

[Implementation of an EPI/PEI synergy model for improving immunization in the peri-urban areas of Karachi: A case study]
[Sobia Ambreen, Muhammad Anas Khan, Rakhshanda Ishaque]
[Vital Pakistan Trust]

Background

Routine childhood immunization (RI) helps to prevent many infectious diseases and ultimately reduces child mortality (1).

Polio is one of the endemic diseases that is still not eradicated in Pakistan (2).

Vital Pakistan Trust (VPT), which is a not-for-profit organization in collaboration with EPI (Expanded Program on Immunization) started an immunization project for improving the RI coverage in the peri-urban areas of Karachi, especially in Super High-Risk Union Councils (SHRUCs).

In Pakistan, the Expanded Program on Immunization (EPI) and Polio Eradication Initiative (PEI) work in parallel to improve immunization, and synergy between these two is necessary to improve immunization coverage against vaccine-preventable disease and to eradicate the polio virus from Pakistan (3).

Therefore, we aimed to implement an EPI/PEI synergy model in one of the SHRUCs (Ittehad Town-UC-2) of Karachi to assess its role in improving the vaccination coverage rates.

Specific Aims & Objectives

Improve RI coverage in the peri-urban areas of Karachi, with a special focus to cover Super High-Risk Union Councils (SHRUCs).

Implement and evaluate EPI/PEI synergy model in one of the (SHRUCs) to assess and replicate the model to improve coverage to other Super high-risk UCs.

Methods

The EPI/PEI synergy model was implemented in Ittehad town UC 2 since December 2021 by Vital Pakistan Trust, nested within the immunization project of VPT as a pilot project.

VPT signed an MOU with the EPI Sindh and District Health Management Teams (DHMTs) on 11th February 2021 for the immunization project to which an addendum was added on 30th June 2021 where VPT was given full charge of Ittehad Town.

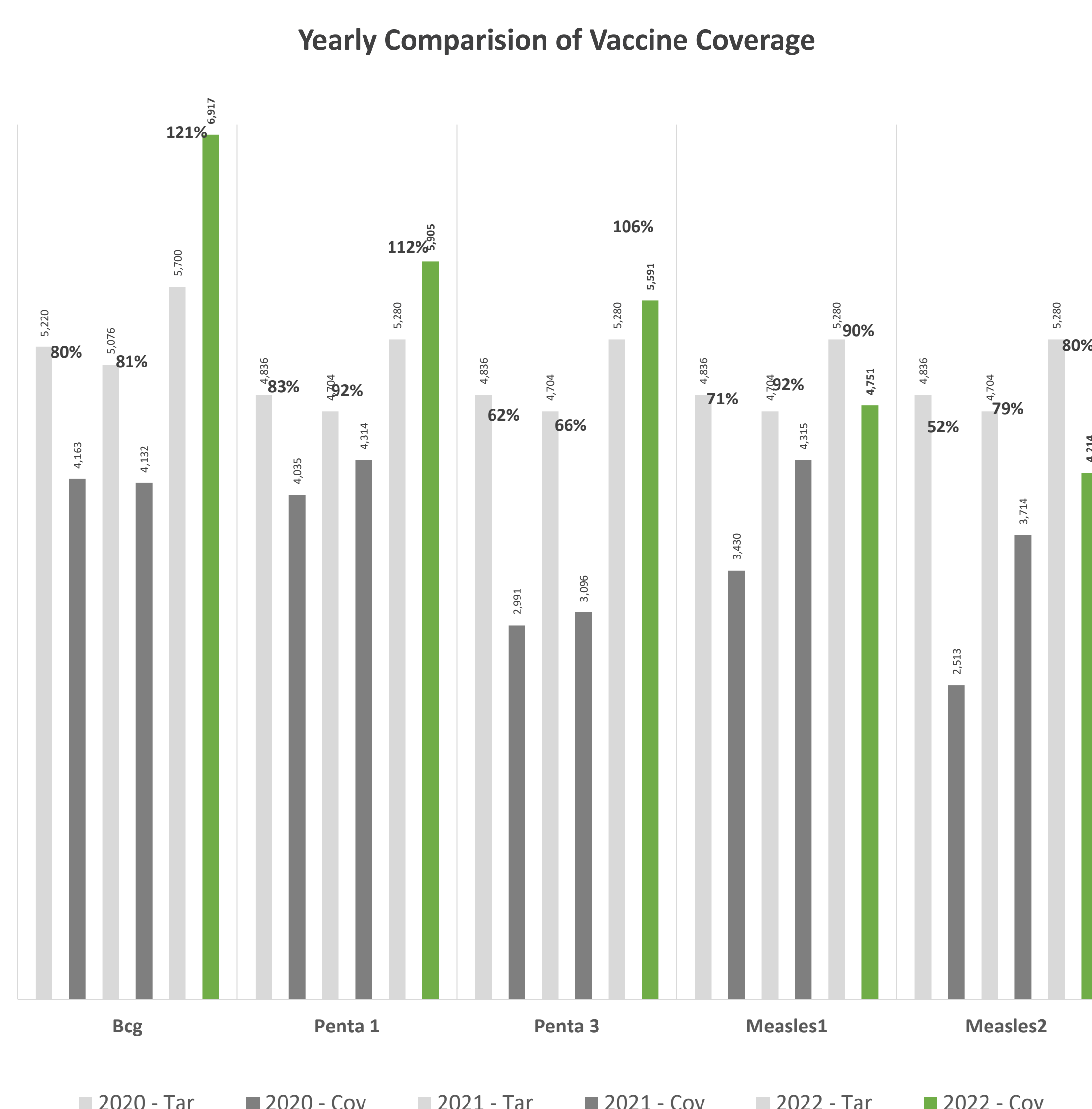
However, final roll out started in December 2021 when VPT took full charge with a target of completion till December 2022. 12 outreach teams, three fixed sites teams and one mobile van were deployed within the allotted UC.

