

Research Article

Immunization status of children in the newly carved states of Telangana and Andhra Pradesh in India

Sairam Challa^{1*}, Sridhar NL², Pallavi Amirapu³

¹Department of Community Medicine, Apollo Institute of Medical Sciences and Research, Hyderabad, Telangana State, India

²Department of Paediatrics, Chalmeda Anandrao Institute of Medical sciences, Karimnagar, Telangana State, India

³Freelance Biochemist, Hyderabad, Telangana State, India

Received: 12 May 2015

Accepted: 07 June 2015

*Correspondence:

Dr. Sairam Challa,

E-mail: apollodrram@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: In 2013, an estimated 21.8 million infants worldwide were not reached with routine immunization services, of whom nearly half live in 3 countries: India, Nigeria and Pakistan. In June 2014, state of Andhra Pradesh has been divided into two new states of Telangana and Andhra Pradesh. Both the new states will face the challenges of new born states in the coming years. India's progress on the MDGs (Millennium Development Goals) for 2015 requires that the new states overcome the challenges effectively. An attempt is made to analyze the available data in the field of child immunization which can serve as a baseline to monitor the progress in the field in the newly carved states. Objectives: To study the status of immunization of children in the newly carved state of Telangana and Andhra Pradesh.

Methods: Secondary data published in the District Level Household and Facility Survey-4 is analyzed.

Results: Compared to DLHS-3 (2007-08), in the state of New Telangana, 9 out of the 10 districts had fall in proportion of fully immunised children. In the state of AP, 9 out of 13 districts had a fall in the proportion of fully immunised children.

Conclusions: The reasons for the steep fall in immunisations can go beyond the reasons for low coverage and could be territory specific. Since Immunization is an eternal event it requires a strong monitoring system to identify and take timely measures to fix the issues at all levels.

Keywords: Immunization status, Telangana, Andhra Pradesh

INTRODUCTION

Immunization prevents illness, disability and death from vaccine-preventable diseases including cervical cancer, diphtheria, hepatitis B, measles, mumps, pertussis, pneumonia, polio, rotavirus diarrhoea, rubella and tetanus. Global vaccination coverage is holding steady. Immunization currently averts an estimated 2 to 3 million deaths every year. But an estimated 21.8 million infants worldwide are still missing out on basic vaccines.¹

As part of the National Health Policy, the National Immunization Programme is being implemented on a priority basis. The Government of India initiated the Expanded Programme on Immunization (EPI) in 1978 with the objective of reducing morbidity, mortality and disabilities among children from six vaccine preventable diseases. The Universal Immunization Programme (UIP) was introduced in 1985-86. The standard immunization Schedule developed for the child immunization programme specifies the age at which each vaccine should be administered and the number of doses to be

given. Routine Immunization (RI) Card is issued to every child and is used to record all the vaccines received by infants and children. According to the immunization schedule outlined by the Government of India, all primary vaccinations including vaccine against measles should be administered by the time a child is twelve months old. Differences in vaccination coverage among subgroups of the population are useful for programme planning and targeting resources to areas most in need. Additionally, information on immunization coverage is important for monitoring and evaluation of the programme.

India is a federal union of states comprising twenty-nine states and seven union territories. In 2014, the new state of Telangana was carved out from the North-Western regions of the state of Andhra Pradesh. In 1956, the Hyderabad state was dissolved as part of the linguistic reorganization of states, and the Telugu speaking part of Hyderabad state, known as Telangana, was merged with Andhra State to form Andhra Pradesh. On 2 June 2014, Telangana was separated from Andhra Pradesh as a new 29th state of India, with the city of Hyderabad as its capital for ten years.²

Both the new states of Telangana and Andhra Pradesh will face the challenges of new born states in the coming years. India's progress on the MDGs (Millennium Development Goals) for 2015, requires that the new states overcome the challenges effectively as the new states can contribute in their own way to the progress.

An attempt is made to analyze the available data in the field of child immunization which can serve as a baseline to monitor the progress in the field in the newly carved states.

