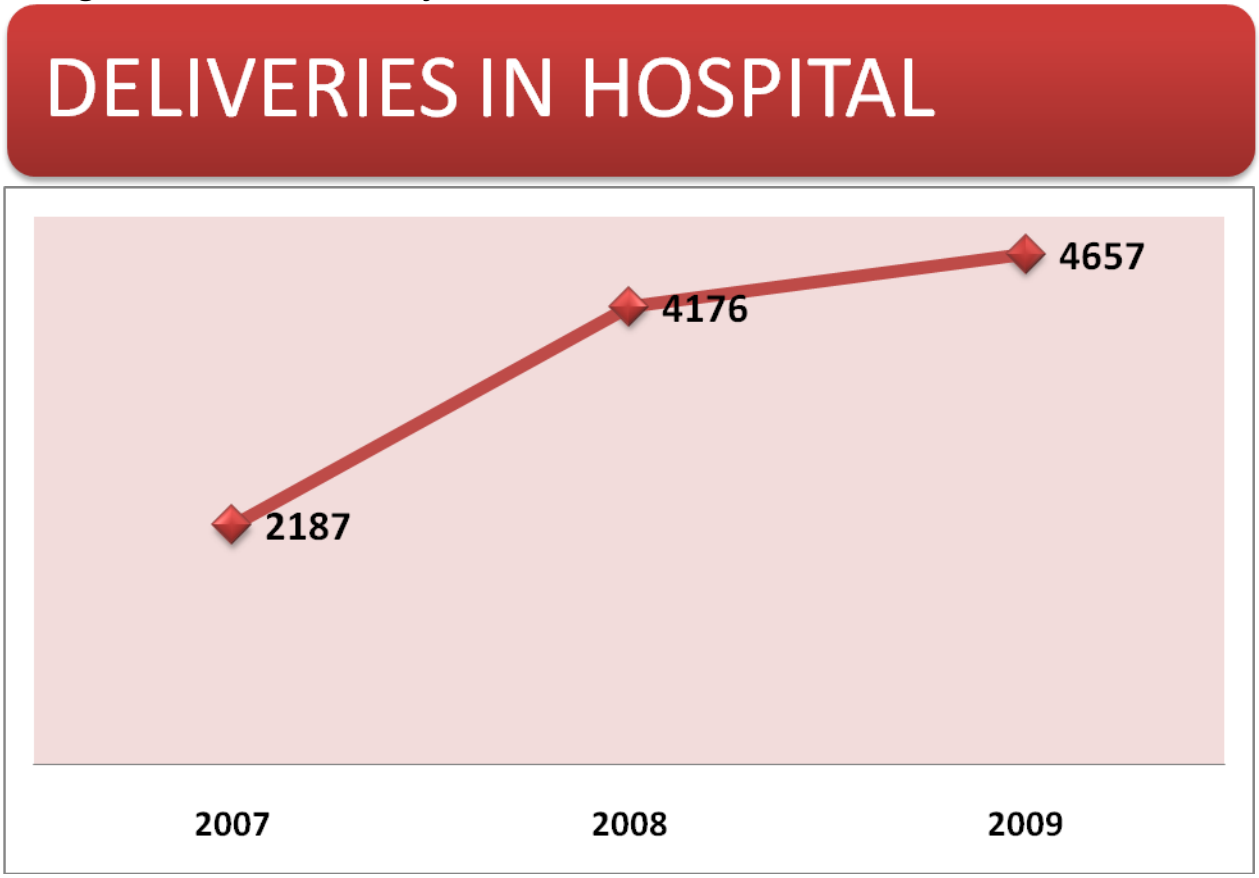
The absolute number of patients yearly attending the OPD services since 2006 have grown from 54,108 to 71,333 as on CY 2007 as detailed in Annexure 4.

The admissions in the DH has also witnessed a similar trend like in the case with OP services, dipping around CY 2004 and again rising @ 12-15% after CY 2005 as shown in the chart below:

INDOOR PATIENT DEPARTMENT

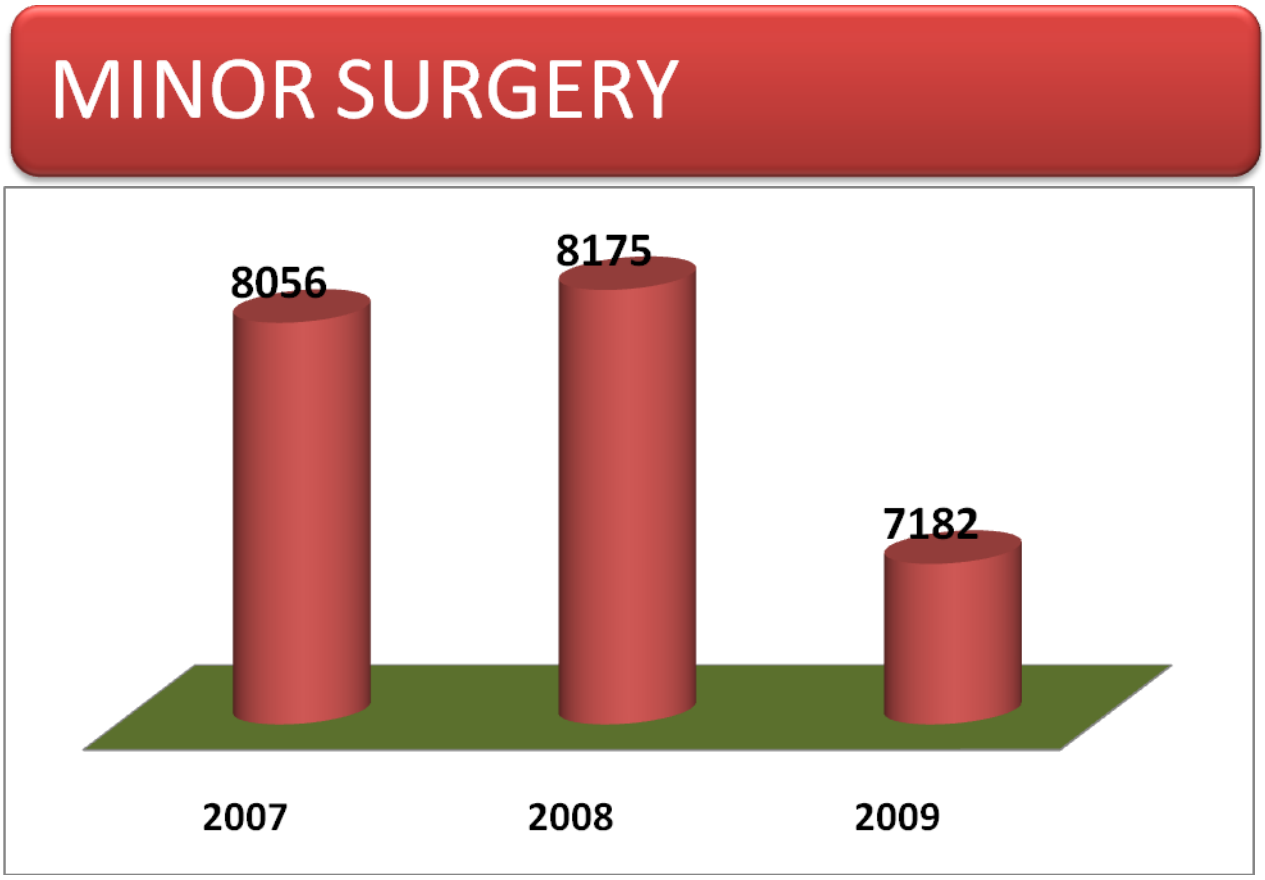


The deliveries at the hospital have also shown a growth of 25.4% from CY 2005 to CY 2007, which can be attributed to rising number of institutional deliveries owing to Janani Surakha Yojna .

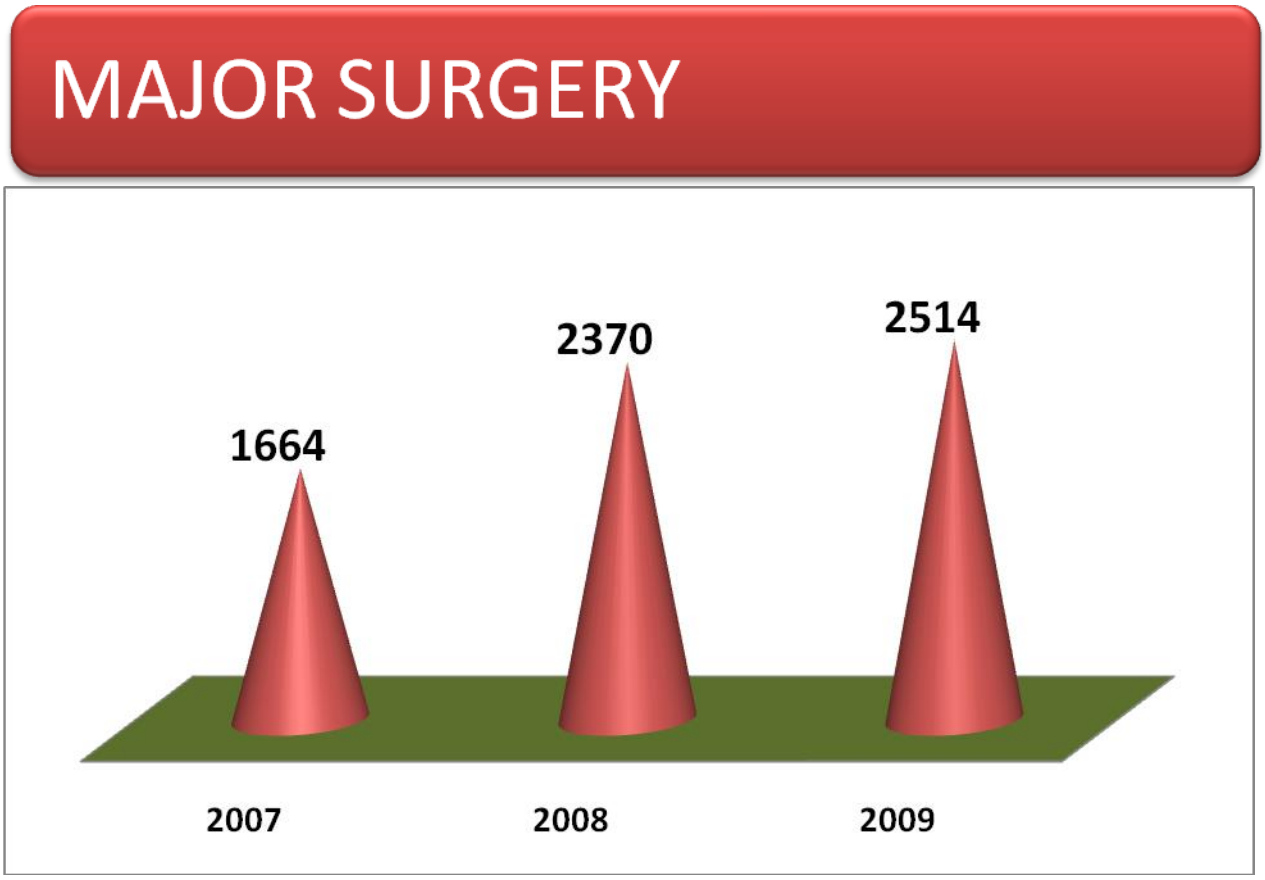


Delivery trends: normal & LSCS

The trend in other types of major and minor surgeries are also on the positive side from CY 2005, as shown in the chart below:



