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Situational Analysis, District Kangra, Himachal Pradesh, India: A Public Health Report

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Abstract

This is a public health report which analyses the district Kangra, right from the difficult geography and topography of the district to stabilizing population profile with increasing geriatric population to expanding laboratory linkages to NICD and PGIMER, Chandigarh to existing insufficient human resources and key public health problems and to compare the present health status indicators with the millennium development goals.

Key Words: Public Health Report; MDGs; Nagarkot; Kangra.

Introduction

Himachal Pradesh is situated in the northwest corner of India. With her difficult topography and limited resources, she has managed to become the polio Free State for the last five years while the neighboring bordering states like Utter Pradesh, Haryana, Punjab, and Chandigarh are still harbouring the wild polio viruses. She has progressed far better than the country in terms of millennium developments goals developments like birth rate 20.5/1000 Population as against 25/1000 of the country; infant mortality rate 50/1000 live births as against 58/1000; couple protection rate 63% as against 54% of the country but lagging behind in exclusive breast-feeding, birth spacing methods and anemia. The leading burden of the diseases in the state falls in the category of chronic obstructive pulmonary disease, tuberculosis, acute respiratory infections, and diarrheas of infancy, which are the major areas of public health priorities.[1]

I was working as nodal officer (Integrated Disease Surveillance Project-IDSP) cum Integrated Child Development Scheme-sector advisor in the Kotkhai block of district Shimla-H.P prior to my joining Master in Applied Epidemiology-Field Epidemiology Training (MAE-FETP) course at National Institute of Epidemiology, (NIE_ICMR), and Chennai. I joined MAE-FETP course to acquire greater skill in epidemiology relevant to the public health practice. Having completed three months of 1st contact session at NIE, Chennai, I was assigned district Kangra at Dharamshala (Himachal Pradesh), IDSP cell for my field placement for which I reported to O/o CMO, Kangra in the last week of April, 2006.

The objectives of field training are:

1. To describe the health facilities available; the socio-cultural and disease profile of people within the district and state;

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2. To identify the major public health priorities and disease burden;
3. To compare the present health status indicators with the millennium development goals.

Materials and Methods

Data Collection/Data Sources

We discussed about the Field Epidemiology Training Program course (FETP) with the Chief Medical Officer, Kangra at Dharamshala and also about the various field assignments which we would undertake in two years. For collection of primary as well as the secondary data, we went to:

-Health branch in the office of Chief Medical Officer, Kangra at Dharmshala;

-Records and reports of the offices of Block Medical Officers/Senior Medical Officers of Shahpur and Kangra blocks;

-Laboratories of Microbiology and Pathology of Dr. Rajindera Prasad Medical College, Tanda (Kangra);

-Deputy Commissioner/Additional Divisional Magistrate offices;

-The offices of district statistical officer, Irrigation and public health (IPH), education, police;

-District census and election officer at Kangra and also, their corresponding head offices at Shimla either by phone or personal visits so as to know about the present health scenario, secondary data availability and the existing surveillance system of the district.[2]

Results

Himachal Pradesh is situated in the north-west corner of India right in the lap of the Himalayan ranges and is almost entirely mountainous with altitudes ranging from 350 to 6975 meters above the sea level. It has deeply dissected topography, a complex geological structure and a rich temperate flora in subtropical latitudes. The hilly state of Himachal Pradesh came into being as Union Territory on 15th April 1948 with integration of 30 princely states. The state is divided in to three zones, 12 districts; 51 sub divisions; and 75 blocks; and *3037* gram panchayats having 17495 villages.[3]

Geographic Profile

The state is located at latitude of 30°22'40" N to 33° 12'40" N and longitude of 75° 45'55" E to 79° 04'22" E. The altitude of state ranges from 350 meters to 6975 meters above mean sea level. The state has an area of 55,673 Sq. Kms. It constitutes 1.69% of India's area and 10.54% of the Himalayan Land mass.

