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# **Adverse events following co-administration of TCV and measles vaccine: Pilot study in Karachi**

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11th International Conference on Typhoid and Other Invasive Salmonellosis



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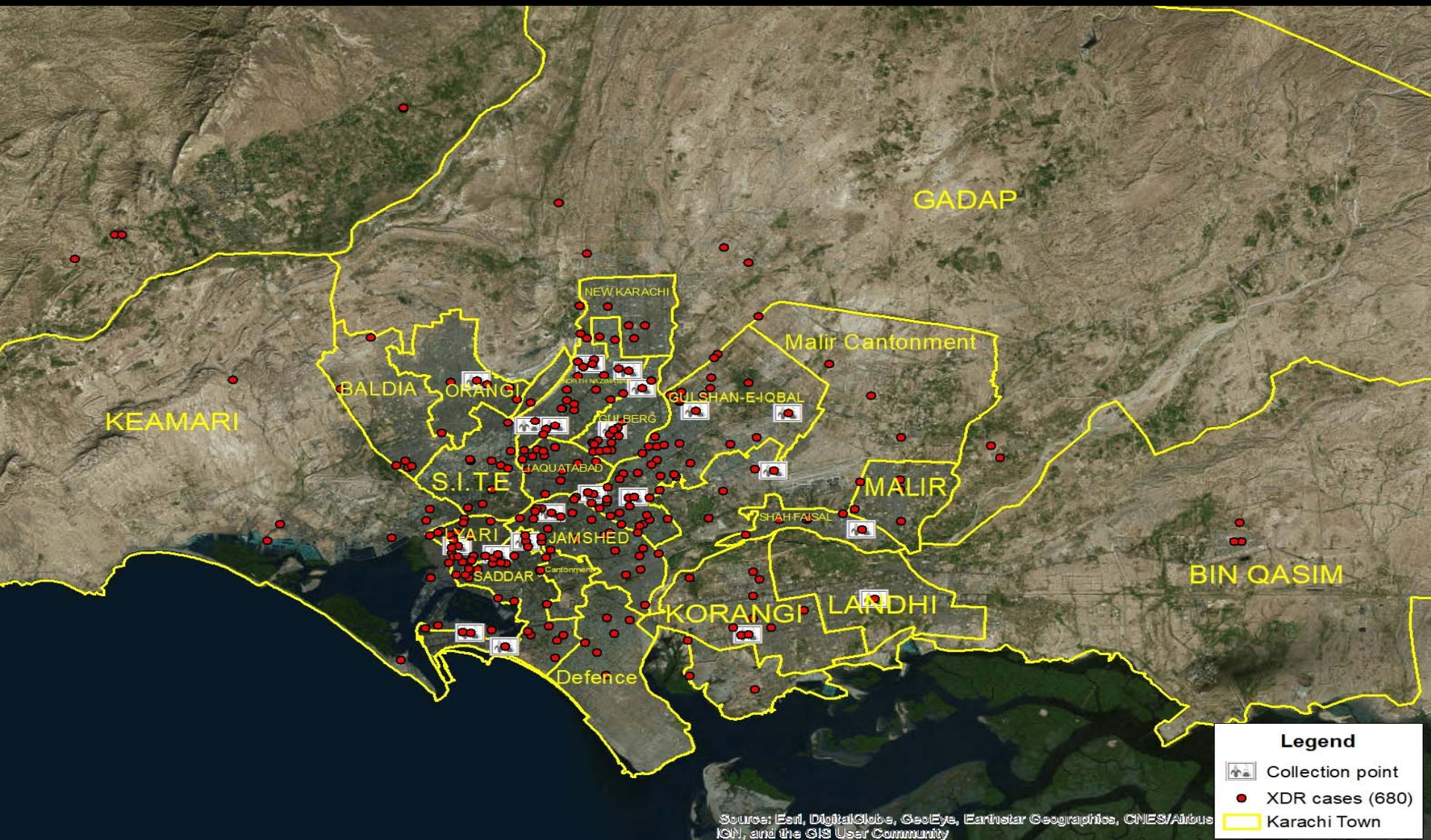
# Outline

- Background
- Rationale and Objectives
- Methodology
- Results
- Strengths and Limitations
- Conclusion

# Background



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# Background



- Extensively drug resistant typhoid outbreak in Hyderabad, Pakistan (2016)
- Sporadic cases reported from Liyari town, Karachi
- Government requested us to start immunization with TCV in Karachi
- Nationwide measles SIA started side-by-side and this was an opportunity for doing the pilot with co-administration of TCV and measles vaccine.

