

# Rapid assessment procedure: The role in assessing morbidity pattern in rural community of India

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## Abstract

**Objective :** To obtain data on morbidity pattern of a rural community by using rapid assessment procedure (RAP) for planning health services.

**Design:** Qualitative survey.

**Setting:** Study conducted at Himalayan Institutes of Medical Sciences, Dehradun in Garhwal region of Uttaranchal situated in Northern part of India during October 2000.

**Subjects:** 7 out of 150 villages and a total of 120 local health functionaries (LHFs) were randomly selected. Ranking for five most common diseases based on their experience was done, separately for each population group. The level of agreement between different key informant and morbidity registers was assessed by Spearman rank co-relation method.

**Results:** There was wide variation in opinion of various key informants regarding the common presenting complaints among men. But all local health functionaries and data from morbidity register agreed to the fact that leucorrhoea and anaemia were the two most common presentations among women. Both the RAP method used here point out that ARI followed by different types of skin infection were most frequently reported problem in children. Spearman's rank correlation showed that there was significant mutual agreement between different types of LHFs in problems related to women and children but none of the sources agreed with the other source in problems related to men.

**Interpretation & Conclusion:** The rapid assessment of Community Morbidity may be conducted quite satisfactorily with the help of local health functionaries (LHFs)

## INTRODUCTION

The planning for delivery of health care services in a rural area by any health organization requires the knowledge of the morbidity pattern of the community. Valid and reliable data on community morbidity is often not available, neither with Government Agencies nor with Non-Government Organizations. The classical social science and epidemiological research methods are usually too time consuming and resource intensive to be used by programme managers for improving health programme operations. <sup>1</sup>

Over the last decade several methods of rapid assessment have been developed to assess health status, programme functioning and impact as well as health beliefs and behaviours in various settings <sup>2</sup>. Such Rapid assessment procedures (RAP) are a reality in International Health, nutrition and development planning <sup>2</sup>. We explored the potential of using two different types of RAP methods i.e.

key informant interview and review of document i.e. morbidity register with following objectives:-

1. To obtain data on morbidity pattern of a rural community by using RAP for planning health services
2. To study the concordance between data obtained by key informant interview and review of morbidity register through RAP

## METHODS

The study was conducted by Himalayan Institute of Medical Sciences (HIMS), Dehradun, a medical college in the Garhwal region of Uttaranchal in Northern part of India. This upcoming institution was asked to devise a method for studying morbidity pattern of a rural community within a short span of time by rural development institute - Dehradun. The area covered under the study was Garhwal region of

Uttaranchal, India. This is a hilly area with 150 villages having a population of 25000 each. In every rural community there are a few health functionaries who provide health services to them i.e. auxiliary nurse midwife (ANM), medical officers of primary health centres (PHCs) and local practitioners (LP) including doctors from indigenous system of medicine. This study was conducted in October 2000.

Out of 150 villages 7 villages were randomly selected namely Kunjapuri, Kumalda, Shyampur, Bhogpur, Talai, Vishthapit & Chidderwala. A total of 120 local health functionaries (LHFs) i.e. ANMs, LPs and MOs of PHCs in these villages were randomly selected for key informant interview. Only those health care functionaries who were working in the area for last five years or more were included in the study. Interviews were taken by doctors from department of community medicine, HIMS, Dehradun. Information was recorded on a pre-designed proforma. LHFs were asked to rank five most common diseases from their experience in their respective villages in descending order of occurrence, separately for each population group i.e. women, children and men. A time period of ten days was allotted to complete and submit the filled proforma. Similar information, pertaining to last one year, was also noted from the morbidity registers at each of the PHCs. The data obtained from registers were separated for each village and analyzed. Using relative ranking method, the diseases rated highest in each population group by a LHF was given a score of five. Subsequent diseases rated lower were given scores of four, three, two and one, respectively. The scores of diseases prevalent among women, children and others were obtained by taking the sum of these scores obtained from three types of LHFs and morbidity register. Scores assigned by individual LHFs, OPD register and also aggregated scores were ranked in ascending order of magnitudes. Thus the top five diseases prevalent in region were delineated. The level of agreement between different key informants and morbidity register was assessed by Spearman's rank correlation method.

