



Predicting COVID-19 Infection Among Older Syrian Refugees in Lebanon: A Multi-Wave Survey

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AIMS

Identify the **socio-ecological predictors** of COVID-19 infection among older Syrian refugees in Lebanon

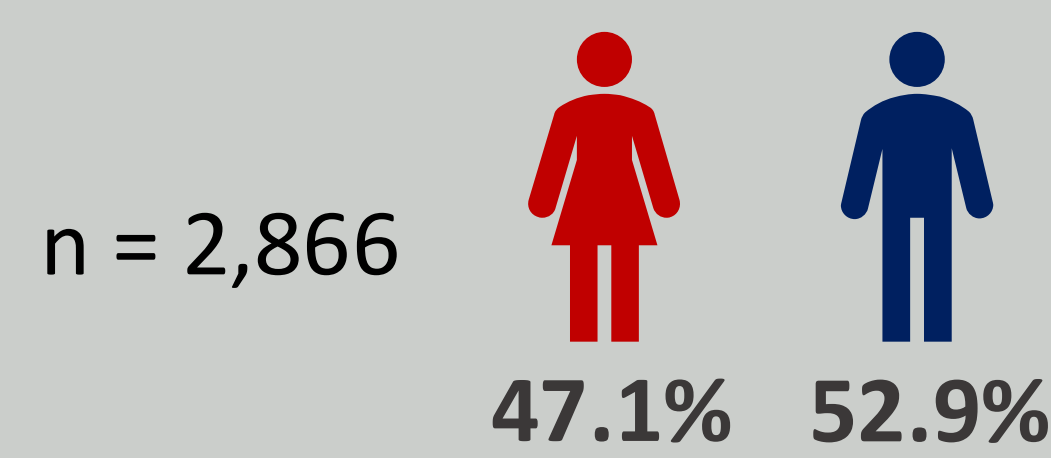
Describe the **barriers** to diagnostic testing faced by those who reported an infection

METHODS

A NESTED CROSS-SECTIONAL STUDY

Study Population

Refugees ≥ 50 years
From households that received assistance from a humanitarian organization



Candidate Predictors



Analysis

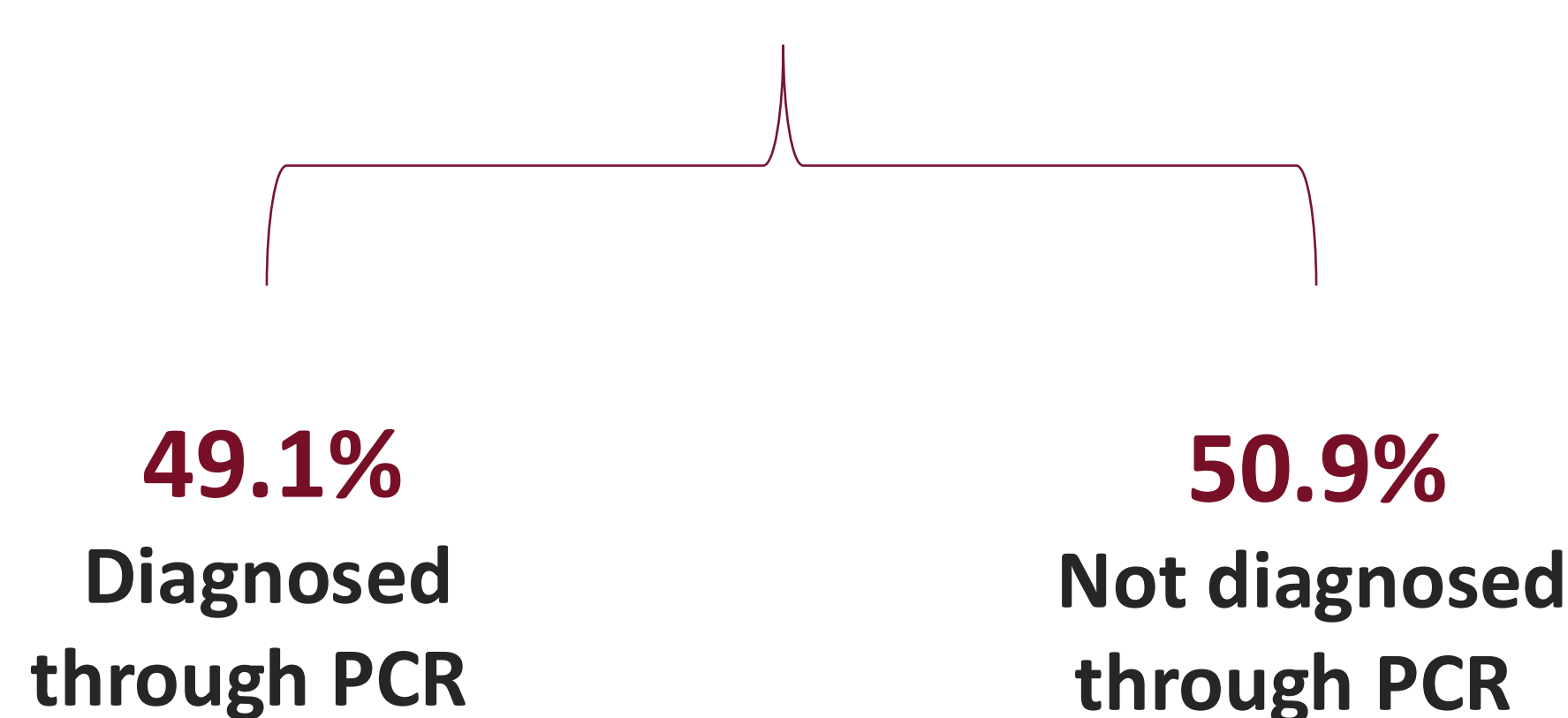
The final model was developed using adaptive **LASSO** regression

