

Reproductive and Child Health Services in Karnataka

How Much Do They Cost?

Anaka Aiyer and Poornima Vyasulu

Centre for Budget and Policy Studies

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We are grateful to the officials of the Health Department of Karnataka for their co-operation in providing and explaining the data, and for discussions at various times.

Responsibility for errors and opinions is that of the authors alone.

RCH Services in Karnataka—How Much Do They Cost?

Introduction

In 1999, the Karnataka World Bank report made the following observations:

- The Maternal Mortality Rate was high at 450/100000 live births
- 84% of the cases received ANC—antenatal care—preceding the survey.
- 38% of the women delivered in health institutions, nearly half of the deliveries were attended to by doctors, nurses or midwives, 22% delivered with the help of TBAs
- Nearly 1/4 of all mothers did not receive TT, 3/4 of which received OFA tablets
- Present GOI rules state that each PHC has to cater to a population of 30000 and each sub centre should cater to a population of 5000. Number of PHC/lakh had grown to 4.64 and number of sub centres per lakh had grown to 24. Each PHU was to cater to a population of 15000.
- At the village level there was to be at least one Dai for a population of 1000.
- Per capita expenditure on health (in 1995-96) was projected to be Rs121.34
- Recent statistics (2001) have concluded that health care services are provided at 210 Rs. Per capita at the state level.

Recently, in the sphere of development debates, budget analysis as a tool is gaining popularity. It is felt that this tool enables us to understand how the defined goals of development and policy pronouncements are provided for in terms of financial resources. This note is a part of such a budget analysis process of the RCH programme as it examines the allocation of funds to the RCH programme.

The note is based on the work of a project in Karnataka, undertaken by CBPS, looking into the role of the PRIs in providing effective RCH services. The project focuses on three issues - accountability, accessibility and affordability of the RCH service in Karnataka and Budget analysis is the tool used to understand the efficacy of RCH services.

Provision for RCH in the State Budget

In continuation of its earlier Maternal and Child Health services schemes, the government launched the Reproductive and Child Health [RCH] programme in 1997 with some modifications in the scope and approach. The new RCH service would cover the following additional aspects –

1. Improved Ante Natal Care (ANC)
2. Education on AIDS and Reproductive Tract Infections(RTI)
3. Education for the youth on the same
4. Contraceptive use

It is interesting to note that the state budget has no separate head for the RCH service, either under the medical and public health head of account or the family welfare account. Perhaps the term MCH is used interchangeably with RCH and the line department continues to use the MCH term to include RCH. Since RCH as a budget head is difficult to identify in the budget documents and MCH was more easily identifiable most of this study will be based on MCH budgets.¹

In the nineties, the Karnataka government put aside Rs 1,10,000 lakh for total medical and public health expenditure. The State proposed to spend 3.6% of this on family welfare programs out of which 15.43% (i.e. Rs. 463 lakhs) was allotted for maternal and child health services². At the end of the ninth plan we found that 97% of the total medical and health expenditures was actually spent³. Only 83% of the family welfare budget was realized in actual expenditures, out of which only 3Rs%(97.30 lakh) was spent on the MCH Services. At the Zilla Panchayat level Rs.756.62 lakh was spent out of the available Rs.1000 lakh on MCH Services. The question that comes to mind is – *why is there such a huge difference between what was allocated and what is actually spent on MCH services?*

If this trend continues in the tenth plan, while the projected expenditure on Family Welfare is Rs.5565.35, the actual expenditure will be Rs.4631.513 lakh. Similarly we can expect that Rs.1172 lakh will be spent on MCH Services. Though this is definitely an improvement in actuals (from the previous year's Rs.842 lakh) we cannot be sure that this amount will be actually spent on MCH Services or what proportion of it will actually reach 'maternal health' related services.⁴

Information on the 2002-03 budgets outlays and expenditure was also obtained from the Karnataka government. Under various MCH related heads, it has been found that 78% (approx. Rs 14000 lakh) of the allocations was actually spent. Out of this, 22% was spent on maternal and child health services. More than 100% was spent of Non-plan allocations under the heads of 'allocation to Zilla Panchayats and allocations for special programmes'. It is not clear exactly what is covered in these items—there is need for more work on this at the district level where the work is done.

¹ In fact the key component under RCH seems to be sterilization!

² The MCH services come up under various heads in the general and family welfare allocations. In the general health services it shows up as expenditure on the upkeep of the service providers such as buildings, training etc. in the Family welfare allocations. there are heads we have identified as direct MCH services. A list has been provided at the end of the report.

³ This was also seen in an earlier study of CBPS - Maternal health as Seen in Budget Data....

⁴ A common problem of the MCH service expenditure is that a very large proportion of it goes into child health. We cannot determine how much as there are no actual numbers, but we can assume that a large proportion of the allotments go into programmes such as immunization, nutrition, etc, again we cannot make any comment about beneficiary population.

From the allocations at the state level, we move on to the allocations from the state to the various districts for the year 2004-05, looking at the two project districts - Chamarajanagar and Chitradurga districts. This is a relevant time frame as the primary data we have collected is for the same time period. In order to examine the effectiveness of the budget, *actual expenditures* need to be studied. However, this information is not yet available.

Allocations under Medical and Public Health Heads

Under the heads of Medical and Public Health, Chamarajanagar is allotted 3% of the state budgets while Chitradurga has been allotted 6% for general health services. The basis for this allocation is not clear – is it on population figures or status of health or some other criteria like estimated need for health services through Community assessment ?