## RESULTS

The overall ranking of presenting complaints in various groups reveal that, asthma was commonest among men., leucorrhoea followed by anaemia was commonest complain in women and acute respiratory tract infection (ARI) was commonest morbidity among children. When data was segregated for individual responses of all health functionaries it was observed that there was wide variation in opinion of the various key informants regarding

presenting complains in men. In the opinion of ANM and MO, fever was the commonest complain, but local practitioner ranked it as second commonest presentation. (Table 1) The data from morbidity register depicts that men suffered most commonly from ARI

**Figure 1**

Table 1: Rank positions of reported morbid conditions from different sources

Disease	ANM	LP	MO	LHF <sub>s</sub>	MORBIDITY REGISTER
a) MEN					
Fever	1	2	1	1	6
Diarrhoea	4	7	5	5	4
APD <sup>1</sup>	7	1	2	3	5
Asthma	2	3	3	2	2
TB	5	4	8	7	7
Arthritis	6	8	7	8	8
Skin infection	8	6	4	6	3
ARI <sup>2</sup>	3	5	6	4	1
b) WOMEN					
Leucorrhoea	1	1	1	1	2
Anaemia	3	2	2	2	1
Backache	2	3	7	3	3
Menstrual problem	4	6	3	4	5
UTI <sup>3</sup>	6	7	4	6	6
PID <sup>4</sup>	5	4	5	5	4
Arthritis	7	5	6	7	7
c) CHILDREN					
ARI	1	2	1	1	1
Skin infection	3	3	2	3	2
Malnutrition	6	4	4	4	4
Diarrhoea	2	1	3	2	3
Worm infestation	4	5	6	5	5
Dental problem	5	6	5	6	7
Allergy	7	7	7	7	6

1: Acid peptic disorder, 2: Acute respiratory tract infection, 3: Urinary tract infection, 4: Pelvic inflammatory disease

All three local health functionaries i.e. ANM, MO and LP agreed to the fact that leucorrhoea followed by anaemia were the most common presentations amongst women. On the basis of data from morbidity register at PHC, anaemia was the commonest reported condition among women and leucorrhoea at second order. In combined ranking of LHFs, arthritis was reported as the least common complain amongst top five diseases prevalent in women. In the opinion of ANM, MO and data from morbidity register, ARI was the commonest problem in children. According to local practitioner diarrhoea was most common illness amongst children. Allergy was the least common morbidity condition observed in the above group by all the health functionaries whereas morbidity register reported dental problem as the least common problem. Differences in opinion for the second ranked morbidity was observed, diarrhoea according to ANM, ARI according to LP and skin infections of different types i.e. scabies, fungal infection, bacterial infection in the form of boils, abscess and furuncle, according to MO and morbidity register was the second commonest morbidity, while on the basis of combined decision of LHFs, diarrhea got the second place in ranking. Malnutrition was ranked at fourth place by all the sources except ANM who ranked it at sixth place.

Spearman's rank correlation was calculated to assess level of agreement between various key informants and morbidity register. For men, no significant agreement was found between local health functionaries and morbidity register. Similarly there was no significant mutual agreement between different pairs of health functionaries for health problems in men. For women, LP and ANMs, not only showed significant mutual agreement but both the sources also agreed significantly with morbidity register at varying level of significance. MO's ranking was not in concordance with rest of the sources for women and was not statistically significant too. Agreement between different sources was high for children. For this group decision based on opinion of MOs was highly significant with the morbidity register ( $P=.001$ ). The other health functionaries also showed significant mutual agreement as well as with morbidity register. It was observed that for men and women, the opinion of MO of PHCs varied from the data in morbidity registers at PHCs but it was significantly agreeing with other key informants in children. Nevertheless, the overall ranking of all local health functionaries taken together for all the groups i.e. men women and children, agreed significantly ( $p=.023$ ) with the data from OPD register.