This land locked state is bordered by Jammu and Kashmir in the North, Punjab and Haryana

Figure 1: Maps of Himachal Pradesh and Kangra

in the South West and Northern part of Uttaranchal in the South East. In the North-East, the state forms the international boundary with the Tibetan part of China. Shimla, which once was the summer capital of India, now serves the state capital. The average rainfall varies between 500 mm in Lahaul and Spiti to more than 3400 mm in Dharamshala. Out of 16997 villages in the state only 7867 are directly linked with the all weather roads. Total motorable road in the state is 20,270 kms out of which 7394 kms is metalled. Rail communication is restricted to only two narrow gauge lines connecting Shimla with Kalka (96 km) and Jogindernagar with Pathankot (113 kms) and one 16 kms broad gauge railway line from Nangal dam to Una. At present there are only three Airports namely Jubbar Hatti (Shimla); Bhuntar (Kullu) and Gaggal (Kangra) and about 54 operational helipads in the state. Given the scenic beauty of Himachal Pradesh, she is one of the wonderful states of the country.

Economic and Occupation

The economy of the Himachal Pradesh is dependant upon agriculture and its allied activities and any fluctuation in the agricultural production affects the growth rate considerably. The growth rate in the state was 7.5%. The GSDP at the current prices was estimated at Rs.17938 crores (2004-05) as against Rs. 16075 crores in 2002-03. Agriculture is the main occupation of the people, contributing 35.87% towards the state gross domestic product. Apple cultivation is of special significance for the economic emancipation of the people living in the higher hills of the state. With stone and citrus fruits growing sub-tropical and sub-humid areas, the state is known as Fruit Bowl of India.[4]

Population profile

The state has a population of 60, 77,900 (2001 census), density of the population is 109 persons per sq. km and ranges from 2 in district Lahaul and Spiti (L and S) to 369 in the district Hamirpur. The population of the state constitutes 0.59% of the India's population.[5] The majority of the population is rural (90.2%).

Table 1: Characteristics of the population of Kangra, Himachal Pradesh

Health indicator	Kangra	Himachal Pradesh	India
Total Population	1339030	6077990 (census 2001)	1028737436
Males	661254	3087940	532223090
Females	677776	2989960	496514346
Population density	233 per sq. km	109 per sq. km	325 per sq. km
Urban population	72285 (5.4%)	595581	286119689
Rural population	1266745 (94.6%)	-	-
Sex ratio	1025	968	933
Age			
0-4 years	123191 (9.2%)	560187	NA
5-14 years	290569 (21.7%)	1324203	NA
15-29 years	380284 (28.4%)	1727160	NA
30-44 years	258968 (19.34%)	1176006	NA
45-59 years	171395 (12.8%)	730264	NA
60+ years	123324 (9.21%)	560280	NA
Population above poverty line	224282 families *5(72%)	-	-
Population below poverty Line	64903 families*5 (28%)	-	-

Source: Directorate of Health Services, Shimla, (Himachal Pradesh)

Most of the villages have less than 500 persons (81.5%). The sex ratio is 968 females per 1000 males. Himachal Pradesh has a large area under tribal belt, which covers two districts of Lahaul and Spiti and Kinnour and also Bharmour and Pangi development blocks of Chamba district. (Table 1)

Kangra District Profile- Demographic Information

District Kangra with an area of 5739 sq. km is the biggest in the population covers 22.03% of the total population of the state. Geographically, boundary of this district touches in the east with Kullu and Mandi; in the south with Hamirpur district; in the south-west Una and Hoshiarpur district in the North West-with Gurdaspur district (Punjab). District Kangra lies on 75*35'34"-77*04'4.6" East longitude and 31*41'0"-32*28'05" North latitude. The height of district Kangra is 500 to 5500 meters from the sea level.

