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Strengthening of Primary Health Care: Conceptual Development of Community Health Model for Lower Income Group of Delhi & NCR

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ABSTRACT

Delhi being the capital city of India is very prestigious for the country in many aspects. Health sector of the state is one of the most affected domains of the state. There has been a major shortfall and a big disparity seen in the rural and the urban health of the state, where the urban health of the people is still better as compared to the rural population. To bridge this gap several remarkable steps have been taken by the government in this direction. The major step taken is the launch of National Rural Health Mission (NRHM) in 2005, which has the prime objective to significantly improve the rural health care delivery by using the techniques of planning and decision-making and several initiatives taken for financial risk protection. It also initiated Rashtriya Swasthya Bima Yojana, the milestone of Central Government, which provides cashless facility for hospitalisation to the poor people population. Approximately 35 million families have been benefited by this scheme nationwide till date. In spite of the several government initiatives taken to improvise the health of the citizens still there is a major shortfall of good public health services primarily for the poor population of the state. The paper focuses on the development of a feasible self-sufficient community health model for the lower income group of the population of Delhi NCR. The proposed model will be executed and maintained by the community fund itself without much of the financial dependencies on other external parameters. For the successful implementation of the proposed model, the requirements for the establishment were also analysed. Apart from these the benefits of the proposed health model were also assessed which is going to impact the overall health of the society, particularly for the ones who fall under Below Poverty Line. The paper has been divided in three sections. The first section comprises of introduction, objectives, research methodology used and need of the present study. The next section identifies the requirements for the establishment of the proposed model and the last section of the paper looks forward for the Feasibility Analysis of the Proposed Health Model.

Keyword: Community Health Model, Primary Health Services, Lower income Group, Society
JEL Classification: I15, 131, J11, J38, H57

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Section I

Introduction

As per the Census, 2011 Delhi constitutes approximately 1.5 per cent of the total population of 1.22 billion (Census, 2011) of India. It has a population density of 11,297 persons per sq. km. which is recorded to be the highest in the country. There has been a decline in the decadal population growth of the city primarily because of the improved health care facilities available. But still there is a lot more to take care of for the state's primary health conditions which are not really very good and up to the mark [10]. Good health acts as a catalyst in realising the individual's capabilities and thus contributes to the well- being of the society. It has been observed as a psychology that healthy people are proved to be more productive and contributes more towards the economic development for any nation [13]. On the contrary the ill-health people may not stand up to the mark of the complete realisation of their psychological, social and economic capabilities, and hence have to bear the financial implications in terms of loss of income, productivity and attainment of a good medical care Apart from the treatment in OPD services and doctor's consultation, there is also a much required need for creating awareness about the various vaccines as well and also to promote more and more people to undergo the necessary vaccines for the good life being [22].

Objectives of the study:

1. To study the need of community health model
2. To assess the requirements for the establishment of Community Health Model
3. To study the feasibility analysis of the proposed self-sufficient community health model

Research Methodology:

A health-related survey was conducted in various parts of Delhi for 431 families of urban poor to obtain various data related to the health care conditions of the respondents. The survey was conducted on diverse group, who were mostly employed as drivers and factory workers, though more than half of them were self-employed and some of them did not have any source of livelihood. Hence the research methodology is exploratory research based.

Need of the Community Health Model

The prime reason of this study is to identify the various reasons which are playing a major role in the deteriorated health of this community of people. And it is very shocking to view some of the results which are pertaining to the bad primary health of the people [4]. The income of the people is the biggest obstacle in getting very good health services, without funds it's nearly impossible to achieve good health. This was one of the major reasons identified through the model developed. When we compare the monthly income and monthly expenditure of the sample taken, that ratio is very alarming because the income of the target population was found to be in the range of Rs5000 - Rs15000. Apart from health there are several other expenditures which has to be done by them like food, accommodation, education, clothing and many more [24]. The people going to government hospital are at least not spending from their pockets but if we look at the people who are visiting the private hospitals are actually undergoing out of pocket expenses for the same [5]. This actually puts a lot of monetary burden on them. As all the government hospitals have their OPD during morning hours, which is again the peak working time for these people also. If they don't go on their work they may have to lose their pay for one day or even more than that also in some cases [7]. Loss of salary will definitely lead to mismanagement of their monthly budget for which nobody is readily acceptable.