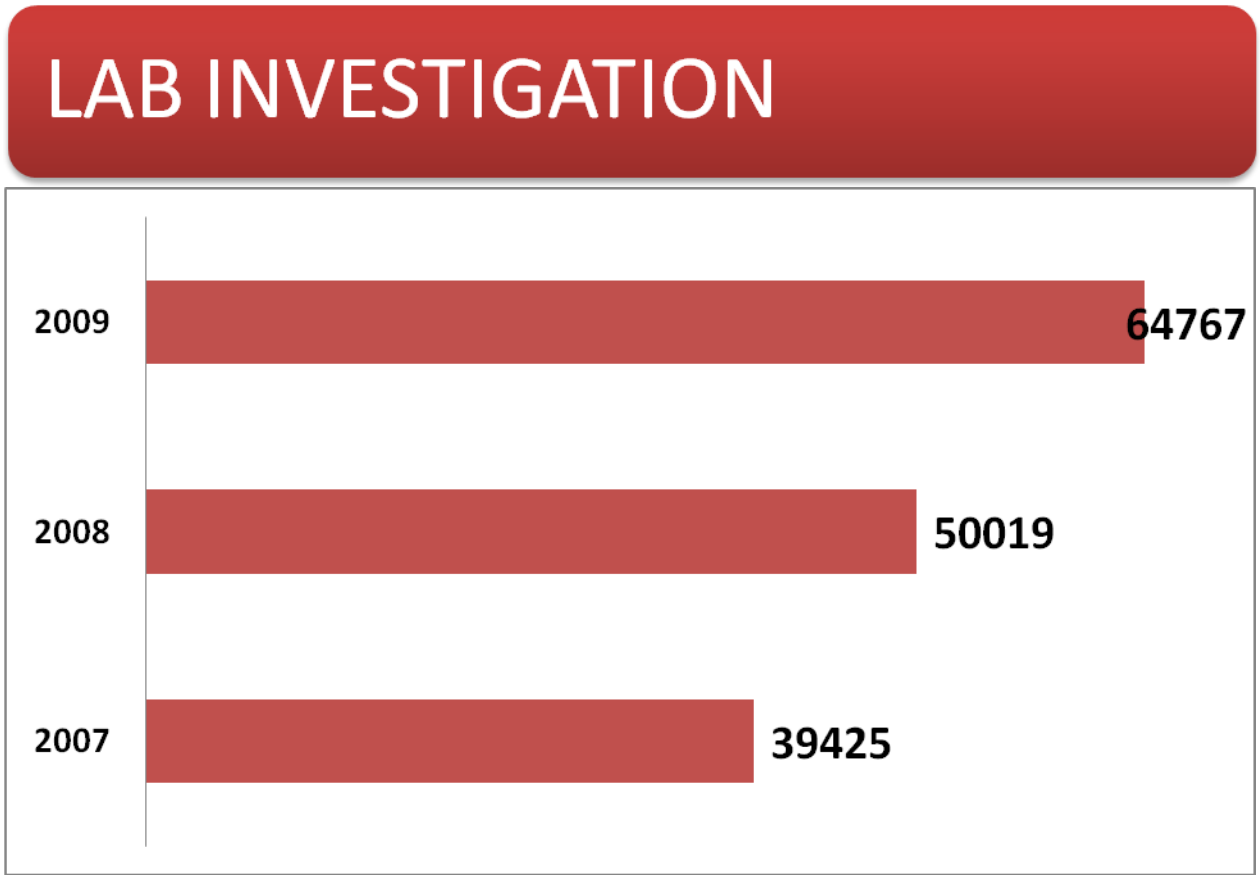
Major and Minor Surgical Trend



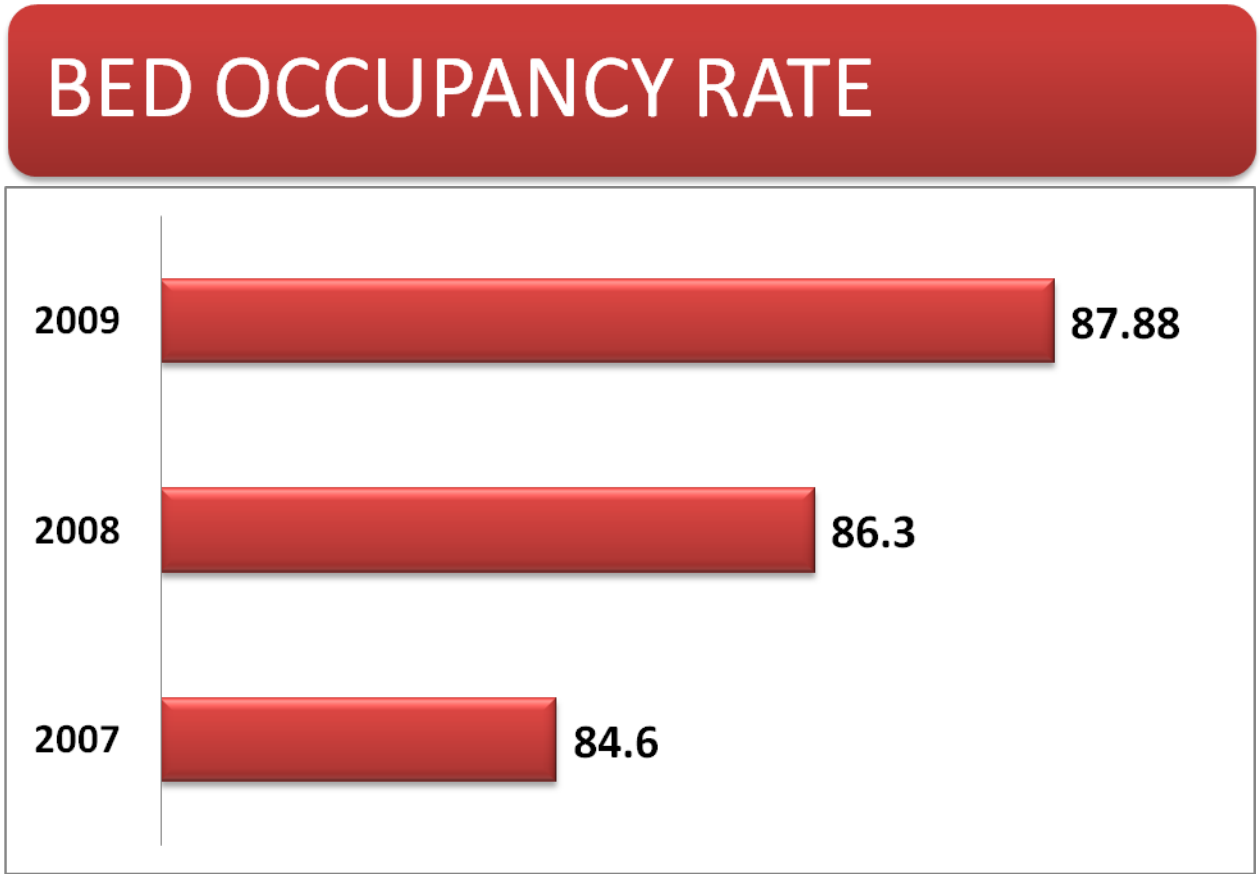
The rising OP and IP load is reflected on the rising quantum of investigation carried out at the hospital. The number of tests have grown 171.6% from CY 2009 to CY 2007, as depicted in the chart below:

Total tests trend

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Curently the hospital is optimally utilised with 84% Bed Occuapcy rate (BOR).



However, lack of ultrasonography suppport in an OBG facility is a constraint. The hospital is in the process of procuring one for handling its rising maternal service requirement.

The organisation is headed by the Superintendent in Chief (SIC), who is ably supported by the level 4, level 3 and level 2 doctors, who report directly to the SIC, as depicted in the chart below. Apart from the OBG specialists, the hospital has on rolls specialist/s to handle Paediatrics, Anaesthesia & Pathology. The support staff consists of Sisters, Staff Nurses (SN) and class IV staff.

Organisational Structure of the District Women's Hospital - Allahabad

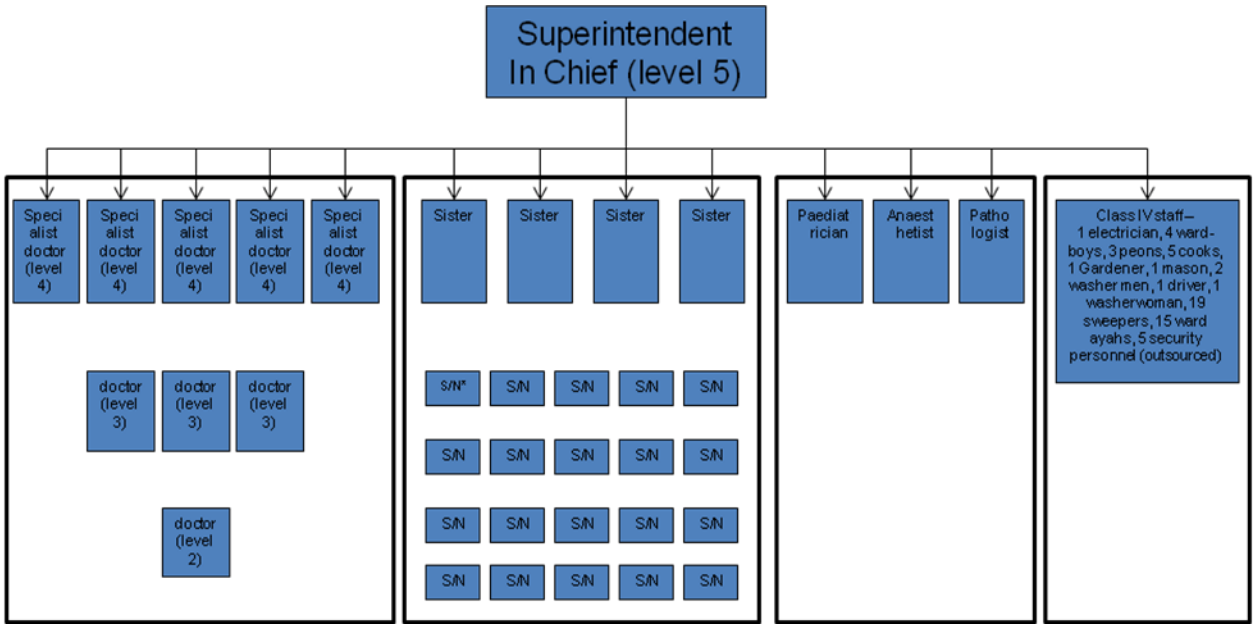


FIGURE 3:GOVERNACE AND MANAGEMENT

The Chief Medical Superintendent (CMS) or SIC serves as the medical and administrative head of DH. The nursing function is headed by a Chief Matron, who is supported by Grade II matron.

