CHAPTER VII

Conclusion

Newton said "I seem to have been only a boy playing on the sea shore, and diverting myself, now and then in finding the smoothest pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me"

7.1 General Introduction

It's effort which may yield or may not. But one should put his whole hearted efforts to bring out the real jam to place to the people for its utilization. Attempts have been made to bring out some thing which may help the policy planners to bring out little change in people's perspectives, if possible. I do not know how much help will be made possible. However, I have tried myself to put my best effort on the issues pertaining to health. In the context of 'Health status in rural Assam', four issues have been addressed. These are Infant mortality, Maternal mortality, Life expectancy and Cause specific mortality. None of the issues is new, but within them some thing new has been attempted to derive. For instance, infant mortality data is available at state level. Due to sample size and other related issues, it has not been possible to
determine a level or trend of infant mortality at district level. The dis-
centralized planning was therefore not possible. With the method
introduced for inflating vital rates at district level presented in chapter 2,
it may be possible to get estimates at district level.

7.2 Findings of the study

In the chapter 2, it has been attempted to make available through
a new method the vital rates at district level. The data will help the
planners to prepare result-oriented programmes for implementation
keeping in view the level of demographic parameters. The data reveals
that the infant mortality in Assam ranges from 65 to 98 per thousand live
births. There are three districts in Assam viz. Bongaigoan, Dibrugarh
and Nalbari which lie in the highest bracket with infant mortality more
than 90. Four districts viz. Kokrajhar, Golaghat, Darrang and Kamrup
have infant mortality from 80 to 90. There are eight districts with infant
mortality between 70 and 80 and eight districts have infant mortality
between 60 and 70. In the lowest bracket, the districts are Hailakandi,
Dhubri, Karbi Anglong, Marigaon, North Cachar Hills, Nagaon, Goalpara
and Karimganj. The reasons for high and low infant mortality have been
discussed in the chapter 2. However, the data suggests that availability
of medical facilities may not be the only for high or low infant mortality,
there may be other reasons such as social customs etc. The table 7.1 provides the number of districts with various ranges of infant mortality.

There is another source of data based on NSSO’s natural division. The data on this source suggests an important trend of infant mortality in two divisions in Assam viz. ‘Plains Western’ consisting of districts of lower Assam and ‘Plains Eastern’ which includes districts of upper Assam. The data provided in table 7.2 reveals that infant mortality is increasing in the upper Assam districts and decreasing in Lower Assam districts.

The second issue addressed in this study is the maternal mortality. The purpose was to find out the status of Assam in respect of maternal mortality. For this purpose a new method of estimation has been derived and with the help of this the maternal mortality has been estimated for some selected states including Assam. It has been seen that estimated number of maternal deaths are not declining though not increasing. Like infant mortality, which is constant in the state for last several years, the maternal mortality is also stagnant in the state; rather the absolute value is on the higher side. The maternal deaths in 1997 were 2861 with MMR as 401. It has increased to 3846 maternal deaths in 1998 with 537 MMR. It has declined to 3008 maternal deaths in 1999 with 441 MMR
and further increased to 3666 with 518 MMR. For acceptability of the estimates, the published data on maternal mortality from Sample Registration System is also placed for the available years. Intervention strategies for bringing down the maternal deaths may be prepared based on the data.

The third issue relates to expectation of life for the state of Assam. The work has been done on integrated expectation of life at different age group for the state by using entirely a new method, which is of academic interest. For policy matters, it may not be of much use. The information that is useful for policy makers is given below.

The data provided in the relevant chapter shows about five year's difference between Assam and India at the beginning of the nineties. However, the gap has narrowed down in the recent years. During the period the gap has narrowed down to four years. Assam needs to increase its heath facilities; otherwise, the state will not be able to stay with the average, what to talk of expectation of intervening ages. As one goes up to upper ages, the expectation of life for the remaining span reduces, but in case of Assam it is lower than the average all India.

A brief of expectation of old aged people can be seen from the concerned chapter. It is observed that a man of 55 years age is
expected to live for another 18.1 years in Assam, whereas it is 19.4 years in case it is calculated taking all India data. Obviously it is more in other parts of the country. The data shows more than one year difference between Assam and India at the beginning of the nineties. However, the gap has increased in the recent years. During the period the gap has widened to two years. The data indicates that the gap may further be widen if Assam do not increase its heath facilities.

The child born at Assam is expected to live for 55 years, whereas it is more in most part of the country. Highest difference of around 5 years has been observed in the period 1990-94 and the lowest difference of 4.4 years in the periods 1993-97 and 1994-98. The actual value varies in case of Assam from 55.1 to 57.2, whereas in case of India, it is from 60.0 to 61.7.

