

Reproductive and child health accounts: an application to Rajasthan

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This paper describes resource flows for reproductive and child health (RCH) in the health care system of Rajasthan, India, using the integrating framework of health accounts. It analyzes sources and uses of RCH funds by provider and expenditure category.

The paper provides policy options for redirecting current public and private expenditures to improve RCH indicators. Comparisons of the share of government expenditure in state gross domestic product (31%), of Rajasthan state government spending as a share of total health spending (21%) and of Rajasthan state government spending as a share of reproductive and child health spending (3%) suggest that there are imbalances to correct.

Even a very large increase in RCH spending by the Government of Rajasthan, an increase bringing its share of RCH total spending up to the level of its share in health spending, would add only one percentage point to the state budget. The principal result of such an increase in public RCH spending would be a substantial reduction in currently high levels of fertility and of mortality among infants, children and women of reproductive age.

Key words: health accounts, reproductive health, child health, health financing, government expenditure, India

1. Health spending: India and Rajasthan

India spends 6% of its gross domestic product (GDP) on health care. The private-sector share of that spending (78%) is among the highest in the world (World Bank 1997a).¹ Dependence on the private sector for health financing is even greater for reproductive and child health care (RCH), posing serious problems for public health managers as they confront a scarcity of financial resources and the unmet health care needs of poor women and children.

The shortage of resources in the public sector is especially acute in poorer states of India, which must finance public health care services primarily from state tax revenues. The Government of Rajasthan, one of India's poorer states, faces a dual challenge in its RCH spending of simultaneously increasing both the amount of funding and the efficiency in public service delivery. Reliable information on the sources and uses of health care resources allocated to RCH can help policy-makers on both fronts. This paper describes the research conducted to obtain information on the resource flows for reproductive and child health financing in Rajasthan, and it suggests how these data can clarify RCH policy options. The health accounts framework shows how households, governments, non-governmental organizations and firms get and spend money for RCH services.

Section 2, following this introduction, provides the context for the RCH spending patterns of the state. Section 3 describes

the structure of financial flows in the health sector. Section 4 focuses on RCH accounts for Rajasthan and categorizes sources and uses into public and private providers, salaries and capital spending, and programme components.² Finally, section 5 discusses the implications of the analysis.

2. The context

Rajasthan ranks near the bottom among India's 15 major states, with only three worse off in terms of the UNDP's human development index. A third of the state's population live below the poverty line and only one woman in five is literate (Society for International Development 1999). At Rs.9519, the equivalent at 1998-99 exchange rates of US\$211, per capita product in Rajasthan is far below India's national average (US\$450 per capita).

Low income notwithstanding, the role of the public sector in the state's economy is large (see Figure 1). The combined expenditures of India's federal government and Rajasthan's state government, complemented by donor assistance that flows through government, account for 31% of State Domestic Product (shown in the interior diamond in the lower portion of Figure 1). Government spending on health care is a smaller though still considerable share of total health spending, public and private, in the state (29%). We turn later in this paper to the rather smaller role of government spending for RCH services.

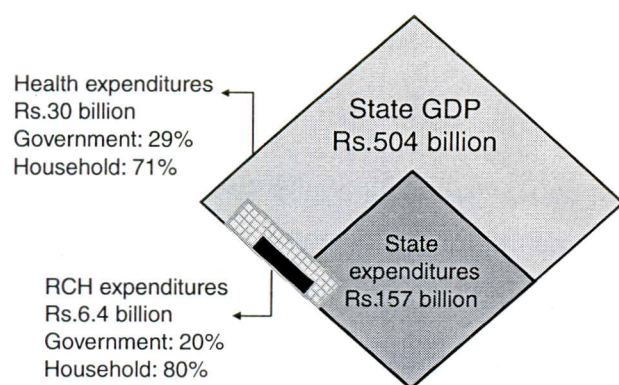


Figure 1. Total health and RCH expenditures and share to State Gross Domestic Product, 1998–99. *Note:* Government = Government of India, Government of Rajasthan and donors.

