

**Workshop on the reduction of IUGR incidence in India**  
**Social Initiatives Group, ICICI Bank**  
**March 4-5, 2003**

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**Reducing IUGR Incidence in India: Additional Health Worker Strategies**

**About us**

This workshop is being organised by the Social Initiatives Group (SIG) of ICICI Bank. The SIG is a non-profit group that funds 'action-research' projects in three areas: (a) infant health at birth (b) elementary education (c) micro-financial services.

In the field of Infant Health at Birth, the SIG's goal is to maximise the proportion of infants born healthy in the country. Reducing the incidence of low birth weight caused by growth retardation in the womb (intra-uterine growth retardation- IUGR) is the key means adopted to achieve this goal. The SIG aims to reduce such low birth weight incidence by:

1. Facilitating research, debate and action on the nutritional deficiencies that cause IUGR.
2. Facilitating debate on and validating strategies to improve access to and quality of primary health and nutritional services through the public health system and Integrated Child Development Services (ICDS) programme.

**Perspective on the workshop**

Improving female nutritional status at critical points in her lifecycle (the fetal stage, 0-6 years, adolescence and during pregnancy) is a pre-requisite to reducing Intra-Uterine Growth Retardation (IUGR) incidence and thereby low birth weight incidence<sup>1</sup>. Nutritional status at a given point is not only a function of intake, but of several other factors such as the frequency with which an individual falls sick and the duration of illness. Any attempt to reduce IUGR incidence must take all critical factors into account. Services that could reduce IUGR incidence include appropriate Behaviour Change Communication, targeted food supplementation, micronutrient supplementation and efficient outreach services to prevent, and failing that, to cure illness.

The public health system and Integrated Child Development Services (ICDS) Programme are collectively mandated to provide the complete basket of maternal and child health, and nutrition services required to reduce low birth weight incidence<sup>2</sup>. Nevertheless, low birth weight incidence in India currently stands at 33% — the second highest in the world<sup>3</sup>.

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<sup>1</sup> The immediate cause of IUGR is poor fetal nutrition during gestation. Fetal access to nutrients is mediated by a complex supply chain, whose efficiency depends on the mother's nutritional status as a fetus, as an infant, as a child, at conception and during pregnancy. See for instance, Harding, J., 2001

<sup>2</sup> Annexure- 1 contains details on the reach, broad structure of, and services provided by the public health system and ICDS programme. The annexure will concentrate on services that have direct relevance to the reduction of low birth weight incidence.

<sup>3</sup>State of the World's Children- 2000, UNICEF

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The functioning of two categories of grassroots personnel is critical if this reduction is to be achieved— the Auxiliary Nurse Midwife (ANM) and the Anganwadi Worker (AWW). For a variety of reasons, they are unable to satisfactorily carry out the responsibilities allotted to them. This translates into gaps in the coverage and quality of services rendered with consequent implications for outcomes.

Figures from NFHS II survey<sup>4</sup> reveal that only about 37.3% of women in India receive all the three ante-natal check-ups during their pregnancy. This means that almost 63% of the women do not receive the mandatory ante-natal check-ups. Further, of the women who do receive Ante Natal Care, about 1/3<sup>d</sup> do not undergo any check-up in the critical first trimester.

ICDS areas fare somewhat better. The 1992 NIPCCD evaluation of the ICDS<sup>5</sup> revealed that 60.8% of eligible pregnant women received regular check-ups through ICDS services. 68% of pregnant women in ICDS areas received referral services. Approximately 40% of these women received referral services from 'other' (non-ICDS and non- public health system) sources. In areas that were not covered by ICDS, only 50.3% and 52.6% of eligible pregnant women received regular health check-ups and referral respectively.

The more recent NCAER study<sup>6</sup>, reveals that 75% of the pregnant and lactating women were registered in the programme. Only 60% of registered women received Ante Natal Care/ Post Natal Care services. 54.8% of registered women received the Nutrition and Health Education services.

These figures are indicative of systemic problems that prevent the attainment of public health goals, especially 'quality-sensitive' goals such as low birth weight incidence. They constitute an unfinished agenda within the public health system's and ICDS' mandate.

Furthermore, emerging scientific evidence highlights the role of micronutrient deficiencies in intra-uterine growth retardation (low birth weight caused by growth retardation in the womb). An observational study<sup>7</sup> conducted in Pune noted a significant relationship between micronutrient rich food<sup>8</sup> consumption during pregnancy and size at birth. The trend was the strongest among the lightest women. 31.3% of the women in the study had a Body Mass Index (BMI) less than 18.5 kg/m<sup>2</sup>,

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<sup>4</sup> National Family Health Survey- 2 1998-99

<sup>5</sup> National Evaluation of the Integrated Child Development Services, 1992

<sup>6</sup> Concurrent evaluation of the Integrated Child Development Services, National Council of Applied Economic Research, June 2001.

<sup>7</sup> Rao, S., Yajnik, C. S., Kanade, A., Fall, C. H. D., Margetts, B. M., Jackson, A. A., Shier, R., Joshi, S., Rege, S., Lubree, H., Desai, B., 2001

<sup>8</sup> Green-leafy vegetables, fruit and milk. The fruits consumed in the study were zizipas ('ber'), *tamarind* and *guava*.

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which is indicative of chronic malnutrition<sup>9</sup>. There may be a strong case for ensuring an increased consumption of micronutrient rich foods during pregnancy through the public health system and/ or ICDS to break the inter-generational low birth weight cycle.

A pertinent question that arises here is whether the existing systems (health and ICDS jointly) can fill current gaps in coverage and quality without an additional category of grassroots personnel to support either the ANM or the AWW.