Plan Allocations

In theory, plan allocations refer to *additional investments of a long term nature on programmes introduced in that plan period*. In this sense, this should indicate new initiatives taken. Unfortunately, programmes introduced in past plans have not been transferred to non-plan funding because of fiscal constraints. Often, in a fiscally tight situation, non-plan expenditures, which are supposed to be less important, are cut. In the field of health, which depends on the availability of people, and is people intensive, this often means that new recruitments needed, say on retirement of people, does not take place. The common view in government that non-plan expenditure is not a priority is as wrong as the view that plan allocations are important. This distinction has thus lost all meaning, but is provided any way. The main point is that plan allocations should not be understood as a new initiative unless independent evidence to that effect is available.

Under the plan allocations, the exact heads for MCH could not be identified. Account heads such as allocations to PHCs, upgradation of PHCs, dispensaries, rural health services and so on⁵ were used. It was assumed that, budgets allocated under these subheadings might eventually reach the woman in some form of service provided. Here too, 4% of the total state share is allocated to Chamarajanagar while 6% was allocated to Chitradurga.

For Chamarajanagar, we find that close to 19% of the budget for general health was allotted to the Taluk Panchayats and the rest was retained at the Zilla Panchayats. There is no allocation to the gram panchayats from this head.

Non-Plan Allocations

⁵ Please see the list at the end of the report.

If we look at non-plan allocations of the state to the Chitradurga and Chamarajnagar Zilla Panchayat⁶, we find that the state had allotted close to 97% of its non-plan expenditures on salaries for general health. To the Taluk Panchayat schemes, the state has allocated 53% to salaries.

Most of the heads under which we have identified MCH services are largely expenditures heads like the upkeep of the PHCs, provisions for operating/ running costs such as water and electricity. These are also included in the calculation of budgetary allocations to MCH as they are essential to provide good MCH services. This makes unbundling the allocations into direct and indirect costs difficult.

Between the 2 districts, Chamarajnagar somehow got a lower allocations under all the heads.

FAMILY WELFARE SCHEMES

In the allocations to the districts we find that, 8% of the total allotments for family welfare are allocated to MCH services for Chitradurga. In Chamarajnagar the allocation amounts to 4% of the budget. Here we have taken into account plan, non-plan, and state and centrally sponsored schemes.

Plan Allocations

In the plan allocations also, Chitradurga got a higher allocations from the state as well as the centre⁷. Overall, 1% of the allocations for family welfare came from the state and 99% of the allocation from the centre. This is obviously not a surprising thing as the family welfare programmes is a centrally sponsored programme. In this head, we find various components for potential MCH services. In the ninth plan, it seemed that the center took over providing services such as education, sterilization, training, and some other MCH related programmes. The state was involved in supplying drugs for family welfare, compensations, transport etc. Health is however, a state subject under the constitution.

Non-Plan allocations

34% of the state budget was allocated to Chitradurga for family welfare non-plan. There was *absolutely no allocation* by the state for FW programmes to Chamarajnagar.

PHC LEVEL DATA

⁶ We have looked at the budget for 2004-05 allotments.

⁷ Chitradurga – 9% from state schemes, 5.6% from the central schemes
Chamarajnagar – 7% from state schemes, 4.7% from the central schemes

The data that has been collected from the PHC is primary data from Chamarajnagar. The surveyors have gone to each PHC to collect data on salaries, running costs and the list of the ANMs. The sample has been cleaned and the number of PHC that are complete with information on costs as well as demographics has been analyzed. Information on number of people who visit the PHC and the exact coverage of the ANM cannot be determined from the sample. The trends that have been analyzed are general trends for Chamarajnagar.

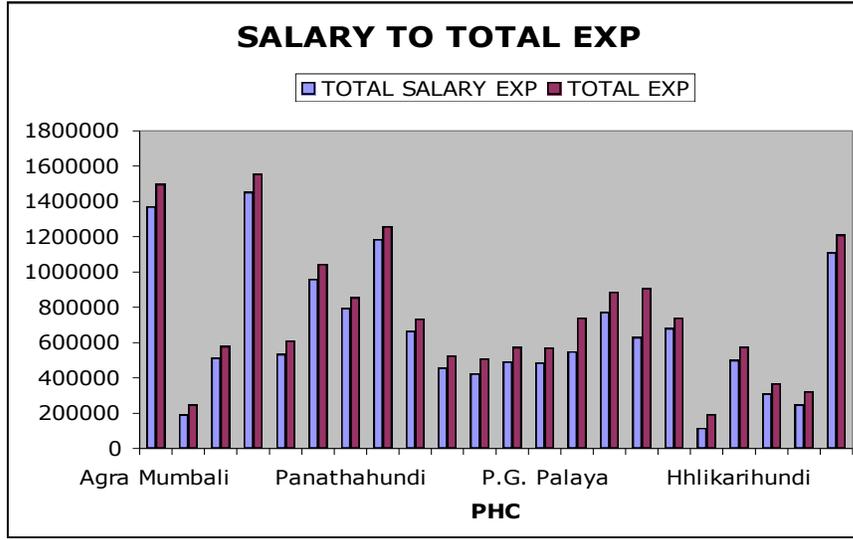
- After the upgradation of PHUs to PHCs, we find each PHC has under its jurisdiction 4 sub centres. Each PHC caters to an average of 15 villages and a population of close to 15400 (on average)⁸. Each sub centre caters to a population of close to 3600 people
- Per capita health expenditure is as Rs. 49/month in the district⁹.
- Each PHC has an average of 4 ANMs and each ANM will provide close to 37 women ANC services in the year.
- 56% of the women receive a TT2 shot. 80% of pregnant women receive 100 IFA tablets. 66% of the women are anemic and are being treated.
- Trained professionals attend to 85% of the deliveries. 34% of the deliveries take place at health institutions. 14% are attended to by trained birth attendants, 21% are attended to by ANMs and mid wives, 14% take place at home. For some pregnancies there is no information on the place of delivery.
- 8% of the women have been identified to be high-risk cases.
- RCH per capita is calculated to be approximately 192 Rs. per capita. This is directly related to the variables we have chosen to represent RCH.
- Maternal and child health per capita was determined to be close to Rs. 556¹⁰.
- It has been found that 89% (as an average) of the expenditure on PHCs goes into the payment of salaries.

