

## ASSESSMENT OF IMPLEMENTATION OF INTEGRATED MANAGEMENT OF NEONATAL AND CHILDHOOD ILLNESSES PROGRAMME AT PRIMARY HEALTH CENTRE LEVEL IN BHAVNAGAR DISTRICT, GUJARAT

Dr. Ashvin. B. Rathod<sup>\*1</sup>, Dr. K. D. Bhalani<sup>1</sup>, Dr. Prashant. M. Jadav<sup>2</sup>, Dr. H. M. Patel<sup>1</sup>, Dr. Dhiren Amin<sup>1</sup>

<sup>\*1</sup>Department of PSM (Preventive and Social medicine), Govt. Medical College Bhavnagar-364001, Gujarat, India.

<sup>2</sup>Department of Biochemistry, Govt. Medical College Bhavnagar-364001, Gujarat, India.

### ARTICLE INFO

#### Corresponding Author:

**Dr Ashvin Rathod**

Tutor, Department of PSM  
(Preventive and Social medicine),  
Govt. Medical College  
Bhavnagar-364001, Gujarat, India.

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### ABSTRACT

**Objectives:** To assess the availability of trained staffs and the logistic support to provide IMNCI services.

**Methods:** A cross sectional study was conducted in 14 PHCs, two from each block, one with the highest RCH indicator grading and another with the lowest RCH indicator grading. Data were collected by personal interview of medical officers. The information collected was about on staff availability, training, logistics.

**Results:** All medical officers were trained in IMNCI except one PHC. IMNCI registers were available at 86% of the PHCs, while chart booklets were available at 71% of the PHCs. The monthly reporting format, ORS packets, paracetamol, chloroquine were available at all PHCs while cotrimoxazole, iron (kid) & Vitamin A were available at 79%, 86% and 57% of the PHCs respectively. The Inj. Gentamycin and Inj. Ampicillin were available only at 13(92.9%) and 11(78.6%) of the PHCs respectively.

**Conclusion:** All PHCs had more than 80% of health providers managing sick children trained in IMNCI. The availability of essential oral drugs, pre-referral injectable drugs, and essential equipment & materials are not optimal.

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### INTRODUCTION

Approximately 28% of all deaths of newborns and 23% of all infant deaths in the world occur in India.<sup>1</sup> Many of these deaths could be prevented by greater access to and use of high quality healthcare in combination with improved newborn and infant care practices in families.<sup>2</sup>

India adapted the Integrated Management of Childhood Illness (IMCI) strategy aiming to reduce its newborn and infant mortality burden and renamed the revised strategy Integrated Management of Neonatal and Childhood Illness (IMNCI).<sup>3,4</sup> In addition to treatment of sick newborns and children, it incorporates home visits for early newborn care, which have been shown to reduce mortality among newborns in Gadchiroli, India.<sup>5</sup> The home visits focus on improving newborn and infant care practices and care seeking for illness.

In India, the "IMCI" strategy has been adapted by experts including representatives of the Indian Academy of Pediatrics (IAP) giving central thrust to neonatal care component, the most critical period affecting infant mortality in India. This adapted version of IMCI was renamed as IMNCI (Integrated Management of Neonatal and Childhood Illnesses).<sup>6</sup>

The present study presents status of IMNCI at primary health care level after 5 years of training in Bhavnagar district.

The specific aspects included in this study are health care, human resource, drugs, equipments, and other logistics.

### MATERIAL AND METHODS

All 7 blocks of Bhavnagar district were included in the study. A cross sectional study was conducted in year 2011-12 in 14 PHCs, two from each block, one with the highest and another with the lowest RCH indicator grading. The pre-tested and semi structured questionnaire was used for the data collection. After obtaining written permission from chief district health officer, data collection was started. A date of visit of the centre was fixed in consultation with medical officer.

Data were collected by personal interview of medical officers and from records & registers available at PHCs. The information collected was about on staff availability, training and logistics. The study was approved by the Institutional Review Board, Government Medical College, Bhavnagar on 30<sup>th</sup> January 2012.