Considering all the above-mentioned reasons for not getting a better treatment there exist a need of a health care facility which is available in the near vicinity of the respondents, which may provide them the required treatment as and when required so that they may not face any long waiting queues and also may not have to take an off from their work place. Apart from that if they may get the primary treatment well in time it may avoid the problem to get deteriorated and also their health will be quite maintained.

Section II

Requirements for the establishment of Community Health Model

The above sections have discussed and identified the real need of establishing the self-sufficient community health models [23][25][26] in specifically the lower areas of society such as slums, JJ colonies and many more, that are not

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very posh and don't even have appropriate living conditions and primary health care facilities also [6]. This health care model is expected to deliver at least the primary treatment at the right time to the residents of these areas so that they don't have to suffer much because of the illness and also don't have to travel long distances for the treatment through either the government hospitals or the private ones [8][27]. The successful establishment and working of this model depends on various resources and factors [12]. The prime factors are identified to be the infrastructural and the human resource requirements which are discussed in detail along with other set of requirements in the following sections.

a. The first and the foremost requirement for this model is the *space*, which is hard to be arranged. If not a very large one, a small place or a clinic or a building is required to run the model. This place can be suggested to be hired from the nearby areas only because the prime motive is to provide the health facility to the people in the near vicinity of their place of residence.
b. The second prime requirement for this model is the *capital investment*. As we know that the initial setup cost of any new venture is always of the major concern. Similarly the proposed health model to be established may also face the same issues. The funding of this model is proposed to be done by the people itself living in these areas on the nearly negligible amount of (Re 1, 2, 5 and 10) per day per person.
c. The initial infrastructural requirements for the establishment of the community health model is given below along with the tentative budget.

Table 1: List of Infrastructure required for establishment of the proposed healthcare model

S.No.	Item	Quantity
1	Thermometer	1
2	Torch	1
3	Sphygmomanometer (B P Machine)	1
4	Stethoscope	1
5	Weighing Machine	1
6	Height Scale	1
7	Invertor Set	1
8	Bed (Patient Examination)	1
9	First Aid Kit	1
10	Life Saving Drugs	1 Set
11	Essential Drugs	1 Set
12	ORS	12
13	Wooden Table	3
14	Chairs	5
15	Wooden Bench (Capacity of 5 People)	3
16	Doctor Basic Examination Tool	1 Set
17	Prescription Pad	1
18	Bell	1
19	Computer	1
20	Printer cum Scanner	1
21	Water Filter	1
22	Toiletry	1 Set
23	Identification Board	1
24	Cupboard	1
25	Mobile	1
26	Cleaning Equipment	1 Set
27	Dustbin	2
28	Stool (Examination)	1

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[1]Tentative calculation of Initial Setup Cost

The amount is appropriate enough to handle the monthly expenditures of the health care services of the proposed health model. The list of the items that will incur the monthly expenditure are mentioned below in the list.

Table 2: List of items incurring Monthly Expenses

S.No.	Item Name
1	First Aid Kit Items
2	Refill Life Saving Drugs
3	Refill Essential Drugs
4	ORS
5	Prescription Pad
6	Refill Toiletry
7	Mobile Bill
8	Refill Cleaning Equipment
9	Rent
10	Electricity Bill
11	Water Bill
12	Drinking Water
13	Cleaning Waste Disposal
Approximate Cost: INR 40, 000	

The approximate cost of the items mentioned in the list provided above is estimated to be INR 40,000. That means there is a monthly expense of Rs.40, 000 that will be incurred for the regular items to be used in the health model proposed.

d. The next very essential requirement for successfully running of the community health model is the *human resources* or *man power* required. The list of the specialised human resource required for the health model includes the doctors, paramedic's staff, multi-purpose staff and the computer operator cum front office executive.