Kangra valley derives its name from Kangra town, which was called Nagarkot in the ancient times. Dharamshala's altitude varies between 1,250 meters (4,400 ft) and 2,000 meters (6,460 ft). Since 1960, when it became temporary headquarter of the Dalai Lama, Dharamshala has risen into international repute as "The Little Lhasa in India"- http://www.tibet.net. (Figure 1)

Laboratory Facilities, Linkages and Networking

Availability of adequate laboratory support in terms of existence and adequacy is a pre requisite for successful implementation of any national programme in any given area. It also serves as an integral part of the surveillance system. For example, the laboratories are very much involved in the diagnosis of a disease and tracing the source of infection. It plays a vital role in the early detection of an outbreak. The other services include detection of new disease agents, quality control of biological and to find out natural foci of infection like Plague in Shimla (Rohru). Laboratory has become the basis upon which the lines of the treatment, control of the diseases as well as the preventive measures are conveniently decided. The laboratory networks are ideally at four levels of functions. These are (a) peripheral laboratories and microscopic centers (b) district public health laboratory (c) disease based state laboratories and (d) reference laboratories and quality control laboratories. The objectives of this exercise are to:

1. Identify and describe the existing laboratory facilities in Kangra District;
2. Identify the lacunae (if any)
3. Suggest recommendations to bridge the identified gaps.
4. Establish networking links with other state level laboratories and referral laboratories during routine as well as epidemic situation.

There are fourteen blocks, which in turn, have a total of seventy-eight primary health centers and 13 community health centers and 438 sub centers. There are seven government civil hospitals, one zonal hospital, one medical college and one Ayurvedic College at Paprola. (Table 4). We identified four laboratories primarily. Of these two were at different peripheral level namely, laboratory of Ichhi primary health center and laboratory of Chamunda community health centre. The third was the laboratory of Civil Hospital, Kangra, (District Hospital) functioning at district level and fourth reference laboratory was with Doctor Rajendra Prasad Government (DRPGM) College Hospital, Dharamshala. We visited all four laboratories and had a talk with the laboratory technicians and medical officer or pathologist-in-charge. We identified the resources in terms of manpower and equipments. We went through the records and registered maintained at the laboratories to get a better understanding on processes. We also identified the various tests that are done at the primary (first level) and secondary (referral) level.

Laboratory setting is available at the three-district hospital, five sub-division hospitals, fourteen community health centers and twenty-eight primary health centers. Besides these, there are several private laboratories in the urban and semi- urban areas of the district. Investigation facilities provided were examination of blood, urine, stool, malarial parasites, sputum for AFB and others at primary, secondary and tertiary level laboratories. Laboratories at the district hospital and sub divisional hospitals are manned with pathologist and laboratory technicians. Laboratory technicians are running laboratories at block level/PHC level. Staff pattern (as rationalized) in these laboratories is as below:

1. Primary Health Center – One laboratory Technician.
2. Community Health Center - Two laboratory Technicians
3. Civil Hospital - Two laboratory Technicians
4. District Hospital - One microbiologist

Twelve Laboratory Technicians

External and internal quality control measures were taken as per guideline of different national programme (e.g. sending

Table 2: Key public health priorities in Kangra, Himachal Pradesh

Public health priority	Key elements	Ongoing prevention and control programme
Respiratory diseases, inclusive of COPD, ARI etc.,	• Unhygienic and overcrowding of the houses due to wintry conditions. (Over25% prevalence) • Burning of wood as fuel in houses.	• Proper sanitation • Routine immunization/ Nutrition • School health proper programme.
Diarrheal & dysentery diseases	• 6.1% prevalence mostly in the rural areas • Unhygienic practices of defecation	• Combat team created in every PHC • IDSP in action • Problematic village / areas identified.
Tuberculosis	• High prevalence in the slum areas	• RNTCP in action • DOTS implemented
Iron deficiency anemia	• Over 30% of the prevalence, esp., in the women.	• RCH programme • Parasitic disease control • Iron fortified foods & dietary modification.

blood smears for cross checking to designated state/central government laboratory in national anti malaria programme and cross checking of sputum smear by the supervisors in revised national tuberculosis control programme). Our labs are not equipped to combat the diseases of epidemic potential like measles and dengue and inter sectoral co-ordination with the powerful private sector is also one of the identified lacunae. Institutional linkage facilities for laboratory are available from Dr. Rajinder Prasad Govt. Medical College, Kangra at Tanda and Indira Gandhi Medical College, Shimla for the district hospitals and networking facilities are available with Central Research Institute, Kasauli; PGIMER, Chandigarh and other institute of National Importance is National Institute of Communicable Diseases 9NICD), New Delhi.

