

## Key Findings

SARS-COV2 detected with 29.4% of nasopharyngeal swabs tested positive for SARS-COV2.2. None of the laboratory samples tested positive for Influenza. Poor ventilation in overcrowded tents with 56% of trainees sharing bed spaces and all trainees were vaccinated as per existing Army public health policy. Only 2 out of 4 training camps detected, reported, and responded to the outbreak within the 7-1-7 timeline. Median age of trainees was 23.5 years (IQR: 20.0-24.8 years), with 35 females and 65 males.

## BACKGROUND

- Acute Respiratory Infections are important causes of morbidity and mortality.
- In August 2023, Zambia Army recruited over 5000 trainees.
- From August to October, 2023, there were reports of a surge in respiratory tract infections among trainees.

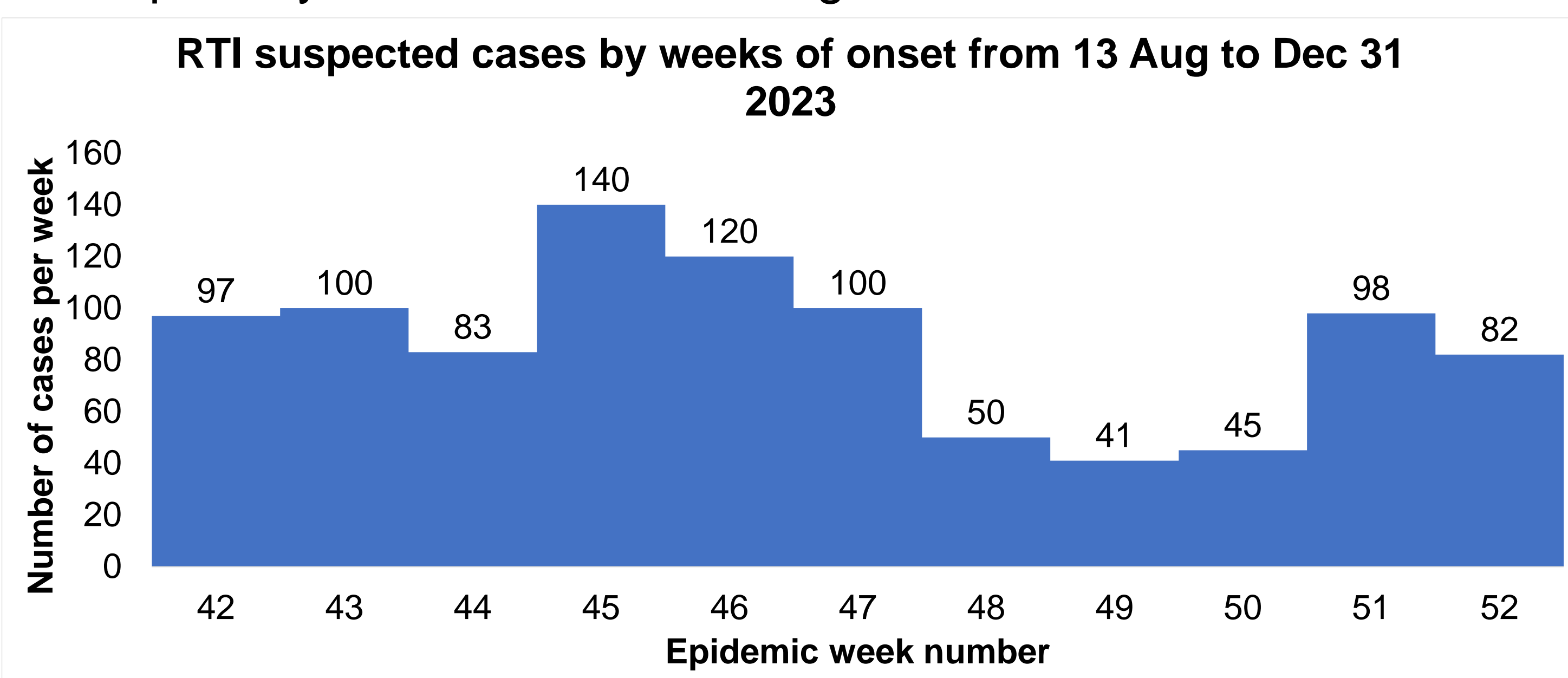


Figure1: Epidemic curve

- Conducted an outbreak investigation to describe and confirm the cause of the surge of respiratory infections in training Camps.

## METHODS

- A descriptive cross-sectional study design utilizing quantitative methods
- We collected nasopharyngeal swabs for analysis of Influenza and SARS-COV2 using purposive sampling.
- Data on demographics, environmental assessment, vaccination status were collected using an electronic questionnaire.
- A 7-1-7 standardized tool was used to measure outbreak detection, reporting and response within 7 days.