Table 3: Monthly Requirement of Human Resource

S.No.	Human Resource	Quantity	Estimated Payment
1	General Physician	3 days per week	25000
2	Multi-Purpose Staff	1	10000
3	Paramedic	1	15000
4	Computer Operator cum Front Office Executive	1	10000
Approximate Total Cost :			**INR 60,000**

As per Table 2 and 3 it is clearly reflected that the Monthly Expenditure of the community health model is estimated to INR (60,000+40,000) =1, 00,000.

e. The next essential requirement for the establishment of the community health model is the *essential medicines* and *lifesaving drugs*. It has been proposed that the health centre will be fully equipped with the essential medicines as per the NLEM (National List of Essential Medicines) [11]. The medicines used will be the Generic medicines which are cost effective and health effective as well. The prices of the generic medicines and the branded medicines are compared and it

[1]All rates have been found using 1mg App, various vendors dealing in furniture and electronic devices along with interaction with several Medicial Representative and Chemist Stores. The Initial Setup Cost of the community health model was found to be approximately INR 1.2 Lakh.

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is found that there is a huge difference between the two prices may be because of the GST and other taxes implied on the branded medicines [9]. All the required medicines will be available every time in the health centre and it will be given free of cost to the people who are the participants of this model. The list of essential medicines is provided below.

Table 4: List of Essential Medicines

Sl. No.	Drug	Administration Route/Dosage Form	Strengths
1.	**Nonsteroidal Anti-inflammatory Medicines**		
1.1	**Non-Opioid Analgesics, Antipyretics and Nonsteroidal Anti-inflammatory Medicines**		
	Diclofenac	Tablets	50 mg
	Aceclofenac	Tablets	100 mg
	Paracetamol	Syrup	125 mg / 5ml
		Tablets	500 mg
2.	**Anti-allergics and Medicines used in Anaphylaxis**		
	Cetrizine	Tablets	10 mg
	Prednisolone	Tablets	10 mg
3.	**Anti-infective Medicines**		
3.1	**Anthelminthics**		
3.1.1	**lntestinalAnthelminthics**		
	Albendazole	Tablets	400 mg
		Suspension	200 mg/5 ml
3.1.2	**Antifilarials**		
	Diethylcarbamazine Citrate	Tablets	50 mg
3.2	**Antibacterials**		
3.2.1	**Beta Lactam Medicines**		
	Amoxicillin	Powder for suspension	125 mg/5 ml
		Capsules	250 mg, 500 mg
	Amoxicillin + Cloxacillin	Dry Syrup	125 mg + 125 mg per 5 ml
3.2.2	**Other Antibacterials**		
	Ciprofloxacin HCI	Tablets	250 mg, 500 mg
	Ofloxacin	Eye/Ear Drop	
	Ofloxacin+Omidazole	Suspension	50/100 + 125mg/5ml
	Co-Trimoxazole (Trimethoprim +Sulphamethoxazole)	Tablets	40+200 mg 80+400 mg
3.3	**Antifungal Medicines**		
	Fluconazole	Tablets	150 mg
3.4	**Antiprotozoal Medicines**		
3.4.1	**Antiamoebic and Antigiardiasis Medicines**		
	Metronidazole	Tablets	400 mg
4.	**Antianemia Medicines**		
	lron Folic Acid	Tablets	Small - Elemental Iron - 20 mg + Folic Acid - 100 mcg Large - Elemental Iron - 100 mg + Folic Acid - 0.5 mg