Resource planning at DH is largely guided by the policies of the State government. For instance, recruitment at various levels has to be in line with the number of sanctioned posts and other guidelines. Similarly, material procurement is mostly through rate contracts of the govt. Thus, the management's role in resource planning is mostly limited to sending requests to the next level of authority and follow-up, managing purchases within its control, and managing the hospital's

operations with the resources available, which is not a small challenge. However, with the RKS support, the constraints are mitigated partially.

At DH, there is generally a shortage of manpower at all levels, which poses a considerable operational challenge considering the hospital's increasing patient load, especially a full-time Anaesthetist. Besides, there is also the task of ensuring that the available manpower performs its duties effectively (encompassing the aspects of both willingness and competence). However, in managing these issues, the management also has to adhere to Government policies that are not always flexible, besides coping with problems relating to transfers, deputation, and special duties.

While there is a government system in place, it is the individual that drives the results. The same is evidenced in the improving operating statistics from CY 2005- 2007 at DH. Despite the general constraints that are there in most public healthcare facilities today, there is strong sense of pride among the staff of being attached to the facility and being able to serve humanity. This has been attributed to the current leadership (employee survey) that takes active interest in the day-to-day operations. With an overall motivated team, a laid down documented system can go a long way in maintaining and improving the quality of care.

Some important management related features characterising DH are discussed in the following sections.

- ZONALITY OF FUNCTIONS: The management has operationalised the sprawling heritage buildings using the various wards for specific group of OBG disorders—post-surgical obstetrics ward, post-surgical gyaenic ward, laproscopic surgery ward, disaster ward, emergency ward, obstetric ward, Gyanae ward and so on. The management has tried to maintain the broad zonality of function. For instance, nursery is close to OT and obstetric ward, emergency ward is close to OT.

Sprawling Campus at Dufferin



FIGURE 4

Human Resource Management: The human resource distribution is determined by the sanctioned norms, which is factor of the number of beds in a facility. However, with improvement in service levels the patient load has gone beyond the effective load that can be handled on a defined set of patient care services. The gaps arising out of such shortages places a large amount of burden and disproportionate work expectations from the people currently employed at the hospital.

The shortages identified in the various cadres of human resources employed at the DH as per IPHS are as below (current strength of staff detailed in Annexure 5).

FINANCIAL STABILITY AND ROGI KALYAN SAMITI

The financial inputs of the hospital come from both, the state government and 'Rogi Kalyan Samiti' (RKS). RKS is called as Chikitsa Prabandhan Samiti (CPS) in the State. The state government provides grants for the salaries of the on-roll employees, procurement of medicines & consumables and also for maintenance of hospital infrastructure. For any extra expenditure necessary for the functioning of the hospital, funds of the Rogi Kalyan Samiti are utilised (e.g. salaries to daily wage workers). This government support for the hospital ensures that the supplies of medicines and consumables, along with equipment and instruments are maintained through RKS and patients are at no instance, denied of any facility for want of funds.

The District Women's Hospital Allahabad, receives grants from the Uttar Pradesh State Government, for different categories of expenses that it incurs. For example, in 2007-08 the grant received for doctors' salaries was Rs. 37,99,600, the grant for nurses' salaries was Rs. 45,20,569, and the grant for salaries for other cadres was Rs. 1,55,13,684. In 2006-07, the grants received were Rs. 43,68,300, Rs. 69,03,625, and Rs. 8771000 for doctors' salaries, nurses' salaries, and salaries of other cadres of staff. Other than the grant for salaries, the hospital also receives budgeted grant for medicines. In 2007-08, the grant received for medicines was Rs. 14 lacs, while for the current year it is Rs. 11.5 lacs.

Other than the grant received from the State Government, the hospital also generates its own revenue through the diagnostic services it offers. In the financial year 2007-08, Rs. 1028115 was generated in terms of revenue. In the same period, Rs. 273233 was the expense incurred by the hospital. 50% of the revenue generated through diagnostics goes towards the Rogi Kalyan Samiti.
The oraganisational structure of RKS (depicted in the table below) has a working committee and an advisory committee with the following officers responsible for the various roles within the RKS.

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SUMMARY

The hospital is challenged in terms of the patient load that it receives. However, with the given the resource constraints that it has, it is able to mitigate the same and retain the trust of the community owing to the group of its highly motivated clinical and support staff. Some of the key issues that need to be addressed and incremental steps that need to be taken over and above what is already being done at the micro and macro levels are highlighted below. The detail of the same is being described in the next section on Gap Analysis.

KEY STRENGTHS

- Support of the Government of Uttar Pradesh as the patron of the hospital
- No shortage of supplies of medicines, consumables
- Centre for National Health Programmes
- Close proximity with the district hospital – Allahabad
- Equipped with quality manpower
- Increasing trends of both out-patients and in-patients numbers
- Patient satisfaction with reference to whether they would chose the facility again, overall patient care process
- High employee satisfaction with reference to the nature of service they provide to the patients, their personal growth

KEY WEAKNESSES

- Need for up-gradation of infrastructure, viz. public conveniences, emergency & IP equipment, sluice rooms, public announcement system, etc.
- Manpower quantum constraint
- There is no unique identification number to track patients.

KEY OPPORTUNITIES

- Role of the Rogi Kalyan Samiti in the generation of funds for the hospital

PATIENT CARE SERVICE

OUT PATIENT SERVICES

The Out Patient Services at the hospital extends its services to the public from 800 hours to 1400 hours every day, from Monday to Saturday. Besides the consultation facilities, the OPD complex also has a registration counter (for patient registration), a billing counter (for billing of the diagnostic tests) and a pharmacy counter (for dispensing of drugs to the patients).

The seating capacity of the OPD complex is for about 30 patients, with 4 consultation chambers. While there are benches and slabs for seating the mothers/patients, with the growing need of care delivery there is a need to increase the space in the waiting area. The OP complex is the first point of contact from where patients get into the system to receive care in the hospital – IP, the Laboratory (lab), Emergency and the ICTC centre.

PATIENT REGISTRATION

Process Group	OutPatient Services	**Sub-Process**	Patient Registration
Process Location	Registration Counter	**Process Owner**	Registration Clerk(s)
Input(s)	Walk in patients, Referred patients	**Output(s)**	Registered patients
Process Flow / Process Description			
• Patient arrives at the OPD. • The new patients are registered at the registration counter after their details (Name, age, sex) and the consulting doctor's name are filed in by the registration clerk and the patient is charged a nominal sum of Rs.1 as registration fee. • The entry of the patient is made into the OPD register.			
Process Records	O.P.D. card Registration form		

	OPD patients' register

PATIENT CONSULTATIONS / EXAMINATIONS

Process Group	Out Patient Services	**Sub-Process**	General / Specialist OP Clinics
Process Location	Specialist's rooms	**Process Owner**	Specialists
Input(s)	Patients with OPD Card	**Output(s)**	Patients' consultation done with the specialist
Process Flow / Process Description			
• The registered new/old patients arrive in the waiting area of the OPD. • The consultant examines the patient and calls the name of the patient next in queue, if her OPD card is with the doctor, else the next patient walks in herself. • At every consultation, the doctor advises suitable medications/tests on the OPD card.			
Process Records	OPD Registers OPD card		

DISPENSING OF MEDICINES

Process Group	Out Patient Services	**Sub-Process**	Dispensing of Medications
Process Location	Medicine Dispensing counter	**Process Owner**	Pharmacist In-charge
Input(s)	OPD card with the prescribed medicines Pharmacist Medicines	**Output(s)**	Dissipation of available medicines to the patient
Process Flow / Process Description			
Patient presents the prescriptions. Pharmacist(s) at the counter dispense(s) the available drugs / medications. The dosage of the medicine is explained to the patient.			

Process Records	OPD medicine slip OPD drug register

INJECTION ROOM

Process Group	Out Patient Services	**Sub-Process**	Injection Room
Process Location	Injection Room	**Process Owner**	Nurse In-charge
Input(s)	Patients requiring IM/IV injections.	**Output(s)**	Medication Injections are administered
Process Flow / Process Description			
• The patient who is prescribed an injection by the doctor, arrives at the injection room • The prescription is referred to, and the injection is administered.			
Process Records		Injection Register	

OP STAFF ROSTER

Process Group	Out Patient Services	**Sub-Process**	OPD Staff Roster
Process Location	OPD	**Process Owner**	ADMO Medical
Input(s)	In-charges and Specialists	**Output(s)**	A roster specifying the availability and times of various in-charges / specialists are prepared and displayed
Process Flow / Process Description			

• A duty roster is prepared by the in charge • The roster is prepared a month in advance and the doctors are informed by the in-charge about a week prior to the new duty roster for a month • The employees refer to the roster and abide by it, to perform their duties.	
Process Records	OP Duty Roster

IN-PATIENT SERVICES

The IP comprises of the surgical (new and old), maternity, emergency and private wards. A total of 142 beds are operational at the IP, and remains well-connected to the OT complex, to facilitate the progressive patient care. The admission in the IP is managed from the emergency (situated opposite to the OP block) that receives patients from the OP (referred by the doctors) and within its own area in case of an emergency. The Patients go to the IP next to the emergency ward, where they are allotted beds on the 'Bed Head Tickets' (BHT) provided at the emergency.

The patients here are provided with clean bed spread, uniforms and diet for those who are prescribed for the same. Every morning, ward rounds are made by SIC and doctors to monitor the progress of care and alter the plan of care if required.

While the department is fully functional, clean and hygienic for the secondary level of care delivery, it needs an up gradation in its infrastructure as far a designated sluicing area is concerned. Also USG and patient monitors are essential as far as care delivery is concerned (details of the infrastructural gaps and equipment availability issues are mentioned in Annexure 9). The various processes in the IP area are as follows:

PATIENT ADMISSION IN WARD

Process Group	In Patient Services	**Sub-Process**	Patient admission in ward
Process Location	Emergency	**Process Owner**	Nursing
Input(s)	Patients	**Output(s)**	Admitted patients

	Doctor's instructions		
Process Flow / Process Description			
• The doctor advises admission to the patient on the OP card • The patient with the card, arrives at the nursing desk in emergency and is issued a 'Bed Head Ticket' (in case any billing is required, it is done at the centralized billing counter) • The nurse then allots a bed to the patient.			
Process Records	Bed Head Ticket IPD register		

SAMPLE COLLECTION

Process Group	In Patient Services	**Sub-Process**	Sample collection
Process Location	Wards	**Process Owner**	Nursing staff
Input(s)	Bed Head Ticket Sample collection vessels Investigation slip Patient	**Output(s)**	Patient's sample collected
Process Flow / Process Description			
• Based on the doctor's suggestion, patient's sample is collected in the ward • The sample is then sent through ward boy, to the laboratory • The sample is deposited into the sample collection area/lab.			
Process Records	Bed Head Ticket. Dispatch register. Sample reception register at the laboratory.		