In 1997, the infant mortality rate (IMR) was 85 per 1000 live births in Rajasthan; IMR for India was 72 and for Kerala, the best-off state in terms of human development, 13. Rajasthan's maternal mortality rate (MMR) is a very high 431 per 100 000 births. The total fertility rate (TFR) in Rajasthan, 4.4 births per woman, is 25% above the average for India as a whole (3.5).

Poor RCH outcomes are attributable in part to poor health service utilization (see Table 1). Failure to seek care when needed is primarily the result of a health system where services are unaffordable, of poor quality and often at some distance from people's homes. Many of the inadequacies of the service delivery system can be traced to dependence on out-of-pocket spending for RCH services. There are, for example, large disparities in service use between rural and urban areas. A 1999 household survey found that among those women who did use RCH services, 65% of antenatal care clients, 79% of post-natal care clients and 72% of child health care clients in the top income group sought and received care in public facilities (Hotchkiss et al. 2000). In effect, the rural poor were denied public RCH services because none were

available near enough to their residences, whereas well-off urban dwellers, who could, if necessary, pay private providers, did have recourse to subsidized public RCH services.

In a representative sample of six districts surveyed, interviewers found a large number of health care facilities to be under-staffed, under-stocked and poorly equipped in terms of RCH inputs (see Table 2). More than 70% of both primary and community health facilities are understaffed; more than 50% lack critical supplies; and 50% or more of primary facilities lack infrastructure and equipment. Tertiary level hospitals are better equipped but face frequent drug shortages. Disparities in service access and service use between rich and poor, urban and rural, suggest that reallocation of resources and a more vigorous extension of service coverage could yield impressive improvements in RCH outcomes.

3. Financial flows in Rajasthan's health sector

About 6% of Rajasthan's State Domestic Product goes to finance health care provided by all public and private entities delivering such services (see Table 3). Households pay out-of-pocket for 71% of this total, and government and donors finance the remaining 29%. Spending on RCH services constitutes about one-fifth of that on all health services; the subsidy component, i.e. the share financed by governments and donors, is about 20%, hence somewhat less than the subsidy provided to other health services.

The financing and delivery of RCH services can be best understood within the context of the health sector as a whole. Specifically, we consider these questions.

- Is the lower subsidy rate for RCH services, than for other health services, prejudicial to RCH outcomes?
- Would an increase in the subsidy rate for RCH services be a sound use of public funds, and if so, is it affordable by federal or by state government?

To address these questions this analysis identifies five sources of funding for health care including budgetary allocations from the Federal Government of India and the State Government of Rajasthan, respectively, international donor assistance, households that make direct out-of-pocket payments,

Table 1. Utilization of reproductive and child health care services in Rajasthan

RCH Indicator	Rural (%)	Urban (%)
Women who received antenatal care	47.5	75.1
Deliveries in medical facilities	14.9	53.7
Home deliveries attended by trained personnel	18.0	39.3
Women with pregnancy-related complications who sought skilled treatment	29.1	61.1
Vaccinated children	61.5	84.3
Women who use family planning	33.7	48.5
Men and women aware of reproductive tract infections		
Men	15.4	29.6
Women	23.1	29.6

Source: IIMR (1998).

Table 2. Percentage of health facilities in six districts of Rajasthan that are adequately equipped (i.e. have more than 60% of critical RCH inputs)

Type of input	Primary level care	Secondary level care		Tertiary level care
	(primary health care centres)	Community health centres	First level units	
Infrastructure	24.9	68.1	86.9	100
Staffing	29.5	9.0	21.7	100
Supply	45.9	0.0	21.7	0
Equipment	50.9	68.1	95.6	100

Source: IIHMR (1999a).

and firms that finance services through insurance or other arrangements. These funds pay for services provided by both public and private health care entities.