The fourth issue caters the cause specific mortality in the state of Assam. If the data on age specific death rates are taken into consideration it is seen that about 20 percent of the deaths are occurred in the age group less than 1. Death rates decreases after the age 5 and than after age 55, it starts going up. For the age group 0-4 also, the death rate is higher by 5 point in Assam. In most of the age group the death rates are higher in Assam than all-India. The data on cause
specific mortality will reveal the burden of diseases in that particular age group. Let us therefore discuss causes of deaths of this age group for India and Assam. This cause is not basically a cause, but an unclassified group. So it is seen that about one-fourth of the total deaths occurs, where doctors can find the cause of deaths.

The 2nd identifiable cause of death in rural India after the biggest killer disease is 'infectious and parasitic diseases'. This includes deaths due to Cholera, Typhoid & Paratyphoid, Dysentery, Diarrhea and Gastroenteritis of presumed infectious origin, TB of lungs, Leprosy, Tetanus, Rabies etc. Out of around 40000 thousand deaths, this cause group claims about 5000 deaths. Another important disease is 'pregnancy childbirth and puerperium'. This cause group claims on an average of one-tenth of the total deaths in the country from the women of age group 15-49.

The data further reveals that sizable percentages of deaths occur due to cancer and that is about 5 percent of total deaths. Deaths due to child disease that is 'conditions originating in the perinatal period' occupy the second position in comparison to total deaths. Pregnancy related deaths also claims about one percent of the total deaths.
A look on the data indicates that out of 122 deaths, 69 male and 53 female, 30 deaths are identified as deaths due to 'coughs (disorders of respiratory system)' which is the highest among all ten causes. Male deaths are more than female. However, in terms of percentages, female death under this cause is highest (26.4%). The 2nd rank goes to 'digestive disorders'. This group claims 19 deaths (15.6%). It is important to note that out of 53 female deaths, 6 deaths pertain to 'childbirth and pregnancy' i.e. maternal deaths, which constitutes 11.3 percent of the female total deaths. Another important area is of child deaths. Here the significant area point that can be noted is death of 16 infant deaths of 122, which constitutes 8.2 percent of total deaths.

The percentage distribution of deaths by major cause-group for rural Assam is given in the following statement. The highest percentage of deaths occurs in rural Assam for the cause group diseases of the respiratory system, followed by infectious and parasitic diseases. The third cause group is symptoms, signs and abnormal clinical findings not elsewhere mentioned. This is an unclassified cause group. The third cause group is basically the diseases of circulatory system. It may be mentioned that the specific cause "cancer" claims around 7 percent of
total deaths in Assam. Deaths due to child deaths claims 5.6 percent and maternal deaths are of the order of 2.3 percent.

The status of Top Ten killer diseases in Assam can be seen from the following statement. Top ten diseases consists of around two-third of total deaths during 1996. The specific disease ‘bronchitis & asthma’ claims the highest percentage of deaths in Assam. The same cause claims the highest percentage of deaths in all-India. The estimate in all-India is based on about 3500 number of deaths, whereas the estimate of Assam is based on only 22 deaths. But ranking remains the same. It is also expected that percentage of deaths (18.0%) would be close to the reality. The data also reveals that males are more prone to the disease than the female. The second cause responsible for deaths in Assam is the ‘heart attack’. It claimed about 6.6 percent of total deaths. The third to sixth ranks with equal number/percentages of deaths are occupied by ‘dysentery’, ‘peptic ulcer’, ‘cancer’ and ‘respiratory infections of new born’. The seventh to ninth ranks are secured by the diseases ‘malaria’, ‘influenza’ and ‘pneumonia’. The tenth killer disease is ‘TYPHOID’.

It is important to note that during the year 1997, the first two dreaded diseases which claims the highest and the second highest number/percentages of deaths are ‘bronchitis & asthma’ and ‘HEART
attack', while the third highest percentage of deaths are claimed by 'cancer'. The percentages of deaths pertaining to these causes are 11, 9.7 and 7.7 respectively. The fourth dreaded disease during 1997 was 'paralysis of cerebral apoplexy' with 5.1 percent. The fifth, sixth, seventh and eighth rank are secured by 'peptic or gestric ulcer', 't b of lungs', 'anaemia' and 'typhoid & paratyphoid' with 4.9, 4.5, 3.9 and 3.6 percent respectively. The ninth and tenth diseases are respectively 'influenza' and 'pneumonia' with 3.6 and 3.4 percent respectively.

