

**Original article****Evaluation of knowledge about Integrated Management of Neonatal and Childhood Illnesses (IMNCI) approach among the internee doctors**Vaibhavkumar Ramanuj<sup>1</sup>, D.V. Bala<sup>2</sup><sup>1</sup>Assistant Professor, <sup>2</sup> Professor & Head, Community Medicine Department, Smt. NHL Municipal Medical College, AhmedabadCorrespondence to: Vaibhav Ramanuj E-mail – [vaibhavramanuj@yahoo.co.in](mailto:vaibhavramanuj@yahoo.co.in)**Abstract:**

IMNCI is an important strategy being implemented across our country with the aim of reducing infant as well as children under-5 mortality. It has also been incorporated in the undergraduate curriculum for M.B.B.S. This cross-sectional study was carried out among 100 internee doctors of Smt. NHL Municipal Medical College, Ahmedabad. The results showed that 32% internee doctors were not able to classify child's illness for possible infection based on symptoms given. Also only 50% correctly knew the National Immunization Schedule. The only descriptive question related to treatment of malaria as per the IMNCI guidelines was not attempted by 21%.

**Keywords:** IMNCI, examination, classification, treatment, Internee doctors

**Introduction**

It is known to us that over the last three decades the annual number of deaths among children less than 5 years of age has decreased by almost a third<sup>1</sup>. However, this reduction has not been evenly distributed throughout the world. Every year more than 10 million children die in developing countries before they reach their fifth birthday. Seven in ten of these deaths are due to acute respiratory infections (mostly pneumonia), diarrhea, measles, malaria or malnutrition – and often to a combination of these illnesses<sup>1</sup>. Although various prevention and treatment strategies to prevent morbidity and mortality among children have already proven effective. Evidence suggested an integrated approach should be made available to manage sick children to achieve better outcome. So, during the mid- 1990s, the WHO, in collaboration with UNICEF and other agencies, institutions and individuals developed a strategy known as Integrated Management of Childhood Illness (IMCI). The IMCI strategy addressed curative care, various aspects of nutrition, immunization and other important elements of disease prevention and health promotion. This strategy has been expanded in India to include all neonates and is renamed as “Integrated

Management of Neonatal and Childhood Illness (IMNCI)”<sup>1</sup>.

As a part of the strategy to reduce Infant and Under-5 Mortality, IMNCI has been implemented across the country. The IMNCI training is being given to all health personnel as well as to the Anganwadi workers. The training has been included in Undergraduate Curriculum for M.B.B.S. students since 2006-07 to bring awareness as well as to strengthen their knowledge and skills. The medical students are usually given this training in their 6<sup>th</sup> semester.

The objective of our study was to assess the knowledge of the internee doctors of Smt. NHL Municipal Medical College who had undergone the IMNCI training in 2008 during their undergraduate study, to classify and treat children below five years as per the IMNCI norms.

**Methodology**

This cross sectional study was carried out during April-May 2010 where total 124 internee doctors were approached, informed about the study and oral consent was taken from them. These internee doctors were given a pre-designed questionnaire which included multiple choice questions based on the physician chart booklet given to them during their training on IMNCI in their U.G. curriculum. They were also asked to use the chart booklet to answer the questions if they want. The questionnaire included questions about the classification of symptoms, examination of child, treatment for various classifications and advice to mother/ caretaker. Totally 100 interns were assessed.

**Results**

Out of 100 interns, only 43 correctly knew the aims & objectives of IMNCI.

The questions related to examination, classification and appropriate treatment of a child for infection showed that 56% knew correct examination methods, 68% could correctly classify, 24% could cite the correct pre-referral treatment, 31% could answer the correct dose and dosages of antibiotic treatment and 27% could answer the correct advice to be given to the mother / care taker. (Table-1).

The questions related to diarrhea showed that 49% knew correct examination points and questions to be asked in children with diarrhea. 82% could correctly classify the illness. It was found that less than 40% of internee doctors could correctly answer various treatments for various types of diarrhea.

Interestingly, 64% could answer about vaccines to be given, 42% knew correct doses and 50% correctly knew the National Immunization Schedule.

**Table-1: Knowledge about Infection, Diarrhea and Immunization**

QUESTION	CORRECT ANSWER (n = 100)
<b>INFECTION</b>	
Examination	56
Classification	68
Pre-referral treatment	31
Antibiotic treatment	24
Advice to mother	27
<b>DIARRHOEA</b>	
Examination	49
Classification	82
Plan – C	36
Plan – B	41
Plan – A	38
Antibiotic treatment	27
Follow up	34
<b>IMMUNIZATION</b>	
Vaccines	64
Dose	42
Schedule	50

Out of 100, 62 internees correctly knew the features of malaria and only 10% could identify the treatment as per IMNCI norms. The question related to treatment of malaria was the only descriptive question in the questionnaire and it was not attempted by 21 internees. (Table-2).

**Table-2: Knowledge about Malaria**

Qestion	Correct	Not correct	Not attempted *
Features	62	38	--
Treatment	10	69	21

\* The question related to treatment for malaria was a descriptive one and 21 internees did not attempt the question.

About 56% knew correct method of examination for identifying feeding problems, 51% knew correct classifications and only 16% knew appropriate treatment for the same. As far as malnutrition is concerned, 78% knew correct examination for malnutrition, 82% could correctly classify and 61% knew correct treatment for the same. It was found that 33% knew correct examination of anaemia, 66% could correctly classify and 44% knew the correct treatment for anaemia. (Table-3).

**Table-3: Correct Knowledge about Feeding Problems, Malnutrition and Anaemia**

QUESTION	CORRECT ANSWER (n = 100)		
	Feeding problems	Malnutrition	Anaemia
Examination	56	78	33
Classification	51	82	66
Treatment	16	61	44

### Discussion

Although it is found that at the end of the training when feedback is taken from students, majority of them feel that the IMNCI training is excellent in terms of improving their skill and knowledge regarding pediatric practice, the study showed that only 43% of the participants correctly knew the aims of IMNCI. It also showed that many of the participants could not correctly examine, classify and treat the children as per the IMNCI norms. It was also found that the knowledge and the approach to a child as per the IMNCI strategy was not up to the mark.

### Recommendations

Although the IMNCI training is given by both the Community Medicine and the Pediatrics Departments, the students should be encouraged to implement the IMNCI approach whenever they are posted in the Pediatrics ward in their concerned semesters.

Also, during the internship posting in Pediatric ward, hands-on-training for IMNCI should be emphasized.

### Limitations

The sample size is less and hence the interpretations can not be generalized to all internee doctors. But, this is an important aspect dealing with the reduction of morbidity and mortality in children. Further studies could be carried out and necessary moderations can be done.

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### References

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