## RESULTS

- We interviewed 108 military trainees including 35 females and 65 males.
- The median age was 23.5 years (IQR: 20.0 – 24.8 years).
- All trainees were vaccinated as it is an existing Army public health policy.

Table 1: Laboratory results

Training Centre	Influenza	Sars-Cov2	Remarks
Kapela Makufi	Negative	Negative	Nil
Kohima	Negative	Negative	Nil
Lukanga	Negative	Negative	Nil
SFTS	Negative	Positive	29.4%

## RESULTS CONTINUED

Table 2: 7-1-7 Matrix

Centre	Date of emergency	Date of detection	Date of notification	Date of early response initiation	Date of early response completion	Early response actions
SFTS		08/10/23	13/10/2023	15/8/2023	20/12/23	Informed ZNPPI
Kohima		07/10/23	10/10/2023	15/8/2023	20/12/23	Informed ZNPPI

- Two training camps detected, responded and reported the outbreak within the 7-1-7 timeline.

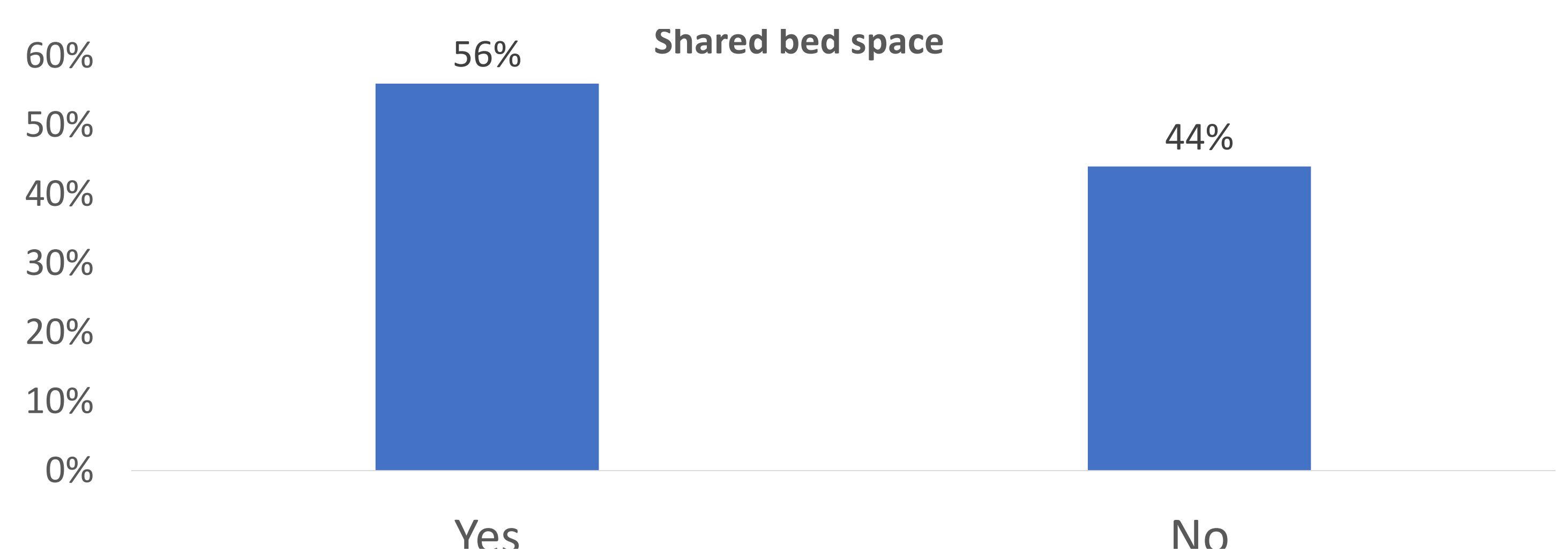


Figure2: Shared bed spaces

- Poor ventilation in overclouded 10 x 5 tents and 56% of trainees sharing bed spaces

## CONCLUSIONS

- The surge could have been caused by SARS-COV2 with noted overcrowding providing a favorable ground for transmission.
- Only two facilities were able to detect, report and respond within 7 days.
- Public health actions included regular mass screening for SARS-COV2 and proposed training of surveillance officers in e-IDSR to enhance real-time reporting.

## Additional Key Information

- Author Contact Information** : [mwenyafrancis@gmail.com](mailto:mwenyafrancis@gmail.com)
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- Conflicts of Interest**
  - The author declares no financial conflicts of interest.
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