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5.	**Dermatological Medicines (Topical)**		
5.1	**Antifungal Medicines**		
	Miconazole	Ointment or Cream	2%
5.2	**Antiinfective Medicines**		
	SilverSulphadiazine	Cream	1%
5.3	**Scabicides and Pediculicides**		
	Gamma Benzene Hexachloride	Lotion	1%
6.	**Gabtrointestinal Medicines**		
6.1	**Antacids and other Antiulcer Medicines**		
	Ranitidine Hydrocholoride	Tablets	150 mg
	Rabeprazole	Tablets	10, 20 mg
6.2	**Antiemetic**		
	Ondansetron	Tablets	4 mg, 8 mg
		Syrup	2 mg/5 ml
6.3	**Antispasmodic Medlcines**		
	Dicyclomine HCI + Paracetamol	Tablets	10/20 mg + 500 mg
7.	**Vaccines**		
	Rabies Vaccine	Injection	
	Tetanus Toxoid	Injection	
8.	**Nasal Drops**		
	Xylometazoline	Nasal Drop	0.05%, 0.1%
9.	**Antioxytocics**		
	Isoxsuprine Hydrochloride	Tablets	10 mg
10.	Medicines Acting on the Respiratory Tract		
10.1	**Antiasthmatic Medicines**		
	Salbutamol Sulphate	Tablets	2 mg, 4 mg
10.2	**Cough Preparation**		
	Cough Expectorant	Syrup	Diphenhydramine HCI - 14.08 mg Ammonium CI - 138 mg, Sodium Citrate - 57.03 mg and Menthol - 2.5 mg/5 ml
	Cough Suppressant	Syrup	DextromethorphenHBr - 10 mg PhenylpropanolaminHCI - 12.5mg, Chlorpheniramine Maleate - 2mg and Menthol - 1.5mg/5ml
11.	**Nutrition, Vitamins and Minerals**		
	Calcium	Tablets	250 mg, 500 mg
	Vitamin B Complex (As per Schedule V)	Tablets	Prophylaclic Dose
	Plaster of Paris/Gypsona		

[Source: National List of Essential Medicines (NLEM-2015)]

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Section III

Feasibility Analysis of the Proposed Health Model

According of the Health Survey conducted across Delhi for 431 urban poor families. It was found that the average amount per day per person was INR 2.0 and the average family size was found be around 5 people living per family. Therefore, a family was willing to pay INR 10.0 per day for general healthcare services. Therefore, if each urban poor pays INR 2.0 per day, an amount of INR 1.293 Lakhs per month will be collected. This amount if efficiently used can be utilized to develop and maintain self-sustaining model for Basic Health Care Solution

Family size = 5 persons
Amount to be paid per day per person – INR 2.0
Amount collected per day per family – INR 10.0
Total Families = 431
Amount collected per day for all 431 families – 431*10 = INR 4310.0
Amount collected per month for all 431 families – 4310*30 = INR 1, 29,300
Initial cost of establishment = INR 1, 20,000
Amount remaining = 1, 29,300 – 1, 20,000 = INR 9,300

Therefore, a future development and buffer amount of around INR 30,000approx (1, 29,300 - 100,000) can be deposited every month. In the future this fund can be utilized for the enhancement of the community health model. It may be expected to develop a self-sufficient health model which may work for 24*7 hours. It may also be suggested to transform the initial health model to be fully equipped along with at least one dedicated doctor (General Physician) available throughout. We can also propose initially a collaboration with a diagnostic service which can further be improvised to have the diagnostic centre of its own. And the last but not the least we can also provide an ambulance which is available 24 hours at the health centre.

The successful running of the community health model may attract several NGOs also which may offer their services in all the possible ways to this health model to be the most successful one.

Conclusion

The self-sufficient community health model is proposed to be operational in the defined geographical area. It is expected to provide the maximum possible primary health treatment facilities to the residents of the defined area. The community health model established will prove to be a very big asset for the people living in the neighbourhood. This will also prove to be a very remarkable step towards the mankind, as we can see thousands of people are suffering and even have to sacrifice their lives because of lack of proper treatment. Therefore, it can be strongly commented to establish such kind of community health model for the better health care of the people.

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