DRUG ADMINISTRATION/ PREPARATION OF PATIENT

Process Group	In Patient Services	**Sub-Process**	Drug administration
Process Location	Wards	**Process Owner**	Nursing staff
Input(s)	Bed Head Ticket Drugs	**Output(s)**	Successful drug administration
Process Flow / Process Description			
• The doctor prescribes the medicines to the patient on the 'Bed Head Ticket' • The nurse refers to the Bed Head Ticket for administering the drug to the patient. • The drugs are administered to the patient/or patient is prepared for a procedure			
Process Records	Bed Head Ticket		

INDENTING PROCESS IN WARDS

Process Group	Indenting procedure	**Sub-Process**	Indenting procedure in the wards
Process Location	Wards	**Process Owner**	Nursing
Input(s)	Indent	**Output(s)**	Procurement of desired medicine/materials
Process Flow / Process Description			
• The required items are entered in the ward indenting register. • The registers are then sent to the medicine store/general store. • The indented items are sent to the ward and their entries made in the stock registers by the staff at the store. • The material is received in the ward.			
Process Records	Indent register at the wards. Stock register at the stores.		

PATIENT DISCHARGE

Process Group	In Patient Services	**Sub-Process**	Discharge of patient
Process Location	Wards	**Process Owner**	Nursing staff
Input(s)	Doctor's orders to discharge Bed Head Ticket Discharge Slip	**Output(s)**	Discharge of patient from the ward
Process Flow / Process Description			
• The doctor intimates the patient about her discharge • The discharge slip is prepared by the doctor and nurse hands it over to the patient • The patient is discharged from the hospital • The Bed Head Ticket is then sent to the MRD			
Process Records	• Bed Head Ticket • Discharge Slip		

EMERGENCY

The department of emergency, located opposite to the OP block alongside the IP block caters to an average of 40-50 mothers/patients in gynaecological/ obstetrics distress. Once a mother/patient is admitted here, she is either transferred to the labour room (LR) or operation theatre (OT) during the course of her treatment, or is discharged based on the requirement. The hospital also handles secondary level paediatric emergencies to offer integrated mother and child care.

However, absence of Intensive care Unit (ICU) to handle emergencies is a constraint.

PATIENT ADMISSION

Process Group	Emergency Services	**Process Group**	Patient admission
Process	Emergency	**Process**	Emergency

Location	department	**Location**	department
Input(s)	• Patients • Doctor's instructions	**Input(s)**	• Patients • Doctor's instructions
Process Flow / Process Description			
• The patient in labour is brought to the emergency. • Referrals (if any/required) are checked and the patient is then admitted in the emergency ward. • Also, patients referred from OPD by the doctor, reach here to get admitted.			
Process Records	• Bed Head Ticket • Emergency Admission Register		

SAMPLE COLLECTION

Process Group	In Patient Services	**Sub-Process**	Sample collection
Process Location	Wards	**Process Owner**	Nursing staff
Input(s)	BHT Sample collection containers Patient	**Output(s)**	Patient's sample collected
Process Flow / Process Description			
• The doctor suggests sample to be collected from the patient • The collected sample is deposited into the sample collection area/lab.			
Process Records	BHT Dispatch register. Sample reception register at the laboratory.		

DRUG ADMINISTRATION/PREPARATION

Process Group	In Patient Services	**Sub-Process**	Drug administration
Process Location	Wards	**Process Owner**	Nursing staff
Input(s)	• BHT • Drugs	**Output(s)**	Successful drug administration
Process Flow / Process Description			
• The doctor prescribes medicines to the patient on her 'Bed Head Ticket' • The nurse refers to the BHT for administering the medicines to the patient. • The drugs are administered to the patient/ or patient is prepared for a procedure			
Process Records	Bed Head Ticket		

TRANSFER TO WARD/OT/LABOUR ROOM

Process Group	Emergency Services	**Sub-Process**	Patient transfer
Process Location	Wards	**Process Owner**	Nursing staff
Input(s)	BHT Patient	**Output(s)**	Successful patient transfer to ward/OT
Process Flow / Process Description			
• Mother/Patient having planned surgery is transferred to the OT. • A mother in Labour, transferred to LR • Patient not needing further emergency care is transferred to the ward, or is discharged from the hospital.			
Process Records	Bed Head Ticket		

SURGICAL SERVICES

For complex cases, where normal delivery is not possible, or where a surgical intervention is required for curing an obstetric/gynaecological disorder, the hospital provides facility of surgery on the patient.

The hospital has 2 spacious and zonally deigned OTs (separate disposal corridor at the back of OT, as shown in the picture below) for major surgeries and one OT for minor surgeries.

PICTURE 1: DISPOSAL CORRIDOR OUTSIDE OT



FIGURE 5

PICTURE 2: ZONALLY DESIGNED OT COMPLEX



FIGURE 6

The OTs are well equipped for secondary care, however, there is need for ceiling surgical lamps and monitoring system for mother. The OT follows regular schedule of intermediate and final cleaning at the end of the day along with regular weekly fumigation as a measure to abate infections in the absence of system for hospital infection control (HIC).

The management has utilized its sprawling facilities to designate separate post-surgical wards next to each OT to facilitate easy patient shifting and management. This apart it has also designated separate wards for minor laproscopic surgeries.

PATIENT SURGERY – MAJOR

Process	Surgical services	**Sub-Process**	Surgery of the

Group			obstetric patient
Process Location	Operation Theatre	**Process Owner**	Doctor
Input(s)	• Patient • Doctor • Nurses • Equipment & instruments	**Output(s)**	Operated patient
Process Flow / Process Description			
• Preparation of the patient for PAC • Shifting of the patient in pre-operative room for pre-medication • Shifting the patient to OT room for operation • Performing the operation • Shifting the patient to post surgery ward and examining for few days			
Process Records	• Bed Head ticket • Operation card • OT register		

PATIENT SURGERY – MINOR

Process Group	Surgical services	**Sub-Process**	Minor Surgery of the patient
Process Location	Operation Theatre	**Process Owner**	Doctor
Input(s)	Patient Doctor Nurses Equipment & instruments	**Output(s)**	Operated patient
Process Flow / Process Description			
Investigation and transfer of patient to minor OT Shift that patient in ward for observation and discharge after sometime			
Process Records	Bed Head ticket Operation card OT register		

PATIENT TRANSFER TO WARD

Process Group	Surgical services	**Sub-Process**	Patient transfer to ward
Process Location	Operation Theatre	**Process Owner**	Nurse
Input(s)	Patient Doctor Nurses OT register	**Output(s)**	Operated patient
Process Flow / Process Description			
• The operated patient is put in the post operative ward until stable and fit to be transferred to the low care ward • The patient is then taken to the ward for further recovery & post operative management along with the baby.			
Process Records	• Bed Head ticket • Operation card		

SUPPORT SERVICES

The patient care services are supported by lab, dietary and sterile supply unit. The hospital currently fulfills its requirement for blood and blood products from the Combined District hospital.

LABORATORY SERVICES

The hospital offers lab services in haematology, pathology and clinical biochemistry. Besides providing testing services for samples from obstetric and gynaecological patients, the samples for suspected Tuberculosis patients are also tested, under the National TB control Programme.

Although a variety of tests that are required for efficient diagnosis, are done here, equipment like USG machine, HIV ELISA reader and auto analyzer are required for increasing the efficiency of the services.

TESTING OF PATIENT SAMPLES AND REPORT GENERATION

Process Group	Laboratory services	**Sub-Process**	Testing of patient samples
Process Location	Pathology laboratory	**Process Owner**	Pathologist
Input(s)	• Patient samples • Lab equipment • Pathologist • Technician	**Output(s)**	• Validated and reliable test results
Process Flow / Process Description			
• Patient gets registered in the hospital registration counter by paying applicable charges for the test • Patient goes to pathology lab with the cash slip • Different types of samples are collected from OP • Samples are processed • Records of patient's tests are entered into the respective registers • Report of test results • The report are handed over to patients and records are updated			
Process Records	• Cash slip • Pathology laboratory register • Pathology test reports		

INTEGRATED COUNSELING & TESTING

In its mandate to participate in the National AIDS Control Programme, the hospital has an ICTC centre, that counsels patients that have been identified as HIV positive cases to modify their sexual and social behaviour and also offers health education to individuals seeking to prevent such sexually transmitted diseases.

HIV TESTING & PATIENT COUNSELING

Process Group	Integrated Counseling & Testing	**Sub-Process**	HIV testing & counseling
Process Location	ICTC	**Process Owner**	Counselor
Input(s)	• Patient • Counselor	**Output(s)**	Patient counseling
Process Flow / Process Description			
• Check, whether the patient has been referred by a health care provider or a walk-in • Pre Test information is given • In case the patient is neither referred by a health care provider nor is a walk-in, it is investigated as to what is the reason for the patient to have come for an HIV test • She is then explained about HIV test and referred to pre test counseling • If the client opts for HIV Test, blood sample is drawn and an HIV rapid test is performed, following national HIV testing algorithm • Laboratory then sends sealed report to counselor within 30 minutes • Counselor Provides post test counseling • In case of the patient being HIV positive, individual post test counseling is done and the patient is referred to ART centre for registration for baseline investigation. Pregnant Women are Provided PPTCT. Also, referral to support group is offered • In case of the patient being HIV negative, follow up counseling is done and the patient is explained about how to remain HIV negative			
Process Records	• Patient register • ICTC register		

PICTURE 3: PPTCT PROGRAM SIGNAGE



FIGURE 7

PHARMACY SERVICES

No patient treatment can be complete, without the right and adequate drugs have been provided to them. DH has a pharmacy that stocks the medicines to be dispensed to the patients on a generic name. The hospital has also put up a list of drugs that is available in the hospital for the knowledge of interested individuals.

The pharmacy has a pharmacist and a ward boy, who dispense drugs and supplies to individual patients and also to the indented drugs from the IP area.

PROCUREMENT PROCESS

Process Group	Purchase procedure	**Sub-Process**	Material & medicine purchase

Process Location	Pharmacy, finance department	**Process Owner**	Finance department, hospital administration
Input(s)	Indent	**Output(s)**	Procurement of desired medicine/materials
Process Flow / Process Description			
• Medicine store in charge generates quarterly requirement & give order directly to firms which are approved by government for the pre-defined 250 medicines. • Drug is received from approved government supplier as per procurement plan in medicine store.			
Process Records	• Indent register		

SUPPLY OF DRUGS TO THE IP AREAS

Process Group	Pharmacy services	**Sub-Process**	Medicine supply
Process Location	OPD, IPD, Emergency, OT	**Process Owner**	Pharmacist,
Input(s)	Indent from the wards, OPD, IPD, Emergency and OT	**Output(s)**	Adequate medicine supply to the respective areas
Process Flow / Process Description			
• Indents are sent from the respective areas in the hospital. • The indents are received at the Medicine Store and are entered into the indent register. • The medicines are issued to the respective hospital departments. • The stock registered is updated			
Process Records	• Indents • Indent register		

	• Stock register

DIETARY SERVICES

While the decision to have a particular kind of food for health remains under the purview of the doctors depending upon the physical condition of the patient/ laboratory results, the patient is offered a choice to have the food from the kitchen or from home.