Non Governmental Organisations (NGOs) in India have been experimenting with community- based 'solutions' to improve the access to and quality of primary health services with a specific focus on the poor. This history of innovation has meant that there are a number of likely strategies that could be understood in terms of their potential for larger impact when integrated into the public health system. It has also meant that there are a number of positions on what systemic changes are needed to achieve the unfinished agenda. These (broad) positions include:

1. An additional health worker is not necessary. The unfinished agenda can be achieved by rationalising the roles of the ANM and AWW and other related workers. This role rationalisation could incentivise the worker/s and free up time to concentrate on hitherto- neglected tasks.
2. A variant on the above would emphasise the involvement of a local Community Based Institution, such as a women's group, to take on specific service delivery functions. These functions could include identifying pregnant women, some form of behaviour change communication, gathering beneficiaries at a pre-determined location in the village so that the visiting ANM can provide services, acting as a source of community pressure on the ANM to visit regularly etc.
3. Facilitating private management of the publicly funded health system could remedy many of the inefficiencies that exist in service delivery at the primary level.
4. An additional health worker is necessary because the existing frontline workers cannot handle the entire list of responsibilities allotted to them. This worker could be at the Sub Centre level or at some point below it.

The 'additional health worker' view has been a subject of interest for some time now in both the government and voluntary sector. There has been a significant degree of difference among the different 'models' adopted across several parameters, including:

- Population level the worker is positioned at: this could range from sub- village ('tola' or hamlet level) to the Sub Centre (5,000 population) level
- Role: the extent to which it is focused on curative care and the extent to which preventive- promotive services form a part of the agenda
- Selection criteria and process: this defines the worker's profile

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<sup>9</sup> These findings have formed the basis for an on-going randomised controlled trial in Mumbai slums.

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- Community Based Institution involvement: this has implications for who the worker is accountable to and how s/he is monitored
- Institutionalisation in the system: the worker could be integrated into the larger public health system to different degrees and in different ways. This is typically reflected in the reports that the worker is expected to produce. It is also reflected in the ANM's and/ or the Primary Health Centre Medical Officer's responsibilities towards the worker (e.g. technical support and re-training). Most NGO 'models', however, are completely parallel to the public health system
- Pre-service and in-service training protocols and processes
- Financing: whether by grant money, user fees or through government sources

The experience with additional health worker strategies, when implemented, has been very variable. Some NGO 'models' notably the SEARCH 'model' in Gadchiroli and Jamkhed 'model' in Jamkhed have produced a fairly dramatic documented impact on health outcomes in their field areas<sup>10</sup>. In contrast, the experience with large scale government programmes, even when the approach is based on NGO 'models'<sup>11</sup>, has been generally negative. The Ministry of Health and Family Welfare sponsored Community Health Worker/ Village Health Guide scheme is an example<sup>12</sup>. Emerging evidence suggests that the Jan Swasthya Rakshak scheme in Madhya Pradesh is not producing positive results at all, and may need serious reform<sup>13</sup>.

At the same time, the central government and some state governments are considering the idea of introducing an additional health worker. The Maharashtra state government has already accepted in principle the idea of a 'Gramin Lokswasthya Yojana' on a pilot basis<sup>14</sup>. This yojana allows for a health worker at the village level or below. The Chhattisgarh government is in the process of implementing the 'Indira Swasthya Mitandin Yojana'. This scheme allows for an additional health worker at the hamlet level (there would be several hamlets in a dispersed village). This translates into more than one worker within a single village. The recent Government of Karnataka task force on health and family welfare

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<sup>10</sup> In Jamkhed, for instance, in five years the infant mortality rate decreased from 176 to 52 per 1000, child health improved (immunization rates increased from 0.5% to 81%, malnutrition decreased from 40% to 30%), family planning acceptance increased (from 1% to 38%), maternal health indicators improved (ANC coverage improved from 0.5% to 80%, and deliveries by trained attendants from 0.5% to 74%). See, Arole, M., Arole, R., (1994)

<sup>11</sup> The Community Health Worker/ Village Health Guide scheme is a case in point. It was based on lessons from the Jamkhed project. In fact, the government also delegated the responsibility of training some CHG/VHW to the training team at Jamkhed. The workers were disillusioned after training since they did not receive the same kind of support from the government as they received from the training team. The scheme also had no provision for re-training.

<sup>12</sup> Please refer to Annexure- 2 for more details on this.

<sup>13</sup> See, for instance, the executive summary of the recent MP- Jan Swasthya Rakshak review by the Community Health Cell, Bangalore

<sup>14</sup> The Maharashtra government's 10<sup>th</sup> Five Year Plan document states its commitment to an additional health worker. 5,000 villages are to be covered in the first phase of the pilot, with phased expansion plans.

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recommended that the staffing of Primary Health Centres and Sub Centres be re-organised/ re-structured in light of the area and total populations they cover<sup>15</sup>.

The Infant Health at Birth team at the SIG, ICICI Bank therefore feels that this is a good time to analyse the experience the sector has had with additional health worker programmes. The SIG's hypothesis is that the success or failure of large-scale programmes is determined by whether the 'systems' to finance, select, train and re-train, support and monitor the grassroots health worker are designed and implemented appropriately. The manner in which the worker is financed is seen as an important influence on functioning— user fees, for instance, build in a bias towards curative care and financing through a community based institution builds in a strong community stake in monitoring.

In this light the workshop seeks to understand:

1. What accounted for the success of NGO 'models' in their field areas
2. Why have government scale-ups been markedly unsuccessful so far? Can their lack of success be understood in terms of the failure to integrate the factors responsible for NGO success into the functioning of the public health system? Or are we looking at a different set of causes altogether?

The ultimate objective is to inform current and planned scale ups of additional health worker 'models' such that the unfinished Maternal and Child Health and nutrition agenda can be addressed, thus reducing Low Birth Weight incidence.

