The impact of the COVID-19 pandemic on rabies reemergence in Latin America: The case of Arequipa, Peru

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INTRODUCTION

In Arequipa, Peru, normal canine rabies control activities include:
- Yearly mass dog vaccination campaigns
- Surveillance and subsequent focus control
- Efforts to reduce the spread of COVID-19 have disrupted these vital control efforts

RESULTS

1. Model simulations- 6 different scenarios were tested:
   - Vaccination coverage: ideal (A,D), suboptimal (B,E) and none (C,F)
   - Surveillance: normal (A-C) and decreased (D-F)

   Simulations were run for all plausible ranges of $R_0$ (i-figures) and for results for $R_0 = 1.44$ (ii-figures) were displayed individually for ease of visualization.

2. Surveillance data- unfortunately, we are already seeing rising trends:
   - January 2021 had the highest number of confirmed cases since rabies was reintroduced in 2015 despite below-average surveillance

   Rabies diagnosis requires laboratory analysis of submitted brain samples. Confirmed rabies cases are depicted in panel A while total sample submissions (surveillance) were depicted in Panel B.

CONCLUSION

In Arequipa and across Latin America, rabies control activities were dramatically reduced in 2020
- Models predicted exponentially rising trends of canine rabies cases
- Early 2021 surveillance data confirms increase in cases despite lower-than-average surveillance

Rabies elimination programs across Latin America are in danger

FUTURE DIRECTIONS

- COVID-19 will continue to challenge public health systems in Latin America in the intermediate-term future
- Innovative methods to conduct rabies control efforts safely are needed

REFERENCES


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