# Rationale and Objectives



## Rationale:

- Limited data on co-administration of TCV with other vaccines
- TCV has recently been approved for introduction in routine immunization at 9 months of age in EPI, Pakistan.

## Objectives:

- To monitor AEFI at day 7 and 14, following co-administration of TCV and measles vaccine

# Methodology



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- Measles SIA scheduled from 15<sup>th</sup> Oct 2018 – 27<sup>th</sup> Oct 2018, and we started the co-administration of TCV and measles vaccine at the Kharadar general hospital, Karachi.
- Children with high grade fever, diarrhea and use of antibiotics were screened out of the study.
- Children of age 9 months – 5 years receiving TCV and measles vaccine (eligible for study) were approached for consent
- Complete demographic data and any past occurrence of typhoid or measles was taken in written form.



# Methodology



- A vaccination card was issued and a hotline number was given for emergency coordination with the team.
- All eligible subjects were followed up via phone calls on 7<sup>th</sup> and 14<sup>th</sup> post vaccination days.
- Details of health condition of the participants were recorded on forms by trained professionals (using Brighton collaboration 2005).

## Results

**12**

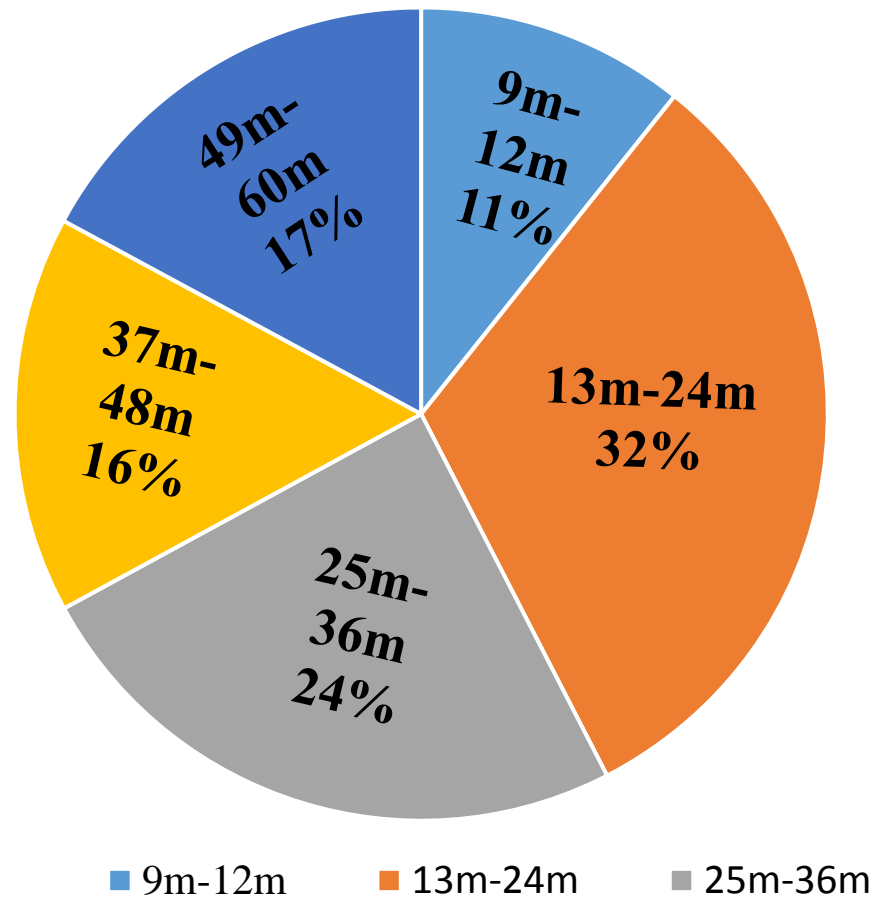
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follow up