The calibration and discrimination of the model were assessed using **C-slope** and **C-statistic**, respectively

Outcome → Self-reported Covid-19 infection

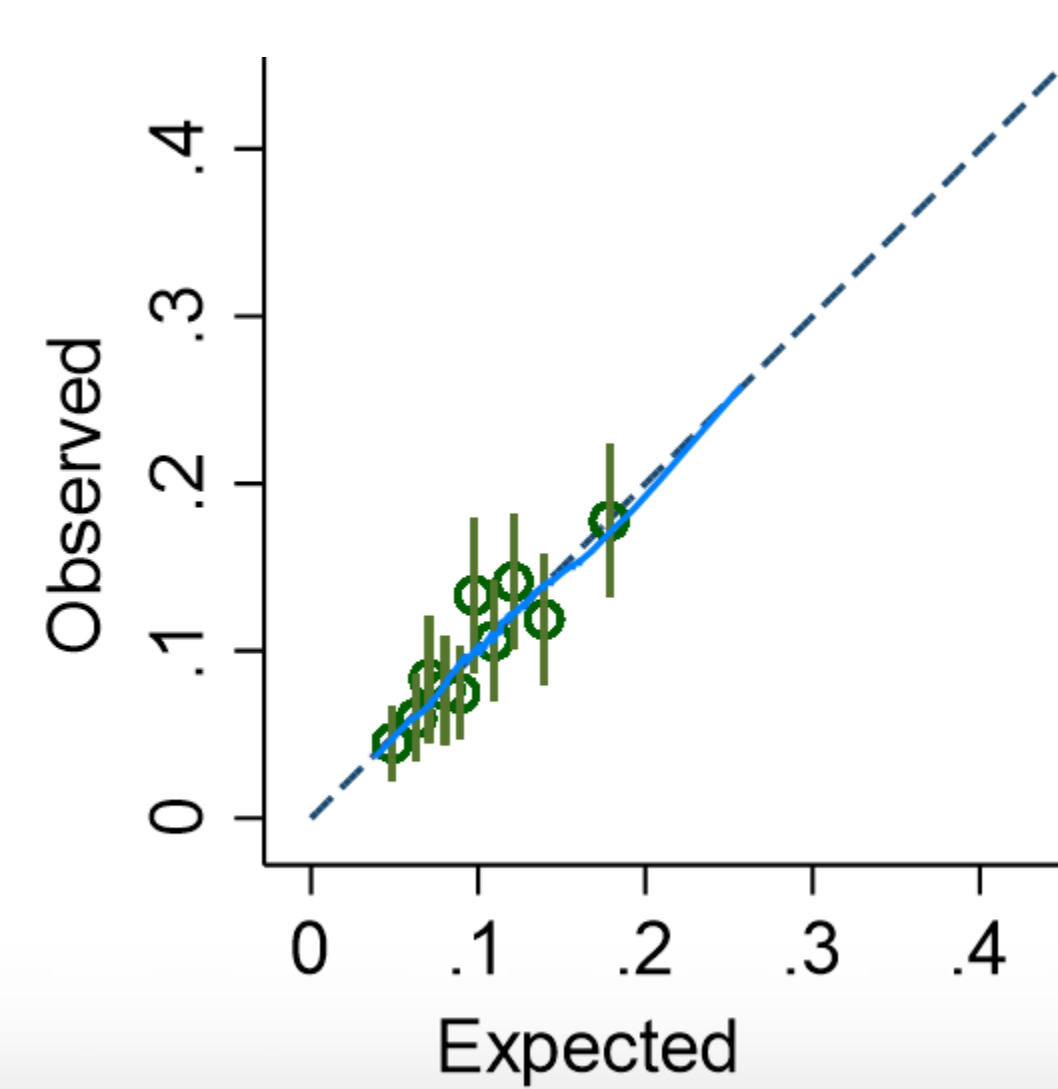
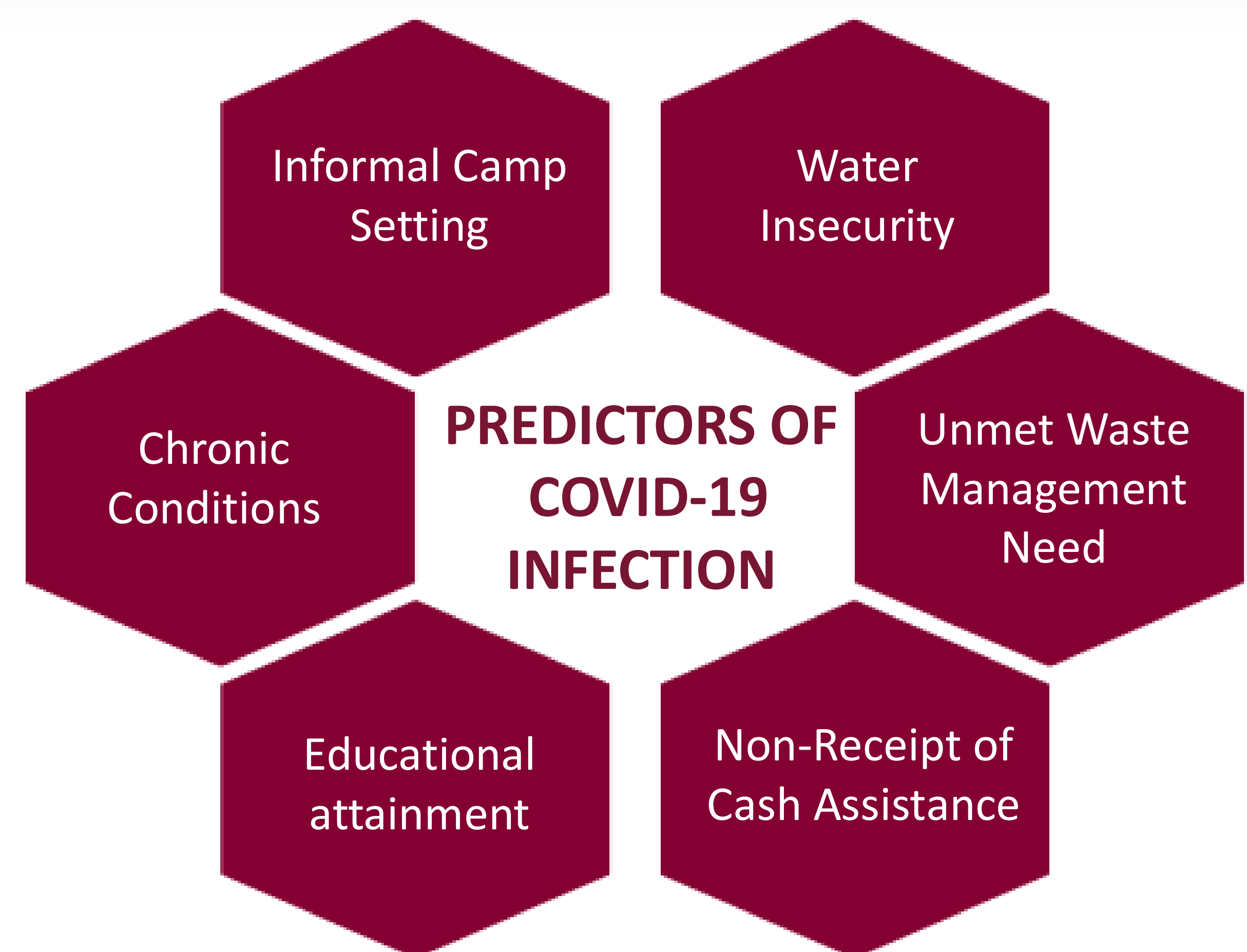
MAIN FINDINGS

10% REPORTED A COVID-19 INFECTION at least once



The main reasons for NOT taking the PCR test are:

- 64% perceived that tests were unnecessary
- 32% were not able to afford the tests



	Estimate (95% confidence interval)
Calibration-in-the-large	0.005 (-0.121 to 0.131)
C-slope	1.004 (0.704 to 1.304)
C-statistic	0.621 (0.587 to 0.655)

EXAMPLE INDIVIDUALS

The risk of infection for individuals with the following conditions is:

4%

- Inside informal tented settlements
- Never attended school
- No chronic conditions
- Received cash assistance
- Water secure
- Waste management needs met

26%

- Outside informal tented settlements
- Preparatory education
- Two chronic conditions
- Did not receive cash assistance
- Water insecure
- Waste management needs unmet

CONCLUSION

This study identified six predictors of COVID-19 infection among Syrian refugees in Lebanon, which included social determinants. COVID-19 may be underreported due to limited diagnostic testing in this population.

Recommendations:

Consideration of **social determinants** for future pandemic preparedness

Address the **basic needs** of older refugees

Ensure **PCR coverage** for hard-to-reach refugees