Objective

1. To study the status of immunization of children in the newly carved state of Telangana in India.
2. To compare the immunization status of in New Telangana with New Andhra Pradesh and other southern states of the country.
3. To Map the Geographic variations (of Immunization status) in the different districts of Telangana and Andhra Pradesh.

METHODS

Secondary data published in the District Level Household and Facility Survey-4 is analyzed.^{3,4} District Level Household and Facility Survey (DLHS) have been undertaken by the Ministry of Health and Family Welfare, Government of India with the main objective to provide reproductive and child health related database at district level in India. The data from these surveys have been useful in setting the benchmarks and examining the progress the country has made after the implementation of RCH programme. In addition, the evidence generated

by these surveys has also been useful for the monitoring and evaluation of ongoing programmes and planning of suitable strategies by the central and state governments. The Ministry of Health and Family Welfare, Government of India, initiated the process of conducting DLHS-4 during 2012-2013 and has designated the International Institute for Population Sciences (IIPS) as the nodal agency to carry out the survey. Fieldwork in Telangana was conducted during June 2013 to February 2014, gathering information from 13927 households, 12432 ever married women and also from 587 health facilities.³ Fieldwork in Andhra Pradesh was conducted during August 2013 to January 2014, gathering information from 20490 households, 16498 ever married women and also from 1040 health facilities.⁴ In DLHS-4 vaccination coverage of children aged 12-23 months has been recorded either from vaccination card or by asking the mothers in case the card was not shown.

Definitions: The term "Received full vaccination" is used in the survey to denote Children age 12-23 months, who received, BCG, 3-injection of DPT, 3 doses of Polio (excluding polio zero) and Measles. The Terms Erstwhile Andhra Pradesh, used in this document depicts the state of Andhra Pradesh before bifurcation in 2014. The term New Telangana is used to depict the newly carved state of Telangana in 2014 and New Andhra Pradesh depicts the residual state after the bifurcation in 2014.

RESULTS

Proportion of fully immunised children in newly carved state of Telangana (Figure 1, 3 & 4)

The proportion of fully immunised children in Telangana as per 2012-13 DLHS-4 is 47.5 percent. While 48.8 percent of rural children were fully immunised, 45.8 percent from urban Telangana were.

Compared to DLHS-3 (2007-08),⁵ in the state of New Telangana, 9 out of the 10 Districts had fall in proportion of fully immunised children. Warangal is the only district where there is a rise in the proportion of fully immunised children (+4 percent).

The steepest fall in proportion of fully immunised children occurred in Karimnagar (-44 percent) followed by Rangareddy (-42 percent) and Medak (-40 percent). Telangana as a state has a fall by 24 percent (compared to the same districts in the erstwhile state of Andhra Pradesh).

Proportion of fully immunised children in residual state of Andhra Pradesh (Figure 2, 3 & 5)

The proportion of fully immunised children as per 2012-13 DLHS-4 is 60.9 percent. While 62.8 percent of rural children were fully immunised, 55.8 percent from urban Andhra Pradesh were.

In the state of AP, 9 out of 13 districts had a fall in the proportion of fully immunised children, and the rest 4 had a rise as compared to DLHS-3 (2007-08).⁵

The AP State witnessed steepest fall in the proportion of fully immunised children in Krishna (-36 percent) and West Godavari districts (-20 percent). The 4 districts which had an improved the coverage of fully immunised children include Srikakulam (+18 percent), Vijayanagaram (+8 percent), Visakhapatnam (+5 percent) and Guntur (+4 percent).

Comparison of the newly carved states with the erstwhile state of Andhra Pradesh (Figure 3, 4 & 5)

Between DLHS-3 and DLHS-4, the proportion of fully immunised children has come down by 24 percent in the districts of Telangana State. While it has come down by 4 percent in AP state (p<0.05).