# Results

## Age Stratification

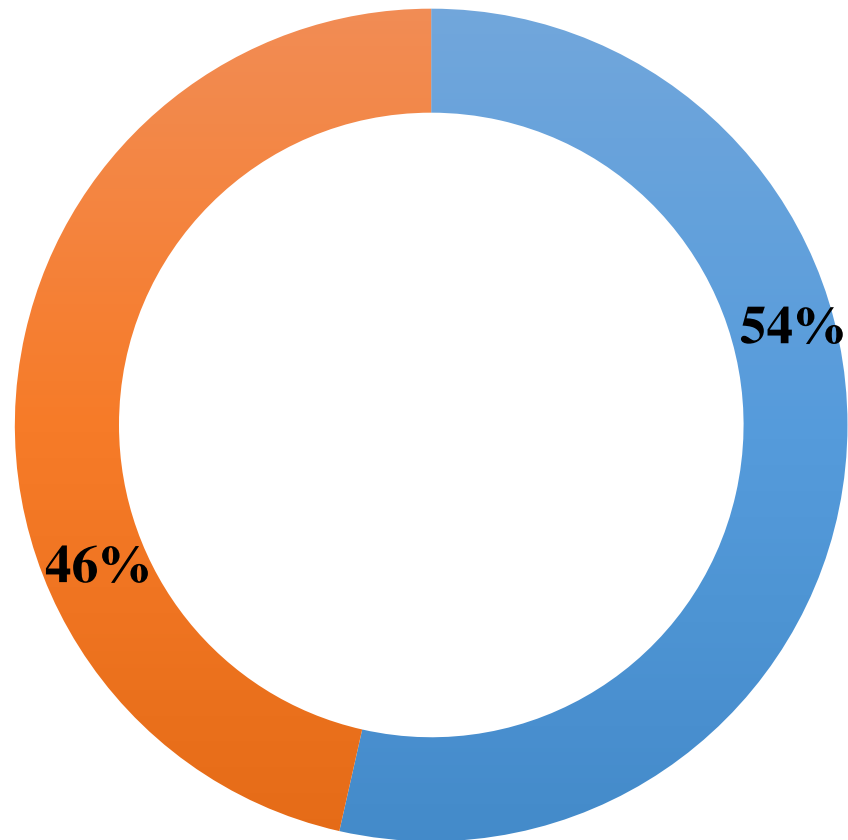




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# Results

## Gender Stratification



■ Male ■ Female



## Results

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<b>AEFI Report Time</b>	<b>No. of children followed</b>	<b>AEFI Reported N =252</b>	<b>AEFI reported per 100</b>
7 <sup>th</sup> post-vaccination day	252	57	22.6
14 <sup>th</sup> post-vaccination day	252	21	8.33

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# Results

## AEFI – Co-administration of TCV and Measles Vaccine – Karachi (N=252)

Age Group	Fever N (%)	Pain at injection site N (%)	Vomiting N (%)	Rashes N (%)	Diarrhea N (%)	Cough/ Cold N (%)	Malaise N (%)	Total N (%)
	N=78							N=252
9M-12M (N)	8 (10%)	0	0	0	2 (2.5%)	1 (1.2%)	1 (1.2%)	12 (4.7%)
13M-24M	16 (20.5%)	0	0	1 (1.2%)	5 (6.4%)	4 (5.1%)	2 (2.5%)	<b>28 (11.1%)</b>
25M-36M	7 (8.9%)	1 (1.2%)	1 (1.2%)	0	0	0	0	9 (3.5%)
37M-48M	10 (12.8%)	0	0	0	0	0	2 (2.5%)	12(4.7%)
49M-60M	14 (17.9%)	1 (1.2%)	0	0	1 (1.2%)	0	1 (1.2%)	17 (6.7%)
Total	<b>55 (70.5%)</b>	2 (2.5%)	1 (1.2%)	1 (1.2%)	8 (10.2%)	5 (6.4%)	6 (7.6%)	<b>78 (30.9%)</b>



## Results

### AEFI – TCV Alone – Hyderabad

Reaction Categories	6M-12M	13M-24M	25M-36M	37M-48M	49M -60	Total (N=486)
Fever	50	45	40	30	22	232 (47.8%)
Pain @ inj. site	5	4	8	8	8	119 (24.5%)
Rash	1	1	0	0	1	4 (0.8%)
Diarrhea	9	12	4	3	2	35 (7.2%)
Vomiting	2	5	2	1	1	12 (2.5%)
Cough/ Cold	5	5	6	3	2	25 (5.1%)
Malaise	0	1	0	0	0	1 (0.2%)
Other AEFI	4	3	10	2	2	25 (5.1%)
<b>Total</b>	<b>76</b>	<b>78</b>	<b>78</b>	<b>52</b>	<b>38</b>	<b>486 (100%)</b>



## Strengths and Limitations

### Strengths:

Co-administration is done during measles SIA, and this provided us with the data of AEFI in a wide age range (*i.e. from 9 months to 60 months*).

### Limitations:

The sample size in required age group (*i.e. 9 months to 15 months*) is small. (*this sample size can be increased and seen for more credible results in future*).



## Conclusion

- TCV vaccine was found to be safe for administering alongside measles vaccine in campaign setting.
- Fever was the commonest AEFI observed.
- Single dose of 0.5ml IM injection of TCV along with measles vaccine is safe among children aged 9months -5yrs.





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# Acknowledgements

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# Thank You