The sessions are therefore organised as follows:

**March 4, 2003**

- Session 1 'Potential interventions to reduce Intra- Uterine Growth Retardation (IUGR) incidence': the objectives of this session are to (a) highlight the prevalence, impact and etiology of low birth weight incidence in India, and (b) explore community- level interventions that have been employed to reduce its incidence. Discussion will be structured around the efficacy of interventions and their implications for services currently provided by the public health system and ICDS
- Session 2 'Health Systems (Rural)': this session seeks to analyse the systemic problems that impinge the functioning of the Auxiliary Nurse Midwife and Anganwadi Worker. Discussion will seek to bring on board participants' perspectives on these systemic problems

**March 5, 2003**

- Session 3 'Health Systems (Rural)— Innovations': this session will discuss NGO innovations that have the potential to remedy the systemic problems discussed in session 2. The innovations explored will include both 'models' that do not involve

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<sup>15</sup> 'Karnataka: Towards Equity, Quality and Integrity in Health', Final Report of The Task Force on Health and Family Welfare, Government of Karnataka, April 2001

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any additional workers and those that do. The objective is to evaluate the options presented in terms of their larger potential to tackle the unfinished Maternal and Child Health and nutrition agenda and reduce low birth weight incidence. Discussion will be structured around two main topics:

- a. how far we can go without adding any categories of grassroots personnel in the public health system and ICDS; and
  - b. defining the elements that constitute an additional health worker 'model' most able to achieve a reduction in low birth weight incidence
- Session 4 'Health Systems (Rural)— experiences with scaling': this session will discuss the lessons learnt from government additional health worker schemes to inform current and future up scaling efforts. Discussion will be centered on how the same problems can be avoided in future large scale programmes
  - Session 5 'ICICI Bank funded projects': this session will have presentations on ICICI Bank funded projects of relevance to the workshop. Discussion will be an open forum for feedback from workshop participants

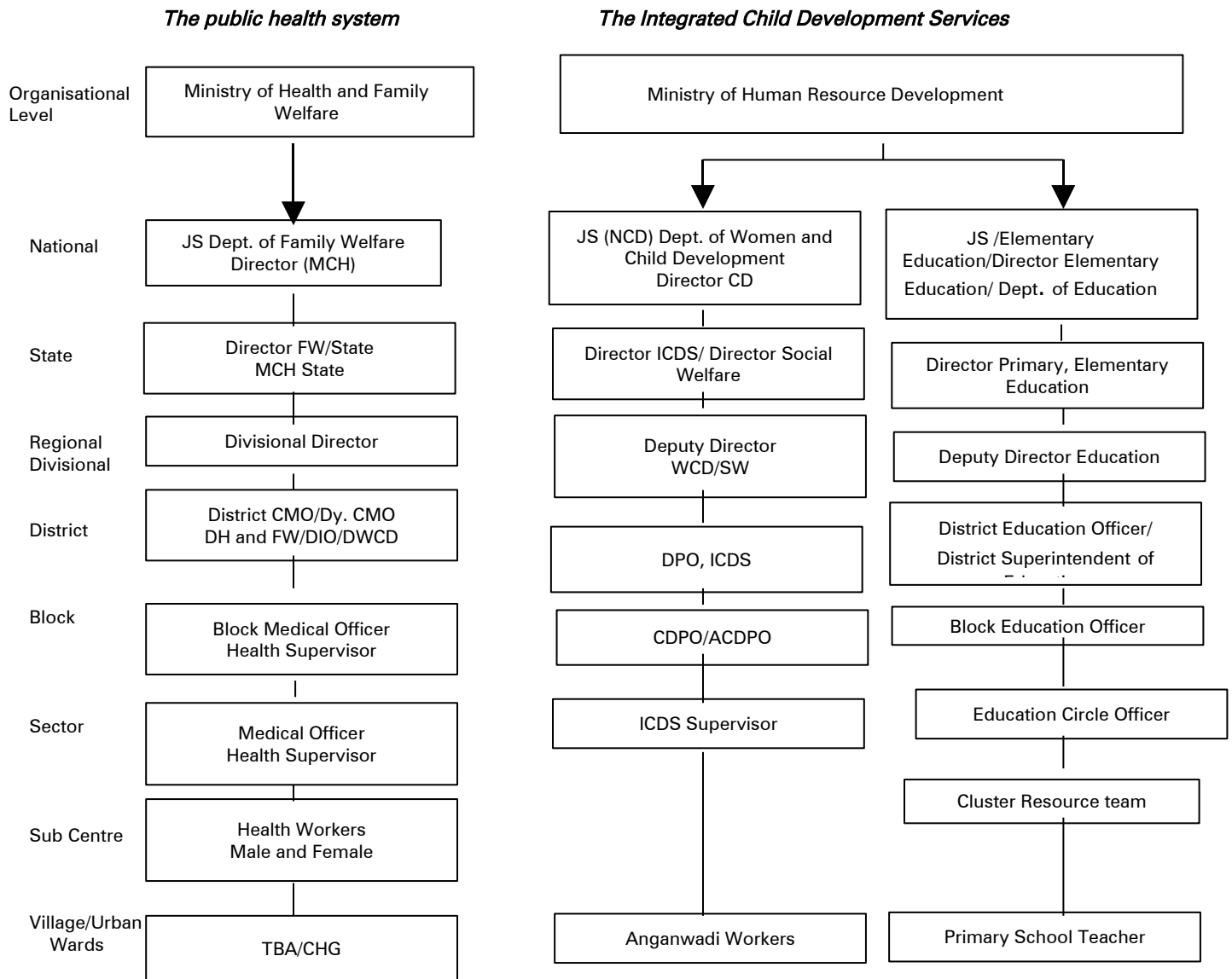
This document contains 4 annexures. These are meant to provide additional background information of relevance to the Workshop. The annexures are as follows:

- Annexure- 1: The rural public health system and the Integrated Child Development Services Programme— structure and services of relevance to reducing LBW incidence
- Annexure 2: The Community Health Worker scheme
- Annexure 3: The Comprehensive Rural Health Project, Jamkhed
- Annexure 4: The Jan Swasthya Rakshak scheme

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**Annexure- 1: Structure of public health system (rural) and the Integrated Child Development Services (ICDS) programme**



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**Services provided: public health system (rural)**

The public health system in India is the single most important source of preventive and promotive services among the poor<sup>16</sup>.