Imagine thus a matrix with five columns representing these five sources and two rows representing public and private delivery systems that are paid for by these sources. This matrix is one of a family of matrices in which uses can be distinguished in many different ways. Analysis can separate recurrent and capital spending; it can distinguish wages, salaries, medical supplies and pharmaceuticals, and other purchased inputs. It can separate out specific programmes such as antenatal care and family planning. Similarly, the sources could be distinguished differently as between households divided into income quintiles, separate donors or hypothecated taxes versus general revenues from government entities. The choice of matrices to display depends on data availability and the stories and analyses one proposes to make use of the available information. In all cases, however, the accounting framework requires that the sum of all sources is equal to the sum of all uses. This requirement proves to be a useful analytical tool when knowledge about one side of the identity is less complete than the other. Cells in a matrix that might be unknown can be partially filled, under some conditions, by means of simple algebra. For

example, data on pharmaceutical imports from abroad may be quite good, as is information about public sector wage payments. Payments received by private providers may be kept secret, whereas details of out-of-pocket spending can be estimated from good sample survey data. Fitting pieces together in a family of flow of funds matrices may be among the most effective means to learn about health spending.

The focus here on the sub-set of the health accounts for RCH services is driven by the fact that public support for these services, and specifically support for low-income women and children, is meagre compared to public support in other areas.³ The pattern, composition and rigidity of health funding and expenditures emerge from the analysis to suggest potentially fruitful policy initiatives that could reshape financial flows to the advantage of the people of Rajasthan.

4. RCH accounts for Rajasthan

RCH spending in Rajasthan was about Rs.120 per person per annum in 1999, or less than US\$3.⁴ These limited funds, we argue below, are too little and are probably misallocated. Prevention and promotion of healthy behaviour receives too

Table 3. Total health and RCH expenditures (Rupees) and share to State Domestic Product, 1998–99

Sources of funding	
State Domestic Product (SDP)	504 520 million
Total health care expenditure (public plus private)	30 033.22 million
Public expenditure	8 672.8 million
Household expenditure (out-of-pocket) ^a	21 361.02 million
Total RCH expenditure (public plus private)	6 426.5 million
Health as % of SDP	5.95%
Public	1.72%
Household (out-of-pocket)	4.23%
RCH as % of SDP	1.27%
RCH as % of health expenditure	21.39%

Source: Hotchkiss et al. (2000), IIHMR (1999b, c).

^a Out-of-pocket spending purchases health services from private providers (i.e. clinics, diagnostic centres and pharmacies), items unavailable at public facilities and transportation to reach a health facility.

Table 4. Percentage distribution of government and household sources of funding for reproductive and child health in Rajasthan, 1998–99

Source of funding	%
Government finance of government services	20.21
Household finance of service, by type	
Medicare Relief Society	0.45
Other government-provided services	30.59
Privately provided services	48.75
Total	100.00

Source: Hotchkiss et al. (2000), IIHMR (1999b, c).

little attention, resulting in available funds having to finance curative services in response to unprevented illness. Furthermore, if public goods and services for the poor are under-financed, RCH services will fall short of their potential to achieve satisfactory health outcomes. Given the unacceptably high levels of maternal, infant and child mortality in Rajasthan, it is important to look in detail at spending in this area to see if greater efficiency can be achieved and if perhaps more resources can be applied to achieve better results.

Sources and uses by public and private providers

The Indian federal government and the Rajasthan state government, with complementary donor assistance, finance only one-fifth of all RCH services and only half of the RCH services provided by government facilities. Private households finance a larger share of publicly provided RCH services than does the government (see Table 4). However, these public agencies finance about one-third of other health services. And unlike many RCH services, these other health services, especially curative care in public hospitals, are less likely to be public goods. Even setting this likelihood aside, one may argue that the public sector should finance at least as large a share of RCH services as it does of other health services. Its failure to do so must contribute in substantial measure to the poor RCH indicators observed.

On an out-of-pocket basis, households finance four-fifths of the RCH services they receive. Their direct payments to

private providers constitute nearly half the services financed; they also make payments to public providers. The only pre-payment or insurance arrangement is the Medicare Relief Societies,⁵ which finance just 1% of all RCH services.