The individual PHC break ups can be shown below.

⁸ There are some outliers in the sample that cater to close to 4 villages only.

⁹ For formula check the end of the report.

¹⁰ Please see end of the report for formula used.



Name of the health centre

PER CAPITA

General health

Agra Mumbai	60.82275498
Yodhatra Palaya	56.08103214
Bachahalli	61.52858661
Ramapura	53.35871579
Dhadaduvadi	33.02501354
Hunure	63.00458163
Panathahundi	37.72389146
Santhamanahalli	52.70962343
Baraga	58.31635815
Punachi	113.7678649
Matalli	32.12849479
Kuduru	39.71719975
P.G. Palaya	36.66940399
Lokenahalli	46.8213811
Maduvanahalli	
Palya	44.56162836
Umakuru	60.3821032
Kotalavadi	14.35707899
Hhlikarihundi	59.02722696
Chulakivadi	16.26864093
Coudahalli	19.75779817
Goudahalli	74.5939678

Total	1034.623347
Average	49.26777841

per capita without outliers	total
	average

the outlier has been identified to be at agra mumbali as no
Information on the census of children is present.

During the ninth plan the government upgraded the Public Health Units to Primary Health Centers. This effect can be directly seen in the PHC sample data. What can be found is that, the PHC now caters to a population of 15000, which was the population coverage of the PHUs in the World Bank report. Also, in our data we see that there are some PHCs, which cover 4-8 villages only. An educated guess is that, when the PHUs were upgraded to PHCs, their coverage was untouched. There was hardly any improvement in the quality of services at the upgraded PHC.

What has been observed is that, though every PHC seems to be stacked adequately with contraceptives, maternal health care is inadequate. Some of the reasons are –

- There are only male doctors at the PHC, thus, reducing accessibility.
- The PHC are inadequately equipped
- The distance of the PHC to the individual also matters; often the PHC is completely inaccessible and unreliable.
- There are many social stigmas attached to maternal health care, ante natal care and post natal care that often reduce the accessibility of these services.
- Most of the problem arises due to inadequate staffing and inadequate provision of infrastructural services.
- Though there is a record that says close to 80% of the women receive 100 IFA tablets during their pregnancies, it is very hard to evaluate the effectiveness of this result. Due to a myth that mothers who take iron tablets will have dark skinned babies. Most often the tablets are distributed, but will remain in the houses stocked away in a corner.

The DHO of Chamarajnagar confirmed the lack of adequate staff and funds for the district.

ANALYSIS OF HOUSEHOLD LEVEL DATA

Household level data comprises of a survey conducted on women to evaluate their awareness on Reproductive and Child Health services within the community. The current sample consists of 139 observations of which 110 have been collected from Chamarajnagar. Since the database of

Chitradurga is rather small, no general analysis has been done on the same. The data from Chamarajnar, in addition to having a larger size, is also more informative.

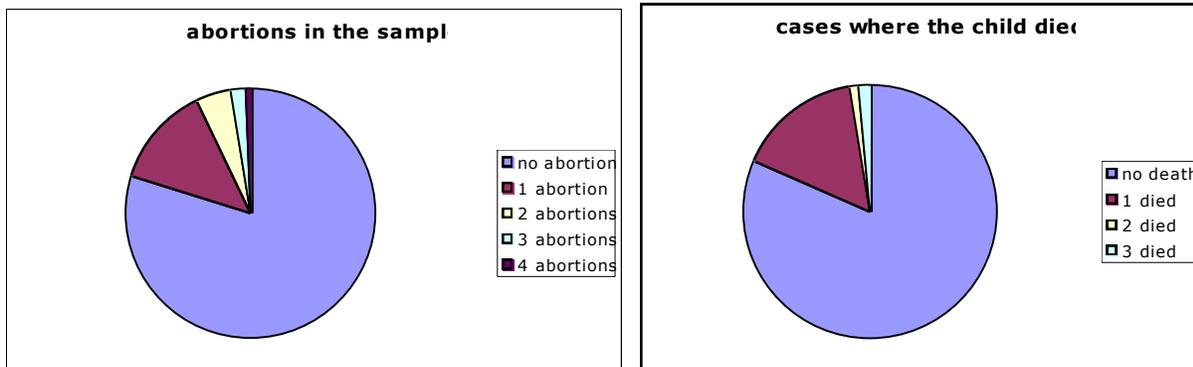
The results presented below, show general trends. The findings are preliminary and there are outliers in the sample under various heads. The present data can be used to determine future direction of data collection and analysis.

CHAMARAJNAGAR – general trends of the sample

The average age of sample interviewed in Chamarajnar was close to 23. In the district, the average annual income was app 9800 Rs and (ranging from 1000 to 80000). On average, there were 6 members living together in the household.

In the sample, which was conducted in a 6-month period, 30% of the women interviewed were pregnant. However, this value cannot be assumed to be a general trend as the surveyors might have identified pregnant women for the survey. A larger database needs to be analyzed before any conclusions are made.

In the sample 95.5% of the women have been pregnant before (105 observations). While the age for the first pregnancy ranges from 12 to 34, the average age is around 19 years. 20% of the women have **had** at least 1 abortion, 63.5% of which have had 1 abortion for sure. 18.2% of the children were stillbirths or have died due to some complication or the other.

