DID THE NATIONAL CAMPAIGN FOR POLIOMYELITIS VACCINATION ACHIEVE ITS OBJECTIVES? A PILOT SURVEY IN AL-KHOBAR AREA

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Objectives: To verify whether the first national campaign for poliomyelitis vaccination achieved its objectives.

Setting: Al-Khobar area in the Eastern Province of the Kingdom of Saudi Arabia.

Materials & Methods: Randomized samples have been obtained using the Bowleg’s proportional allocation scheme. At the first stage, housing blocks of 8-10 houses were selected using random sampling procedure. At a second stage, 2 houses from each block were selected in a 1 or 4 order. Both Saudi and non-Saudi nationals living in these households were screened using pretested questionnaire administered at a face-to-face by trained interviewers. The questionnaire covered areas that included number of children vaccinated, reasons for non vaccination, whether or not the vaccinated child has received certificate of vaccination as well as placement of stickers on the door of the vaccinated households.

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**INTRODUCTION**

Poliomyelitis infection has become increasingly under control because of early immunization, surveillance, and case identification. The worldwide effort to eradicate poliomyelitis by the WHO has received remarkable echoes in the Kingdom of Saudi Arabia. A nationwide poliomyelitis vaccination programme has been implemented. This programme started on the 11th to 13th Jumada II, 1417H (4th to 6th November 1995) and 3rd to 5th Rajab 1416H (25th to 27th November 1995). The programme involved trained field health workers administering vaccination on door-to-door basis to all children equal to or less than 5 years of age. The aim of the campaign was to get a minimum of 80% of the targeted population (children < 5 years of age) immunized. This study was done to verify whether the national immunization team has achieved its objective or not by a small checking survey which was conducted over 2 days as a door-to-door survey immediately after the immunization days.

**MATERIAL AND METHODS**

A randomly selected group of household samples were chosen from Al-Khobar. Stratified two-stage sampling was done in the population of Al-Khobar area. The area had been divided into 2 homogenous sectors. About 7% sample was selected. The total sample size was divided into different sectors using Bowleg's proportional allocation scheme. At the first stage, housing blocks were selected using simple random sampling procedures as the blocks are similar in nature. At second stage, two houses from each block were selected in 1 or 4 order (each block having 8 to 10 houses). All Saudi and Non-Saudi nationals living in these houses were screened using a pre-tested questionnaire administered in a face-to-face interview by trained interviewers. The questionnaire covered areas of placement of stickers on immunized households, the accuracy of information displayed in these stickers, the number of children vaccinated and not vaccinated, the reason for non-vaccination and whether or not the immunized children received certificates. The cooperation of the authorities in the various government institutes was secured through ample discussions pertaining to the objectives of the survey and the mechanics of screening of the targeted households. Furthermore, obtaining family/guardian consent was always a priority. Islamic ethics, local customs and individual wishes were closely observed.

**RESULTS**

A total of 107 households were surveyed in Al-Khobar. The total population surveyed was 527 people including 213 adults and 314 children, 152 (48.4%) of the children were aged five years or less. One household occupied by a senior citizen and
another household were not available initially. Upon re-visit by screening team, they were informed that the occupiers had gone abroad. Eighty percent of all households had children over 5 years of age. In all the households surveyed, all children of eligible age, i.e., 5 years or less were vaccinated (N=152). None of the children aged 5 years or less were non-vaccinated. Only 2 households received the vaccination at a primary care health center but all others had been vaccinated by the national immunization programme teams. All of the immunized children obtained vaccination certificates. In addition, 100% of households surveyed had stickers placed on the outside door by the national immunization programme teams, 95% of the stickers were placed out of the reach of children. None of the surveyed households had follow-up visits by the national immunization programme teams.

DISCUSSION

Poliomyelitis infection has been shown to be amenable to eradication. Such a goal was obtained in the Americas through case surveillance, recognition and immunization.6-8 The incidence of poliomyelitis infections in other parts of the world is steadily dropping.5-13 To achieve similar objectives a national immunization programme was undertaken in Saudi Arabia. This was done on a door-to-door basis. Following the national immunization programme days, quality assurance questionnaires were issued by trained professionals. The results showed that 100% of all targeted population received immunization. Immunized individuals were issued immunization certificates. This Pilot study also shows that 101 (95%) of household had stickers placed outside the door identifying them as having been visited by the national immunization programme teams.

Although a lower percentage was required (80%) to achieve the national immunization programme objectives, it seems that the immunization programme in Al-Khobar had achieved a higher percentage coverage (100%). Through re-infection by the live attenuated oral polio vaccine and auto-immunization, the number of immune individuals to polio virus will exponentially rise. This may ultimately help the goal of eradicating polio virus from the Kingdom.

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