1. FOOD PREPARATION AND PROVISION TO PATIENTS

Process Group	Dietary services	**Sub-Process**	Provision of food to the patients
Process Location	Hospital areas	**Process Owner**	Housekeeping system
Input(s)	Cook, dietary In-Charge	**Output(s)**	Provided meals to the patients
Process Flow / Process Description			
• The food is prepared at the hospital kitchen • The dietary in-charge (CMS) tastes the food and approves it • The prepared food is then served to the patients			
Process Records	Nil		

CENTRAL STERILE SUPPLY DIVISION

OT being the major user, the hospital has a Theater Sterile Supply unit (TSSU), instead of a CSSD. While the TSSU is located against the principles of sterilization in the unsterile zone of OT, the fact that it is within the OT complex mitigates the risk of infection. The OT staff nurse along with the class IV staff cleans, dries and packs the instruments needed for therapeutic and other diagnostic procedures. There are two sterilizers in the TSSU.

PICTURE 4: TSSU AT THE ENTRY OF OT



FIGURE 8

STERILISATION OF INSTRUMENTS

Process	CSSD	**Sub-Process**	Sterilisation of

Group			instruments
Process Location	Sterilisation room	**Process Owner**	Nursing staff
Input(s)	Infected/ soiled instruments	**Output(s)**	Sterilised medical instruments
Process Flow / Process Description			
• The instruments are cleaned, dried and packed, and then are taken to the sterilisation room. • The sterilisers in the TSSU, sterilises the instruments • Sterilised packs are kept in the room next to the OT in the washing area			
Process Records	Nil		

MEDICAL RECORD DIVISION

For the storage of the patient records, a department of medical records is present at the hospital that stores the 'Bed Head Tickets' (BHTs) of the patients These are stored in cartons, with daily discharged patients' BHTs bundled together and piled up for the carton of that month. Besides the BHTs, the records department also stores a copy of the birth certificates.

MEDICAL RECORDS UPKEEP & MAINTENANCE

Process Group	Medical Records	**Sub-Process**	Maintenance of medical records
Process Location	Medical Records Division (MRD)	**Process Owner**	I/C – Medical Records Division
Input(s)	Medical Records	**Output(s)**	Stored updated medical records
Process Flow / Process Description			
• The BHTs of the discharged patients are sent to Medical Records Room, every day. • All the BHTs for a hospital day are bundled together and stored month-wise in cartons.			

Process Records	• Bed Head Tickets • Ward registers • MRD register

LINEN & LAUNDRY SERVICES

The hospital has in-house manual laundry service. The linen is sent to them to be washed and dried. While the soiled linen is pre-washed, bleached and dried, before sending it to the laundry, there is a strict need of a sluice room for the same. Currently it is cleaned and kept in patient wash room.

CLEANING OF DIRTY & SOILED LINEN, CLOTHES

Process Group	Laundry services	**Sub-Process**	Cleaning of hospital laundry
Process Location	Hospital Laundry	**Process Owner**	Hospital dhobi
Input(s)	• Linen (soiled and dirty), patient uniform, staff uniform • Laundry area	**Output(s)**	• Clean linen & laundry
Process Flow / Process Description			
• The soiled linen (if any) is bleached in the patient washrooms and dried • The bleached soiled linen along with other clothes, are sent to the dhobis for washing • The dhobis wash the clothes and send them back to the wards			
Process Records	Nil		

HOUSE KEEPING SERVICES

The in-house staff takes care of the hospital premises cleanliness. The housekeeping staff (sweepers) and the staff nurses are responsible for the primary and secondary segregation of hospital waste. There are color-coded bins that are used for segregating the various categories of wastes. The segregated waste is then dumped into metal containers, from where, they are taken for dumping.

CLEANING OF HOSPITAL AREAS

Process Group	Hospital Housekeeping system	**Sub-Process**	Housekeeping system in different hospital areas
Process Location	Hospital areas	**Process Owner**	Housekeeping system
Input(s)	Housekeeping staff	**Output(s)**	Maintenance of proper housekeeping standards in the hospital
Process Flow / Process Description			
• The housekeeping staff attends to the various hospital areas. • The area visited by the housekeeping staff is cleaned.			
Process Records	Checklists at respective ward areas		

BMW MANAGEMENT PROCESS

Process Group	Bio Medical Waste	**Sub-Process**	Waste management
Process Location	Wards, waste assimilation area	**Process Owner**	Nursing, Housekeeping staff

Input(s)	Colour coded bins & polythene bags, assimilation trunks	**Output(s)**	Proper waste segregation and disposal
Process Flow / Process Description			
• Generated hospital wastes are sorted in the colour coded polythene bags at the source of generation. • The filled-in polythene bags are stored in metal trunks. • The waste from the metal trunks is disposed off from the hospital.			
Process Records	Nil		

PICTURE 4: BMW BAGS IN THE IDENTIFIED STORAGE BOX


CLEANLINESS IS NEXT TO GODLINESS
PITCH-IN
PAVAN
CLEANLINESS IS NEXT TO GODLINESS
PITCH-IN
PAVAN

FIGURE 9

SECURITY SERVICES

For the purpose of protection of the patients and their privacy, the hospital has hired home guards. While the hospital has made efforts to have grills, gates, and has scheduled visiting hours to maintain hygienic environment, such efforts become difficult to be enforced the socio-economic and literacy levels of the people visiting the hospital.

PICTURE 5: SIGNAGE TO REINFORCE SAFETY AND SECURITY



PICTURE 6: SIGNAGE TO REINFORCE HYGIENE


कृपया पान खाकर इधर उधर
थूकना सख्त मना है।
चिकित्सालय में रिश्तेदार व बच्चे प्रातः
अनावश्यक रूप से भीड़ न लगायें।
28 15:51

MAINTENANCE OF PATIENT & STAFF SECURITY

Process Group	Hospital Security Services	Sub-Process	Patient, staff protection in various hospital areas
Process Location	Hospital areas	**Process Owner**	Security Services
Input(s)	Security staff	**Output(s)**	Maintenance of proper security of patients and staff at hospital areas (OPD, IPD, emergency)
Process Flow / Process Description			
The home guards (hired security at the hospital) provide security to the patients and staff. They prohibit unnecessary/unwanted visitors from entering the emergency and ward areas.			
Process Records	Nil		

GOVERNANCE AND MANAGEMENT

FUND MANAGEMENT

The State govt. grants are utilized for management Dufferin Hospital predominantly the disbursement of salary, and partly for procurement of drugs/consumables and maintenance of the facility. Apart from the govt. grants, the fund generated under the 'Rogi Kalyan Samiti', are also utilized for hospital infrastructure/ equipment maintenance.

SALARY DISTRIBUTION

Process Group	Hospital employees' salary management	**Sub-Process**	Fund reception from govt. & salary distribution
Process Location	Finance department	**Process Owner**	Finance department
Input(s)	Government grant	**Output(s)**	Proper distribution of hospital employee's salaries
Process Flow / Process Description			
• The annual grants for hospital employees' salaries are provided by the state government. • Every month, the salaries of hospital employees are provided to them			
Process Records	• Government Grant records • Salary records		

MAINTENANCE OF EQUIPMENT/HOSPITAL INFRASTRUCTURE

Process Group	Maintenance of hospital equipments/ infrastructure	**Sub-Process**	Fund reception & maintenance management of hospital equipment/infrastructure
Process Location	Finance department	**Process Owner**	Finance department
Input(s)	• Government grant • Rogi Kalyan Samiti fund	**Output(s)**	Proper maintenance of hospital equipments/ infrastructure
Process Flow / Process Description			

• The annual grants for the hospital are predominantly used to pay salaries. • Apart from the government grant for maintenance funds from RKS is also utilized for the maintenance purpose)	
Process Records	• Government Grant records • Maintenance registers

STORE PURCHASE MANAGEMENT

With the assistance of the finance department and the state government, the hospital administration, headed by the SIC, is responsible for the store purchases done.

PURCHASE OF MEDICAL ITEMS/CONSUMABLES

Process Group	Purchase procedure	**Sub-Process**	Material & medicine purchase
Process Location	Store	**Process Owner**	Finance department, hospital administration
Input(s)	Indent, tender	**Output(s)**	Procurement of desired medicine/materials
Process Flow / Process Description			
• Information regarding the items required is sent to the directorate – information. • The directorate calls for bids (two bid system-technical and financial) • A comparative study is made and the approved applicant (committee, comprises of the CMS & CMOs of the hospitals of the district) is offered the contract to supply the items.			
Process Records	• Letter to the directorate – information • Public announcement (tender) • Letter from the directorate – information to the hospital		

ABSTRACT:

The amount of waiting time a patient experiences in a primary care or specialty care outpatient setting may have an effect on patient satisfaction and may depend on other visit characteristics. We sought to investigate and quantify the association between waiting of a patient in a Goverment maternity Hospital belonging to the Government of Uttar Pradesh and assess the waitng time of a patient in order to avail the clinical Services Provided by District Women Hospital,Allahabad

1. To estimate the total waiting time the patient has to spend to avail the clinical facilities provided in the Out Patient Department of District Women Hospital, Allahabad

A prospective cross sectional study was done through systematic random sampling method. A total of sixty Patients who came for receiving consultation at the Out Patient Department were observed

The total time taken from the point, patient stands in the line of the registration Counter, the point the patient reaches Consultants chamber, and again time taken at the Drug Dispensing Counter, to the point patient reaches the Pathological Lab for investigation are taken into consideration.

The estimation of waiting time for a patient at the drug dispensing counter was assessed by calculation of mean of total time spent by a patient for availing the clinical facilities in the Out Patient Department, and it depicted that waiting time for a patient for availing services is Thirty three minutes..

The Average time taken for completion of all activities in the Out Patient Department is Forty Five minutes.

Thus from the above study conducted from 1st April,2009-15th April,2010 with an aim of estimation of total waiting time for patients at the Out Patient Department we can conclude the maximum waiting time for a patient is outside the Doctors Consultation room because of mismanagement.

The other Processes Are effective in provision of care and if this process proper management is done system of provision of care to Out Patient will be more effective.

1 .INTRODUCTION:

STATEMENT OF PROBLEM:

District Women Hospital,Allahabad is a 142 bedded Hospital. 200 – 400 patient visit the Hospital every day to avail the obstrectics and gynecology care available in the hospital . Patients who seek treatment in these O.P.D. are charged Rs.1. and BPL patients are provided care free of cost.

OUT PATIENT SERVICES

The Out Patient Services at the hospital extends its services to the public from 800 hours to 1400 hours every day, from Monday to Saturday. Besides the consultation facilities, the OPD complex also has a registration counter (for patient registration), a billing counter (for billing of the diagnostic tests) and a pharmacy counter (for dispensing of drugs to the patients).

