

ASSESSMENT OF IMMUNIZATION COVERAGE IN IRAN

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Key words: IRAN,, EPI, VACCINATION

ABSTRACT

In an effort towards complying with the WHO's global policy of achieving Health For All by the year 2000 and also with the pledge made by the Government of Iran to that effect, a national headquarters has been set up to speed the implementation of the Expanded Programme on Immunization (EPI) in the country. This paper aims to report the results of evaluations made at various times since the beginning of the implementation of EPI in 1983.

INTRODUCTION

Continuous assessment of the vaccination coverage is an important and integral part of the implementation of any expanded Programme on Immunization (EPI). Since 1983, when the Government of Iran embarked on planning and implementation of EPI in Iran, a number of vaccination coverage surveys have been carried out in the country to both provide a baseline data and help monitor progress towards the final goal of 100% coverage by the year 1990.

The first set of these surveys were carried out by an International Review Team composed of the members of the Ministry of Health ; School of Public Health and Institute of Public Health Research, University of Teheran; the World Health Organization; and the UNICEF during April 1984.

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Assessment of ...

In the meantime, and up to March 1985, a series of EPI management courses, both at the senior-, and mid- level , were carried out for about 300 employees of the Ministry of Health to introduce the EPI. Each course was conducted in a workshop format for a period of 2 weeks, and all together, 9 courses were executed during this period.

As the results of these training activities and the initiatives decreed by the Ministry of Health , a number of vaccination coverage surveys were carried out in Iran by the National Survey Teams. All these surveys were verified and analyzed at the School of Public Health, University of Teheran. The purpose of this paper is to report the cumulative results of these surveys and comment on the comparison of the results obtained by the National and the International teams.

Material and Method

All surveys were conducted according to the criteria recommended by the WHO for the standard cluster survey³. The age limits for children to be included in the surveys was set at 12 to 23 months, inclusive. The birth dates were recorded off an official document, e.g. birth certificate, vaccination card, etc. BCG vaccination was not included among the criteria for full immunization, and the mother's statement, in the absence of vaccination card , was accepted as valid.

Results and Discussion

Tables 1 and 2 Present the results of the surveys made by the International Review Team¹, and the National Survey Teams, respectively. Table 1 reflects, in general, a better immunization activity in the rural areas which is further confirmed when the last two columns of table 2, i.e. urban areas (other) and rural areas, are compared. In table 2 the data for the urban areas of the city and the province of Teheran has been separated mainly because these areas are much better served by both governmental as well as private health services. The private health services are suspected to play a major role in urban child

immunization in the capital city and its surroundings . Moreover, the spasmodic lack of vaccines and other necessary supplies does not affect these areas as much as it does the more remote parts of the country.

The main reason for better immunization coverage in the rural areas, when compared to the urban areas, rests on the fact that the present practice of urban immunization is passive, whereas for rural areas is active and at times door to door by mobile teams. However , contrary to this overall trend, the BCG vaccination is lower in the rural areas and within the urban areas is not sufficiently high. The main reasons for this observation are:1) the past leniency of the Ministry of Health on BCG vaccination; 2) lack of sufficient amounts of vaccine; 3) preference of the vaccinators for injecting older children i.e. those over 5 years of age; and 4) difficulties in returning to the same rural areas to read the results of the tuberculin skin tests which has been considered a prerequisite for BCG vaccination. However, since the implementation of the EPI in Iran, the Ministry of Health is strongly advocating and enforcing the direct BCG vaccination in children under 1 year of age wherever the tuberculin test is not practicable. Thus it is expected that BCG coverage improves in the near future.

This also explains the reason for not including the BCG vaccination among the criteria for full immunization in these surveys. Nevertheless, since the beginning of the present Iranian calendar year of 1364 (March 1985), BCG vaccination has been included in the criteria for full immunization.

Our preliminary probe into the problem of incomplete immunization points to the lack of knowledge for subsequent doses, previous attacks of the EPI target diseases (especially the measles), presence of trivial infections such as mild diarrhea, coughs, etc. at the time of vaccination, and conditions generally known as "obstacles" like inconvenient immunization time table, too far distances to go to get vaccination, crowding, and so on as reasons for the greater proportion of the observed drop outs and lack of completion.

The geographical distribution of the surveyed areas is presented in figure 1. As can be seen, they are well

distributed throughout the country in various ecological conditions. The surveys made by the National Survey Teams covers an estimated population of 11 million, approximately a quarter of the country's population.