Is it households or governments that are more likely to finance public goods in the area of RCH services? Although this analysis cannot answer this question definitively, it seems reasonable to suppose that the dependence on out-of-pocket spending has a corollary in emphasis on private health goods and services, those that the payer perceives to be essential at the time because of the observed onset of illness. Public good and preventive health services, in contrast, as with immunization, family planning and essential obstetric care, may be part of a prospective delivery system. If this system is under-financed, then reproductive health will suffer and cannot be readily corrected even by a substantial increase in private health spending.

Sources and uses by salaries and capital spending

We turn now to another member of the family of matrices (see Table 5).⁶ In this format the analyst can examine the flow from the five identified sources⁷ to four uses of funds for RCH services: salaries, drugs and contraceptives, other recurrent expenditures and capital spending. This matrix permits the analyst to address several key questions:

- How does the level of spending for reproductive and child health in Rajasthan compare with recommended levels?
- What is the distribution by source of spending? Is that distribution sufficient to achieve good outcomes for reproductive and child health?
- Do the governments of India and Rajasthan provide enough public financing for reproductive and child health?

Answers to these questions can clarify the options that government officials may wish to consider as they allocate scarce public resources to RCH services.

- (1) Rajasthan spends less than US\$3 per capita on all RCH services, of which a large share, probably more than half, would not constitute parts of the essential package. The *World Development Report 1993* (WHO 1993: Table 5.3 and related text, pp. 116–18) argues that a combined

Table 5. Sources and uses of funds for reproductive and child health in Rajasthan (as % of total RCH funds)

Uses	Sources				
	Govt of India	Govt of Rajasthan	Donors	Household	Total
Salaries	8.36	2.68	1.14	31.92	44.09
Drugs and contraceptives	2.00	0.06	0.82	41.49	44.37
Other recurrent	0.45	0.15	0.95	4.79	6.34
Capital expenditure	0.43	0.09	3.08	1.60	5.20
Total	11.24	2.97	6.00	79.79	100.00

Source: Hotchkiss et al. (2000), IIHMR (1999b, c).

Table 6. Government of Rajasthan (GOR) expenditures on all health services and RCH services (Rs. billions) and as a share of total spending on health and RCH; projected expenditure on the assumption of raising the RCH subsidy rate to equal the health subsidy rate

Expenditure sector	Total spending (public plus private) (Rs. billions)	Total GOR spending (Rs. billions)	GOR spending as a share of total spending
Health care	30.00	6.4	0.21
RCH care	6.4	0.2	0.03
If the GOR spends the same subsidy on RCH as on health care	7.55	1.58	0.21

Source: Sharma et al. (2000), Hotchkiss et al. (2000), IIHMR (1999b, c).

public health package and essential clinical services related to RCH would cost about US\$8.⁸ Thus, the women and children of Rajasthan are receiving at best one-third and probably no more than one-fifth of the services that the 1993 analysis suggested as a minimum. An increase in coverage to 80% of the population in need, associated with more spending on the right services, could, according to the World Bank estimates, cut the RCH burden of disease by between 24 and 32%. That change would bring related health indicators for Rajasthan (IMR, MMR, TFR) into much closer alignment to those of the Indian national average.

- (2) Four-fifths of spending on RCH in Rajasthan comes directly from the pockets of the beneficiaries, 11% derives from Government of India, and 6% draws on the contributions of international donors. The smallest contributor is the Government of Rajasthan, which pays for just 3% of all RCH services, mainly the salaries of state health department employees.
- (3) The very substantial dependence on direct household financing for RCH services, combined with the apparent under-financing of the sector as a whole, suggests that government funding, specifically from the Government of Rajasthan, could usefully be increased.