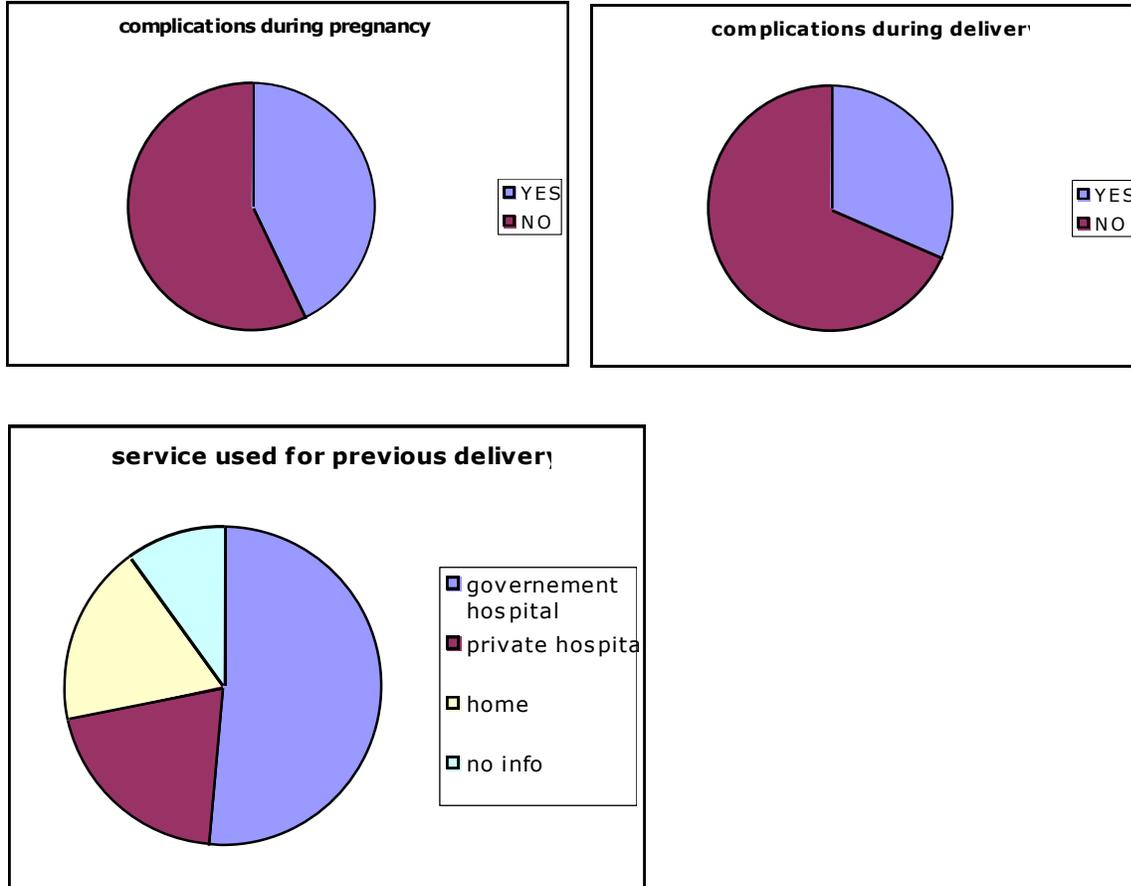


The sample also has information on the various services the women availed during the last pregnancy they had. 97.3% of the women had taken TT shots, 83.6% were given iron supplements, 82.7% had their urine tested and 88.2% of the women had blood tests. Even though one might be tempted to conclude that these numbers are good indicators of ANC provided, the question must be asked about the quality of services. When the women are given the iron tablets, its difficult to determine how many will actually take it. Also, we have no information on what gets tested on the broad headings of urine and blood tests.

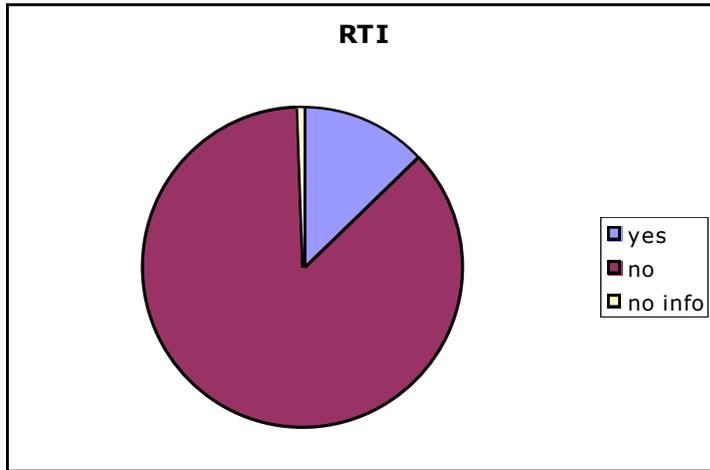
It was found that 42.7% of the women had some complication during pregnancy. These complications included stomach pain, severe giddiness, anemia and tiredness.

For the previous delivery, 51.8% of the women availed the services of a government hospital, 20% availed the services of a private hospital and 18.2% had their deliveries at home. During the time of delivery 31.8% of the women had complications of different sorts. Caesarians compromise a large portion of the deliveries.

How were the complications dealt with?