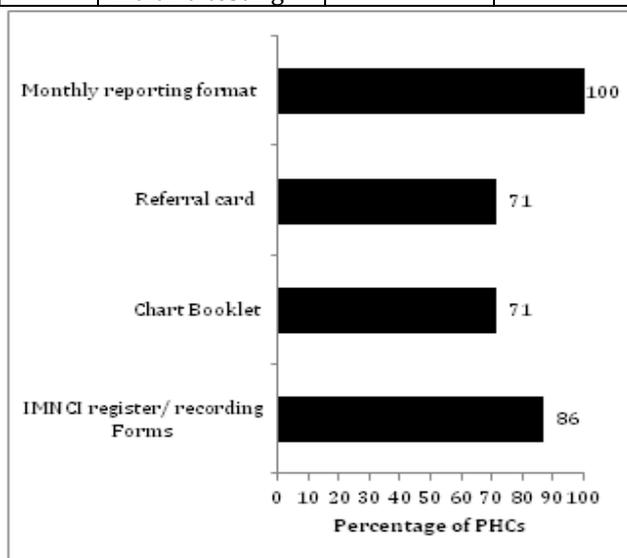
### RESULTS

From the 14 selected PHCs, MBBS medical officers were available at 6 (42.2%) PHCs and out of them, 5 (88.3%) were trained in IMNCI. AYUSH medical officers were available at 9 (64.2%) PHCs and all of them were trained in IMNCI. There were 92 sanctioned posts of FHWs

& 15 sanctioned posts of FHSs in these 14 selected PHCs. Out of these, 2 (2.2%) posts of FHWs & 8(53.4 %) posts of FHSs were vacant. From the available FHWs & FHSs, 84 (93.3%) FHWs & 6 (85.7%) FHSs were trained in IMNCI.

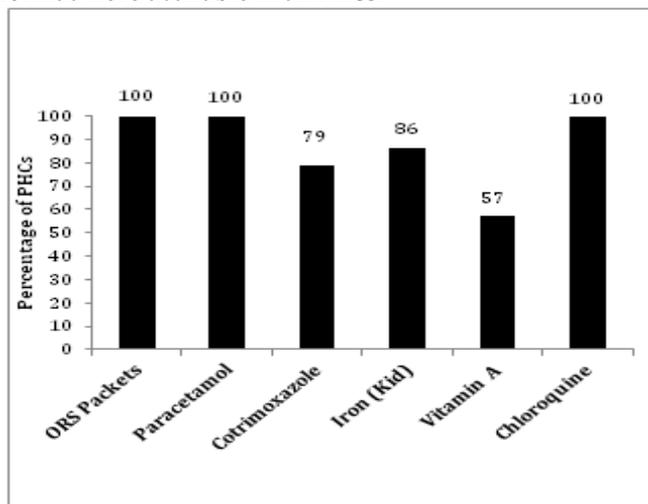
**Table I: Availability of equipments for IMNCI at PHCs of the Bhavnagar District**

Sr. No	Equipments	Number (N=14)	Percentage
1	Weighing scale (adult type)	14	100
2	New born weighing scale (Pan type)	14	100
3	Baby Timer for counting respiratory rate	5	35.5
4	Measuring jar of 1 litre	1	7.1
5	Cup, spoon	1	7.1
6	Thermometer	14	100
7	Facility for malaria testing	14	100



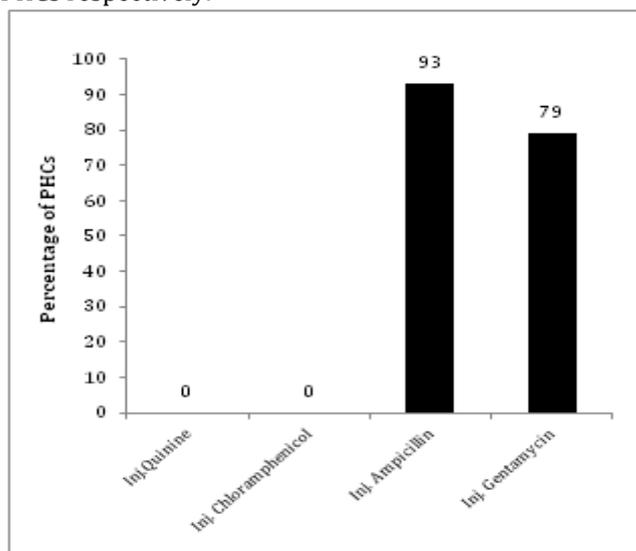
**Figure 1: Availability of logistics required for IMNCI at PHCs of Bhavnagar District.**

IMNCI registers / recording forms were available at 86% of the PHCs, while chart booklet & Referral card were available at 71% of the PHCs. The monthly reporting format were available in all PHCs.



**Figure: 2 Availability of essential oral drugs for IMNCI at PHCs of Bhavnagar District**

The ORS packets, Paracetamol, Chloroquine were available at all PHCs while Cotrimoxazole, Iron (kid) & Vitamin A were available at 79%, 86% and 57% of the PHCs respectively.



