

# Missed Opportunities for Pentavalent and Measles Vaccination

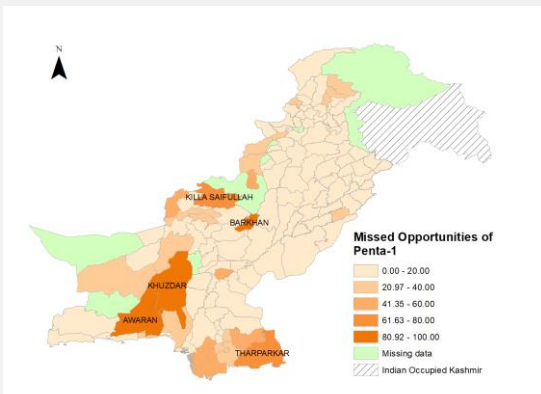
## INTRODUCTION

Pakistan faces recurrent outbreaks of vaccine-preventable diseases despite relatively high contact between families and the health system. A major contributor is **missed opportunities for vaccination (MOVs)** - situations where mothers of eligible children interact with health services but their unvaccinated children remain unvaccinated. Addressing MOVs offers one of the fastest and most cost-effective pathways to improving immunization coverage without expanding infrastructure.

## RESULTS

1. There are **18.5 million children** aged 1–5 years that are eligible to receive vaccines. Of these, **26% missed at least one measles** and **13% missed a pentavalent vaccine**.
2. Over **90% of mothers** of unvaccinated or partially vaccinated children had recently visited a healthcare facility, yet vaccination status was not checked or vaccines were not offered.
3. Missed opportunities are heavily clustered in **remote, rural, and poorer districts**, particularly in **Balochistan**, followed by **Sindh** and underserved areas of **KP**. Missed measles vaccination reaches **up to 43% in Balochistan** and **39% in Sindh**, with the highest burden in districts such as Awaran, Washuk, Killa Abdullah, and Tharparkar. These patterns align closely with poverty, low maternal education, and weak service outreach.
4. Missed opportunities increase from **around 10% for Penta-1** to **approximately 25% for Measles-2**, indicating that the system is more effective at starting vaccination than ensuring completion. Inconsistent practices across facilities further undermine continuity of care (Fig 2).
5. Addressing vaccines through this approach is complicated by the fact that majority of health visits are in private sector facilities, that seldom participate in vaccinations.

Figure 1: Missed Opportunities of Penta 1

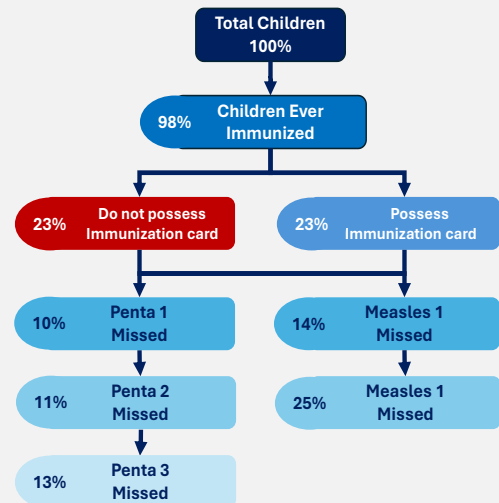


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## KEY MESSAGES

- 13-26% of children miss at least one dose of measles or pentavalent vaccines.
- For 90% such children, their mothers will avail some health service. Asking mothers seeking healthcare about their children’s vaccination status is an opportunity to catch up on missed doses.
- Since most healthcare is sought in the private sector which don’t participate in vaccination, a few high volume facilities may be identified in each union council for vaccine promotion.

Figure 2: Flow-Chart Analyzing Distribution of Children Aged 1-5 for Assessment of Missed Opportunity of Vaccination, 2019-20



## RECOMMENDATIONS

### 1. Institutionalize vaccination screening at every public sector health facility contact

Ask every mother visiting for healthcare if they have a child under 2 years and about their vaccination status. If behind they may be caught up immediately. This can potentially reduce missed vaccination by **10% or more** without expanding infrastructure.

### 2. Identify high volume private facilities and support them with vaccination

Since most healthcare visits are in the private sector, high volume private facilities may be identified in every UC and arrangements be made to refer children identified for vaccination by the government vaccinators.

### 3. Low vaccination areas in rural Sindh, KP and Balochistan may be mapped geospatially and reached with vaccination through targeted programming.



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