It is mandated to provide the following services of significance to reduce low birth weight incidence:

1. Ante Natal Care (ANC) services: including iron (and folic acid) supplementation, weight gain monitoring, health and nutritional counseling and identification and management of high-risk pregnancies
2. Disease prevention: this includes preventing diseases like malaria that have a significant impact on low birth weight incidence
3. Curative care: personnel from the public health system seek to identify illness at an early stage through home visits. Curative care is delivered at various levels from the village level upwards
4. Family planning services

Service delivery is organised at the following levels: village, Sub Centre (5,000 population), Primary Health Centre (30,000 population), followed by the Community Health Centre (100,000 population), with the taluka or district hospital at the apex<sup>17</sup>.

*Village level*

The workers stationed at the village level (Traditional Birth Attendants and Community Health Guides) are usually voluntary workers and are not government employees. Village level services are also provided by the Auxiliary Nurse Midwife (or ANM) through home visits. The ANM is stationed at the Sub Centre level.

*Sub Centre (SC)*

Physical infrastructure in the area of primary health care begins at the Sub Centre level. Each Sub Centre is staffed by an Auxiliary Nurse Midwife (ANM)— also referred to as the female multipurpose worker— and a male multipurpose worker (male MPW).

The ANM carries out the following functions:

- Providing maternal and child health services. This includes Ante Natal Care and Post Natal Care.
- Providing family planning services
- Medical termination of pregnancy
- Providing nutrition and health education
- Identifying cases of communicable diseases and informing the male worker
- Immunisation

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<sup>16</sup> World Bank, 2001

<sup>17</sup> The population levels mentioned are normative. Actual population levels vary across states.

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- Training dais/traditional birth assistants
- Recording vital events
- Maintaining records of pregnant women, ANC and child care records and an eligible couple register for family planning
- Primary medical care
- Participating in team activities<sup>18</sup>

The male MPW carries out the following functions:

- Identifying cases of malaria, performing confirmatory tests, recording results and educating the community about malaria prevention
- Identifying cases of communicable diseases, carrying out control measures to prevent diseases from spreading, educating the community about preventive measures
- Environmental sanitation<sup>19</sup>
- Immunisation
- Providing family planning services
- Informing people about the availability of services for medical termination of pregnancy
- Maternal and child health<sup>20</sup> in the twilight<sup>21</sup> area of the female MPW
- Nutrition<sup>22</sup>
- Recording vital events
- Maintaining records
- Providing primary medical care
- Participating in team activities<sup>23</sup>

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<sup>18</sup> Attending and arranging for staff meetings at the primary health centre, community development block or both, coordinating activities with the female health worker, and other health workers, meeting the health assistant for guidance and maintaining the cleanliness of the Sub Centre as well as participating in various camps and campaigns.

<sup>19</sup> This involves helping the community in the construction of soak pits, kitchen gardens, manure pits, compost pits, sanitary latrines, smokeless chulhas, and supervise their construction. The male MPW is also responsible for chlorinating

<sup>20</sup> The male MPW has to identify and refer women with abnormal pregnancy, medical and gynaecological problems, cases of difficult labour and newborns with abnormalities to the female MPW. He is also supposed to immunise pregnant women with tetanus toxoid as well as educate the community about the availability of MCH facilities and encourage them to utilise the facilities.

<sup>21</sup> Although the ANM/female MPW is supposed to cover a population of 5,000, a section of this population is called the intensive area while the remaining is called the twilight area. In the intensive area, she is supposed to conduct all the activities listed above and provide relevant services, while in the twilight area she provides maternal and child health services only on request.

<sup>22</sup> The male MPW is supposed to identify cases of malnutrition among pre-school children (1-5 years) in the intensive area and the children between the ages 0-5 years in the twilight area and refer them to the balwadis or PHC, distribute IFA supplements to children between 1-5 years in the intensive area and to pregnant and lactating women as well as children from 0 to 5 years and family planning acceptors in the twilight area. The male MPW is also required to educate the community about nutritious diet for women and children.

<sup>23</sup> Team activities include attending and participating in the staff meetings at the PHC, community development block or both, coordinating his activities with the female MPW and the dais in the twilight

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As per the current norms, a Sub Centre is to be provided for a general population of 5,000 people and for a population of 3,000 persons in tribal and inaccessible areas. The number of villages that fall in the purview of a single Sub Centre varies from state to state depending on the population distribution. An exception in this regard are the Andaman and the Nicobar islands, where the norm is based on the distance and not the population.

*Primary Health Centre (PHC):*

A Primary Health Centre functions under a Medical Officer who is supported by 14 paramedical and other staff. It has inpatient facilities of 4 to 6 beds and acts as a referral centre for 6 Sub Centres beneath it. As per the current norms, there has to be one PHC for a 30,000 population (20,000 population in the tribal and difficult areas). The PHC provides supportive and supervisory services to the Sub Centre. Besides this, the PHC is supposed to serve as a focal point for delivering integrated promotive, preventive and curative care to the designated population.

*Community Health Centre (CHC)*

A Community Health Centre (CHC) caters to a population of 100,000 persons. It is expected to provide public health expertise, epidemiological services, training, monitoring and evaluation, continuing education and first level referral for specialist medical treatment. This includes diagnosis, special investigation, consultation and surgery. A Public Health Officer heads each CHC. Other specialists stationed at the CHC include a general physician, general surgeon, obstetrician, gynaecologist, and paediatrician, seven Auxiliary Nurse Midwives and other paramedics. The CHC functions as a mini-hospital with 30 beds, an X-ray and labour room and laboratory facilities.

CHCs were modeled on the sanitation and epidemiology<sup>24</sup> stations in the erstwhile USSR.

*Taluka hospital or District hospital*

Above the CHC is the taluka hospital or a district hospital. The Taluka level hospital serves about half a million people, while the district hospital serves about 2 million people. Both provide medical and surgical facilities. At the district level, there is also a large health administration responsible for the communicable disease control programmes and family planning in addition to medical services.

**Reach of the primary health care system**

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area, meeting the health assistant every week for guidance.