Table 3 presents the percentage differences between the surveys made by the International and the National teams. This table points to the effects of the pressure made by the Government of Iran, both materially and spiritually, to implement the EPI in the country and achieve the stated national objective of 90% coverage within the next two years. This table also points to a previously stated fact⁴ that in developing countries it is difficult to establish a well organized system, thus the discrepancies among the figures.

The cumulative, population weighted average of the country wide immunization status of the children 12 to 23 months of age is presented in table 4. This table updates the previously reported figures for the country², and also provides a more comprehensive baseline to monitor future progress.

Figure 1. Distribution of surveyed areas for vaccination coverage in Iran. Numbers denote the various ecological regions of the country: 1- Eastern; 2- Southern; 3- North-western; 4- Northern; 5- Central.

- A - Areas covered for both urban and rural populations by the International Review Team (Zanjan, Shahrekord, Zabol, Rafsanjan, Khoram Abad, and Shirvan).
- B - Areas covered for urban population by the National Survey Teams:
 - City of Teheran (four districts: north, east, south, west);
 - Province of Tehran (Damavand, Shahryar, Varamin, Karaj, Southern Teheran);
 - Other urban areas (Semnan, Mashhad, Sanandaj).
- C - Area covered for rural population by the National Survey Team (Kamyaran).
- D - Areas covered for both urban and rural populations by the National Survey Teams (Birjand, Kashmar, Shahrood, Eelam, Gorgan, Khoy, Genaveh, and Jahrom).

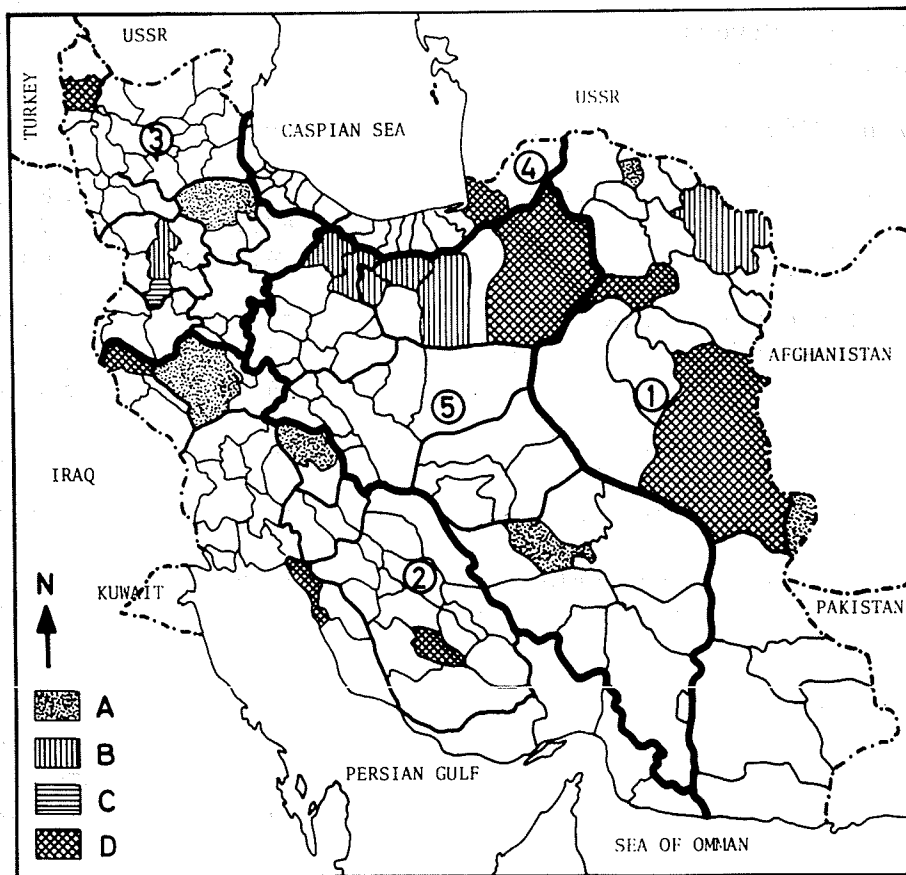


Table 1. Results of the vaccination coverage surveys carried out in Iran by the International Review Team, April 1984.