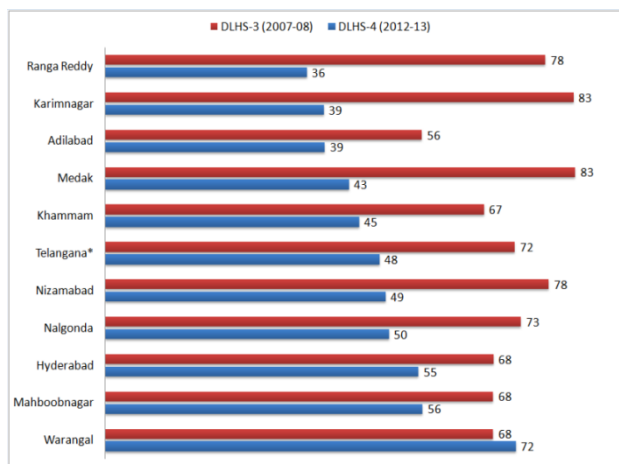


Figure 1: Trends in proportion of fully immunized children in districts of newly carved state of Telangana.

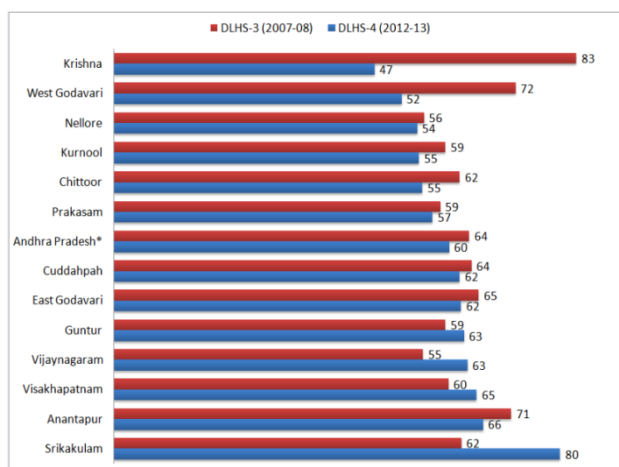


Figure 2: Trends in proportion of fully immunized children in districts of residual state of Andhra Pradesh.

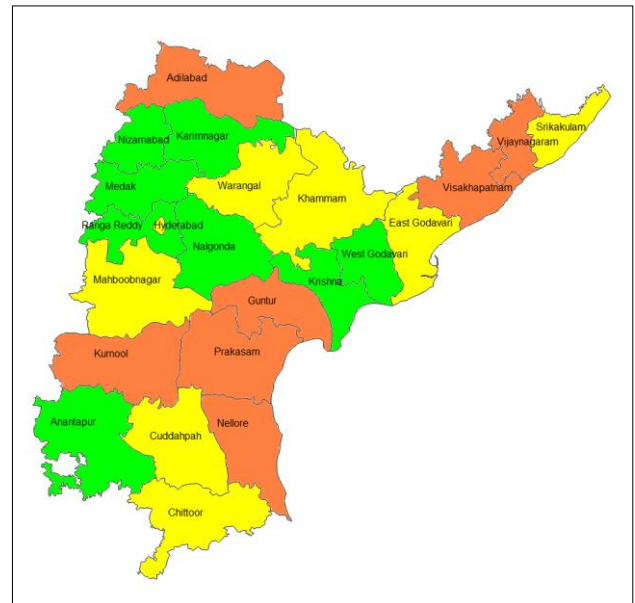


Figure 3: Map showing proportion of fully immunized children in districts of erstwhile state of Andhra Pradesh (DLHS-3).

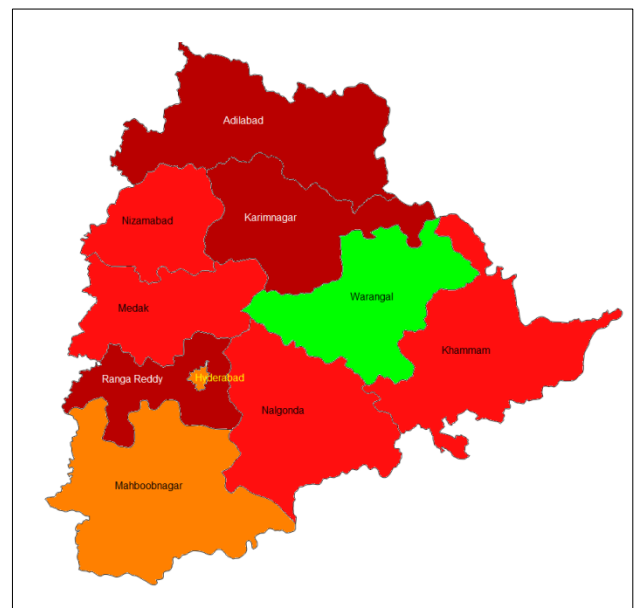


Figure 4: Map showing proportion of fully immunized children in districts of the newly carved state of Telangana (DLHS-4).