The state government could consider bringing the subsidy rate for RCH services into line with its subsidy now provided to the health sector as a whole (see Table 6). Currently, the Government of Rajasthan pays about one-fifth of the bill for health care but only 3% of the bill for RCH services. Bringing the subsidy rate for RCH up to that for health generally would cost about 1 billion more rupees than at present. That amount is less than 1% of the state budget. Another approach may be to reallocate funds from a lower priority programme to RCH services. Whichever path is chosen, it seems likely that more public funding for prevention and promotion of RCH will result in significant improvements in health outcomes.

Sources and uses by programme components

Table 7⁹ presents another member of the family of matrices. The two government and donor sources are here consolidated into a single column labelled 'government'. This column total is apportioned among seven programme service areas. Household spending appears in two columns distinguishing household payments for services initiated in the public sector¹⁰ from household payments to private providers.

Table 7. Sources and uses of funds for RCH in Rajasthan by programme components (as a percentage of total RCH funds)

Uses	Sources				Government/Total
	Government	Household		Total	
		Public	Private		
Antenatal care	2.71	3.89	2.37	8.97	0.30
Childbirth	4.87	4.90	5.68	15.45	0.30
Postnatal care	0.27	1.29	0.22	1.78	0.15
Family planning	3.19	0.75	2.58	6.52	0.49
Child health care	5.19	8.67	10.09	23.95	0.22
Abortion services	0.43	0.98	1.08	2.49	0.17
RTI services	3.55	10.56	26.73	40.84	0.09
Total	20.21	31.04	48.75	100.00	0.20

RTI = reproductive tract infection.

Source: Hotchkiss et al. (2000) and IIHMR (1999b, c).

Comparing cells in the bottom row (Total) of Table 7 shows that public institutions receive one and a half times as much of their revenues from households as they do from governments and donors ($31/20.2 = 1.5$). The subsidy component of RCH services, i.e. the share of all services funded by government and donors, is 20.2%. Which of the seven identified services is most (or least) subsidized? Not surprisingly, in light of government and donor interest, the highest rate of subsidy, nearly 50%, is for family planning. Childbirth and antenatal care follow with a subsidy rate of near 30%. Child health care, abortion services and postnatal care follow. The lowest subsidy rate, less than 10%, is for reproductive tract infection (RTI) services, which are largely financed and delivered in the private sector. Leaving RTIs (and hence STDs and HIV/AIDS) to the private sector may, in the long run, be a costly error in government health policy.

Considering aggregate spending on all RCH services as grouped in Table 7, RTIs capture the lion's share of all RCH resources (40.8% of the total), although given modest public support. Child health care (24%) and the combination of antenatal care, childbirth and postnatal care (26%) constitute other large shares of the total. Family planning, though highly subsidized, uses only 7% of RCH resources, and abortion services form a small portion as well.

Public spending on childbirth

Governments and households finance about 30 and 70% of childbirth costs, respectively. Households make payments to both public and private providers (somewhat more to the latter). Over half of all rural births in Rajasthan occur at home, as poorer households try to keep costs down by avoiding hospital charges. In many cases, home delivery proceeds without incident. However, home delivery without a skilled attendant is risky. The search for cost-effective risk reduction strategies merits continuing government attention.

The practice among young Indian mothers in some states (Punjab, for example) but not in others (Uttar Pradesh), of returning to their natal households for first births, may be beneficial. A girl's own mother may be more attentive to her well being than are a young husband and a mother-in-law. An ethnologist reviewing differences in birthing practices in India noted that 'women who give birth in their natal village are more relaxed and better treated, and have a more supportive environment in which to deliver'; in some cases, 'a woman is not thought to be getting adequate care in her *susral* [the home of her husband and in-laws]' (Jeffery et al. 1989). Public health promotion might consider advising mothers to give birth in their natal homes; many women already do so in Rajasthan. The costs may be small, the benefits substantial. In contrast, training traditional birth attendants does not seem to yield many benefits (Starrs 1998; Dayaratna et al. 2000), and full access to emergency obstetric care, or even essential obstetric care provided by a skilled attendant, may be difficult to finance under current constraints.

