# Integrated management of childhood illness: Bringing treatment closer to home

Shrivastava SR\*, Shrivastava PS, Ramasamy J.

Department of Community Medicine, Shri Sathya Sai Medical College & Research Institute, Kancheepuram

#### **ABSTRACT**

Globally, the main target of all child health programs is to ensure a reduction in infant/under-five mortality. Globally the progress has been observed in reducing child mortality rate the average annual rate of reduction has remained persistently low in many developing countries. The Integrated Management of Childhood Illnesses (IMCI) is a cost-effective strategy that advocates use of evidence-based protocol in the management of common etiology of childhood illness. Despite availability of data on the effectiveness of IMCI in child health and health system, current global coverage of IMCI is far from expected. The objective of the present article is to suggest long-

term, cost-effective and primary health care based measures which will aid in extending the child health services to the inaccessible areas. IMCI targets children aged between 0-2 months and 2-5 years and encourages the use of simple clinical signs for detecting cases. To maximize the scope of benefit, IMCI program assessment should be done to ascertain the barriers in effective implementation. To conclude, systematic implementation of the IMCI strategy in community well backed by trained health workers can definitely improve the prognosis of childhood illness.

**Key words:** Child health, global health, Integrated Management of Childhood Illnesses

## \*Corresponding author:

3rd floor, Department of Community Medicine Shri Sathya Sai Medical College & Research Institute Ammapettai village, Thiruporur - Guduvancherry Main Road Sembakkam Post, Kancheepuram - 603108, Tamil Nadu, India Tel. +919884227224; e-mail: drshrishri2008@gmail.com

Received: 13.07.2013 Accepted: 21.09.2013 Progress in Health Sciences Vol. 3(2) 2013 pp 187-189 © Medical University of Białystok, Poland Globally, the main target of all child health welfare programs is to ensure a reduction in infant/under-five mortality as it is the main indicator reflecting the quality of health care system and socioeconomic development of the country [1]. In spite of a 35% global reduction in child mortality, the average annual rate of reduction has remained persistently low in many countries in Sub-Saharan Africa and South Asia region (viz. Bangladesh and Nepal) [1,2]. Worldwide almost 6.9 million children die annually before their fifth birthday, implying death of 19000 children every day, most of which have been attributed to diarrhea, pneumonia, malaria, and malnutrition [1].

The Integrated Management of Childhood Illnesses (IMCI) is a cost-effective strategy that advocates use of evidence-based protocol in the management of common etiology of childhood illnesses (including pneumonia, diarrhea, malaria and malnutrition) and thus provides quality-assured care [3,4]. IMCI targets children between 0-2 months and 2-5 years and encourages the use of simple clinical signs for detecting cases without use of laboratory investigations offering empirical treatment [2,4,5]. Such an integrated approach is advocated as most of the children brought for medical treatment often suffer from more than one condition, making a single diagnosis impossible at the remote health centers [2]. IMCI comprises of both preventive and curative components that are executed by mutual interaction between families / communities / health facilities [1,3,4]. It not only facilitates health promotion but also takes into account the variety of factors that put children at serious risk [3, 4]. IMCI aims for improvement in three areas, namely, patient management skills of health care staff, health system and family / community health practices [2]. Incorporation of neonatal component and endorsement of health care services from community-based workers instead of facility-based has also been exercised in some of the countries under IMCI as most of the under-five deaths occur in the neonatal period and the majority of the sick children do not avail the services of health centers [5].

Implementation of IMCI has been found to be associated with multiple benefits to the health care delivery system, health care staff, and community such as reduction in the under-five mortality [2,5,6]; augmenting nutritional status of children [2]; improving knowledge and satisfaction in caregivers [6]; enhancing skill/performance of health providers [2,6]; improving quality of care [2]; reducing financial burden on the health system [2]; discouraging the practice of misuse of antibiotics and other drugs [2,4]; and providing assistance for diagnosis of HIV-1 infection [7].

Despite availability of data on the effectiveness of IMCI in child health and health

care delivery system, current global coverage of IMCI is far from expected [2]. Multiple bottlenecks such as lack of clarity among program managers [8]; poor planning in the implementation [8]; overlap in defined roles and responsibilities among stakeholders [8]; lack of integration of services [2]; imperfect supervision and monitoring mechanism [5,8]; inefficient referral system [8,9]; inadequate availability of basic equipments and drug supplies [5,8]; poor training in terms of quality and duration;[5] lack of regular reinforcement of guidelines [9]; poor performance of health care staff [9]; resistance among health care workers [10]; and inadequate funding support [2]; have been recognized which are arresting the reach of IMCI in the community.