		RURAL AREAS
No. of surveys made	6	6
No. of children examined	1272	1263
% holding vaccination card	69.3	77.7
% with DPT* vaccination I	77.4	87.5
" " " " II	63.7	78.5
" " " " III	54.6	63.7
% with OPV** vaccination I	73.2	85.7
" " " " II	63.5	74.0
" " " " III	54.4	57.4
% with measles vaccination	54.4	67.2
% with BCG vaccination (scar)	12.2	5.5
% with full immunization ⁺	42.8	47.3
% with full immunization under 12 months ⁺	13.6	11.7
% with maternal tetanus toxoid I	8.8	6.1
" " " " " II	6.5	4.6
Estimated population covered(1000)	332	1352

* *Diphtheria, Pertussis, Tetanus.*

** *Oral Poliomyelitis Vaccine.*

+ *Excluding BCG vaccination.*

Table 2. Results of the vaccination coverage surveys carried out in Iran by the National Survey Teams as of March 1985.

	City of Teheran (urban)	Province of Teheran (urban)	Urban areas (other)	Rural areas
No. of surveys made	4	5	11	9
No. of children examined	849	1065	2320	1907
% holding vaccination card	78.4	81.5	77.1	90.0
% with DPT* vaccination I	90.6	89.2	79.6	91.0
" " " " II	84.7	81.9	69.7	78.9
" " " " III	77.5	72.6	57.4	59.7
% with opv vaccination I	90.6	88.3	80.0	90.1
% " " " II	84.3	80.6	68.7	78.0
% " " " III	78.2	72.2	56.6	57.8
% with measles vaccination	71.1	69.9	53.9	77.0
% with BCG vaccination (injection)	21.5	30.0	28.3	25.4
" " " " (scar)	18.7	24.4	16.3	10.0
% with full immunization ⁺	64.5	61.9	43.0	47.4
% with full immunization under 12 months of age ⁺	42.4	42.3	19.6	19.6
% with no vaccination	8.4	9.0	13.8	5.8
% with maternal tetanus toxoid I	4.5	12.3	9.9	13.7
" " " " II	2.9	8.7	6.4	9.3
Estimated population covered (1000)	7260	1878	1497	1067

* Diphtheria, Pertussis, Tetanus.

** Oral Poliomyelitis Vaccine.

+ Excluding BCG vaccination.

Table 3. Progress made between April 1984 and March 1985 towards the implementation of the Expanded Programme on Immunization in Iran as measured by the percentage change between the results of the surveys made by the International Review Team and that of the National Survey Teams, excluding the city and the province of Teheran.

	Rural areas	Urban areas
Holding vaccination card	12.3	7.8
DPT ⁺ vaccination I	3.5	2.2
" " II	0.4	6.0
" " III	-4.0	2.8
OPV ⁺⁺ vaccination I	4.4	6.8
" " II	4.0	5.2
" " III	0.4	2.2
Measles vaccination	9.8	-0.5
BCG vaccination (scar)	4.5	4.1
Full immunization [*]	0.1	0.2
Full immunization under 12 months [*]	7.9	6.0
Maternal tetanus toxoid I	7.6	1.1
" " " II	4.7	-0.1

+ *Diphtheria, Pertussis, Tetanus.*

++ *Oral Poliomyelitis Vaccine.*

* *Excluding BCG vaccination.*

Table 4. Population weighted averages of various vaccination coverage indices for Iran, 1985*.

No. of surveys made	41
No. of children examined	8676
Estimated population covered(1000)	13386
% holding vaccination card	77.7
% with DPT ⁺ vaccination I	88.4
" " " " II	80.6
" " " " III	71.1
% with OPV ⁺⁺ vaccination I	88.1
" " " " II	79.5
" " " " III	70.9
% with measles vaccination	69.1
% with BCG vaccination (Scar)	15.9
% with full immunization**	56.6
% with full immunization under 12 months**	35.5
% with maternal tetanus toxoid I	6.0
" " " " " II	4.0

* *Compilation of all the studies carried out between early 1984 and March 1985 (the end of the Iranian calendar year of 1363) both by the National and the International Teams.*

** *Excluding BCG vaccination.*

+ *Diphtheria, Pertussis, Tetanus.*

++ *Oral Poliomyelitis Vaccine.*

Acknowledgement

The authors wish to express their sincere thanks and gratitudes to their devoted colleagues at the School of Public Health and Institute of Public Health Research, University of Tehran for their painstaking endeavours during the EPI management workshops. We are also indebted to our colleagues at the Ministry of Health, without whose help and interest these surveys would have never materialized.

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Received 1985