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The study aimed to **strengthen laboratory capacities for rabies control by establishing RT-PCR through the One Health approach and fostering intersectoral collaboration.**

BACKGROUND

In 2015, the global toll of human rabies was estimated to be 59,000 deaths per year, mainly in Asia and Africa. In Mali, the estimated number of deaths in 2017 was 136. However, it remains crucial to obtain validated data to evaluate the real incidence of human rabies, which relies only on laboratory confirmation (e.g. molecular technique). This project aimed to implement the molecular biological diagnosis of human rabies in public health surveillance.

METHODS

This study adopted a One-Health approach (Figure 1) for the implementation of human rabies diagnostics, using a three steps process:

- Preparation step: technical validation at the University Clinical Research Center of Point G (UCRC)
- Validation step: Integration with the Department of Infectious Diseases
- Diffusion step: Dissemination at the national surveillance level.

Physical and online meetings with stakeholders from the Central Veterinarian Laboratory of Bamako, Institut Pasteur, Paris (IPP) and UCRC to define and establish the steps of collaboration, technical support and biological material sharing.

RESULTS

- Established pathways for building local capacity and collaborative efforts
- Following validation, Mali gained the autonomous capacity for human rabies diagnostic
- Strengthened national surveillance and response efforts to rabies.
- Molecular biology laboratory confirmed 6 out of 13 (46%) of suspected cases.

CONCLUSIONS

- The One Health approach and a transdisciplinary collaboration were essential to the development and implementation of the first biological diagnosis of human rabies in Mali.
- These collaborative efforts remain essential to reach the final goal of zero human deaths due to canine rabies by 2030.

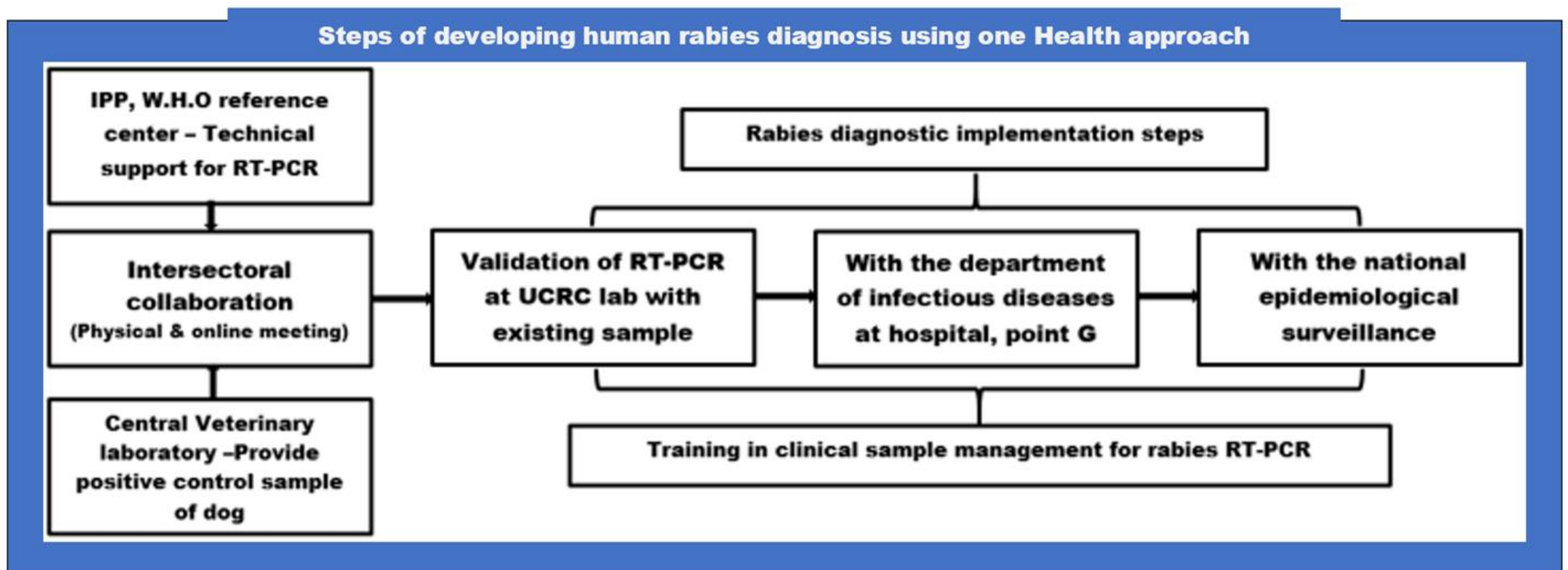


Figure 1: The implementation of human rabies diagnostic in public health.

ADDITIONAL KEY INFORMATION

Acknowledgements: To EDCTP2 programme, Malian' health authorities, and all the public health professionals engaged for rabies control.

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Funding Source: This project is part of the EDCTP2 programme supported by the European Union (grant number CSA2018HS-2517).

Conflicts of Interest: The author declare no conflict of interest