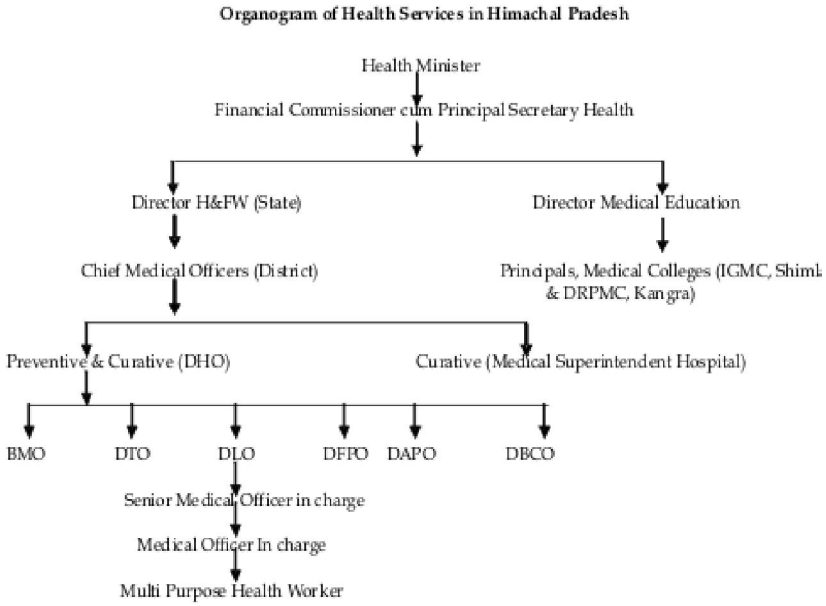
Major public health priorities

The public health problems in the district related with maternal conditions, communicable diseases, non-communicable diseases and injuries. Important communicable diseases were acute respiratory tract Infection (including pneumonia), tuberculosis, chronic obstructive pulmonary disease, acute respiratory infections and diarrheal diseases and geriatric ailments. Exclusive breast-feeding, birth spacing methods and iron deficiency anemia are the areas, which need special attention in the light of the National Rural Health Mission (NRHM). The district is famous for the world known divine places in Kangra and also Dharamshala for Dalai Lama. There are important tourist centers and therefore, they attract good number of tourists round the year and their presence may be the causes for high prevalence of HIV/STDs. Iron deficiency anemia (30%), respiratory diseases (25%), acute diarrheal diseases (6%) and tuberculosis are the three public health priorities in Kangra district (Table 2).[3] There is no public and private networking going on.

Organization of the Health System

Unlike in West Bengal and other states of India where we have the clear-cut division of the two cadres of the health services, i.e., public health cadre specialists and clinicians, but in Himachal Pradesh, both are in one line and therefore, the chances of clashes are obvious. The health ministry is responsible for framing and developing the various health programmes in the state. Principal Secretary of health is responsible for implementing the ministry decisions as well as appointing authority for doctors. Directorate health services are concerned with getting decisions implemented by the districts through their officers and reporting the activities above and downwards. Chief medical officer heads the district and is responsible for implementing various programes in his district. In the process, the

Table 3: alth human resource profile



BMO (Block medical officer); DHO (District health officer); DTO (District tuberculosis officer); DLO (District leprosy officer); DFPO (District family planning officer); DAPO (District AIDS programme officer); DBCO (District blindness control officer)

various program officers help him and block medical officers are responsible for the blocks.

