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KNOWLEDGE, ATTITUDES AND PRACTICES ON NOMA AMONG HEALTH PRACTITIONERS IN ZAMBEZIA PROVINCE, MOZAMBIQUE

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BACKGROUND AND OBJECTIVES

Noma is a devastating orofacial gangrene primarily affecting children with malnutrition. Starting as a simple gingivitis, **when promptly identified, it can be effectively treated with antibiotics**. However, the lack of awareness among healthcare professionals leaves the majority of cases untreated, resulting in a 90% mortality rate within two weeks.

Mozambique, as most countries, has no national plan dedicated to or addressing noma. Within the medical education framework, **noma-specific content is absent in both medicine degree and pediatrics residence**. It is taught in the stomatology curriculum and the maxillofacial surgery specialty. But these constitute a scarce workforce, with ratios of 1:5 million population for maxillofacial surgeons and 1:70,983 for stomatologists in Zambezia provice.

Prompt diagnosis being key to prevent progression to death, we aimed to assess the knowledge, attitudes and practices on noma among health practitioners.

STUDY DESIGN

This was the secondary objective of the "Noma Echoes" project which - in collaboration with the Provincial Health Department of Zambezia-, we aimed to provide the first scientific evidence for the presence of noma in Mozambique.

Harnessing the visits to multiple districts in Zambezia looking for noma survivors, we **visited health facilities on a convenience sampling basis**. One to **three health providers per health facility were invited to participate in the study, chosen on a quota sampling basis**, aiming at having a profession-diverse sample (*Figure 1*).

After signing an informed consent, a **KAP questionnaire including closed and open-ended questions** was administered by a trained researcher. Additionally, health practitioners were informed on the diagnosis, treatment and prevention of noma using a poster that was left at their disposal along with a phone number to encourage future reporting of suspected cases.

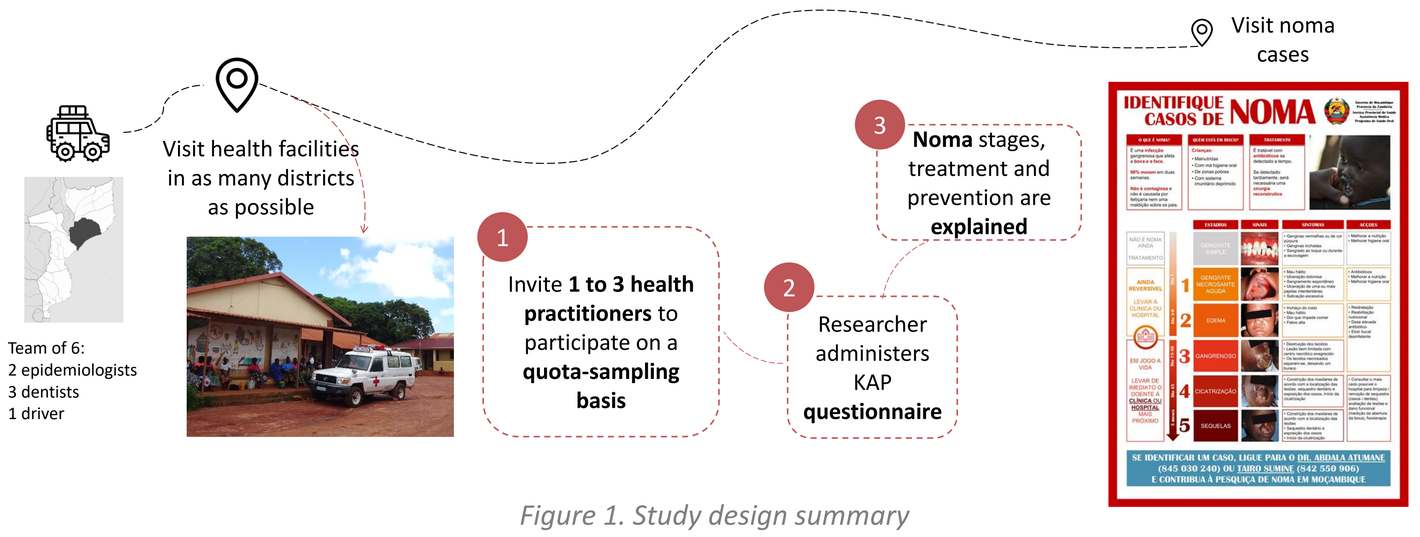

Figure 1. Study design summary

RESULTS

Participant characteristics (n=41):

- 49% female, 51% male
- 36% had university education, 64% technical education
- 58.5% were working in health centers, 30% in district or rural hospitals, 7.3% in a General hospital and 2.4% in a Central Hospital

Oral Health Practices

Oral screening rates when attending a child diagnosed with:

- Malaria: 61%
- Malnutrition: 80%
- HIV+ : 89%

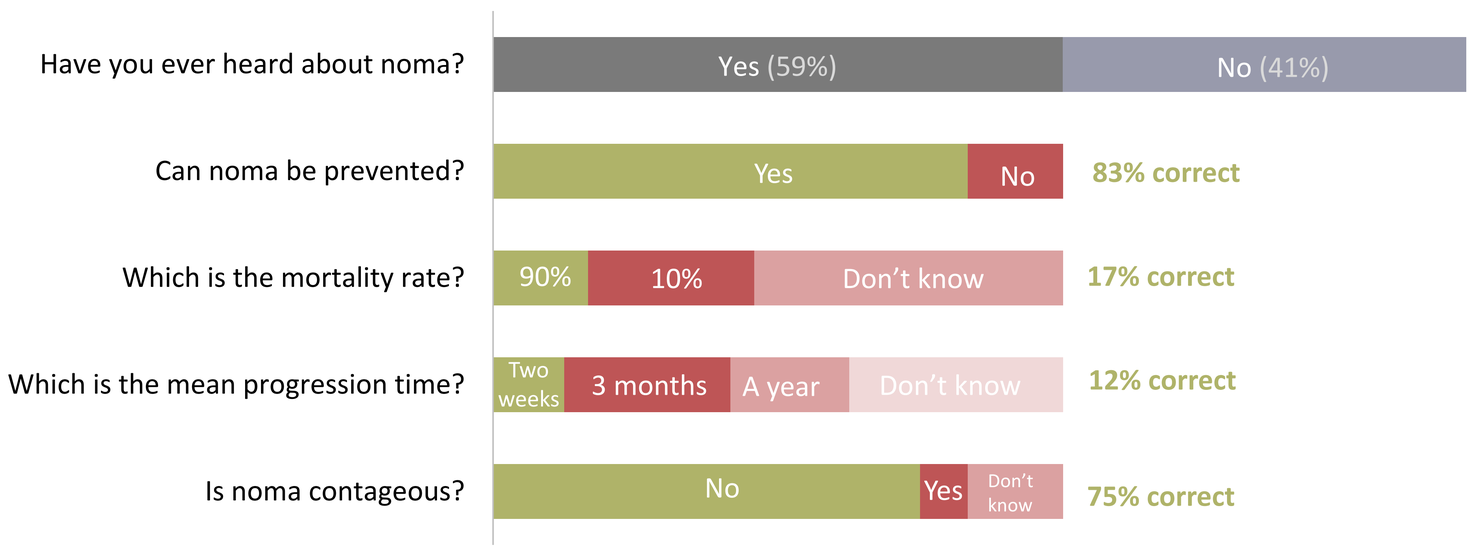

Figure 2. Answers to questions on noma knowledge administered to those who affirmed having heard about noma. Green bars represent the correct answer.

Noma diagnosis

Participants were presented with three cases, as presented on *Figure 3*.

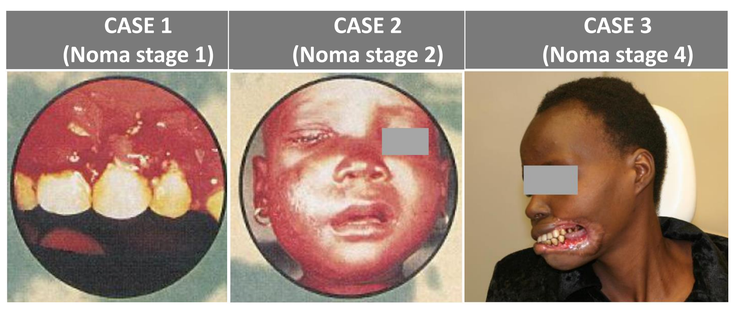

Figure 3. Photos of noma case studies. Percentages indicate number of participants who correctly diagnosed each case study.

Noma Knowledge

Summarized data is presented in *Figure 2*. When segregated by education level, 54% of those with technical education and 80% of those with university education had heard about noma before.

Seventy-one percent had known noma through education, 12% through the media and 25% at work.

CONCLUSIONS

- Although **over half** of health practitioners in Zambezia province **have heard about the disease**, very **few know its high mortality and its rapid progression**, **and almost none can diagnose its early stages**.
- These results are comparable to those obtained in the noma KAP studies done in Burkina Faso (1) and Zambia (2).
- There is an urgency in training health practitioners at all levels to diagnose noma at its reversible stages.

ACKNOWLEDGEMENTS

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Finally, we would like to thank Elise Farley for her valuable advise on the development of the KAP questionnaire.

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ETHICS STATEMENT

This study was approved by the Comité de Bioética de Zambézia. Health providers participated voluntarily after signing an informed consent.