**Figure 3: Availability of Injectable drugs for IMNCI at PHCs of Bhavnagar District**

The Inj. Chloramphenicol and Inj. Quinine were not available at any of the PHCs while Inj. Gentamycin and Inj. Ampicillin were available only at 13(92.9%) and 11(78.6%) of the PHCs respectively.

**DISCUSSION**

In this study it was found that all PHCs have more than 80% of health providers trained in IMNCI. Health facility surveys conducted by WHO in Sudan<sup>7</sup> (2003), Morocco<sup>8</sup> (2007), and Egypt<sup>9</sup> (2002) showed that 57.6%, 73.3% and 77.3% of health facility had at least 60% health workers trained in IMCI respectively.

In our study it was found that the weighing scale (adult type), thermometer, and facility of malaria testing were available and functional at all 14 PHCs while measuring jar of 1 liter and cup- spoon were available and functional only at one PHC.

Health facility survey conducted by WHO in (2000) in Rufiji, Morogoro Rural, Kilombero and Ulanga districts of south-eastern Tanzania<sup>10</sup> showed that 16% and 6% health facilities had all essential equipments & materials for IMCI respectively.

Mean of availability of essential oral drugs was 5.21, out of 6 in PHCs. Only 50% PHCs had available all the six drugs. Health facility surveys conducted by WHO in Sudan<sup>7</sup> (2003), Morocco<sup>8</sup> (2007), Egypt<sup>9</sup> (2002) & Malawi<sup>11</sup> (2004) observed that mean of availability of essential oral treatments were 5.0 out of 6, 5.8 out of 6, 3.3 out of 4, 6.4, out of 8 essential oral drugs respectively.

Mean availability of injectable drugs for pre-referral treatment was 1.71, out of 4 injectable drugs in the PHCs. All 4 injectable drugs were not available at any of the PHC. Health facility surveys conducted by WHO in Sudan<sup>7</sup> (2003), Morocco<sup>8</sup> (2007), Egypt<sup>9</sup> (2002) found that mean of availability of injectable drugs for pre-referral treatment were 2.6 out of 4, 3 out of 3 and 1.7 out of 3 injectable drugs respectively

**CONCLUSION**

From above finding we conclude that all PHCs had more than 80% of health providers trained in IMNCI managing sick children. The availability of essential oral

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drugs, pre-referral injectable drugs, and essential equipment & materials are not optimal. None of PHCs had all essential oral drugs and all essential equipment & materials.

**RECOMMENDATIONS**

Vacancy of staffs at some centres should be filled up. Efforts are needed to improve availability of essential oral drugs, pre-referral injectable drugs, and essential equipment & materials for IMNCI. Need of more emphasis on maintenance of IMNCI register, for the documentation of their work.

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**REFERENCE**

1. United Nations Children's Fund. Levels and trends in child mortality: report 2010. Estimates developed by the UN Inter-Agency Group for Child Mortality Estimation. Unicef, 2010.
2. Darmstadt GL, Bhutta ZA, Cousens SN, Adam T, de Bernis L, Walker N. Evidence-based, cost-effective interventions that matter: how many newborns can we save and at what cost? *Lancet*2005;365:977-88. [[PubMed](#)]
3. World Health Organization. IMCI adaptation guide, version 5. WHO, 1998.
4. World Health Organization. Integrated management of neonatal and childhood illnesses. WHO, 2003.
5. Bang AT, Bang RA, Baitule SB, Reddy H, Deshmukh MD. Effect of home-based neonatal care and management of sepsis on neonatal mortality: field trial in rural India. *Lancet* 1999;354:1955-61. [[PubMed](#)]
6. Thacker N. Integrated Management of Neonatal and Childhood Illnesses- A New Hope for Child Survival. *Indian Pediatr* 2007; 44:168-71.
7. World Health Organization. Health Facility Survey on Quality of Out- patient Child Health (IMCI) Services- IMCI Health Facility Survey Sudan March April 2003. 2004. WHO-EM/CAH/013/E/G/02.04/500.
8. World Health Organization. National health facility survey on the quality of outpatient primary child health care services - IMCI health facility survey Morocco October-December 2007.2009. WHO EM/CAH/188/E/03.09/100
9. World Health Organization. Health Facility Survey on Quality of Out- patient Child Health (IMCI) Services - Egypt March April 2003.2003. WHO-EM/CAH/012/E/G/07.03/500.
10. Schellenberg J, Bryce J, de Savagny D. Tanzania IMCI Multi- Country Evaluation Health Facility Survey Study Group, et al; The effect of Integrated Management of Childhood Illness on observed quality care of under five in rural Tanzania. *Health Policy Plan*.2004;19:1-10.
11. World Health Organization. Health Facility Survey Malawi.2004.