



MEDICAL STUDENTS AS ALUMNI IN SCHOOLS ARE ACCEPTED FOR MEASLES RUBELLA VACCINATION CAMPAIGN: LESSONS FROM 'JUBILEE IN SCHOOLS'

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ABSTRACT

Introduction: Government of India has initiated Measles-Rubella vaccination (MR) campaign to cover 41 crore children for protecting children against vaccine preventable diseases. Despite the availability of vaccine, measles continues to cause of morbidity and mortality in Kerala. Rubella could be devastating for women if they contract infection in pregnancy. **Methodology:** To increase the acceptance of campaign the medical students were directed to organize a session in the school they studied on the scientific basis and the importance of MR vaccination. The program also aimed to build up the social commitment and soft skills among medical students. **Results:** 107 schools were visited by 187 medics covering 15074 students. There were 16 Lower Primary Schools, 32 Upper Primary Schools, 40 High schools, 4 schools having LP and UP sections, 9 schools having UP and High school sections and 6 schools having LP, UP and HS sections. At no places medics faced opposition for the conduct of the programme. Feed backs were received from 90 schools; 67 (74.4%) opined the sessions were excellent, 85 (94.4%) reported their doubts regarding immunization were clarified satisfactorily and 79 (87.8%) expressed interest for further classes in future on various health topics. **Conclusion:** This innovative program was aimed to increase the capacity of medical students to manage, collaborate and communicate on matters of social importance. Above all the students were motivated to do such socially relevant programmes in their alma mater in future.

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INTRODUCTION

India, along with ten other WHO South East Asia Region member countries, has resolved to eliminate Measles and control Rubella/Congenital Rubella Syndrome (CRS) by 2020. Rubella has so far been neglected in India despite the fact that Mumps Measles Rubella (MMR) vaccine has been initiated in children at 13-18 months of age in some states.¹

The coverage of MMR vaccine ranged from 5% to 42% in different parts of the country.² WHO goal of congenital rubella syndrome (CRS) is an annual incidence of less than 1/lakh live births. It is already eliminated in Cuba and USA.^{3,4} But the annual incidence of CRS in developing countries ranges from 0.4 to 4.3 per 1000 live births. Rubella is endemic in India, but no nationwide data on prevalence is available. 10% to 30% of adolescent females and 12% to 30% of women in the reproductive age-group are susceptible to rubella infection in India.⁵ Sero-surveys have found that 6% to 47% of school girls aged 11-18 years are susceptible for Rubella infection.⁶

Measles deaths have declined by 51% from an estimated 100,000 in the year 2000 to 49000 in 2015 made possible by increasing the first dose vaccine reach from 56% to 87% in these years. The second dose started in 2015 to close the immunity gap. Present campaign is aimed to cover 410 million children across the country in next 2 years. As India accounts for 37% of global measles deaths, a positive global impact is expected.⁷

Campaign was introduced on 5th February 2017, initially in five States -Tamil Nadu, Karnataka, Goa, Pondicherry and Lakshadweep, for children aged between 9 months and 15 years. Till March 31st 2017, 33.2 million children were vaccinated in these States. The second phase started in October 2017 across eight States and Union territories. Government of Kerala launched MR vaccination campaign on 3rd October 2017.⁸ The last date of the campaign had to be extended as the targeted coverage could not be reached. Though 75 lakhs children in ages between 9 months to 15 years were the target for 3rd November, only 44.3 lakhs (59 per cent) could be covered by October 28.⁹

It is in this context, the program *Jubilee in Schools* was initiated. The program was to facilitate Measles Rubella (MR) Vaccination project by organizing campaigns in schools by the medical students who were alumni of those schools. The

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program also aimed to develop social commitment and responsibility among medical students. The improvement of the management, collaborative and communicative skills were also envisaged.

METHODOLOGY

Experts from the Department of Pediatrics and Community medicine prepared a training module for medical students. It had two parts in content. Part one was on the scientific aspects of immunization- 'Rationale of Immunization'. The second part was the need, policy and procedures of immunization program- 'National Immunization schedule' and 'MR vaccination campaign'. All MBBS students except first year and final year were given the training in a two hour session. The trainings were conducted on 11th and 12th October 2017. A letter of introduction from Principal of Medical College to Head of Schools was distributed among medical students. Students approached the schools in their village/town where they had their schooling before securing admission to medical college. After obtaining prior permission from the school authorities they sensitized the school students during their morning assembly on 17th October 2017. The presentations were in their own style. Queries raised by the students and teachers regarding the MR vaccination campaign were clarified. At the time when the sessions were ongoing a call centre functioned in the medical college with access to subject experts.

After the sessions, the Medical Students submitted the certificate of participation signed by school authorities, a detailed report regarding the session including their experience and a selfie with students wherever possible. The former two were compulsory and the third was optional. The school authorities were personally contacted later telephonically by Community Medicine department and their feedbacks were collected using a semi-structured questionnaire.

