

# Implementation fidelity of possible serious bacterial infection adaptive implementation during COVID-19 pandemic

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Most of PSBI treatment implementation strategies were implemented with fidelity that: 1) recovered services interrupted due to COVID-19; 2) enhanced the capacity of health extension workers (HEWs) to manage PSBI; 3) improved community awareness about the integrated community case management (iCCM)/PSBI service availability; 4) strengthened the primary health care capacity to mentor HEWs; and 5) improved mothers' care-seeking behavior for sick young infants (SYIs).

## BACKGROUND

- In Ethiopia, despite a childhood mortality decline over the past 20 years, the newborn mortality rate did not decline significantly.
- Community-based strategies and programs on child survival have been in place since 2012, but uptake of service for sick newborns remains low and the COVID-19 pandemic placed significant stress on PSBI treatment.
- PSBI treatment strategies to mitigate COVID-19 consequences on newborn mortality were designed and implemented November 2020–June 2022. This study looked at the implementation fidelity of the strategies.

## RESULTS

**Table 1: Implementation Fidelity**

Measures	Apr-21	Oct-21	Jun-22
% of HEWs trained/mentored on iCCM/PSBI	-	82.6	80.1
% of HEWs supervised on iCCM/PSBI	-	71.8	85.9
% of HPs participated in the PHCU level PRCCM meetings in the last 6 months	-	66.2	62.5
% of HPs facilitated awareness creation meetings at the community level	-	96.9	93.8
% of HPs facilitated kebele-level multi-sectoral meetings at least once in the last 6 months	-	46.1	62.5
% of WDAs that are functional (i.e., meets with HEWs, reports activities to HEWs, do home visits, and identifies sick newborns) in the last 3 months	65.1	60.9	57.8
% of HPs treated sick young infants in the previous 6 months	35.9	80.0	84.4
Total SYI cases seen (September 2020-March 2021 vs April 2021-September 2021 vs October 2021-June 2022)	149	292	894

## METHODS

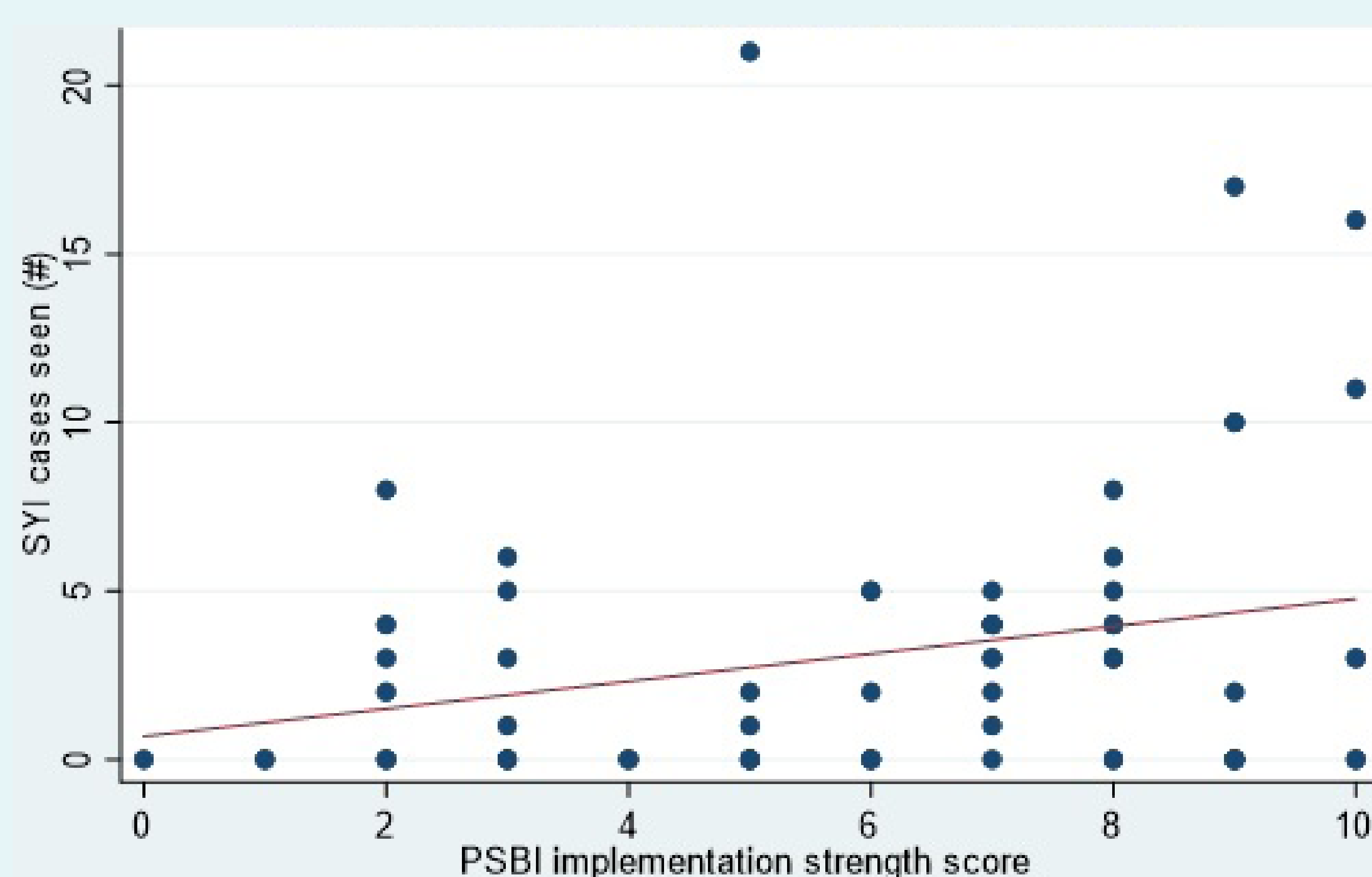
- Study sites: two woredas, 11 health centers, and 66 health posts serving about 250,000 people.
- Mixed-methods implementation research.
- Data were collected in April 2021 for baseline, October 2021 for mid-term, and June 2022 for end-line evaluations.
- Implementation intensity was measured as an index measure using indicators listed in Table 1.
- The implementation strength index was recalibrated to 0–10, with a higher score indicating better intensity.
- We conducted an interrupted time-series analysis of the number of SYI cases treated over time, examining data at the health post level.

## DISCUSSION

- Most of these strategies were sufficiently implemented.
- Measuring fidelity is critical to understand if adaptive strategies are implemented as intended.
- Most implementation strategies were incorporated with the PHC and woreda work stream for sustainability.
- Despite improvements observed, remaining barriers impeding optimal iCCM/PSBI services included perceived low quality of service; lack of community trust; inadequate number of HEWs and unsustainable workload for those available; and supply shortages.



### Trends in the # of SYI cases managed at health posts



### Association between # of SYI cases seen and implementation intensity