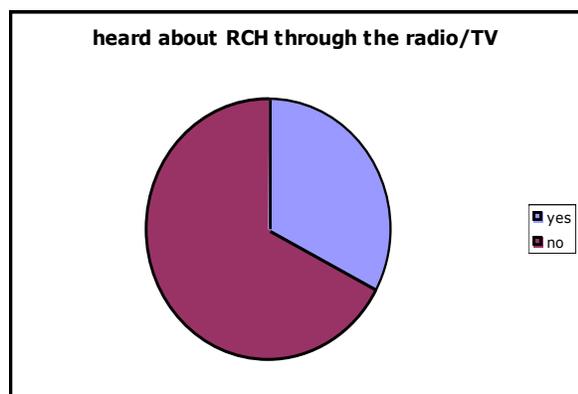
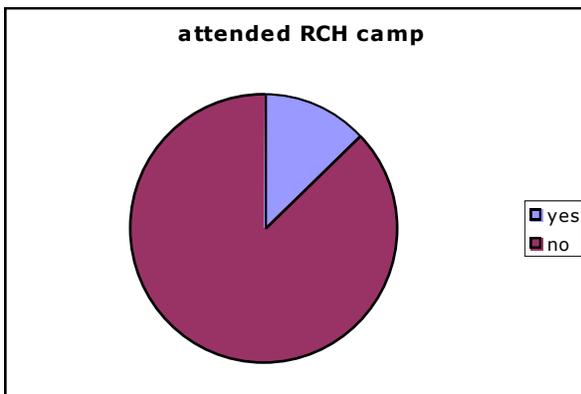
If we look at the other aspects of RCH, we find that 12.7% of the women have had RTI. The validity of the number is debatable. For one, there are women who have RTI but don't know about it, there are others who might have it and choose not to talk about it. However, 12.7% can be taken as a broad measure of awareness.

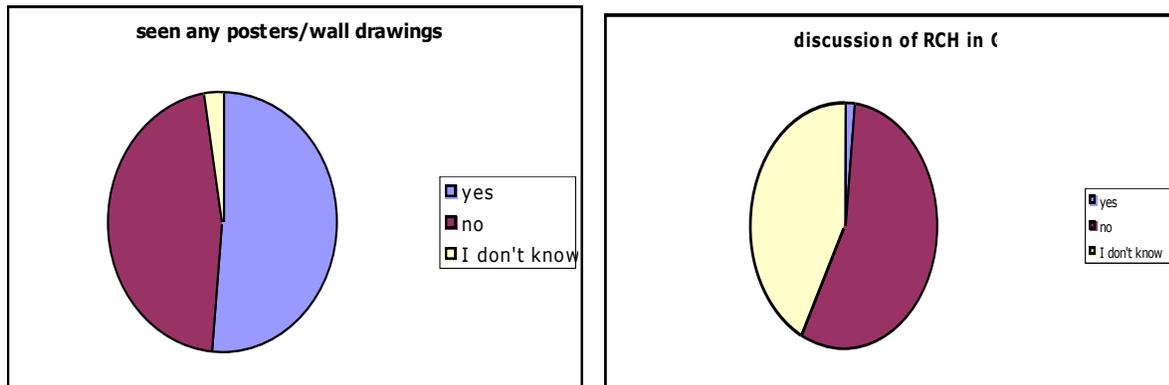


Only 10% of the women interviewed actually consulted the doctor regarding the same.

About family planning, 75.5% of the people know about family planning. Most of the women felt that 2 children is the ideal number for a family. This is disregarding the fact they may have had **more** than 2 children.

As a part of the RCH programme, the government is conducting a mass media education programme on RCH. When the observations were asked if they had attended any RCH camps, 87.3% said they hadn't. 32.7% of the people had heard programme related to RCH on the radio or on TV programmes. 51.8% had seen some print on RCH. When asked if the issue of RCH was discussed in the Gram Panchayats, 1.8% said yes. 55.5% said it hadn't been discussed in the Panchayat and 42.2% had no idea if it was discussed or not.





In the next step, depending on where the delivery had last taken place, the sample has been divided into 3 categories: -

- Government hospital delivery
- Private hospital delivery
- Home delivery

GOVERNMENT HOSPITAL DELIVERY

In this section, individuals who have had their previous delivery at the government hospital were analyzed. The sample had 57 observations.

The average age of the population interviewed is 22. The monthly income ranges from 1000 to 25000, with an average of 7500. The median value is 5000. **this may not be reliable— for example if the family has land, which we may not have checked-** On the average there are 6 household members in each individual’s household. Here too, we find that most of the women were 18-19 during their first pregnancies.

The sample has on the average less than 2 children currently. ¹¹ 21.1% of the individuals in the sample have had abortions and the maximum frequency is the case where they had 1 abortion previously. 17.5% have lost their children after childbirth.

The women have paid anywhere between 0-3800 Rs for antenatal care¹². The average is 567 (with a S.E of mean of 94) and a median of Rs370. A large percentage of the costs will come

¹¹ Though the matter might be trivial, I am trying to identify if there is any link between the number of children the individual already has and the choice of service for delivery of the next child.

¹² Antenatal care includes medicines, costs of check ups and costs of laboratory services. The women have been to any number between 1-5 ANC checkups, but our cost data only includes the aggregate amount.

from medicines prescribed for the individual. When looking within the trends we find that, 8.2% of the women have had TT injections, 78.9% were given IFA tablets, 82.5% of the women have had their urine tested and 89.5% of the women had their blood tested.

At the time of delivery¹³, the individual would spend on average 1500 Rs (S.E of 242) and a median value of Rs1000. Depending on the level of complication they might have spent upto Rs 11000 for delivery. In 66.7% of the cases, the nurse conducted the deliveries and in the rest of the cases, a doctor conducted the delivery. 33% of the women faced some complication during delivery.

For the total costs, an individual would spend anywhere between 1800-2200 Rs during their pregnancy. The median value of expenditure was Rs. 1380.

NOTE: - In the next two analyses, the sample set for each is very small and hence the trends determined in analysis may not represent the sample population.

PRIVATE HOSPITAL DELIVERY

The database of the private hospital delivery category consists of 22 observations.