Comparison of the newly carved states with other states of the Southern part of the country (Table 1)

While two states of the Southern part of the country, Kerala^{6,7} and Karnataka^{8,9} have improved their immunization coverage, along with the newly carved states of Telangana and Andhra Pradesh, even the state of Tamilnadu^{10,11} had a steep fall in the coverage from 82 percent to 56 percent.

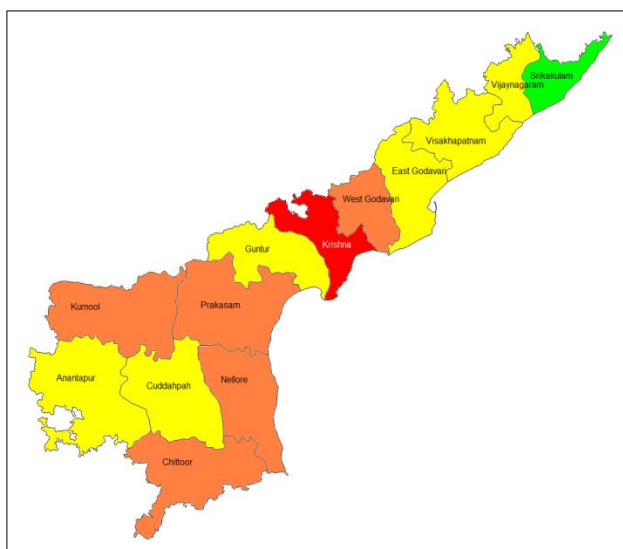


Figure 5: Map showing proportion of fully immunized children in districts of the residual state of Andhra Pradesh (DLHS-4).

Fully Immunised Children	Colour
> 70 Percent	Green
61-70 Percent	Yellow
51-60 Percent	Orange
41-50 Percent	Red
< 41 Percent	Dark Red

Figure 6: Legend for MAPs.

Table 1: Trend in the immunization status in Southern states.

State	DLHS-1(1998-99)	DLHS-2(2002-04)	DLHS-3 (2007-08)	DLHS-4 (2012-13)
Telangana			72.2	48.3
Andhra Pradesh			63.7	60.1
Andhra Pradesh Erstwhile	75.0	63.0	67.0	
Karnataka	72.0	71.0	77.0	77.6
Kerala	84.0	78.6	79.6	82.5
Tamilnadu	92.0	91.0	81.8	56.2

DISCUSSION

There is fall in fully immunized status in both the newly carved states of Telangana and residual Andhra Pradesh.

District Level House Hold Facility Surveys have shown that traditionally (since DLHS 1) Southern states of the country performed fairly when it comes to immunization services. Tamil Nadu had the best coverage followed by Kerala, Erstwhile Andhra Pradesh and Karnataka. While rest of the three states of south sustained a fair coverage, the state of erstwhile Andhra Pradesh, started having steep fall since 2002, further falling by 2012. Unusually the state of Tamilnadu, ranked 1 interms of full immunization coverage in DLHS 1 has dwindled down to rank 4 among the 5 southern states of the country by 2012. Interestingly Kerala and Karnataka continue to improve their coverage. While it is easy to empirically attribute the fall in coverage in the Erstwhile of Andhra Pradesh to the Social movements it witnessed,^{12,13} it becomes imperative that the fall in immunization coverage in Tamil Nadu instigate search for other determinants of the fall.