Public spending on reproductive tract infections

RTI services were the largest claimant on RCH financial resources and were mostly financed out-of-pocket; government financed 9% of RTI services and households 91%. This

high cost, unanticipated by public health managers prior to the availability of the 1999 survey data, may signal underinvestment in government-financed information campaigns to alert people to risks in this area. A very high percentage of women interviewed (37.5%) reported an RTI-related symptom in the past 3 months. Considering the stigma attached to divulging such information, even this high share may be an understatement of the problem. Only 19.7% of those who reported an RTI-related symptom reported seeking medical help. The survey also reveals that around 87% of users incurred a cost for RTI treatment. An average user of RTI treatment services expected to spend Rs.626 (Hotchkiss et al. 2000).

Public spending on family planning

Government and donors fund half of all family planning spending. They have a long and continuing commitment to help families achieve their fertility objectives. However, current practice may 'crowd out' private spending. Crowding out means that free or nearly free public services may drive private providers out of business due to unbeatable competition from subsidized public provision. In substituting public for private, there is no net gain in fertility reduction, but there is a real loss of public funds that could have been allocated to other high-priority programmes.

Public-private interactions

There is a common thread in several issues identified. Government resources can complement, supplement or compete with private resources. If a government offers free services that households would otherwise buy, the funds are lost to other possible uses. If a government spends wisely, as on information campaigns to reduce the need for private spending on abortion and RTI services, it might reduce the need for household spending and save money all round. Generally, government should encourage efficient private spending on reproductive health and should not try to compete; it should not crowd out private spending but should rather complement it and make it as efficient as possible.

5. Implications of the analysis

There is a growing need for public managers to analyze their own spending and how it affects private and household financial decisions. The sources and uses of funds, which are necessarily subject to continuing change over time, can be tools to analyze and clarify policy options in this key area of social services.

This analysis demonstrates that the State Government of Rajasthan pays a larger share of the people's health bill than it does of the bill for reproductive and child health. In light of the predominant role of RCH services in an essential package of health care prevention and promotion, this difference in subsidy rate should be corrected. With only a 1% increase in its state budget (or alternatively, a reallocation of 1% of its current spending obligations), the state government could make a substantial addition to public spending for RCH. Looking again at Figure 1, a small change in the interior diamond (aggregate public spending by the State Government of Rajasthan) allocated to the dark rectangle of RCH

spending, could yield substantial benefits in terms of better health outcomes.

The Government of India does satisfy our criteria that the subsidy for reproductive and child health should be greater or equal to the subsidy for health care. This paper does not address the broader issue of whether the subsidy of the Government of India to the state of Rajasthan (and other poor states) contributes enough to the objective of reducing disparities in health status between rich and poor regions.

How might additional state spending, or reallocations within the current budget envelope, be allocated? More support for information and education to bring about wiser spending by households may be beneficial. Reductions in spending that 'crowd out' private spending are potentially useful. A better focus on the needs of the poor, especially those in rural areas who are far from points of service, merits review. All told, better use of even the limited resources available could contribute to greatly improved outcomes on the key indicators of maternal, infant and child mortality.

Endnotes

¹ In a regression of public share of health spending against the log of per capita product for 108 countries included in the World Bank database, both India as a whole and the State of Rajasthan are well above the regression line.

² Interested readers can contact the corresponding author (at s.sharma@tfgi.com) for a copy of unpublished background papers providing a description of how the work was conducted.

³ For alternative approaches to presenting national health accounts data and analysis, see Berman (1996) and Rannan-Eliya et al. (1997).

⁴ See the *World Development Report 1993, Investing in Health* (World Bank 1993: 116–18). Many analyses published since 1993 demonstrate that the majority of low-income countries fall well short of the levels of spending on the essential package of health services identified in the World Bank report.

⁵ Medicare Relief Societies are autonomous bodies created in each tertiary and secondary level hospital to complement and supplement the existing health care facilities (IIHMR 1999c; Sharma et al. 2001). A recent household survey shows that RCH expenditures account for 23.46% of the total household expenditures (Hotchkiss et al. 2000). Thus 23.46% of the total revenue generated through Medicare Relief Societies was used in the table.