OBSERVATIONS AND RESULTS

The trainings were given to 280 MBBS students. Four teachers engaged students; two each from Pediatrics and Community medicine. 187 students succeeded in engaging target students in schools they studied earlier. A total of 107 schools were visited by these 187 medical students covering 15074 students. The engaged schools belonged to all 14 districts covering entire state of Kerala. The distribution of locations of schools is given in fig 1 and number of schools and students reached are given in table 1.

Table 1 District wise number of schools covered and number of students reached

Sl No	Name of the District	Number of schools covered	Number of students reached.
1	Trivandrum	5	580
2	Kollam	3	320
3	Pathanamthitta	3	410
4	Alappuzha	6	380
5	Kottayam	5	400
6	Idukki	1	78
7	Ernamkulam	13	3764
8	Thrissur	36	5525
9	Palakkad	6	440
10	Malappuram	9	1391
11	Calicut	8	595
12	Wayanad	2	287
13	Kannur	8	751
14	Kasargode	2	153

The program could reach 16 Lower Primary Schools (LP), 32 Upper Primary Schools(UP), 40 High schools(HS), 4 schools having LP and UP sections, 9 schools having UP and High school sections and 6 schools having LP,UP and HS sections.(figure 2). Feed backs could be collected from 90 schools out of 107 schools reached (Table 2).



Figure 1

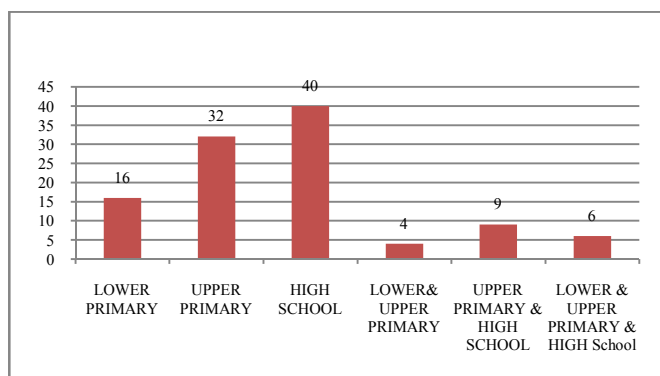


Figure 2 Number of schools according to the levels of courses conducted

Table 2 Feedback from schools about session

Category	Frequency (%)
Excellent	67 (74.4%)
Good	23 (25.6%)
Total	90 (100%)

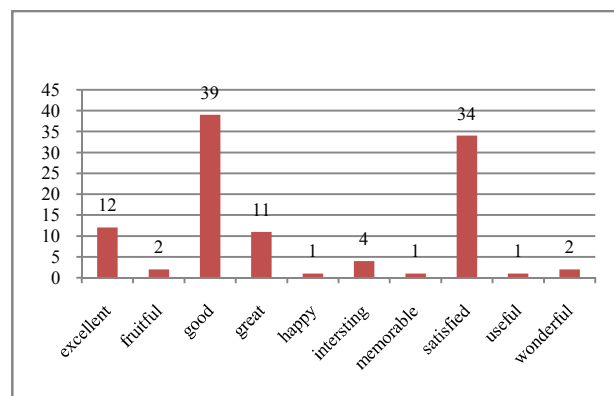


Figure 3 Feedback items and number of volunteer medical students' responses.

Table 3 Queries and questions faced by Volunteer medicos raised by students in schools.

Does the child need campaign dose if already had all routine vaccinations?
Why is it necessary to immunize male children against rubella?
How safe is this vaccine?
Are there any side effects for this vaccine?
Can a child take this vaccine during fever?
Benefits of this vaccination?
Can a child with skin infection take the vaccine?
What to do if a child develops fever?
Any relationship between autism and MR vaccine?

It could not be collected from 17 schools; either due to not accessible by phone or due to non response from the school end. 67 schools (74.4%) opined that the sessions were excellent. 85 schools (94.4%) reported that their doubts regarding various aspects of immunization was clarified satisfactorily by the medical students. 79 schools (87.8%) expressed their keen interest for further classes in future on various health topics. Majority suggested that early intimation and involvement of PTA (Parent Teacher Association) would have been more beneficial. In one of the vaccination resistant areas the school authorities informed that they could remove the religious misconceptions regarding immunization through this session. However 11 schools (12.2%) responded that they were not interested in similar sessions. They claimed that they had already such programs from the health department or they are not ready to compromise the class hours for conduct of such programs. All of these were CBSE schools.

The medical students appreciated the opportunity to go back to their Alma mater and they reported having a remarkable and inspiring experience (Fig 3).