These program officers are responsible for implementing their respective programs in the district and maintaining the records. They are responsible for transmitting the data both ways, that is, to the State Head Quarter (HQ) and to the Peripheral Blocks, thus developing a networking between the State HQ and the peripheral units for reporting and other activities. At the tehsil level and the sub-tehsil level are the Block HQ which is headed by the block medical officer under whom are the civil hospitals, community health centers, primary health centers, civil dispensary and sub-centers. The most peripheral worker is the multipurpose health worker who is the peripheral unit of health manpower responsible for actual implementation of all the national programs (Table 3) while the staff position and medical institutions have been summarized in the tables 4 and 5.

Table 4: Medical institutions with number of beds available as on 31/03/05

District	Hospitals	CHCs	PHCs	CDs	Sub-centers	Beds
Bilaspur	2	5	27	2	117	385
Chamba	4	7	40	0	169	611
Hamirpur	2	5	24	0	152	434
Kangra	8	13	78	2	434	1462
Kinnour	2	3	17	0	33	226
Kullu	2	5	17	0	35	136
Lahaul & Spiti	1	3	14	0	35	136
Mandi	6	9	59	0	311	1110
Shimla	11	6	77	9	260	2174
Sirmour	5	3	34	5	148	604
Solan	5	3	32	5	178	921
Una	2	4	20	1	131	369
Himachal Pradesh	50	66	439	22	2068	8824

Since inception of National Rural Health Mission, (NRHM) health becomes joint responsibility of General Administration, Health department and Panchayat department. At district level the District Health and Family Welfare Samiti has been formed where Sabhapati is the Kangra Zilla Parishad as Chairperson, District Magistrate of Kangra is the Vice-Chairperson and chief medical officer is the member secretary. It was the highest body to look after the different public health activity including all National Health programmes. DRPGMC, Kangra at Tanda staff is working with the help of the state personnel from the various sections. They are likely to be shifted and in the month of December 2006 to Kangra. Civil hospitals like Palampur, Nurpur, Kangra etc., are made the Model Hospitals of the state. According to NFHS-1 (1992), median distance

Table 5: Consolidated staff position of district Kangra as on 30TH April, 2006

Sr. no.	Category of post	Sanctioned	In position	Vacant	Surplus
1.	C.M.O.	1	1	0	-
2.	Medical officers	212	192	26	6
3.	Medical officer(Dental)	23	18	05	-
4.	MEIO	1	Nil	1	-
5.	Distt. food inspector	1	1	0	-
6.	Drug inspector	1	1	0	-
7.	Assitt. Malaria officer	3	1	02	-
8.	Assitt. Leprosy officer	1	0	1	-
9.	Staff nurse	156	112	44	-
10.	Public health nurse	2	nil	2	-
11.	Trained Dai	2	0	2	-
12.	Family planning Field worker	1	1	0	-
13.	Health educator	17	6	11	-
14.	Pharmacist	144	112	32	-
15.	Sr. Lab. Tech.	76	55	21	-
16	Female health supervisor	99	83	16	-
17.	Female health worker	450	450	0	11
18.	Male health supervisor	68	55	13	-
19.	Male health worker	438	273	165	-
20.	Class-IV	224	160	64	-
21.	Sweepers	105	89	16	-

of a sub-center and PHC is 3.5 and 6.9 kms. (Table 6)

In Indian System of Medicine (ISM), a separate department for ISM and H exists in the state which accommodates 1118 ayurvedic dispensaries and 3 unani and 14 homoeopathic dispensaries. The other sectors linked with health in the state are Integrated Child Development Scheme (ICDS) providing services to the pregnant and lactating mothers to the 14 blocks with 1423 Anganwari workers. The Irrigation and Public Health depart. is providing 80% of the drinking water through "gravity water supply scheme" to the state.

Indicators towards the Millennium Development Goals

When we observed the indicators of the millennium development goals (MDGs), we identified that Kangra is the hot spot for HIV/ AIDS cases followed by Hamirpur district, being the bordering district to Punjab. And the cases of the malaria are also on the rise in the Indora belt near to Punjab where the Annual Parasite Index (API) rises above two. High literacy rate and per capita income are 76.7% and Rs. 24,903/- in Kangra as against 64.9% and Rs. 20,989/- in HP is worth remarking.