The average age of the sample interviewed was between 24-25 years and the annual income s ranged from 2000 to 60000. The mean annual income was 15880, which was relatively close to the median value. There were on average 6 members in the household. At 20 years (average) most of the women had had their first child. 63.6% of the women said they faced some complication during their pregnancies.

In previous pregnancies, 31.8% of the women have had abortions and the same percentage of women lost of their children after childbirth.

For Antenatal care, the individual would spend on an average 1300 – 1700 Rs. In this sample set, we find that all the women have had TT injections, 95.5% have been given IFA tablets, 86.4% of the women have had a urine test and 90.9% of the women have had a blood test.¹⁴

¹³ The costs of deliveries include only the cost incurred to the individual in payments to doctors, nurses, dayis, ANM, etc for conducting the delivery.

¹⁴ Since there is no information on what is the exact point of ANC service delivery, one cannot make any conclusions regarding the quality of ANC given by each individual service (government or private).

50% of the women have had some complication during delivery. An individual has paid anything between Rs 55 and Rs 45000 for delivery services. On average, for a delivery in a private hospital, an individual spent between 10300-14300 (the median value is 6300).

The per capita expenditure on private health services works out to be close to 13900 Rs. The median value is Rs 7500 and the per capita expenditure ranges from 1200 – 49500 Rs.

HOME DELIVERY

In the home delivery category, it was determined that there were 20 observations that were relevant to the analysis.

The average age of the population interviewed was 23 and their annual income on average was 11775. The median value was 6500. Here too, there were on average 6 members in the household. Most of the women interviewed were 18 at the time of their first pregnancy. 45% of the women said they faced some complication during their pregnancies.

Individuals in the sample have on average 2 children. 5% have had abortions previously and 10% of the women have lost their children soon after child birth (in previous pregnancies).

Though the average value of the payments for any Antenatal care was close to 500 with a standard error of the mean of 142, the median value was 280 Rs. All the women in the sample have had TT injections for their last delivery. 85% were given IFA tablets and the same percentage has had their urine tested. 90% of the women have had a blood test done during their pregnancies.

For the delivery alone, the individual paid up to 4395 Rs. The average ranged from 500-900 Rs. The median value is Rs 50. In the sample 35% of the deliveries are conducted by the dayi, who will charge on the average Rs50 per delivery. A nurse conducts close to 25% of the delivery and will probably charge anywhere between 500-1000 for the delivery. This is probably the reason one sees such large range in the sample. 20% of the sample has had some complication during delivery.

Consequently, a delivery at home will cost anywhere between Rs 50 – Rs 4500. The average value is Rs 1265 (with a standard error of 339). The median value for cost of delivery is Rs510.

Summary-

In addition to there being a gap between allocations and expenditures, one finds that between the ninth and the tenth plan budget, allocations to family welfare and MCH in medical and public health as a percent of the total state health budget have decreased. One reason might be that, with the introduction of the national rural health mission, the **state** government has begun to

divert its resources away from the same. Another reason could be that the state is abdicating its responsibility towards family welfare and RCH. In the era of reforms. This needs deeper study.

A cross section comparison of total allotments for the health budget reveals that Chamarajnar gets a lower allotment than Chitradurga. This trend is consistent within the heads also. Only in the allocations of the state to the TPs to these districts, does Chamarajnar get a higher allocation. The reasons that could probably explain this are 2 fold-

- Chitradurga is an older district and hence its allotments have been constantly revised to reach this figure.
- Chitradurga, has a larger population.

Another trend that can be noticed with the government welfare budgets is that, the government has reduced RCH to programmes such as TT, ANC coverage. What constitutes the broad heading of ANC is not known. Also, their targets include coverage of immunization (mostly for children) and sterilization. The state government is into mass media education for MCH. So while the state is claiming to have more than 100% coverage on their various programmes, the people of Chamarajnar are not of the same opinion. In the household data, it can be found that except for the print media, there is a majority of the sample that has not heard of RCH through any media. A plausible reason could be that the state has not carried out these programmes as effectively in Chamarajnar.

While we look at the budgets, we find that the post box system of service delivery¹⁵ seems to have been circumvented in the plan expenditure allocations. We find that the state has separate provisions for the Zilla and the Taluk Panchayats but this is the level at which services are delivered.

The problem of this budget analysis is that the heads identified as allied services of MCH are under various collective heads. It almost impossible to determine what proportion of allocations to water, electricity and even PHCs would go into maternal health.

When we compare the results from the PHC level data and the household level data, it can be seen that, while the ANM claims that only 34% of the deliveries were institutional deliveries, 71.8% of the household observations used hospitals. the ANM's list says that 21% of the deliveries were conducted by the ANM, but the household data says that 10% of the deliveries at home were conducted by the ANM. There is no mention of ANM delivering in the hospitals. The problem with making such a comparison is the time period of the sample. The PHC data has been collected in 2003-04, but the delivery data has a more random time period.

In the household data, 33 observations were pregnant at the time of the survey. Out of these, 93.9% of the women had taken a TT injection and 81.8% had been given IFA tablets. From the

¹⁵ The post box system refers to the transfer of funds from the state to the ZP. The funds are then transferred to the TPs through the ZPs.

PHC level data, we find that 80% of the women had received IFA, but only 56% had been given TT1. Does the discrepancy of TT given mean that TT is not being delivered properly at the PHC level? Does it mean that the women are using some other service for TT injections delivery? There can be verified when the database is complete.

There is no mention of any individual who has used the PHC for delivery in the household data. This could also be due to the fact that service delivery of the PHC comes under the broad head of government hospital. This needs to be verified.