No one had to face any opposition from students, school authorities or people in the locality. At schools the students could communicate with heads of institutions, request and receive permissions and engage the students in a comfortable atmosphere. The medical students could handle the queries and needed no attempt to seek help from the call centre in the college. The college union expressed their interest in conducting similar programs in future also.

DISCUSSIONS

High Physical Quality Life Index in the background of low per capita income¹⁰ is the Kerala paradox; well discussed internationally. Progressive status of the state is well acknowledged. Still the MR vaccine campaign in Kerala faced firm resistance from general public including physical assaults in certain regions.¹¹ Some of the districts are known for resistance against vaccinations in general. Counter campaigns were active against MR vaccines also. The planted false information in social media included its ineffectiveness and side effects like male sterility presented as scientific facts. American-Israeli conspiracy, pork-based gelatin as medium etc were also alleged¹¹. However there are signs of resistance build up against the rising fundamentalist beliefs and practice within respective communities in Kerala without disrespect to core religious practices. The flash dances emerging as a serious way of questioning of the orthodoxy is one example.¹² In 'jubilee in schools', no student faced resistance anywhere, including those who counter campaigned in the concerned areas. Their status as alumni of the school, absence of parents and campaign without prior intimation might have contributed for that. They were not considered as part of Government and hence those who oppose Government in power were not keen to oppose.

Each country's commitment to eliminate measles and rubella is influenced by competing health priorities, and in some cases lack of capacity and resources. All countries need to improve case-base surveillance for both measles and rubella, ensure documentation of each outbreak and strengthen the link between epidemiology and laboratory data. Achieving high coverage with measles- and rubella-containing vaccines will require a multi-sectoral approach to address the root causes of lower uptake in identified communities including service delivery challenges or vaccine safety concerns caused by circulating myths about vaccination.¹³ This is the first mass campaign of a rubella containing vaccine. The MR vaccine was only recently introduced into the routine EPI system. Enhancing population awareness about rubella disease and its prevention is an important mechanism for increasing understanding of the rationale of the MR vaccine over traditional measles vaccine. Social mobilization effort forming a component of campaigns were recommended to develop better understanding of rubella.¹⁴

An extension of date to achieve 100% target was needed in Kerala due to low vaccination rate especially in districts like Malappuram, Kozhikode and Kannur which had coverage 34%, 48% and 50% respectively⁸. Twelve, seven and five were the ranks for these districts respectively for literacy rate out of 14 districts with rates 95.4, 95.2 and 93.6 percentages.¹⁵ This no way was correlated with low vaccination coverage.

Insisting for written consent by parents, some schools - mostly CBSE - refused to cooperate for Vaccination, necessitating complaint to Child Protection Authority by Health.¹⁷ Schools showing detachment from social concern and their attitude of callous unconcern for happening around and focusing only on Studies is a matter of serious concern. That may percolate to the passed out students too. Creating academic elite with no concern for surrounding can lead to a national problem later. 10-50% of children with congenital anomalies have laboratory evidence of CRS. It accounts for 10-15% of pediatric cataract¹⁶

The India Expert Advisory Group on Measles & Rubella (IEAG-MR) including representatives from UNICEF, WHO Head Quarters and Centres for Disease Control and Prevention, complimented India on the widening MCV (measles containing vaccine) coverage, and the significant reduction in dropout rate which declined from 44% for 1st dose to 13% for 2nd dose¹⁷.

The role of the doctor within the healthcare team has changed and the change is ongoing. As team lead, Doctors have accountability for the collective responsibility and grow beyond the routines happening hitherto. World Federation of Medical Education international task force- started in 2010 and will conclude in 2018- suggested areas to be explored in this context. They included the doctor as communicator, educator, researcher and manager of health care (WFME 2017).

Areas other than doctor as scholar largely remain ignored in Indian Medical Education system. Even Medical Education Units covering three domains ignore these skills. In our program medicos received only a briefing. This along with their learned information enabled them to communicate with students in schools effectively. Queries and questions were handled to the satisfaction. They approached schools, communicated with authorities, managed arrangements and gave the lectures. All these points to their Capacity to manage

collaborate and communicate. Students and new generation alleged to be indifferent to the ongoing happenings around; being immersed in studies. This may be more true to medical students. Many happenings around are medically significant. Responsiveness to these is mandatory and Institutions have an obligation to foster that approach. Jubilee took up that responsibility and medicos performed successfully. Students could reach all districts of the state. If all 31 medical colleges were involved, the reach would have been more visible and effective.

CONCLUSION

Even in Kerala MR Vaccination coverage was below target, facing resistance. Medicos are accepted in schools even in areas of resistance to Government machinery for MR campaign. They have a potential to be a change agent. In the process they learn by practice the skills of management, communication and collaboration. They remained responsible by working in areas beyond direct supervision.

The campaign revealed necessity and confirmed possibility. It showed that students are willing to work beyond routines.

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