Table 6: Distance from the nearest health facility

Distance	Sub-Center	PHC	PHC or Sub-Center	Hospital	Dispensary /Clinic	Any health Facility
Within village	14.9	3.3	17.8	-	14.5	28.8
Less than 5 Kms.	44.5	23.4	51.6	-	51.1	55.7
5-9 Kms.	17.6	35.5	22	18.8	21.7	14.2
10Kms.	13.5	38.6	8.4	63.3	10.6	1.3
Median Distance (Kms.)	3.5	6.9	2.9	15.9	3.5	2.2

Source: Directorate of health services HP

Table 7: Indicators of progress for the Health related Millennium development goals, (Kangra), India, 2005

Value of the indicator

Goal	Indicator	Kangra (Year)	State (Year)	India (Year)
Goal 1	Prevalence of the underweight children<5 years of age	60.8% (NFHS-3)	36%	46% (NFHS-3)
	Proportion of the population below minimum level of dietary energy consumption.	15.5%	12.5%	21%
	%age of children 6-59 months of age who received the 1st dose vitamin-A in the past six months.	95%	102.83%	29.7(1999)
	Proportion of the infants under six months who are exclusively breast fed.	99%	NA	55.2 (1999)
Goal 4.	Under-five mortality rate	14	14.4	17.8
.	Infant mortality rate	20 (NFHS-3)	36-49	57-58 (NFHS-3)
	Measles immunization among children under one	103.83%	95.5%	58 (NFHS -3
Goal 5.	Maternal mortality rate	255	287	301
	Proportion of births attended by the skilled health personnel.	80%	90% (2005)	42.5 % (2001
	Contraceptive prevalence rate	95%	104.75%	48.2
	%age of women receiving antenatal care.	80%	94.45%	41.3(98-99)
Goal 6. (HIV)	HIV prevalence among 15-24 years old pregnant women.	0.25-0.5 %	NA	NA
	Condom use rate of the contraceptive prevalence rate	5.6%	6.0 %	4.8%
	Number of children orphaned by HIV/AIDS.	Nil	NA	1.2 million
	%age of the people using a condom during most recent higher risk sexual encounter.	3.4%	5 %	NA
	%age of STI clients who are diagnosed and treated according the guidelines.	About 6000 clients last year (80.5 %)	90%	NA
	%age of HIV positive women receiving anti-retroviral treatment during pregnancy to prevent mother to child transmission of HIV.	Nil	NA	84.5 % (200B
Goal 6	Malaria death rate (per lac)	Nil	Nil	0.09
(Malaria)	Proportion of the people with uncomplicated malaria getting correct treatment at the health facility and community levels, according the national guideline, within 24 hrs of the onset of symptoms.	NA	NA	NA
	%age of women pregnant women who have taken chemoprophylaxis or drug treatment for malaria.	Nil	NA	NA
	The proportion of the households having at least one insecticide treated bed nets	Nil	0.05%	NA
Goal 6 (TB)	Prevalence and death rate associated with tuberculosis	ARI-1.9%(258/lac/yr) DR-3-5%	1.9 % DR-4% in NSP cases	1.5% DR-4-5 %in NSP cases
	Proportion of the TB cases detected & cured under DOTS.	68% 87%	78% 88%	66% 84%
	%age of estimated new smear positive TB cases registered under DOTS approach	98%	91%	93%
Goal 7	Proportion of population with sustainable access to improved water source, urban and rural.	NA	91% (2006)	77.9 % (2006
	Proportion of urban population with access to improved sanitation.	28%	29%	30% (2006)
Goal 8	Proportion of population with access to affordable essential drugs on a sustainable basis.	35% (2006)	34% (2006)	NA

DR-Death rate; **ARI**-Annualized Risk of Infection rate; **NSP-**New slide positive

Decennial growth rate for the decade 1991-2001 is +17.54 as against the country rate that is +21.34. This is one of the remarkable features of the health and family welfare programs of the state. (Table 7) No doubt, the majority of the MDGs of the district are excellent not only when compared with statistics of the state but also with the country.[6,7] All round good health indicators of the state, e.g., the state has succeeded to eliminate the leprosy and the current prevalence rate is 0.6/10,000 population of the state. In the Revised National Tuberculosis Control Program (RNTCP), the new case detection rate is 80% and the cure rate

is 88% to 89%-a successful implementation of the program.