<sup>24</sup> a branch of medical science that deals with the incidence, distribution, and control of disease in a population-Reference:

< <http://www.m-w.com/cgi-bin/dictionary> >

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The public health network is nearly universal in its coverage of rural India for primary health care if infrastructure to population ratios are used as an index. Infrastructural development in health has been rapid since the eighties in order to keep pace with the growth in population. The number of Sub Centres increased from about 84,000 in 1985 to about 136,000 in 1997, while the number of PHCs increased from 9,000 in 1985 to about 22,000 in 1997<sup>25</sup>. However, if coverage by services is looked at, significant room for improvement becomes apparent.

Surveys indicate that the public health network accounts for only about 20% of outpatient curative services. However, it is the most widely utilised source of preventive and promotive care, especially among the poor. It is also the main source of inpatient curative care among the poor<sup>26</sup>. The outpatient curative services that almost 80% of the poor access are largely provided by untrained practitioners.

Despite being the main source of preventive- promotive services, the public health system's level of coverage is not very good. Only about 13% of women in India reported a home visit by a health worker or a family planning worker<sup>27</sup>. Focussing on ANC alone, only about 65% of mothers in India received any ANC<sup>28</sup>, and this figure has remained virtually unchanged since the earlier survey<sup>29</sup>. Of the women who did receive some ANC, 33.1% of rural women and 30.1% of urban women received ANC only after the critical first trimester. Over 40% of the mothers in rural areas did not receive any kind of ANC<sup>30</sup>. This means that one out of every three women in the country did not receive any ANC.

A strong case for working with the public health system to optimise its functioning emerges from the above. Due to the immense network of infrastructure that exists in the country, working to improve service delivery is a logical proposition. Inadequate outreach in the presence of existing infrastructure is especially troubling given that it is an effective way of ensuring that the poor access and receive preventive and promotive health services<sup>31</sup>.

**Services provided: Integrated Child Development Services (ICDS) programme**

The ICDS or the Integrated Child Development Services programme was launched on October 2, 1975, in 33 blocks. It is the world's largest and most long- standing child development programme. As the name suggests, it is a programme that envisages the delivery of services in an integrated manner, for all-round child

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<sup>25</sup> Bulletin on Rural Health Statistics in India, 2002.

<sup>26</sup> Among those below the poverty line, the public sector is the main source for all services, except outpatient curative care. World Bank, 2001.

<sup>27</sup> NFHS-II. This data is for the 3 years preceding the survey.

<sup>28</sup> Ibid

<sup>29</sup> Ibid

<sup>30</sup> Ibid

<sup>31</sup> Inpatient services are the least effective way of reaching the poor. Immunisations and outpatient services at PHCs are much more pro-poor. World Bank, 2001.

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development. The programme recognises the need to break the intergenerational cycle of low birth weight through various interventions aimed at different points in the lifecycle.

The ICDS provides the following services relevant to reducing low birth weight incidence:

- Health check-ups including Ante Natal Care (ANC) and post-natal care at the anganwadi centre (AWC)
- Immunisation of pregnant women
- Supplementary nutrition for pregnant and nursing mothers. Selected adolescent girls are also given supplementary nutrition once a week
- Nutrition and health education for pregnant women. Special counseling and educational activities are organised for selected adolescent girls

The beneficiaries of the programme, therefore, include the children in the 0-6 age group, pregnant and lactating women and adolescent girls. Girls who belong to families below the poverty line or who have dropped out of the formal education system are given preference in the scheme.

The objectives of the ICDS include the following:

- To improve the nutritional and health status of children below the age of six years
- To lay the foundation for the proper psychological, physical and social development of the child
- To reduce the incidence of mortality, morbidity and malnutrition and number of school drop outs
- To achieve effective co-ordination of policy and implementation among the various departments to promote child development
- To enhance the capability of the mother to look after normal health and nutritional needs of the child, through proper health and nutrition education

The services of ICDS are provided at an Anganwadi Centre (AWC) through an Anganwadi Worker (AWW). An AWC is located at the 1,000 population level and is open for approximately 4 hours on working days. Each AWC has an AWW and a helper.

The AWW carries out the following functions:

- Teaching children who attend the pre-school through the play-way method
- Educating the community through counselling sessions, home visits and demonstrations
- Growth monitoring and nutritional surveillance of children in the 0-6 age group
- Providing supplementary nutrition to pregnant and lactating women as well as children below the age of six

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- Arranging for health check-ups and immunisation of children and antenatal women by the ANM and Lady Health Visitor at the AWC
- Detecting disabilities in young children and referring them to health functionaries
- Maintaining registers such as
  - Survey register for the entire area that is covered by the AWC
  - Attendance register
  - Supplementary Nutrition Programme register
  - Pre- School Education register
  - Register of stock
  - Daily diary
  - Record of immunisations carried out for children and pregnant women
  - Growth card for all children up to 6 years
  - Records of referral cases

**Coverage of the ICDS**

The ICDS has been 'universalised' to reach over 5,000 blocks in the country, covering a population of about 230 million. About 62% of the eligible women in ICDS areas avail of the supplementary nutrition facilities, about 60% avail of the Ante Natal and Post Natal Care and approximately 30% receive Tetanus Toxoid injections. About 44% of the eligible women receive iron & folic acid supplements and health check-ups at the AWC<sup>32</sup>.

The data above suggests that it is necessary to analyse and improve the impact of the ICDS programme.

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<sup>32</sup> NCAER, Op. Cit.

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**Annexure- 2 : The Community Health Worker scheme**

The Community Health Worker Scheme (CHW)<sup>33</sup> was launched across the country in 1977. The scheme was based on the Jamkhed project that has been discussed in Annexure 3<sup>34</sup>. The community, in this case, the village was supposed to choose the worker who was then trained by the government. The goal was to have one CHW for every 1000 people in the country (at the same level as the Anganwadi worker in the ICDS programme). Within five years of the launch of the scheme, about 400,000<sup>35</sup> CHWs had been trained, leading to the establishment of the second largest cadre of community health workers in the world<sup>36</sup>.