⁶ The data on government expenditures on RCH in Rajasthan came from the accounts section of the Directorate of Health and Family Welfare (IIHMR 1999b, c). The accounts do not separate out RCH services. Staff of the Indian Institute of Health Management Research conducted a manual review of paper records to estimate RCH components and costs. Staff used an average of the last 5 years' (1995–99) public expenditure on RCH for calculating the plan, non-plan and CSS expenditures.

The division of total expenditure under Government of Rajasthan, Government of India and donor support derives from a detailed analysis of the 1999 family welfare and RCH programme expenditure budget. Donor support was 30% of the total, a share consistent with the proportion of donor contribution (i.e. 25%) at the national level (NIDI 1999).

The expenditure and allocation patterns under different programmes, like health and family welfare, suggest that Rajasthan state government funds are mainly used for meeting salary (more than 90%), operations and maintenance expenses, whereas donors give money for buildings and equipment (capital expenditure), and drugs and supplies. The donor funds are allocated under capital expenditure (51.4%), drugs and contraceptives (13.7%), salaries (19%) and

other recurrent expenditures (16%) based on the expenditure compositions of the World Bank's RCH programme (World Bank 1997b). The composition of expenditures comes from the national family welfare and RCH programmes (World Bank 1997b). The estimated composition of the expenditure is consistent with the composition under different state programmes.

To calculate the total household RCH expenditure, we multiplied per capita RCH expenditure of Rs.95.8, obtained from a recent household survey, by the total 1999 population (IIHMR 1999b). Rajasthan spends about Rs.6426.36 million on RCH, which includes both public (Rs.1299 million) and private expenditures (Rs.5127.50 million). The share of private contributions is 80% and that of government contributions is 20%. An analysis of national health spending also shows a similar ratio of public-private contributions (World Bank 1997a).

Estimates of out-of-pocket expenditures on medicines came from the household survey. The survey results reveal that medicines account for the major portion, i.e. 52%, of total household spending. Various studies suggest that the contributions made by the households at public and private sector hospitals in the form of user fees are used to meet salary and other recurrent expenditures. Thus, the remaining household expenditure is divided mainly into salary (40%) and other recurrent expenditures (6%).

The composition of the total RCH spending (both public and private) indicates that salaries and drugs consume a major portion, i.e. 44%, followed by other recurrent (6%) and capital expenditure (5%).

We also made an attempt to calculate the source-and-use categories as a percentage of total spending for reproductive and child health in the state, and also presented the same underlying data as a percentage of the gross domestic product (GDP) of the State of Rajasthan. The State Domestic Product of 1999 was used for this purpose.

⁷ The analysis does not take into account in-kind allocations by the Indian government. In-kind contributions go directly from the Government of India to districts (e.g. delivery kits delivered in-kind without financial accounting) and, as such, are not reflected in the health and family welfare expense budgets used for this analysis.

⁸ This estimate assumes that half the public health package cost of US\$4.2 would be allocated to RCH services, and to this half is added the estimated cost of providing management of the sick child, prenatal and delivery care, family planning, and treatments of STDs, all detailed as part of the essential package of clinical services in Table 5.3 of the World Development Report.

⁹ Government and household funds are used to provide different RCH services, namely antenatal care, childbirth, postnatal care, family planning, child health care, abortion services and treatment of RTIs. Our analysis attempted to distribute the household spending between public and private providers.

A recent household survey provided information on per capita expenditure by service type and provider type (IIHMR 1999b). We allocated government expenditure to different programme components using the following procedure. First, we calculated an estimate of the annual number of public visits for each RCH service using household survey information. Secondly, because the unit costs vary considerably across services, we weighted the utilization information with service-specific estimates of the relative unit costs. Actual unit cost information was not available, so weights were based on expert opinions of the time required to provide each of the RCH services.

¹⁰ This includes payments by public sector clients for drugs purchased from private pharmacies, and informal payments to public sector providers.

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