The immunization coverage under Universal Immunization Program (UIP) is >97%. So far as Directly Observed Therapy–Short Course (DOTS) program in the district is concerned, the detection rate is 68% as compared to 75% of the prescribed and the defaulter rate and the failure rate need to be checked. Prevalence of the under weight children (69%) is again the gray area for the district. (Table 5)

But occasional outbreaks of Gastro Enteritis/ measles/rubella despite over 100% reported immunization coverage in the far-flung areas of the district challenge the health system. Some health related millennium developments goals indicators were not available in the district like HIV prevalence among 15–24 years of all women in the state, condom use rate of the contraceptive prevalence rate, number of children orphaned by HIV/AIDS. Maternal aspect of the upper Himachal is bad so far as the institutional deliveries are concerned. Areas of the concern are due to the rough and tough topography of the state leading to untimely and difficult referral services. There is a need to establish a mechanism to ensure non-governmental health institutions delivering quality care to the desired level. There is a need for a dialogue between the private and public health sectors to avoid/reduce duplication of efforts and wastage of resources. 4% increase in the population of elderly people has resulted in increase in prevalence of Geriatric ailments including isolation and neglect of old.

Discussion

Kangra district had extreme climate, as Kangra proper is the plain area while the upper part Dharamshala is hilly and mountainous and extremely rainy, cold and snowy. So, in the latter part the respiratory ailments are in plenty in winter while in the plain area, the diarrheal upsets are quite common in the summer. Though agriculture is the backbone of economy but it is totally rain dependant. So, per hectare yield is less than the state average. Though the district as a whole is well connected and the literacy rate is over 80% in 14 lacs population of the district (22% of the total population of the state), yet poor economy, malnutrition, inadequate infrastructure support reflected to high prevalence of public health problems related to almost all public health diseases. Indicators of millennium development goals are one of the best in the country due to the spread of the government health care network into the peripheries and the people faith into it which has been and reflected in resultant decline in the disease profile.

As Kangra is also famous for the divine temples and tourism of Dharamshala attract many tourists, so the incidences of the HIV/ AIDS cases are the highest in the state. The cases of the HIV/AIDS with the pulmonary tuberculosis are also detectable in the upper Kangra. Due to the lower socio-economic status of the people and living huddled into the single room in the wintry conditions, the cases of the pulmonary tuberculosis and the extra-pulmonary cases 9EPTB) are also on the rise.[8] The more detection of the EPTB cases in the Kangra district over 50% is the remarkable feature for the country. As 90% of the population resides in the rural areas, smoke produced by wood fuels may be another risk factor for prevalence of respiratory diseases in highest numbers. Inadequate treatment for acute conditions and chronic exposure to the risk factors leads to the prevalence of chronic diseases in such large numbers.

Water and Food Borne Diseases

This is the second largest cause of morbidity in the district. Natural water bodies like rivers, khads, nullahs, lakes and springs etc. are vital sources of drinking water supply. They are frequently exposed to contamination through pollutants during rainy seasons and winter as the tanks made for storage of water at the source are washed by the rains or disrupted because of the landslides or the pipes are frozen and broken at various places leading to contamination of the drinking water and possible explanation for the prevalence of diseases caused by water in such high numbers. Practicing unhygienic sanitary habits like

outdoor defecation in the cultivable lands, washing hand with mud after defecation and the most important is the ignorance about the mode of spread of these diseases are all possible risk factors.