The seating capacity of the OPD complex is for about 40 patients, with 4 consultation chambers. While there are benches and slabs for seating the mothers/patients, with the growing need of care delivery there is a need to increase the space in the waiting area. The OP complex is the first point of contact from where patients get into the system to receive care in the hospital – IP, the Laboratory (lab), Emergency and the ICTC centre..

The objective of the study was to estimate the total waiting time of a patient receiving care from the outpatient department of District Women Hospital, Allahabad.

1.2 SIGNIFICANCE OF THE STUDY:

District Women Hospital,Allahabad is an ISO recognized 142 bedded Hospital. The O.P.D.Services is provided to the Females and Child related to their health issue. The Study was mainly conducted with the main focus to identify the whole process in the provision of care and to identify the loopholes in the existing system. The hospital authorities were complaint on a daily basis regarding the mismanagement in the O.P.D.Services provided to the patients. Although the process is well defined it was observed that the queue outside the consultant’s chamber was huge. Those patients who came for emergency care were generally

not able to make an access to the consultant and being a maternal hospital this used to raise the complication of patients who used to visit in full labor.

It was also observed that because of the mismanagement outside the consultant's chamber the consultants were not able to provide quality care as the main focus was to provide the care and finish the crowd as soon as possible.

Waiting time can be calculated at the drug dispensing counter by, calculating the time difference between patient stands in the line of the registration, to the time patients leaves after undergoing a pathological Examination at the Hospital Pathology Laboratory. The time period after the pathology is not taken into consideration as many patients leave the Hospital and visit the next day to collect their report from the Pathology Lab to refer to the consultant again for the next time.

Thus, the study will mainly focus on estimation of waiting time, will brief on the causes of this increased waiting time and recommendations, taking into consideration the observations made during the period of study will reduce the waiting time of a patient in District women Hospital,Allahabad.

The Study Conducted will be a direct benefit to the patient as after the effective implementation of recommendations made by the observer the total waiting time of the patient who wants to avail treatment facilities will reduce and will also organize the management of the Out Patient Department.

1.3. OBJECTIVES OF THE STUDY

The objective of the study was to estimate the total waiting time of a patient receiving care from the outpatient department of District Women Hospital, Allahabad.

1.4. LITERATURE REVIEW:

3.1 KEY TERMS FREQUENTLY USED:

3. Out patient Department: That is where a patient goes first when he feels ill. Or where a patient goes with an accident.
Then the opd doctor will decide what to do. he will either treat the patient and let him go home or refer him to the relevant specialty if needed. (1)

3.1.1 PHARMACY: The word pharmacy is derived from its root word pharma which was term used since the 1400- 1600s.The pharmacy offered general medical advice and a range of services that are now performed solely by other specialist practitioner(2)

3.1.2 PHARMACIST: Pharmacist are highly trained and skilled healthcare professional who perform various roles to ensure optimal health outcomes of their patients.(3)

3.1.4 HOSPITAL :Is an integral part of a social and medical organization, the function of which is to provide , for the population ,complete health care both curative and preventive and whose outpatient services reach out to the family and its home environment ;the Hospital is also a centre for training of health workers and bio social research.(4)

W.H.O. Definition of Hospital.

3.1.5 HOSPITAL PHARMACY: Hospital pharmacies can usually be found within the premises of Hospital. They usually stock a large range of medication, including more specialized medication than would be feasible in the community setting.(5)

3.1.6 MEDICINE: Any substance used in treating or alleviating the symptoms of a disease. (6)

3.1.7 Pathology : is the study and diagnosis of disease through examination of organs, tissues, bodily fluids, and whole bodies (autopsies). Pathology also encompasses the related scientific study of disease processes, called general pathology(7)

3.1.8 Pathologists: are doctors who diagnose and characterize disease in living patients by examining biopsies or bodily fluids. In addition, pathologists **interpret**

medical laboratory tests to help prevent illness or monitor a chronic condition(8)

3.2 COMMON TRENDS SEEN IN THE RESULT OF PREVIOUS STUDIES:

3.2. 1.REDUCING WAITING TIME IN A HOSPITAL PHARMACY TO PROMOTE CUSTOMER SERVICE.

A study has been conducted by J.M. Slowiak, B.E. Huitema, and A.M.Dickonson. The study mainly compares the affect of two different methods of intervention on wait times at a hospital outpatient pharmacy. The study tends to compare by giving feed back to employees regarding customer satisfaction in relation to the waiting time and finding out the actual waiting time so a goal can be set for reducing the waiting time to increase the customer satisfaction. The study produces the result of reducing the waiting time by approximately 20 % and a proportionate increase in the level of customer satisfaction.(9)

3.2.2.WILLING TO WAIT …? INFLUENCE OF PATIENT WAIT TIME ON SATISFACTION WITH PRIMARY CARE.

A study has been done by Roger T Anderson ,Rajesh Balkrishnan and T. Camacho.The study mainly focuses on to ascertain the relation ship between a patient's willingness to return to a primary care physician depending on the waiting time. The study surveyed a cross sectional data of 5030 patients who rated their physician on a survey conducted on the web.The study revealed that longer waiting time were associated with low patient satisfaction. The study also focuses and explains that increase amount of time spent with the physician increases the patient satisfaction.(10)

3.2.3. PATIENT'S RESPONE TO WAITING TIME IN AN OUTPATIENT PHARMACY IN NIGERIA.

A study has been done by Margret O.A. Folabi and Willson O Herun to study the dispensing procedure in a pharmacy and to investigate the possible operational problem which may increase the waiting time of a patient.the study was carried out in a 574 university teaching hospital in Ile – Lfe Nigeria. The data was collected using the technique of workflow analysis and its time study in observing the dispensing process.The study revealed that the major delay component which included patient queing for billing , prescription sheets ,payment to the cashier were contributory to increase the awaiting time of the patient.The most

dissatisfying component was due to the delay in cash counter for making the billing of th medication prescribed.(11)

3.2.4.RELATION SHIP BETWEEN PATIENT PERCIEVE WAITING TIME AND OFFICE BASED PRACTICE SATISFACTION.

The study was conducted in Vague Forest University ,Baptist Medical centre which investigated the association between waiting time and satisfaction outcomes. Cross- sectional survey data was collected from 18 primary and speciality care clinics and overall satisfaction with provided care and willingness to return on a zero to ten point scale.2444 cases were analyzed and it was observed that the time spent wth the physician was 5 minutes or less provided the rating decreased and when the time spent with the physician was more the provider rating increased. Findings confirm that the reduced waiting time leads to increase in patient satisfaction.(12)

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2.RESEARCH METHODOLOGY

2.1 STUDY DESIGN: A prospective cross sectional study was conducted through systematic random sampling method. A total of 60 patients were included in the study who came to District Women Hospital,Allahabad for receiving Consultation in Out Patient Department.

The total time taken was measured by observing the patient and noting the time at the following points in the Hospital O.P.D.

1. Waiting time at the registration counter.
2. Time taken for the registration in the O.P.D.
3. Waiting time for Physician Consultation.
4. Time taken by Physician for Consultation.
5. Waiting time at the drug dispensing counter.
6. Time taken at the drug dispensing counter.
7. Waiting time for sample collection in Lab.
8. Time taken for collection of sample.

.

After the patient leaves the counter the estimation of time is done by making a total sum of that waiting time of waiting at various process in the O.P.D. of the Hospital.

2.2 .STUDY SETTING: The study was conducted in O.P.D. building of District Women Hospital,Allahabad . The O.P.D. building is located next to the main building in close approximation to the accident and emergency services.

The Out Patient Services at the hospital extends its services to the public from 800 hours to 1400 hours every day, from Monday to Saturday. Besides the consultation facilities, the OPD complex also has a registration counter (for patient registration), a billing counter (for billing of the diagnostic tests) and a pharmacy counter (for dispensing of drugs to the patients).

The seating capacity of the OPD complex is for about 30 patients, with 4 consultation chambers. While there are benches and slabs for seating the mothers/patients.

The observation was done in the following way.

The time was noted by the observer at the point comes and stands in the waiting area of registration. Following which the at the registration counter the time is entered at the point patient reaches the waiting area for consultation with the consultant.following which the waiting time is observed at the drug dispensing counter .The last point of estimation of waiting time stands as the pathological Laboratory.

2.3 TARGET POPULATION:

Those patients were included in the study who came and stand in the line of the Registration counter of the O.P.D, and leave the Hospital after receiving care at the O.P.D.Services of the Hospital.

On the basis of pilot Study done by systematic sampling method . It was not possible to take patient on a regular interval therefore it was decided that first patient who would come to the registration counter and stand in queue for registration ,will be included in the study and subsequently once this patient leaves from pathology next patient will be taken by the observer for the study.

A total of sixty patients were included in study, which comprised of five Patients on every working Day of the Hospital O.P.D.Sundays were Excluded from the study ,Second Satrday is half day and O.P.D.functions only upto 12.00 a.m. So it was not included in the study.

2.4 SAMPLE SIZE:

Sampling is the study of parameter(s) of a concerned population by drawing random and statistically significant observations from the population. The sample size depends on the following things:

Size of Population

Population.variance

Confidence Level

Interval Specified

Population variance describes the spread of the concerned parameter of the population under study. For eg. Income levels of the population which can be from Rs. 100 per day to Rs. 10000 per day.

Confidence Level is a Statistical measure of the number of times out of 100 that test results can be expected to be within a specified range. For example, a confidence level of 95% means that the result of an action will probably meet expectations 95% of the time.

The estimates from the sample about the population are not exact and may lie in an interval. Interval Specified depends on that analyst's judgment on the interval range that is acceptable. Higher the interval range smaller will be the sample, however the precision reduces for correction.

Estimation for Sample Size for Survey based statistics is:

$$SS = \frac{Z^2 p(1-p)}{c^2}$$

Where, *Z* is the normal probability constant with mean 0 and Standard dev=1 at 95% Confidence i.e. Z=1.96.

p is the percentage picking a choice. Since we are not sure about the percentage, we use 50% for our sample calculations

C is the interval specified. We take it is as 10% to 15%.

Note that the above formula is only for infinite population. Now for adjustment with Finite population, the following formula should be used:

$$SS_{new} = \frac{SS}{1 + \frac{SS - 1}{POP}}$$

Where POP is the population size

Sample Size

Location	Initial	Final	No. of Years	CAGR	projected this yr	Quarterly Patient Arrivals	Sample Size
Allahabad	91755	98562	2	0.04	102153	25538	**60**

This has been done analyzing the trend of the Patient load, computing the annual growth rate and then using the above formulae

2.5 SAMPLE SELECTION TECHNIQUE:

From the pilot study conducted it was observed that it was not possible to take patients at regular intervals ,so it was decide that only those patients will be taken into consideration who will complete the whole cycle of registering at the registration counter and visit the pathology lab for the purpose of investigation.

Therefore after every patient completes this cycles next patient in the waiting area was included in the study.