In the household data, we find that 12% of the women said they had RTIs and 10% said they had consulted a doctor regarding the same. This could indicate that there are women who are aware about the disease but are not talking to doctors about the same. This shows the possibility of a communication gap between the individual and their accessibility to services.

Of those who had their deliveries in a government hospital, 98.2% only had their TT injections. A 98.2% of TT injections might imply any if the 2 things, 1. The women were not given any TT due to laxness on part of government services, 2. The women were not given TT due to some medical reason (such as quick succession of conception or so on). This trend is only observed in the government hospital. All the individuals who had their deliveries either in private hospitals or at home had TT injections. However, since it is difficult to determine the point of service of delivery for TT and so on, this observation might be baseless.

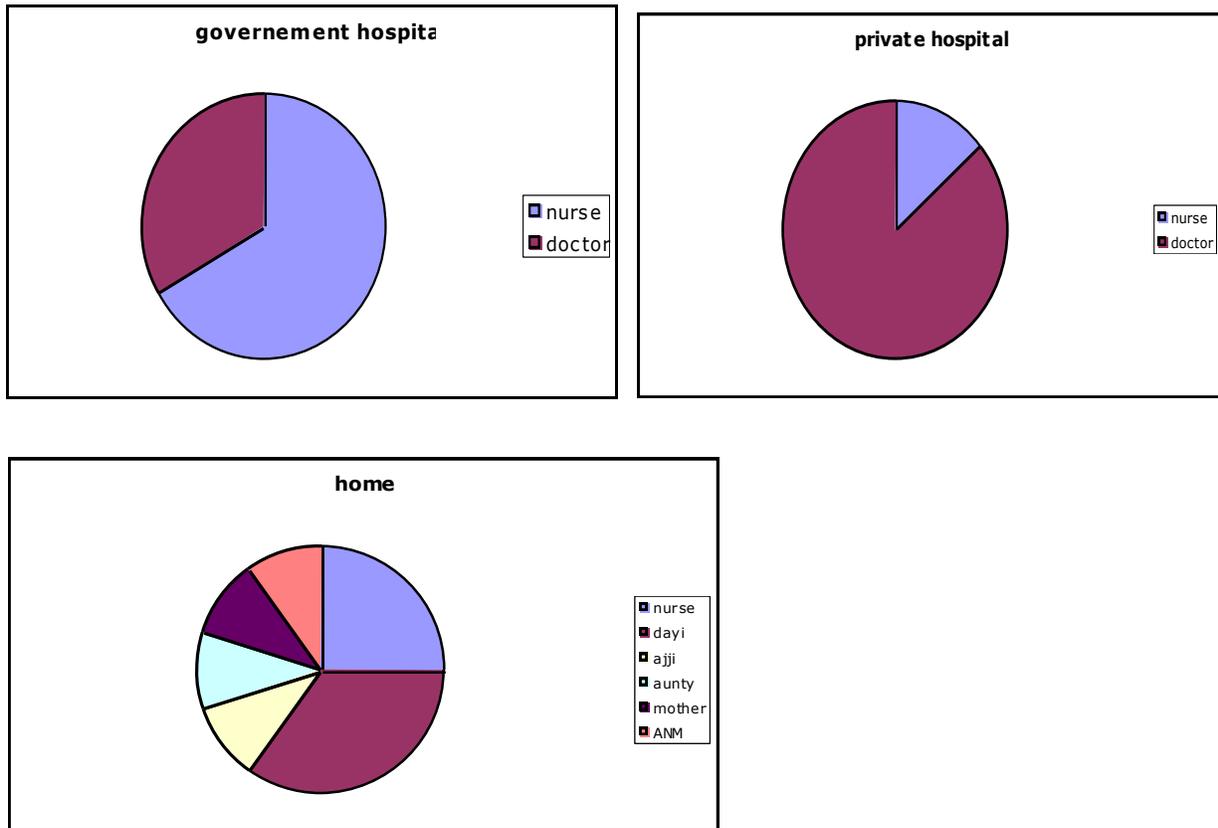
It has been found that between the government hospital and the private hospital, there is a greater percent of women who have had their blood and urine tested if they have gone to the private hospital for their delivery.

Of those who had abortions, 86.4% went to hospitals for their deliveries and 4.5% used their homes for deliveries. Also, all those who had more than one abortion have used the services of the hospital for their last delivery. Of those women whose children were born still, 85% accessed the hospitals for their deliveries. A more rigorous exercise needs to be done before any conclusive statement is made.

It was determined that, at the maximum the government spends Rs 556 on average per for MCH and Rs 192 for RCH at the PHC level. On the individual front, for using services of the government, the women pay close to Rs 1000 for a delivery. The woman seems to be paying for free services.

COMPARISON ACROSS CASES

Personnel who conducts deliveries



FORMULAS USED

HEALTH SERVICES

Calculation of total health services

$$\text{Per capita health services} = \frac{\text{actual expenditures on salaries} + \text{running costs}}{\text{Total population}}$$

- Actual exp on salaries = sum of salaries of docs, nurses, Sr LHW, Jr LHW, Sr MHV, Jr male health worker, lab technicians, drivers, compounders, Group D in the year 2004 (as collected from primary level surveys at the PHC level)
- Running costs = fixed cost allotments for water, electricity, stationary, others, telephone, medicines

- Total population = covered by each PHC (lists maintained at the ANM level).
- Possible problems in the population collected- cant tell how many of the population actually access the PHC services. We assume that since then ANM has collected the info, she covers the population and thus, indirectly they are connected to the PHC services.