The fact that the state of Tamil Nadu has not undergone any social movement, but still had witnessed a steep fall in the immunization status has instigated the researchers to explore the status of immunization across the states of India. It was surprising to see that 9 out of 21 territories,^{3,4,6,8,10,14-29} (the immunization status reports of which have been reviled so far) had a fall in Immunization coverage status. While the states of Telangana and Andhra Pradesh had mass social movement, rest of the states in the country did not witness any major civil movement. In spite of this the country witnessed a fall in immunization coverage in near fifty percent of the states. From this it may be derived that though the mass civil movement may or may not affect public health system, there are reasons for fall in immunization coverage across states which need to be explored and addressed. The DLHS-3³⁰ (Figure 7) has enquired into the reasons for low coverage and reports that the lack of awareness of the need, time and place of immunization are the main reasons for low coverage apart from accessibility, fear of side effects, lack of faith in immunization and lack of trained personal (auxiliary nurse midwife).

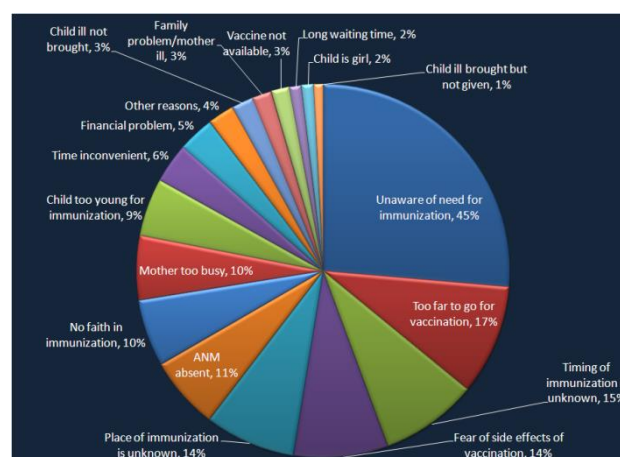


Figure 7: Reasons for low coverage DLHS-3.

CONCLUSION

Despite improvements in global vaccine coverage during the past decade, there continue to be regional and local disparities resulting from limited resources, competing health priorities, poor management of health systems; and inadequate monitoring and supervision. In 2013, an estimated 21.8 million infants worldwide were not reached with routine immunization services, of whom nearly half live in 3 countries: India, Nigeria and Pakistan.¹

The reasons for the steep fall in immunizations can go beyond the reasons for low coverage and could be territory specific. Since Immunization is an eternal event it requires a strong monitoring system to identify and take timely measures to fix the issues at all levels. It takes a strong advocacy system to generate political will and commitment of highest regard to re-instigate faith and importance both among public health administrators and the public on the importance of complete immunization coverage.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