Those patient who leave the hospital premises after collection of medication were excluded from the study.

2.6 STUDY PERIOD:

A pilot test of the study was done on 29th and 30th of March .

In the pilot test observation of the complete process in which a patient avails services in the Outpatient Department.

In the pilot test it was decided that those patient who do not avail the pathology services will not be included in the study..

The study was scheduled for 1st April, 2009 to 15th of April, 2009.

It was prefixed that study will be conducted only during the O.P.D. hours i.e.

Monday to Saturday.

Morning: 08.00 a.m.-2.00 p.m.

Sunday:

Sundays were excluded from the study as O.P.D. is not functional.

On this day the O.P.D is closed.

2.7 Study Method: For collection of data for the sample size, Observer method was used.

The demographic data was collected from the patient :

The demographic data included the following information:

NAME:

AGE:

SEX:

MEDICAL RECORD NUMBER:

Following the collection of the Demographic data, the time the patient is standing in the line of registration counter and the time is noted by the observer(Stage 1).

Observation is made, the point of time patient reaches the drug dispensing counter and the time is noted by the observer(Stage 2).

Time is noted at the point patient leaves the registration counter(Stage 3).

Time is noted as the patient comes and stands in the line for consultation with the physician(stage 4).

Time is noted at the point patient reaches the consultant for consultation(Stage 5).

Time is noted at the point patient reaches the drug dispensing counter(Stage 6).

Time is noted as the patient leaves after receiving medications from the drug dispensing counter(Stage 7).

Time is noted as the patient reaches the waiting area of the pathological investigation(Stage 8).

Time is noted at the point the patient is called for giving the sample at the pathology lab(Stage 9).

Time is noted as the patient leaves after giving sample at the pathology lab(Stage 10).

Following the collection of the data and doing the above calculations the mean was calculated

2.7 DATA COLLECTION INSTRUMENT:

Since the study was based on observer method no data collection instrument like questionnaires were used, only for the collection of demographic data interaction was made with the patient.

2.8.DATA ANALYSIS:

2.8 OBJECTIVE 1 :

To estimate the total waiting time of patient who came to avail services at the Out Patient Department

Data was collected from 1st April,2010-15st April2010.

The total number of Days in which O.P.D.was functional was 12.

.

The calculation of average was done by dividing the sum total waitng time by twelve working days.

The average calculated represents, the total waiting time for a patient who come to avail clinical services at the Out Patient Department.

On presuming the total population of the Out Patient Department a sample size of 60 patients was calculated.

A= Point of time patient comes and stand in line of Registration counter .

B= Point of time patient leaves after providing sample at the pathology Lab .

Total waiting time = B – A (Difference between time of entry and exit of a patient)

The mean of waiting time was calculated for 60 patients.

The result obtained was cross verified through SPSS software.

The same procedure was followed to calculate the absolute waiting time of a patient.

3. RESULT AND FINDINGS

3.1. Objective 1 : To estimate the total Waiting time of patient who visit the Out Patient Department for availing the clinical Services.

Data was collected from 1st April, 2010-15th April 2010.

The total number of Days in which O.P.D.was functional was 12..

The total waiting time for patient are as follows

Average waiting time for a patient-45 Minutes

Absolute waiting time taking into Consideration the various process-33 Minutes.

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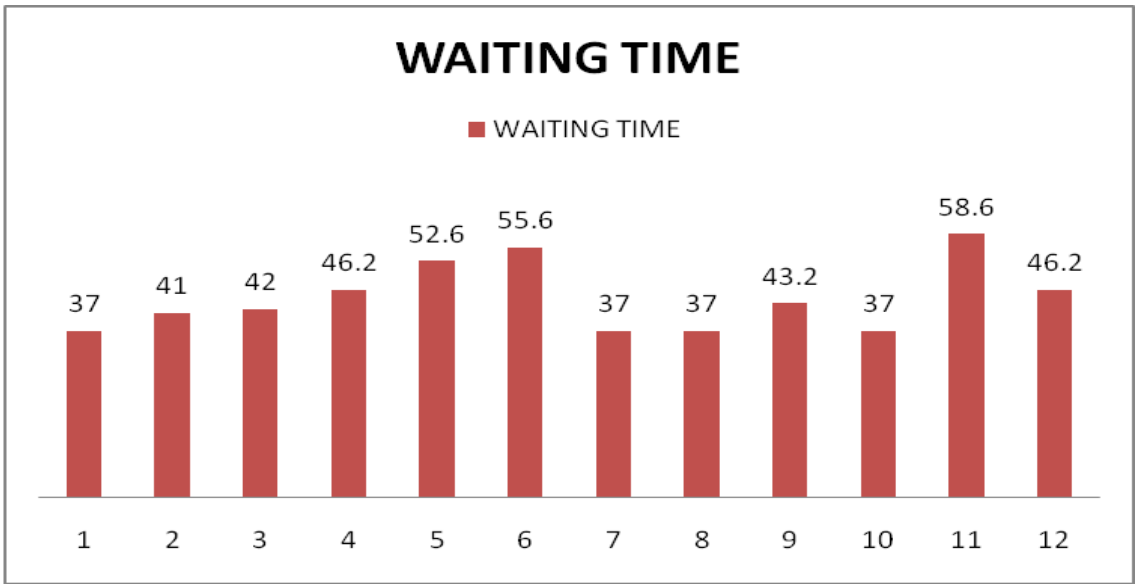


Fig 10.Graph representing the day wise waiting time at the Out Patient Department.

From the above graph we can interpret that the maximum waiting time for a patient is 58.6 minutes. It can be also interpreted that the waiting time increases during the Wednesday which is also the ANC day and maximum no. of patients visit the O.P.D.

Total time taken by the patient to receive services at Out Patient Department = (B – A)

Mean of the total waiting time of 60 patients receiving care at out Patient department: Forty Five minutes

1. Waiting time at the registration counter.=A
2. Time taken for the registration in the O.P.D.= B
3. Waiting time for Physician Consultation.= C
4. Time taken by Physician for Consultation.= D
5. Waiting time at the drug dispensing counter.=E
6. Time taken at the drug dispensing counter.= F
7. Waiting time for sample collection in Lab.= G

8. Time taken for collection of sample. = H

.ABSOLUTE TIME TAKEN= A+ B+C+D+E+F+G+H

Fig 11..Graph representing the Absolute waiting time at the Out Patient Department of patient.

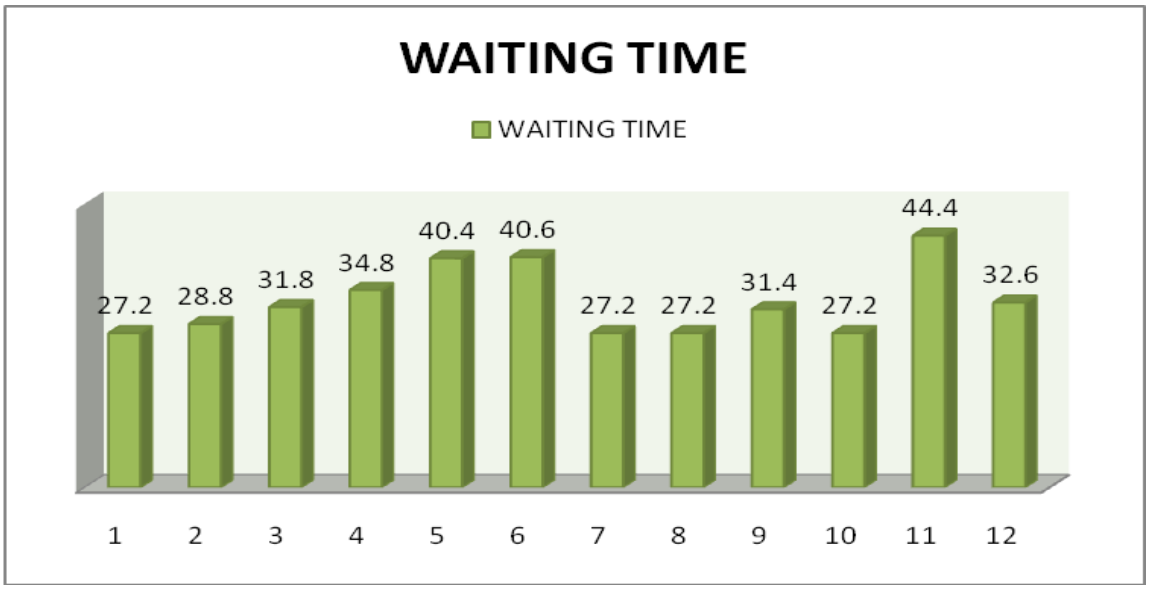


Fig 1.2.Graph representing the Absolute waiting time at the Out Patient Department of patient;

the inference drawn fom the above graph is further is reinforced by the absolute waiting time.

TIME DIFFERENCE BETWEEN : TOTAL WAITING TIME- ABSOLUTE WAITING TIME=12 MINUTES

Maximum Time: 58.6 Minutes.

Minimum Time: 37 Minutes

Average Time: 45 Minutes

4 .CONCLUSION AND RECOMENDATIONS

Thus from the above study conducted from 1st April,2010-16th April,2010 with an aim of estimation of total waiting time for patients at the Out Patient Department we can conclude that.

The system of provision of care at the Outpatient Department is effective and can be further improvised if the Process of management of the O.P.D.is more organized. The difference in the Absolute waiting time and total waiting time is different because the whole O.P.D.building is not in the Same premises so the patient are confused where they have to go and waiting time is increased.

The Out Patient department being essential service of hospital and if this service is made more effective this will lead more patient satisfaction. In the above study conducted it was observed that time spent by a patient at the Out Patient Department is maximum outside the Consultants room which means that patient are not managed properly in this particular area of the O.P.D. The outcome of the study can be taken as a source of effectiveness of the other Process in the Out Patient Department and steps to be taken for effective Management outside the Consultants Chamber.

4.1 DISCUSSION:

In the study conducted above the main focus of the study was to estimate the total waiting time at the Out Patient Department. Out of the eight times period taken the most important variable constitutes to be the total time taken by the patient to reach the consultants room. From the observation made over a period of 12 days it was concluded that the waiting time for a patient is maximum outside the Consultants Room and if the out Patient Department is effectively managed then the Total Waitng will not only Reduce but the consultants would also be able to explain the treatment process more effectively.

The waiting time is there because of the overcrowding made by the patients relative, as they tend to overcrowd the O.P.D.

The other observation made was most of the delay as there is no schedule defined for the Consultants and they usually sit in the consultant’s room subjected to their availability of time from I.P.D.

The O.P.D.building does not include the pathology and the registration and the Patient generally have to walk a from building to another for availing the O.P.D. services.

The Hospital does not have adequate signages therefore patients are usually confused in which direction they have to go after availing one service to another process.

The patients come to take medicine repeatedly without getting themselves registered first or without consultation with the doctor. In such cases the pharmacist has to deal with them and send them back for registration which at times increases the waiting time.

