

# ACUTE RESPIRATORY INFECTIONS IN UNDER-FIVE CHILDREN AND HOUSEHOLD SECONDHAND SMOKE EXPOSURE: EVIDENCE FROM CENTRAL LOMBOK

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## BACKGROUND AND OBJECTIVES

Acute respiratory infections (ARI) remain a leading cause of childhood morbidity and mortality globally, accounting for about 15% of child deaths. Household exposure to secondhand smoke is a preventable but often overlooked risk factor. In Indonesia, smoking prevalence among men exceeds 65%, with most smoking occurring indoors, placing children at particularly high risk. This study aimed to describe weekly trends of ARI cases among under-five children and to assess paternal smoking-related household exposure at Darek Primary Health Center, Central Lombok, in 2024.

## METHODS

A descriptive observational study was conducted at Darek Primary Health Center, Central Lombok District, using medical records of children <5 years with a clinical diagnosis of ARI (January–December 2024). Inclusion criteria: children <5 years diagnosed with ARI and fathers available for interview; exclusion criteria: children whose fathers were not available for interview and ARI cases from outside the PHC catchment area. A total of 988 ARI cases were documented and analyzed for weekly trend patterns. In addition, a subsample of 120 fathers was purposively selected and interviewed using a structured questionnaire assessing smoking history and household risk factors, including ventilation, crowding, sanitation, cooking fuel, and exclusive breastfeeding.

## CONCLUSION

Secondhand smoke exposure in households with ARI cases remained high, mirroring the sustained ARI burden. Low-cost, high-impact interventions such as smoke-free home policies, improved ventilation, cleaner fuel use, routine screening, and counseling should be prioritized to reduce preventable cases and strengthen primary healthcare

## KEYWORD

Acute Respiratory Infections; Secondhand Smoke Exposure; Smoking; Child Health; Disease Prevention

## RESULTS

Over the 12-month study period, 988 ARI cases were recorded (mean: 19 cases per week), with a mid-year peak followed by persistently high case numbers. Among 120 fathers surveyed, 71.7% were active smokers, of whom 74.4% smoked indoors. Average cigarette consumption was 8 sticks/day, with 40% smoking  $\geq 10$ /day. Children were exposed  $\geq 3$  times/week in 65% of families and nearly daily in 20.8%. Despite 58.3% of fathers reporting receipt of health information from PHC health workers, 60% of them continued smoking indoors. Poor ventilation, household crowding, and solid fuel use further compounded the cumulative risk.