The scheme envisaged that every village or community with a population of 1000 people should elect one representative from the village who was willing to serve the community. The prerequisites<sup>37</sup> for selecting such a person were that s/he should be below 30 years of age<sup>38</sup>, must be literate and able to read and write well, preferably with formal education of up to standard six<sup>39</sup>. Preference was to be given to women in the selection process, with males being selected only in the absence of a suitable woman candidate<sup>40</sup>. The guidelines regarding the educational background of the worker were to be relaxed if the candidate was a woman<sup>41</sup>. Government guidelines also stipulated that the selection should ensure a suitable representation of SC/ST candidates, and the criteria for qualification are relaxed to accommodate such candidates.

The workers were not expected to function as full-time functionaries. Rather, it was assumed that they had some alternative occupation and would perform the functions of the CHW during their spare time, as the work itself would not take more than 2-3 hours<sup>42</sup>.

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<sup>33</sup> The scheme was re-named from time to time. It was also referred to as the Community Health Volunteer scheme in 1980 and Village Health Guide scheme in 1981.

<sup>34</sup> Arole, M., Arole, R. (1994), 'Jamkhed: A Comprehensive Rural Health Project'

<sup>35</sup> Chatterjee, M., 'Health for too many: India's experiments in truth', Reaching health for all., Jon Rhode, Meera Chatterjee and David Morley, Oxford University Press.

<sup>36</sup> The largest cadre of health workers in the world is in China. Ibid.

<sup>37</sup> Guidelines regarding age, sex or occupation had not been specified at the time the scheme was launched. This was pointed out in the first survey of the scheme that was carried out by NIHF in 1978. The conditions mentioned here are subsequent modifications to the initial guidelines.

<sup>38</sup> Exceptions were made if the person was well known for his/her social services in the village and was accepted by the community. Goyal, R.S., (1990), 'Community participation in Primary Health Care: Study of an Indian Experiment'.

<sup>39</sup> Ibid.

<sup>40</sup> Males who were selected had to have a service background or should have been involved in social work in the village. Ibid.

<sup>41</sup> It was sufficient for the women to be able to read and write the language of the area.

<sup>42</sup> Ibid.

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The services that the CHW was supposed to perform were not specified during the early days of the programme. On the basis of an evaluation of the programme that recommended some changes in the guidelines, the final list of services that the CHW was supposed to deliver included<sup>43</sup>:

- Control of malaria and communicable diseases
- Environmental sanitation and personal hygiene
- Immunisation
- Family planning
- Maternal and child health
- Nutrition
- Reporting of vital events
- First-aid in emergencies
- Treatment of minor ailments
- Mental health

CHWs were required to collaborate with the other health functionaries in the provision of these services and supplement each other's efforts<sup>44</sup>.

The CHW was to be selected by the village panchayats. In case the village panchayats were non-functional, the village community selected the worker after a meeting in which the medical officer of the PHC, which handled that village explained the nature of the scheme as well as the criteria for selecting the worker. The role of the medical officer was limited to screening the nominated candidate to make the final selection<sup>45</sup>. The community was also supposed to act as the supervisory body to monitor the work of the CHW.

The government was responsible for training the workers as well as handling the financial aspects of the programme. The workers were to be trained for a period of about three months in the provision of basic health services. On completion of training, the workers were supplied with a medicine kit, the contents of which were replenished on an annual basis<sup>46</sup>. The kits usually contained common allopathic medicines for treating ailments as well as some that belonged to the indigenous systems of medicine. A stipend of about Rs 200 was provided during the training period.

The training of the workers was supposed to inform them about the nature of the scheme as well as their role in it. All the trainers as well as the functionaries

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<sup>43</sup> NIHF (1978)

<sup>44</sup> Goyal, R.S., Op Cit.

<sup>45</sup> Ibid.

<sup>46</sup> The CHWs were to be provided with a kit of medicines by the Government of India. This kit usually contained medicines such as paracetamol, magnesium hydroxide, cough mixture, chloroquine, eye drops, APC, mercurochrome, benzyl benzoate and kaolin powder. This is the list of the common medicines that were used. The actual list could vary a bit. -NIHF (1978)

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associated with the scheme were also expected to have some kind of training exposure. Medical officers and supervisors at the level of the PHC were envisaged as the trainers. The physical site of the training could either be the PHC or the Sub Centre<sup>47</sup>. The CHWs were to be supplied with training manuals. These were released by the Government of India to the various state governments and further down to the district level and PHC officials. Training was imparted in allopathy, as well as indigenous systems of medicine such as Unani, Ayurveda, homeopathy and Siddha.

An honorarium of Rs 50 was paid once the worker began working on the field. Due to problems in receiving the honorarium that were pointed out in earlier surveys, the money was sent directly to the worker in the form of a money order or sent to the village panchayats.

By the mid-eighties the CHW scheme had become almost defunct<sup>48</sup>. Reviews of the scheme brought out that the CHWs were largely involved with providing curative care<sup>49</sup> while the extent of their interaction with health functionaries including the TBAs was poor in general. It was found that only about 40% of the CHWs sought assistance from the other functionaries while only about 60% of the health workers were aware of this aspect of their role<sup>50</sup>.

Although a thorough analysis of the programme was not undertaken<sup>51</sup>, some reviews<sup>52</sup> have highlighted several gaps.

One set of problems with the scheme can be traced back to the poor role definition of this category of workers. The conducted reviews found that the CHWs, the community as well the functionaries of the health system lacked clarity regarding the role of these workers. This was further compounded by the training content, which laid greater stress on curative rather than preventive and promotive skills. Training was largely conducted by Primary Health Centre doctors and Health Supervisors, who were not skilled in training basic health workers<sup>53</sup>. The result was that the CHWs began to consider themselves as village doctors. Village communities who were in need of curative care accepted this role of the workers due to lack of other medical assistance<sup>54</sup>.

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<sup>47</sup> Most of the workers were found to have been trained at the PHC, with only 12.5% receiving training at sub-centres. Goyal, R.S., Op Cit.