4.3. LIMITATIONS

The limitation of the study conducted were, some of the time patient identified left the O.P.D in the mid process without visiting the Pathology Services. At some point of time only one consultant is available and when there is overcrowding four consultants are called .So the patient moved to the next counter thus reducing the waiting time for the patient.

Hospital staff go inside the Consultants room to show the patients they have brought with them which disturbs the regular flow of patients which increases the waiting time

The other factor that caused the limitation was the delay caused due to confusion of the billing Counter of the O.P.D .as patient does not understand where they have to pay for pathological examination.

4.4. RECOMMENDATIONS:

1. The O.P.D. has four consultants Chamber of which only two is functional, because of the shortage of consultant. The number of consultant should be increased so that all four counters are functional and there is no waiting time for the patient.

2. The outpatient department should have centralized facilities registration counter and lab investigation this can be done provided that the Administration office is removed from the same building.

3. An organized O.P.D.was patient calling system should be introduced so that Patient do not overcrowd outside the consultant room with their relatives.

4. The patients are usually confused about the dosage of the drug they are prescribed, If total number of counters and pharmacist are increased this would reduce the load on pharmacist and patient will understand the dosage properly.

5. Signage should be made which indicate where the patient has to visit.

6. The waiting area for the patients needs to be increased with more chairs so that patients can be accommodated in a better and a convenient way

7. A separate counter for senior citizen and physically handicapped people will lead to the convenience that fall into this category as waiting for long time in the line is a difficult thing for them.

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INSTALLATION OF PATIENT CALLING SYSTEM IN OUT PATIENT DEPARTMENT OF DISTRICT WOMEN HOSPITAL ALLAHABAD

INTRODUCTION TO DUFFERIN HOSPITAL

The District Women's Hospital, also known as the Dufferin Hospital (DH) started with an idea of a Maternal & Child Health Hospital by A.V. Peterson in 1884, who was the then collector for the province of Awadh. The proposal for the hospital building was submitted on 1st October, 1887 and on 9th March 1888; the hospital commenced its services.

Located in the heart of the city of Allahabad, this facility is amongst the oldest institutions in the city and prides itself to be the best in its specialty for the district of Allahabad. It is a women's hospital, offering comprehensive secondary level services in Obstetrics and Gynaecology. The hospital today stands as a 142 bedded unit, equipped to offer Out Patient, In Patient, Emergency, Delivery, Surgical, Laboratory and Dietary Services.

Besides serving for Obstetrics & Gynaecology, the hospital also contributes towards the various **National Health Programmes.**

OUT PATIENT SERVICES

The Out Patient Services at the hospital extends its services to the public from 800 hours to 1400 hours every day, from Monday to Saturday. Besides the consultation facilities, the OPD complex also has a registration counter (for patient registration), a billing counter (for billing of the diagnostic tests) and a pharmacy counter (for dispensing of drugs to the patients).

The seating capacity of the OPD complex is for about 30 patients, with 4 consultation chambers. While there are benches and slabs for seating the mothers/patients, with the growing need of care delivery there is a need to increase the space in the waiting area. The OP complex is the first point of contact from where patients get into the system to receive care in the hospital – IP, the Laboratory (lab), Emergency and the ICTC centre.

REGISTRATION AND OPD MANAGEMENT

OPD Registration and consultation services are offered for 6 hrs each day from 0800 AM to 0200 PM, for 6 days in a week.

After the OPD hours the patients are registered in through the emergency department for treatment by the Emergency Medical Officer (EMO).

Every patient is assigned a unique registration number on Registration Card after payment of registration fee or free of any charges as per the government orders. This number is used for tracing all the patient records within the hospital, while the patient moves from one department to the other seeking therapeutic and diagnostic support.

The Registration Counter in the hospital also serves as enquiry & Help Desk counter

OPD schedule for all doctors/specialists/super specialists are made available in the citizen charter and changes if there are any are reflected in the notice board at the OPD and emergency department. Doctors examine patients during OPD hours and prescribe requisite investigation and treatment on the OPD Card.

Admission if required is suggested by the doctor in the OPD slip for the generation of bed head ticket (BHT), and the name of the ward in which admission is desired.

Medication for these patients is provided from the drug dispensing counter in the Out Patient Department.

INTRODUCTION TO THE PROBLEM:

During a study conducted on estimation of waiting time in the Outpatient Department it was observed that the maximum time a patient has to spend is outside the room of the consultant.

The root cause analysis was done and it was identified that the same is because of the Mismanagement in the Waiting area for consultation.

The reason for this mismanagement was overcrowding done by the Patient relatives and because people were not aware that how to avail the services in the Outpatient Department.

As there was no rule established to manage the Patients Visiting it usually lead to overcrowding and inconvenience to the Patient. The patients who require immediate attention were not able to get so because of this overcrowding.

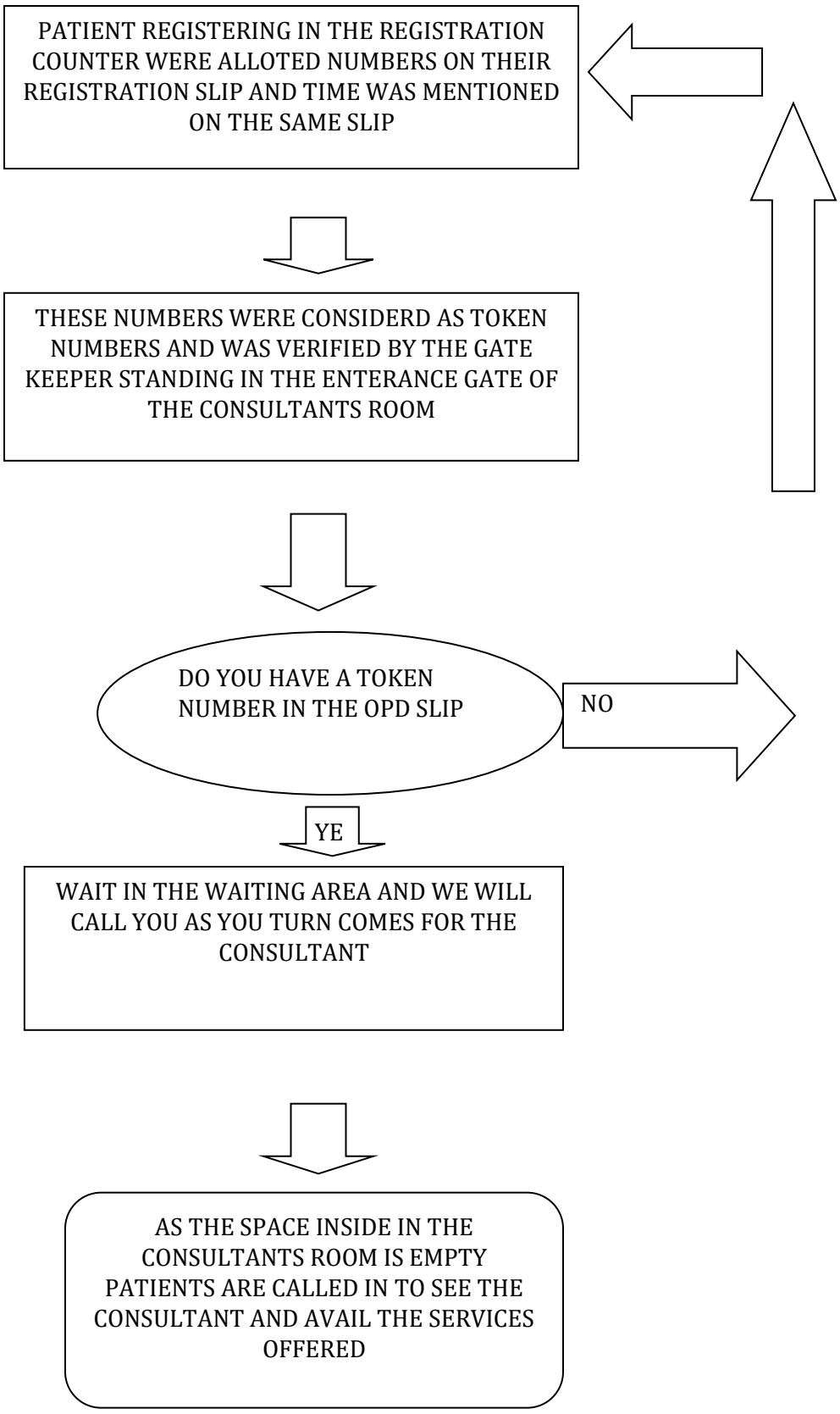
The Problem was taken into consideration and the Management decides to solve the Problem So that Quality of Care could be provided to the Patient Visiting the Out Patient Department.

PATIENT CALLING SYSTEM

Patient calling System is a device which is used for Digital Display of numbers so that the patient could be called in according to the number or token he is allotted to him.

The device for the Patient Calling System Was provided by the National Rural Health Mission, Uttar Pradesh.

The Pilot study For the implementation of Patient Calling System Was done in the Following Way.


PATIENT REGISTERING IN THE REGISTRATION COUNTER WERE ALLOTED NUMBERS ON THEIR REGISTRATION SLIP AND TIME WAS MENTIONED ON THE SAME SLIP
THESE NUMBERS WERE CONSIDERD AS TOKEN NUMBERS AND WAS VERIFIED BY THE GATE KEEPER STANDING IN THE ENTERANCE GATE OF THE CONSULTANTS ROOM
DO YOU HAVE A TOKEN NUMBER IN THE OPD SLIP
NO
YE
WAIT IN THE WAITING AREA AND WE WILL CALL YOU AS YOU TURN COMES FOR THE CONSULTANT
AS THE SPACE INSIDE IN THE CONSULTANTS ROOM IS EMPTY PATIENTS ARE CALLED IN TO SEE THE CONSULTANT AND AVAIL THE SERVICES OFFERED

Following A Pilot Study Done for three days the devices for the Patient calling system was installed in the Waiting Area of The Out Patient Depatment.

The same process Of distribution of token From the registration counter was initiated .

The patient came with the token number and waited for their turn in the waiting area of the Outpatient Department.

Following this they are called in as per the availibliy of space in the Waiting area for consultation.

Following this the Patient Visit the consultant and leave from the waiting area.

ADVANTAGES OF THE PATIENT CALLING SYSTEM.

1. Overcrowding in the Consultants waiting area has reduced as the major overcrowding was done by patients relative.Now the patients are only allowed to go inside and only one attendant if required by the Patient.
2. The patient In labor can be directly taken into doctors chamber in case of emergency.
3. The patient can be comfortably seated in the Air –Colled waiting area of the Outpatient Department and do not have to stand in long queue to fight for their turn to see the consultant.
4. The clinicians can provide quality care to the patients as the Outpatient Department is more organized in Provision of services.
5. The Out Patient Department can be provided any information if they require at the token counter of the Outpatient Department.

Conclusion:

Thus a we can conclude that Installation of the Patient calling System has contributed to the

Convenience of the Patient who comes for availing services at outpatient department of District Women Hospital. Allahabad