RCH SERVICES

Calculation of RCH using a different population figure

Per capita health services = $\frac{\text{actual expenditures on salaries+ running costs}}{\text{Total sample population}}$

- Actual exp on salaries = sum of salaries of docs, Jr LHW, Group D in the year 2004 (as collected from primary level surveys at the PHC level)
- Running costs = fixed cost allotments for water, electricity, medicines
- We assume that 25% of he drugs going into FW goes into MCH in particular
- Total sample population = sum of number of women in the eligible couple list and list of children between the ages of 0-5. We assume they constitute half the eligible couple list and include all women who are in their productive age groups

Calculation of MCH per capita

Per capita health services = $\frac{\text{actual expenditures on salaries+ running costs}}{\text{Total sample population}}$

- Actual exp on salaries = sum of salaries of docs, Jr LHW, Group D in the year 2004 (as collected from primary level surveys at the PHC level)
- Running costs = fixed cost allotments for water, electricity, medicines
- We assume that 25% of he drugs going into FW goes into MCH in particular
- Total sample population = sum of number of pregnant women and list of children between the ages of 0-5.

However, one needs to determine what part of the ANM or doctor's time will go into RCH programmes and consequently their salaries need to be reduced. Also, by assuming that the entire infrastructure cost allocations goes into RCH is a limiting value to the validity of per capita MCH. For example, if we assume that on the whole, 10% of the expenditure of the PHC goes into RCH, our numbers are reduced to Rs 55 for MCH and Rs 19 for RCH. Hence knowing these values will make a tremendous difference to the costs estimated.

AREAS FOR FURTHER ANALYSIS

1. Developing new methods to unbundled costs of RCH within the PHC.

2. Determining a time discounting factors for medical and paramedical staff to calculate the exact costs of providing RCH services.
3. Obtaining morbidity patterns for RCH through the PHC.
4. Looking at Central Allotments for RCH head wise and hence determining the direction of flow of funds.
5. Increasing the size of the database of the household analysis to make conclusions more definitive.
6. Enlarge the size of the Chitradurga database for both PHC level data and household data.
7. Improve the income database of the household data.
8. checking if there are any income effects that determine choice of services once the data on income ahs been reentered.
9. Obtaining data on where ANC was delivered.

APPENDIX

Budget Heads we have looked at

STATE BUDGETS

State level

Rural health services

- Health sub centres (+capital building)
- Subsidiary health centre
- Establishment of new sun centres
- PHC (+capital buildings)
- CHC (+capital buildings)
- Other expenditures
- Water supply to rural health institutions
- ICDS project
- School health services
- IPP (III)
- Health and FW training centres
- Training of senior lab technicians
- Programme for women
- Health programmes for SC/ST women
- Training of junior lab technicians
- Refurbishing existing PHCs

Family Welfare

Providing infrastructure under FW
 Maintenance of equipment
 MCH at PHC level
 Disposable Delivery kits
 Child survival and safe motherhood
 Maintenance of cold chain equipments
 Training in FW & MCH
 Post Partum Programmes
 Akshara Arogya
 Purchase of vehicles
 Women's health care
 Loans to paramedical staff for 2 wheeler
 Provisions hygiene kits for rural women

ZP level

Rural health services

- Health Sub centres
- Subsidiary Health Centres
- PHC (+capital buildings)

Family Welfare

Disposable Delivery kits
 Child Survival and Safe Motherhood

- CHC (+capital buildings)
- Hospital Dispensaries
- Provision of Ambulance vans
- Establishment of blood banks
- Mobile health units
- Strengthening of PHU (+maternity annexure)
- Establishment of PHU (+capital buildings)
- Construction of Post Partum rooms
- Establishment of Sub Centres (MNP)
- Water supply to rural health institution.

These figures include budget as well as actual expenditure for the 9th plan. The 10th plan figures include the projected expenditures.

ALLOCATIONS TO THE ZILLA PANCHAYAT BUDGETS

Plan Expenditures

Medical and Public Health

Zilla Panchayat schemes

- PHC
- PHC (MNP)
- Upgradation of PHC to CHC
- Provisions for Ambulances
- Establishment of blood banks
- Repairs to hospital equipment

Taluk Panchayat schemes

- Rural health services
- Health Sub Centres
- Strengthening of PHUs (maternity homes)
- Establishment of Sub Centre
- Other Expenditure
- School Health Services
- Supplies and materials

Family Welfare

Zilla Panchayat Allotments

State Schemes

Compensations

Supply of drugs under Family welfare

Transport

Centrally Sponsored Schemes

Direction and Administration

District Family Welfare Schemes

Training of Dais

Compensation

IUD Vasectomy and Tubectomy

Mass Education

other services and supplies

District Post Partum Programmes

Non – Plan Expenditures

Medical and Public Health

- PHC
- PHC (GOI Patterns)
- Upgradation of PHC TO CHC
- Drugs and Chemical to Allopathy and Medicines
- Strengthening of PHUs (+maternity homes)
- Establishment of Sub centres

Family Welfare

Population Centres

Zilla Panchayat Schemes

- Buildings
- Water and Electricity
- Telephone
- Taluk Panchayat Scheme

Health and family welfare performance budget (2004-05)

- Direction & administration
- Training
- Urban FW service
- Maternity and Child health
- Transportation
- Compensation
- Mass education
- Selected area programme (include IPP)
- Assistance to local bodies, corporations etc
- Assistance to Zilla Panchayats
- Other service and suppliers
- Expenditure

In our discussions we often found that it was acknowledged that firm data were not available. In its absence, decisions have been based on ad hoc and arbitrary hunches etc. Our effort to use available data shows that the answers we seek cannot be extracted from this data.

This leads to a dilemma. Do we continue to make ad hoc and arbitrary decisions, bemoaning the lack of data? or do we, on the basis of exercises like this one, try and improve the database?

We hope this discussion, which has pointed out specific gaps in availability of data, will contribute to finding a solution to this question. Maternal health is too important a matter to ignore for ever.