**Figure 2**

Table 2: Agreement shown by rank correlation between Local health functionaries regarding reported morbidity in different groups.

Source	ANM Correlation coefficient (Significance)	LP Correlation coefficient (Significance)	MO Correlation coefficient (Significance)	Morbidity register Correlation coefficient (Significance)
<b>Men</b>				
ANM	1	.286(.493)	.262(.531)	.214(.61)
LP	.286(.493)	1	.667(.071)	.095(.823)
MO	.262(.531)	.667(.071)	1	.238(.570)
<b>Women</b>				
ANM	1	.786*(.036)	.429(.337)	.857*(.014)
LP	.786*(.036)	1	.357(.432)	.857*(.014)
MO	.429(.337)	.357(.432)	1	.500(.253)
<b>Children</b>				
ANM	1	.857*(.014)	.857*(.014)	.786*(.036)
LP	.857*(.014)	1	.893**(.007)	.857*(.014)
MO	.857*(.014)	.893**(.007)	1	.964**(.000)

\*Correlation is significant at the .05 level(2 tailed), \*\*Correlation is highly significant at the .01 level(2 tailed)

## DISCUSSION

The provision of primary health care in rural areas rests on the shoulders of village level health care personnel who stay close to the community and people have faith in them. For the same reason they are in a good position to give an overview of the morbidity pattern of the community from where their clients come.

Morbidity spectrum depicted by the present study suggests that the commonest morbidity among women was Leucorrhoea which is in agreement with the observations

made by several researchers across the country <sup>3,4,5,6,7</sup>.

These workers also recorded aches & pains as a fairly common problem among women which is also in agreement with our study. Similarly, general morbidity survey among women in rural areas of India by National Council Applied for Economic & Research (NCAER) <sup>8</sup> found body aches and pains as fifth common cause of their morbidity.

In our study, the morbidity data amongst children was collected as one whole group and not dichotomized into preschool and school age groups. This might be the reason for the difference in the results of our study compared to others; for instance ARI was the most common morbidity in this study whereas it has not been mentioned by Shanthi et al <sup>9</sup>. ARI, skin infections & Diarrhoea were found as the I, II & III most common morbidity in children while survey report of National Family Health Survey - 2 (NFHS-2) <sup>10</sup>, India enlisted these morbidities on III, I & II rank respectively.

The most common morbidities amongst men were fever and URTI, which is in agreement with the findings of NCAER <sup>8</sup> and Health Information of India <sup>11</sup>. NFHS-2 <sup>12</sup> reported Malaria (fever) & Asthma (URT) to be the first and second most common morbidity, respectively in men of rural Uttar Pradesh.

The study suggests that rapid assessment of community morbidity may be conducted quite satisfactorily with the help of local health functionaries along with morbidity register data. With certain modifiable limitations, it can be an effective tool for delineating major health problems in community. The results obtained here depicts that we can rely upon experiences of ANM, LP and MO for deciding about morbidity pattern in women and children but not for men as there is wide variation in opinion of different level of health functionaries in problems related to men. In present study we have compared the opinion of LHF's with data in morbidity register at PHC, assuming that this register reflects the true morbidity pattern of the area to a great extent but our assumption might not hold true in cases where rural population prefer to visit local practitioners more than PHC which are situated at greater distances. It was also observed that opinion of MO was not in agreement for men and women with morbidity registers maintained at their PHCs, this disagreement indicates that the data maintenance at PHCs are not being done properly. In this study we have confined ourselves to five diseases consider to be of common occurrence by different types of local health functionaries in various age groups. So the morbidity picture

we have drawn from above data only partly represents the real scenario. As the information obtained in the present study is not based on survey of the community, it partly reflects the truth and to increase its validity it must be supported with some other qualitative research methodologies like focus group discussion, pile sorting, Delphi method etc. for its effective use in health planning.

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