In 1998 also the highest number of deaths are claimed by the disease 'bronchitis & asthma' with slight change in percentage of deaths (14.2 percent). In this year the disease 'diarrhoea & gastroenteritis' which did not find a place within the tenth rank came to the second rank with 9.6 percent of deaths. The specific cause 'heart attack' that claimed the second dreaded killer disease in 1996 and 1997 has come to the third position with 7.6 percent of deaths. 'T B Of Lungs' claimed 5.2 percent of deaths and ranked fourth. This cause was the seventh killer disease in 1997. Malaria was in fifth, which did not figure in 1997, but occupied seventh position in 1996. Anaemia ranked sixth in 1998, which occupied seventh in 1997, but did not figured within the tenth rank in 1996. The disease 'congestive and other heart diseases' ranked seventh.
claiming 3.4 percent of deaths in 1998. The diseases ‘influenza’, ‘peptic or gastric ulcer’ and ‘typhoid & paratyphoid’ ranked eighth, ninth and tenth, which figured in previous years also.

From the above discussion, it is very clear that the above mentioned diseases are the common diseases in Assam, which needs to be minimized to increase the longevity of human life in Assam.

7.3 Policy Prescription

Infant Mortality in Assam is stagnant in the state for the last ten years. To identify the areas responsible for the present status, the first thing that has been done is to find which division claims more infants lives. The findings in the study suggest that attention needs to be given to arrest the increasing trend of infant deaths in the upper Assam division. For micro-level, planning, one should know the exact area or district where it needs more attention. The study suggests that there are three districts in Assam viz. Bongaigoan, Dibrugarh and Nalbari which lie in the highest bracket with infant mortality more than 90. Four districts viz. Kokrajhar, Golaghat, Darrang and Kamrup have infant mortality from 80 to 90. Though, all the districts of Assam needs special attentions, for the tine being policy implementing authority should atleast take care for
these districts so that a little more number of children can celebrate their second birthday.

Maternal mortality, which is one of the important components of health status, is in bad shape in the state of Assam. Though in comparison to the country as a whole, it is more or less close to all-India average, it is far off from the states like Tamil Nadu, Andhra Pradesh and others. To dig into the present status, the study suggests that the status of maternal mortality has also not improved. The maternal mortality in 1997 was 401. It has increased to 537 in 1998, then declined 441 in 1999 and once again shot up to 518. It means the maternal deaths per hundred thousand births oscillate between 400 and 550.

Expectation of life at birth in Assam has marginally increased from 55.1 during 1990-94 to 57.2 in 1995-99, whereas during the same year, India's expectation of life at birth has increased from 60.0 to 61.7. On the other hand, the expectation of life at age 55+ has declined from 18.1 to 18.0 during 1990-94 to 1995-99. the same for India increased from 19.4 to 20.3. The health status of Assam is no better than the demographically backward states like Uttar Pradesh, Bihar, Madhya Pradesh and Others. To improve the status, it is very much required that the child mortality is minimized after taking recourse to various available
methods. It is also required that death rates are minimized at higher age group so that life span of the people of Assam is increased.

Now to enhance the life span it is important to identify the prevailing diseases in the state. The data available suggests that the first six diseases in Assam that claims lives in decreasing are:

1. Bronchitis. & asthma
2. Heart attack
3. T.B. of lungs
4. Paralysis of cerebral apoplexy
5. Prematurity
6. Cancer

If the cause of deaths are analyzed by age it is seen that the scenario is little different. The first six specific causes that claim the life of infant in order of descending order are:

1. Prematurity
2. Pneumonia
3. Respiratory infection of new born
4. Congenital malformation
5. Anaemia
6. Diarrhoea of new born
Another important sector for improvement in health is the reproductive age of female. Whereas the details of analysis have been done in the specific chapter, the important specific causes responsible for deaths in descending order of percentages are:

1. Diarrhoea & gastroenteritis
2. Influenza
3. T b of lungs
4. Cancer
5. Anaemia
6. Heart attack

As it has been seen that to increase the expectation of life, it is required that mortality is to be minimized. It is possible if death due to specific causes is minimized. It is therefore necessary to identify deaths due to at least serious causes. The first six causes which claim maximum percentage of deaths in descending order are:

1. Bronchitis & Asthma
2. Heart Attack
3. Cancer
4. Paralysis Of Cerebral Apoplexy
5. T B Of Lungs
6. Congestive And Other Heart Diseases

To improve the health status, it is therefore necessary that adequate measures are taken to prevent deaths due to these causes.

Tables pertaining to chapter VII are given in Annexure VI