<sup>48</sup> The annual replenishment of medicines was stopped.

<sup>49</sup> NIHF (1978); Goyal, R.S., (1990).

<sup>50</sup> Goyal, R.S., (1990), Op Cit.

<sup>51</sup> Ashtekar, S., Mankad, D., Damle, A., Kanade, S., 'A profile of community health workers in the Vachan project', Centre for Development Research and Documentation, Pune., 1994.

<sup>52</sup> NIHF (1978); Goyal, R.S. (1990).

<sup>53</sup> Chatterjee, M., Op Vit.

<sup>54</sup> Ibid.

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Improper selection of CHWs has been identified as another source of the problem. Since the emphasis of the services provided, especially the family planning services, was on men when the scheme was launched, most of the workers were male<sup>55</sup>. One of the important roles of the CHW was behaviour change communication to prevent illnesses. This necessitated communicating with women who typically shoulder the responsibility for the health of their families. As women workers would have had easier access to other women in their village, it was later realised that the CHWs should have been women rather than men. This realisation, however, came at a stage, when the male workers could not be phased out<sup>56</sup>.

The status of the CHWs vis a vis the public health system was not clearly understood by either the government functionaries on the ground or CHWs themselves. The district and state level government functionaries considered CHWs to be volunteers and therefore did not officially view them as a part of the government system. They perceived their role as being restricted to providing training and finances for paying the workers. Government functionaries on the ground, however, considered CHWs to be extensions of the public health system and delegated responsibilities to them. CHWs therefore began to perceive themselves as a cadre of government employees and demanded higher remuneration<sup>57</sup>.

A peculiarity with the scheme was that the stipend provided during training was five times the honorarium that was given to the workers<sup>58</sup>. As a result, while several workers underwent training, the lack of sufficient remuneration acted as an incentive for them to function as quacks and charge user fees.

The monitoring of these workers by the community did not take place also largely due to ambiguity regarding the role and status of these workers. The workers were largely perceived by the community as employees of the government due to the honorarium that they received and the delegation of responsibilities to them.

The scheme was initially sponsored completely by the Central Government. This funding was reduced to 50% during the financial year 1979-1980, severely affecting its implementation in several states. The scheme was later revived as a part of the Family Welfare programme, another centrally sponsored programme<sup>59</sup>.

The payment of honoraria continues till date as several workers were trained in the initial phase and continue to exist on the field despite the withdrawal of the scheme.

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<sup>55</sup> Ibid.

<sup>56</sup> Ibid.

<sup>57</sup> Ibid.

<sup>58</sup> Ibid.

<sup>59</sup> Goyal, R.S., Op Cit.

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**Annexure- 3 : The Comprehensive Rural Health Project, Jamkhed<sup>60</sup>**

Dr Mabelle and Raj Arole started the Comprehensive Rural Health Project (CRHP) in Jamkhed in 1970. This was probably the first experiment in community based primary health care in India. The Jamkhed experience has provided the basis for several other experiments in the sector. CRHP sought to provide access to relevant health care where none was available, hence the location at Jamkhed in Maharashtra.

From the initial eight villages, CRHP expanded to cover 70 villages with a population of 100,000 by 1980. As of 1993 the project reached about 500,000 persons in 400 villages across Ahmednagar, Beed and Osmanabad districts in Maharashtra<sup>61</sup>.

Locally resident women were selected and trained to be village- level health workers. While the workers were at the village level, one village could, over the course of time, have had more than one health worker<sup>62</sup>. No educational or literacy pre-requisites were applied. Some of the workers were illiterate. Local residence was perceived to be of tremendous importance because of its implications for motivation, enthusiasm and rapport with other local residents. Middle aged women were preferred because of their greater familiarity and experience with the problems affecting the health of their families. It was also believed that community members would find middle aged female health workers easier to approach. The women had different caste backgrounds. Farmers' clubs or local leaders were involved in selecting health workers to ensure community acceptability.

The village health workers' role encompassed preventive, promotive, curative and rehabilitative services. They were supported in this by a project hospital which functioned as a referral centre. The village health workers' role included:

- Simple symptomatic curative care
- Maternal care: which encompassed Ante Natal Care, delivery assistance and Post Natal Care. Ante Natal Care included Behaviour Change Communication focused on improving nutrition, weight gain monitoring, Iron Folic Acid supplementation and identification of high risk pregnancies and referral of the same to the CRHP hospital<sup>63</sup>. Deliveries were conducted by the health workers using a sterilised kit provided by CRHP. Post natal counseling included advice on weaning practices.
- Under five care: included growth monitoring and immunisation services<sup>64</sup>. The village health workers maintained growth charts. Supplementary nutrition was

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<sup>60</sup> This section is based almost entirely on the document 'Jamkhed: A Comprehensive Rural Health Project' written by the Aroles.

<sup>61</sup> [www.jamkhed.org](http://www.jamkhed.org)

<sup>62</sup> This is implicit in the literature that we sourced information from, though this has not been stated in so many words.

<sup>63</sup> While pregnant women received Tetanus Toxoid injections, it is not clear who administered these injections.

<sup>64</sup> It is not clear whether the health workers provided immunisation services themselves.

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- also provided in conjunction with the farmers' clubs. The farmers' clubs were responsible for cooking and distributing this food
- Family planning services: included distribution of contraceptives and Behaviour Change Communication to increase inter- pregnancy spacing
  - Services to prevent blindness
  - Services to control chronic diseases (e.g. leprosy and tuberculosis)

CRHP trained the first batch of village health workers directly. Their training was primarily based on discussion and non- formal training methodologies. This batch of village health workers became the 'master trainers'. These 'master trainers' trained the remaining workers through hands-on experience, including home visits. The pre-service training at the CRHP centre lasted one week. The health workers were paid an honorarium for attending the training sessions.