The outreach teams conducted 144 outreach sessions per week as per micro plan whereas the mobile van targeted BCG dose coverage for Zero Dose children. Overall, 16 teams were deployed by VPT.

Vaccine coverage against set targets by EPI were measured and coverage rates of zero dose children were assessed.

Graphs/Figures

Eligible Children	Total
Girls	7,260
Boys	7,176
N=(14,436)	
RI Service Provided Through outreach	10,263 (71%)
RI provided through Static sites	2,376 (16%)
RI provided through mobile vaccination vans	1,797 (12%)



Results

- In Ittehad Town, a total of 14,436 eligible children for RI had been registered, of which 7,260 were girls and 7,176 were boys.
- Immunization services were provided through outreach coverages 10,263 (71%), followed by fixed vaccination sites coverages 2,376 (16%), and mobile vaccination vans coverages 1,797 (12%).
- Through the implementation of this synergy model, the targets were met in 2022 as compared to 2021 and 2020 for BCG, Penta1-3 (e.g., In 2020, target for BCG immunization was 5,220 children and achieved 4,163, in 2021, target was 5,076 and achieved 4,132 whereas in 2022 target was 5,700 and achieved 6,917 vaccinations).
- 21.35% increase in coverage observed in BCG, 12% increase in Penta 1, and 06% increase observed in Penta 3 respectively from the original targets in 2022.
- From December 2021 till December 2022, approximately 7,209 zero-dose children had been identified and reached. Out of this number, 3,143 children had received immunization - leading to a 43.5% success rate in coverage of zero-dose children.
- Out of the 56% uncovered children, 89.9% were due to refusals.

Conclusions

Impact of the implementation of this model



The synergy model presents itself as a sustainable solution to the critical barriers to immunization coverage, including issues of accessibility and awareness.

Tracking and vaccinating defaulters and zero-dose children to help reduce morbidity and mortality related to vaccine-preventable diseases in the community.

significant increase in the overall immunization coverage rates

Acknowledgements

- Vital Pakistan Trust field teams who provided feedback and were open to discuss challenges and reporting achievements
- Expanded program for Immunization, Government of Sindh.

References

- Nandi A, Shet A. Why vaccines matter: understanding the broader health, economic, and child development benefits of routine vaccination. Human Vaccines & Immunotherapeutics. 2020;16(8):1900-4
- WHO. World Health Organization Polio Eradication Initiative World Health Organization (WHO): © Copyright World Health Organization (WHO), 2023. All Rights Reserved.; 2022 [Available from: <https://www.emro.who.int/copyright.html>].
- Haq Z, Chandio AK, Zafar S, Iqbal F, Naeem A, Karim S. The synergy between Expanded Program on Immunization and Polio Eradication Initiative in Pakistan: a policy and program exploration. 2021;5:e2021081.