First implementation in its true spirit should occur and then maximizing the scope of benefit can be considered by addressing the identified barriers [5]. Suggested measures can be categorized as policy level (viz. dedicated policymakers and program managers, collaborative efforts by different ministries working towards betterment of child health) [5,8]; system level (viz. strengthening of the health system, customized need specific training) [2,3,5,11]; district level (viz. creation of structural/administrative links between district or national functioning and IMCI, regular review of the program at district, state and national level) [2,5,6]; community level (viz. development of a sense of ownership among health care workers, of integrated community promotion management, incentives to outreach workers, timely feedback from health care workers) [5,6,11,12]; private sector level (viz. adoption of decentralized approach/ roping-in non-governmental organization for effective supervision to overcome the barriers of distance/transportation/ cost, engagement of private sector/full time stand-alone trainers, training of private practitioners) [4,5,9,11,13,14]; and use of mobile technology in implementation [15]; is imperative in improving child survival and thus achieving the Millennium Development Goals related to child health.

To conclude, strategic implementation of the IMCI strategy in community and health facilities well backed by trained professionals/community health workers and adequate supervisory mechanisms can definitely improve the quality of health care services and the prognosis of childhood illness.

#### **Conflicts of interest**

There was no conflict of interest to be stated.

### Funding

No sources of support provided.

#### **REFERENCES**

- Levels & trends in child mortality. Estimates developed by the UN Inter-agency group for child mortality estimation report. [Internet]. 2012 [Cited 2013 June 8]. Accessed from: http://www.childinfo.org/mortality.html
- World Health Organization. Integrated Management of Childhood Illness (IMCI). [Internet]. 2013 [Cited 2013 June 14]. Available from: http://www.who.int/maternal\_child\_ ado lescent/topics/child/imci/en/
- World Health Organization, UNICEF. IMCI information. [Internet]. 1999 [Cited 2013 June 22]. Available from: http://www.who.int/maternal\_child\_adolescent/documents/chs\_cah\_98\_1a/en/
- 4. El Mahalli AA, Akl OA. Effect of adopting integrated management of childhood illness guidelines on drug use at a primary health care center: a case study from Egypt. J Family Community Med. 2011;18(3):118-23.
- 5. Mohan P, Kishore B, Singh S, Bahl R, Puri A, Kumar R. Assessment of implementation of integrated management of neonatal and childhood illness in India. J Health Popul Nutr. 2011;29(6):629-38.
- Rakha MA, Abdelmoneim AN, Farhoud S, Pieche S, Cousens S, Daelmans B, Bahl R. Does implementation of the IMCI strategy have an impact on child mortality? A retrospective analysis of routine data from Egypt. BMJ Open. 2013;3(1):e001852.
- Diener LC, Slyker JA, Gichuhi C, Tapia KA, Richardson BA, Wamalwa D, Farquhar C, Overbaugh J, Maleche-Obimbo E, Stewart JG. Performance of the integrated management of childhood illness algorithm for diagnosis of HIV-1 infection among African infants. AIDS. 2012; 26(15):1935-41.
- 8. Pradhan NA, Rizvi N, Sami N, Gul X. Insight into implementation of facility-based integrated management of childhood illness strategy in a rural district of Sindh, Pakistan. Glob Health Act. 2013;6:20086.
- 9. Shrivastava SR, Shrivastava PS. Evaluation of trained Accredited Social Health Activist (ASHA) workers regarding their knowledge, attitude and practices about child health. Rural Remote Health. 2012; 12(4):2099.
- 10. Callaghan-Koru JA, Hyder AA, George A, Gilroy KE, Nsona H, Mtimuni A, Bryce J. Health workers' and managers' perceptions of the integrated community case management program for childhood illness in Malawi: the importance of expanding access to child health services. Am J Trop Med Hyg. 2012;87(5 Suppl):61-8.
- 11. Li X, Chongsuvivatwong V, Sangsupawanich P, Xia X. Evaluation of short term integrated

- management of childhood illness training on the clinical competency of village doctors in Yunnan, China. J Med Assoc Thai. 2012;95(7):890-4.
- 12. Tychmanowicz A, Kuspit M. Social competences of health service workers. Pilot study. Progress in Health Sci. 2012; 2(1):107-12.
- 13. Armstrong Schellenberg JR, Adam T, Mshinda H, Masanja H, Kabadi G, Mukasa O, John T, Charles S, Nathan R, Wilczynska K, Mgalula L, Mbuya C, Mswia R, Manzi F, de Savigny D, Schellenberg D, Victora C. Effectiveness and cost of facility-based Integrated Management of Childhood Illness (IMCI) in Tanzania. Lancet 2004;364(9445):1583-94.
- 14. Kozka M, Brzostek T, Ksykiewicz-Dorota A. Analysis of nurse staffing and factors determining the demand for health care in Poland. Prog Health Sci. 2011;1(2):59-66.
- 15. Mitchell M, Getchell M, Nkaka M, Msellemu D, Van Esch J, Hedt-Gauthier B. Perceived improvement in integrated management of childhood illness implementation through use of mobile technology: qualitative evidence from a pilot study in Tanzania. J Health Commun. 2012; 17(Suppl 1):118-27.