Iron deficiency anemia and skin diseases

The climatic conditions are extreme with severe winter for five months and rainy season for many months next to Cherrapunji, forcing people to stay indoors clustered in a small room, which favors spread of skin diseases and as the nutritional status is also poor due to tough life style of the people in the mountainous areas. As proper personal hygiene is not practiced, may be because of extreme cold and lack of awareness, the skin diseases have a high prevalence of 31.56/1000 in 2005.

Wound and Injuries

Hilly terrain forces people to climb up and down for their livelihood. This exposes them to occupational injuries. Possible causes are slippery and narrow tracks, land slides, distant places of work, and poor means of communications.

In the district level some data were regularly generated but some data pertaining to the indicators of millennium development goals were not being generated and for this, some modifications were required in the forms (data collection instruments). In addition to this, analysis of the raw data were to be done at the level of block and district also so that the officer concerned can take appropriate measures at their own level as per the result of analysis. Data, which are generated regularly, is not computerized and installation of the computers at each block level can prevent wastage of time, money and manpower.

Existing peripheral laboratories at the primary health center level are capable of handling microscopic examination of sputum and blood smears. Peripheral laboratories needed minimal structural modification of the laboratory areas in the community health centres to perform these functions well along with routine examination of blood, urine and stool with some biochemical investigations. All of them were currently equipped with microscopes for performing microscopy for tuberculosis and malaria. But they are not equipped with any rapid diagnostic tools or any other reagents. The district public health laboratory needs to be constructed and strengthened as per the guidelines of the IDSP in the state for proper discharge of disease surveillance and outbreak control.[9]

Conclusions and Comments

There are many factors that influence the quality of health services, morbidity and mortality of people residing in the state of Himachal Pradesh. Some of them can be identified as following:

1. The state government has provided drinking water supply to approximately 90% villages and all urban areas. The quality of water however, needs to be kept under surveillance at pre-ensured acceptable standards to prevent water borne diseases, as they are the second largest cause of morbidity in the state.
2. Distribution of the primary health care facilities is uneven. Of the 3037 gram Panchayats, 400 are without primary health care facilities. The available centers are also haphazardly distributed thereby, creating difficulties for the rural folks to get the right line of treatment and further speedy referrals and subsequent follow-ups. Institutions located in comfortable areas are better staffed than those in rural and remote areas. This results in undue referrals and delayed treatments.
3. There is no urban primary health care setup in the state resulting in over-crowding in zonal, district and sub-district hospitals.
4. The existing primary health care facilities are under utilized because of ill-defined referral system. The secondary and the tertiary care centers, as a result are overcrowded. Human resource

development: There is a need of continuous medical education (CME) and in-service training of existing health manpower at different levels of the system.

5. Private sector: There is a need to establish a mechanism to ensure non-governmental health institutions deliver of quality care to the desired level. There is a need for a dialogue between the private and public health sectors to avoid/reduce duplication of efforts and wastage of resources.
6. Issues related to epidemiological-demographic transitions requiring urgent attention: Increase in age and prevalence of chronic diseases in the form of non-communicable diseases. Increase in the population of elderly people has resulted in increase in prevalence of Geriatric ailments including isolation and neglect of old.

   -Reproductive health of population: Gender issues affecting women resulting sexual exploitation, rape, domestic violence, unwed mothers, harassment of women at working places, and of course, widow related continuing problem.

   -Life style related problem:

   -Risky Behaviors: Teenage problems like premarital sex and its consequences e.g. teenage pregnancy, and increasing incidence of Reproductive Tract Infections /Sexually Transmitted Diseases/, and HIV/AIDS.

   -Drugs addiction: Increase in smoking, drug addiction and alcoholism, which are unfortunately, on the increase, both between adolescents and adults, in all parts of the state.

Recommendations

The major strategies for improving health of people, which can be adopted, are

1. Provision of graded referral system by the state, that is, within the reach of communities through primary, secondary, and tertiary institutions.
2. Educating the communities for adopting responsible health care practices.
3. Developing partnership with non-government organization and private-practitoners.
4. Functional integration of Indian system of medicine with health services.
5. Inter-sectoral co-ordination for health with other departments.
6. Greater utilization of information technology.

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