REFERENCES

1. WHO. Immunization coverage, 2015. Available at: <http://www.who.int/mediacentre/factsheets/fs378/en/>. Accessed 12 May 2015.
2. The Gazette of India. Government of India, 2014. Available at: <http://egazette.nic.in/default.aspx?AcceptsCookies=yes>. Accessed 4 March 2014.
3. International Institute for Population Sciences. District Level Household and Facility Survey-4; State Fact Sheet Telangana (2012-13). Mumbai: International Institute for Population Sciences (Deemed University); 2014.
4. International Institute for Population Sciences. District Level Household and Facility Survey-4; State Fact Sheet Andhra Pradesh (2012-13). Mumbai: International Institute for Population Sciences (Deemed University); 2014.
5. International Institute for Population Sciences (IIPS). District Level Household and Facility Survey (DLHS-3), 2007-08: India. Andhra Pradesh: Mumbai: IIPS; 2010.
6. International Institute for Population Sciences. District Level Household and Facility Survey-4; State Fact Sheet Kerala (2012-13). Mumbai: International Institute for Population Sciences (Deemed University); 2014.
7. International Institute for Population Sciences (IIPS). District Level Household and Facility Survey (DLHS-3), 2007-08: India. Kerala: Mumbai: IIPS; 2010.
8. International Institute for Population Sciences. District Level Household and Facility Survey-4; State Fact Sheet Karnataka (2012-13). Mumbai: International Institute for Population Sciences (Deemed University); 2014.
9. International Institute for Population Sciences (IIPS). District Level Household and Facility Survey (DLHS-3), 2007-08: India. Karnataka: Mumbai: IIPS; 2010.
10. International Institute for Population Sciences. District Level Household and Facility Survey-4; State Fact Sheet Tamil Nadu (2012-13). Mumbai: International Institute for Population Sciences (Deemed University); 2014.
11. International Institute for Population Sciences (IIPS). District Level Household and Facility Survey (DLHS-3), 2007-08: India. Tamil Nadu: Mumbai: IIPS; 2010.
12. Wikipedia. Telangana movement, 2015. Available at: http://en.wikipedia.org/w/index.php?title=Telangana_movement&oldid=661133885. Accessed 12 May 2015.
13. Wikipedia. Late 2011 Telangana protests, 2015. Available at: http://en.wikipedia.org/w/index.php?title=Late_2011_Telangana_protests&oldid=643150140. Accessed 12 May 2015.
14. International Institute for Population Sciences (IIPS). District Level Household and Facility Survey (DLHS-4), 2012-13: India. Andaman & Nicobar Islands: Mumbai: IIPS; 2014.
15. International Institute for Population Sciences (IIPS). District Level Household and Facility Survey (DLHS-4), 2012-13: India. Arunachal Pradesh: Mumbai: IIPS; 2014.
16. International Institute for Population Sciences (IIPS). District Level Household and Facility Survey (DLHS-4), 2012-13: India. Chandigarh: Mumbai: IIPS; 2014.
17. International Institute for Population Sciences (IIPS). District Level Household and Facility Survey (DLHS-4), 2012-13: India. Goa: Mumbai: IIPS; 2014.
18. International Institute for Population Sciences (IIPS). District Level Household and Facility Survey (DLHS-4), 2012-13: India. Haryana: Mumbai: IIPS.
19. International Institute for Population Sciences (IIPS). District Level Household and Facility Survey (DLHS-4), 2012-13: India. Himachal Pradesh: Mumbai: IIPS; 2014.
20. International Institute for Population Sciences (IIPS). District Level Household and Facility Survey (DLHS-4), 2012-13: India. Maharashtra: Mumbai: IIPS; 2014.
21. International Institute for Population Sciences (IIPS). District Level Household and Facility Survey (DLHS-4), 2012-13: India. Manipur: Mumbai: IIPS; 2014.

22. International Institute for Population Sciences (IIPS). District Level Household and Facility Survey (DLHS-4), 2012-13: India. Meghalaya: Mumbai: IIPS; 2014.
23. International Institute for Population Sciences (IIPS). District Level Household and Facility Survey (DLHS-4), 2012-13: India. Mizoram: Mumbai: IIPS; 2014.
24. International Institute for Population Sciences (IIPS). District Level Household and Facility Survey (DLHS-4), 2012-13: India. Puducherry: Mumbai: IIPS; 2014.
25. International Institute for Population Sciences (IIPS). District Level Household and Facility Survey (DLHS-4), 2012-13: India. Punjab: Mumbai: IIPS; 2014.
26. International Institute for Population Sciences (IIPS). District Level Household and Facility Survey (DLHS-4), 2012-13: India. Sikkim: Mumbai: IIPS; 2014.
27. International Institute for Population Sciences (IIPS). District Level Household and Facility Survey (DLHS-4), 2012-13: India. Tripura: Mumbai: IIPS; 2014.
28. International Institute for Population Sciences (IIPS). District Level Household and Facility Survey (DLHS-4), 2012-13: India. West Bengal: Mumbai: IIPS; 2014.
29. International Institute for Population Sciences (IIPS). District Level Household and Facility Survey (DLHS-4), 2012-13: India. Nagaland: Mumbai: IIPS; 2014.
30. International Institute for Population Sciences (IIPS), 2010. District Level Household and Facility Survey (DLHS-3), 2007-08: India. Mumbai: IIPS; 2009.

Cite this article as: Challa S, Sridhar NL, Amirapu P. Immunization status of children in the newly carved states of Telangana and Andhra Pradesh in India. *Int J Contemp Pediatr* 2015;2:196-201.