After the initial pre- service training, weekly in- service training support and supervision for the practicing village health workers was achieved through village visits by the project team. In addition, all the village health workers visited the CRHP centre once a week for centre- based re- training and technical support. These sessions sought to address problems the health workers experienced. The health workers stayed at the centre from Friday afternoon to Saturday afternoon (including the night in between). These weekly sessions also served to build strong ties between the village health workers. These close knit relationships also created a source of pressure on existing health workers to adhere to the values and technical practices that the project staff advocated. Close interaction between the village health workers also meant that the workers were aware of their peers' practices in the field. The weekly re- training sessions provided a forum at which this knowledge could be shared when necessary with project staff.

Once the workers began their practice, they were allowed to charge the villagers user fees. They were allowed to exercise their discretion in this matter and therefore the amounts that they charged differed from person to person even for the same service. Many villagers paid in kind rather than cash and this was accepted. Farmers' groups played a regulatory role by seeking to ensure that village health workers did not overcharge their clients.

The farmers' clubs acted as a community-based institution that supervised the village health worker along non- technical parameters. As the clubs were involved in hiring the workers, they were also in a position to fire them. Community members therefore brought their grievances regarding the workers' functioning to the farmers' clubs. The farmers' clubs took these issues up with the worker, and exercised their right to fire in consultation with the larger community, if necessary.

In the first five years (1971 to 1976), the Infant Mortality Rate declined from 176 to 52 per 1000. It fell to 49 per 1000 by 1986, followed by a further decline to 19 per 1000

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by 1993. Immunization rates also improved from 0.5% to 81% in the first five years and touched 92% by 1993. Malnutrition measured as weight for age decreased from 40% to 30% during the five years from 1971 to 1976 and decreased further to 5% by 1993. The number of women receiving ANC increased from 0.5% to 80% in 1976 and to 96% in 1993. Deliveries by trained attendants increased from 0.5% to 74% to 98% in 1993. The indicators continue to improve.

This spectacular impact may not, however, be attributable entirely to the health-related interventions described above. Processes of social mobilisation and change, set in train through the project's various community-based activities such as the formation of farmers' clubs and mahila mandals<sup>65</sup>, may have contributed significantly to the improved health outcomes. Even the health workers' training, for instance, sought to break caste barriers. The project staff also developed a low cost nutritious diet using locally available food resources by living on Rs. 1.50 per day for a month. These and other, similar, activities may have changed behaviours directly. It is also not improbable that such activities increased the credibility of the project among local communities making them more responsive to advice or suggestions from project staff and village health workers. These factors need to be understood more fully and taken into account if the lessons from the Jamkhed experience are to inform current and future intervention.

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<sup>65</sup> Women's groups

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**Annexure- 4 : Jan Swasthya Rakshak Scheme**

This account is based on the Executive Summary of the evaluation survey conducted by the Community Health Cell, Bangalore in 2001.

The Jan Swasthya Rakshak Scheme (JSR) was launched under the Integrated Rural Development Programme in 1995 by the state government of Madhya Pradesh in response to the need for primary health care in the state. This project seeks to put in place a village level trained worker to provide round the clock curative, preventive and promotive health services. The villages that do not possess any kind of health infrastructure (Community Health Centre, Primary Health Centre or Sub Centre) are prioritised under this scheme.

Both men and women are eligible to become JSRs although women and candidates belonging to the Scheduled Castes and Scheduled Tribes are given preference. Eligible candidates are required to have at least passed the tenth standard examination and be local residents of the designated area of work. The maximum age limit for becoming a JSR is 35 years.

The process to be used for selecting candidates in this scheme is not very clear. Once selected, the candidate is sent for a six-month training programme. The training is conducted at the Primary Health Centre, Community Health Centre or the District Hospital typically by the Medical Officer and other health functionaries. During this period of training, a stipend of Rs 500 is paid to the workers. After training, the workers have to clear a state level examination for becoming a JSR. Candidates who clear this examination are given a medicine kit, and allowed to practice on the field<sup>66</sup>.

Jan Swasthya Rakshaks have been designated as depot-holders by the government and all life saving drugs are given to them free of cost. They are authorised to distribute contraceptives and provide Oral Re-hydration Solution in cases of diarrhoea. The JSR is also required to assist in the implementation of National Health Programmes, though the manner of assistance has not been specified<sup>67</sup>.

Unlike the earlier CHG scheme, the JSRs are allowed to charge a nominal amount as user fees in exchange for their services. Apart from the stipend that is paid during training, there is no other financial input from the government.

A document released by the Government of Madhya Pradesh claims that 29,180 JSRs had been trained by the end of October 2000. The methods of training or re-training if any, are not available.

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<sup>66</sup> < <http://www.mpinfo.org/English/newsarch/122002/15/nl.htm> >

<sup>67</sup> Ibid.

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The review by CHC revealed several gaps in the implementation of the scheme such as the fact that local communities are largely unaware of the programme even though it is still operational officially. Almost 90% of the selected JSRs have dropped out of the scheme— a process that began from the training phase onwards. The JSRs that have completed the course successfully tend to practice curative care only.

Although the selection criteria gave preference to female candidates, it was noticed that there was only one female JSR. A probable reason for this skewness could be the high educational background that was demanded from the workers. Further, the review found that several quacks and unregistered practitioners had joined the course to legitimise their practice.

Due to the government's aims of providing a trained JSR in each village by June 2002, the targets of training are being met rapidly, affecting the quality of training. The training that is provided to JSRs is congested. It also varies in its scope and focus by trainer, as guidelines have not been specified clearly. Nevertheless, a common pattern observed is that the training is generally focused on teaching the workers the procedure for giving injections and providing dressings. The JSRs also tended to be trained in the use of very few drugs. There is no provision for continuing medical education and the overall linkage of the JSRs with the PHC is not consistent and is inadequately planned. This absence of information leads JSRs to approach quacks to learn about medicines that would help establish their credibility. Further, there is no special provision in the scheme for innovations and alternative experiments in training and programme design or field implementation.

In view of the fact that the JSR is an experiment by a government to have an additional health worker, it is essential to analyse the gaps in the programme and identify lessons for future action.

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