A STUDY ON HOSPITAL CRISIS PREPAREDNESS PLAN DURING AN EPIDEMIC OUTBREAK AT MAX SUPERSPECIALITY HOSPITAL, SAKET

Author : Dr. Sonal Gupta (Student of IIHMR University, Jaipur)

REVIEW OF LITERATURE

- Data from the early 2009 H1N1 influenza response confirm that the concern for risk in health care settings is warranted. In one report, the Centres for Disease Control and Prevention noted that 50% of health care personnel with documented H1N1 infections were infected in a health care setting.
- Furthermore, expert estimates regarding the expected volume of patients in a pandemic, although variable, highlight the need for plans that incorporate measures to -

1.Provide quality care to affected patients

2.Protect patients and health care personnel from health care-associated infection

3.Maintain continuity of core operations in the face of epidemic and pandemic respiratory illness (EPRI).

OBJECTIVES

1. To identify and respond to disease outbreaks on a timely basis.
2. To help in preparing Crisis Preparedness Plan to strengthen the functioning, co-ordination and response for an enhanced hospital care during epidemic.

METHODOLOGY

Type of study *:* Descriptive cross-sectional

Study population : Doctors, Nurses from the Emergency and In Patient Department, Hospital Administrators & In Patient Pharmacy at Max Hospital, Saket, Delhi

Study area- Max Hospital, East wing, Saket, Delhi

Duration of Study- 4 weeks

Technique –Direct Observation of Operations& Unstructured Interviews.

Tool – Schedule

Data collection-Primary (4weeks)

Data entry- Manually

Data Analysis- Using bar charts, pie charts

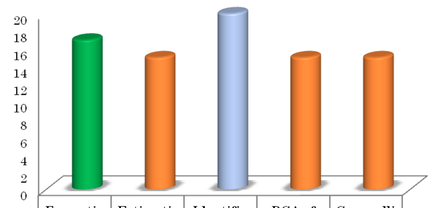
RESULT & INTERPRETAIONS

- In the light of the above findings and with the help of in depth discussions with the Medical Superintendent of MAX SUPER SPECIALITY HOSPITAL, SAKET, DELHI, and Deputy Medical Superintendent, a checklist is structured for each department involved in effectively managing patient flow at the time of epidemics or emergencies. Under each department, there is a list of questions regarding the status of implementation of the recommended action specific to that department.

- The recommended actions included in checklist are under specific departments functional at the time of epidemics namely
  Hospital Administration: Epidemic Control Group
  Emergency Department: Case management
  In Patient Department,
  Essential support services,
  Surveillance: Monitoring and Planning and Postmortem care.

DATA ANALYSIS

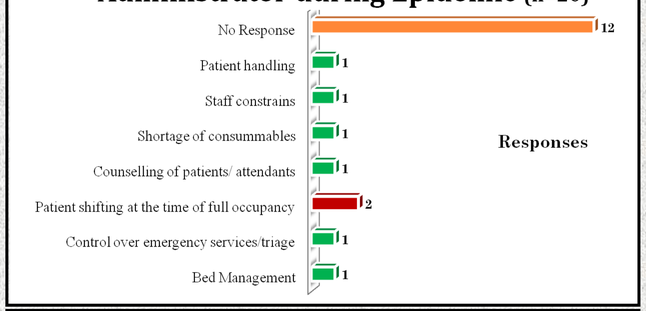
Process Flow of Hospital administration during Epidemic outbreak(n=20)



	Formation of ECG	Estimation of Demand	Identification of expanding hospital	RCA of unresolved matters	Counselling(Patient/Attendant)
Positive responses	17	15	20	15	15

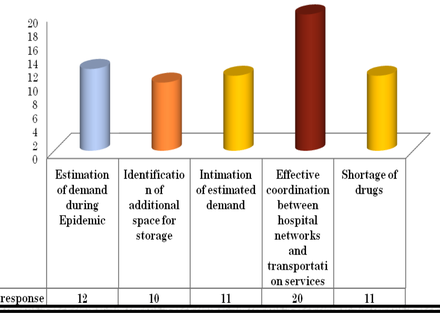
INFERENCE: 17of the Hospital Administrators confirmed the formation of Epidemic Control Group during epidemic outbreak ,Identification of ways to expand hospital was responded positive by all the 20 personnel and 15 confirmed estimation of demand, Root Cause Analysis(RCA) and Counselling of patient/attendants during epidemics.

Challenges faced by Hospital Administrator during Epidemic (n=20)



INFERENCE: The most prominent challenges faced by Hospital Administration include Patient handling(1), Staff constrains(1), Shortage of consumables(1), Counseling of patient/attendant(1), Patient shifting at the time of full occupancy, Control over emergency services/triage(2), and Bed Management(1) during H1N1 epidemic outbreak.

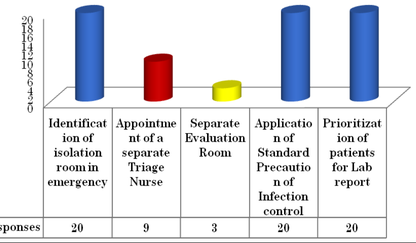
Complete process flow in Pharmacy(n=20)



	Estimation of demand during Epidemic	Identification of additional space for storage	Intimation of estimated demand	Effective coordination between hospital networks and transportation services	Shortage of drugs
Positive response	12	10	11	20	11

INFERENCE: 12 out of 20 staff in Pharmacy responded positively to approximate estimation of increase in demand during Epidemic outbreak , 10 affirmed identification of additional space for storage, 11 confirmed intimation and shortage of drugs during epidemics and all positive response was observed for effective coordination.

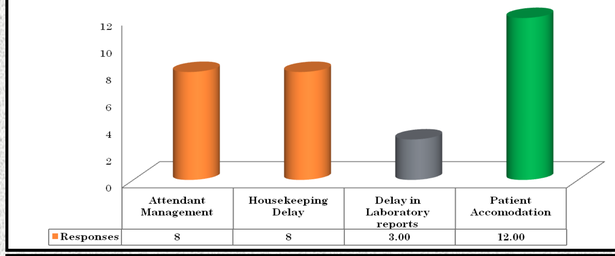
Complete Process Flow in Emergency during Epidemics(n=20)



	Identification of isolation room in emergency	Appointment of a separate Triage Nurse	Separate Evaluation Room	Application of Standard Precaution of Infection control	Prioritization of patients for Lab report
Positive Responses	20	9	3	20	20

INFERENCE: Three processes HIGHLIGHTED IN BLUE namely identification of isolation room, Application of Standard Precaution of Infection control and Prioritization of patients for laboratory reports were confirmed positive by all the interviewees and appointment of separate triage nurse and separate evaluation room were confirmed positive only by 9 out of 20 and 3 out of 20 staff.

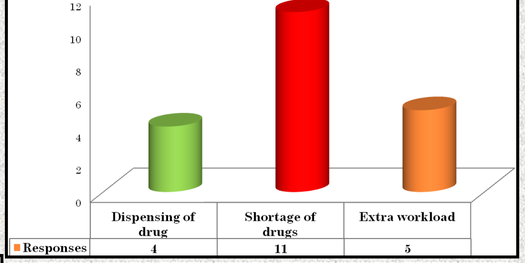
Challenges faced in Emergency during Epidemics (n=20)



	Attendant Management	Housekeeping Delay	Delay in Laboratory reports	Patient Accomodation
Responses	8	8	3.00	12.00

INFERENCE: The most common challenges encountered in emergency was Patient accommodation(12 out of 20) followed by Attendant management & Housekeeping delay (8/20 each). Other includes delay in laboratory reports (3/20).

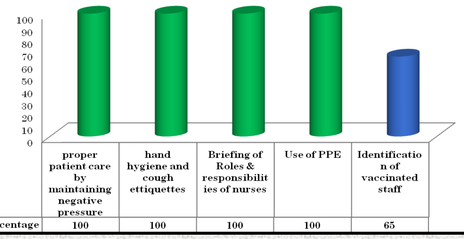
Challenges for Pharmacy(n=20)



	Dispensing of drug	Shortage of drugs	Extra workload
Responses	4	11	5

INFERENCE: The most common challenges encountered by the Pharmacy in the epidemic includes shortage of drugs (11 out of 20) followed by extra workload and dispensing of drug.

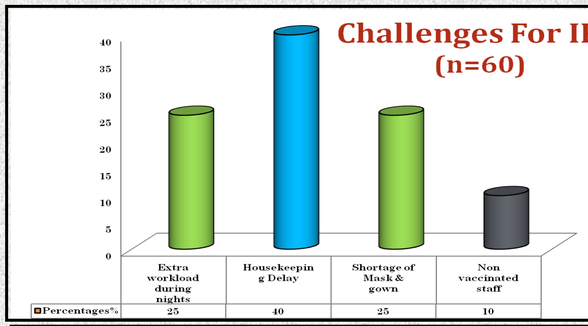
Service delivery in In Patient Department during Epidemic (n=60)



	proper patient care by maintaining negative pressure	hand hygiene and cough ettiquettes	Briefing of Roles & responsibilities of nurses	Use of PPE	Identification of vaccinated staff
Percentage	100	100	100	100	65

INFERENCE: FOUR processes HIGHLIGHTED IN GREEN namely proper patient care by maintaining negative pressure, hand hygiene and cough etiquettes, briefing of nurses & use of PPE were confirmed positive by 100% of the nurses on duty during epidemic.

Challenges For IPD (n=60)



	Extra workload during nights	Housekeeping Delay	Shortage of Mask & gown	Non vaccinated staff
Percentages%	25	40	25	10

INFERENCE: The most common challenges encountered by the nurses in the ward/Intensive Care Unit includes housekeeping delay(40%), Extra workload during nights(25%), shortage of masks & gowns(25%) and non vaccinated staff(10%).

RECOMMENDATIONS

- During epidemic crisis there should be separate entries for the attendants and the patients to reduce the overcrowding.
- Security staff should be on high alert in case of any dispute encountered and a training program should be scheduled for increasing the efficiency during epidemics.
- Adopt measures for proper identification of vaccinated staff though badges etc in case of critical care during an epidemic.

Checklist for Hospital Administration: Epidemic control group

Recommended Action	Under Review	Under Progress	Completed	Recommended Action	Under Review	Under Progress	Completed
Activate or Establish the hospital Epidemic Control Group(ECG)				Use available planning assumptions to estimate increase in demand for hospital services			
Identify season of epidemics with the help of past experience.				Vaccinating staff prior to epidemic season every year			
List all hospital services in priority order.							

CONCLUSION

Derailment of the functioning of the hospital is often observed during epidemic due to following reasons:

- Increased patient flow (excess demand)
- Scarcity of resources to meet the increased
- patient flow (manpower, time, equipments etc)
- Absence of efficient in patient management strategy