

# Cold chain management and peste des petits ruminants post-vaccination seroconversion



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## Introduction

The performance of the peste des petits ruminants (PPR) vaccine, a live attenuated vaccine, requires a high level of cold chain maintenance. The livestock vaccine delivery system in Uganda has several challenges and risks interruptions in the cold chain management from the source to the final consumer, the farmer. This study was conducted to get an insight into the cold chain gaps while delivering livestock vaccines in Uganda, and how they would affect the performance of the PPR vaccines.

## Methods

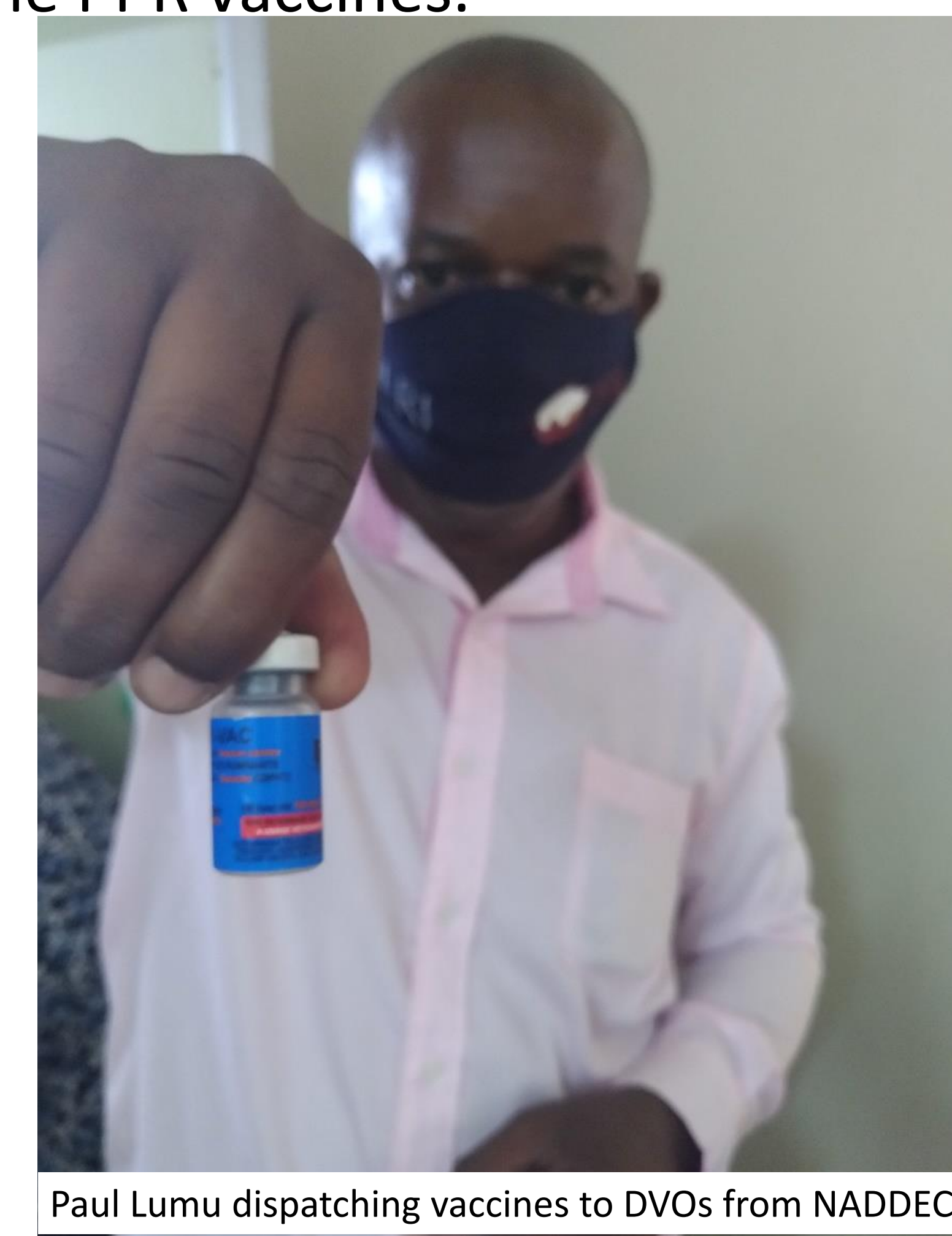
MAAIF provided vaccine doses for the study, procured from the Botswana Vaccine Institute. A cross sectional survey was conducted in 6 districts and 18 sub counties of Uganda to assess cold chain management protocols. Questionnaires, key informant interviews and observation were used to collect data.

## Findings

- Vaccines were transported for an average of 5 hours from NADDEC to the districts
- 83% of sampled districts had an average of 2 fridges at the District level
- Of 18 sub counties sampled, only 3% had fridges at the sub county level
- 33% of the sampled districts had thermometers as well as temperature monitors for fridges
- Cool boxes used in the field lacked temperature monitors
- 33% of the sampled districts replenished the ice while vaccinating in the field



Some of the Fridges in Ntungamo District



Paul Lumu dispatching vaccines to DVOs from NADDEC



Cool box used in the field, Nakaseke District

## Conclusions & limitations

The cold chain facilities in Uganda are functional, especially at the district level but there is room for improvement at the sub county level. There is need to operationalize a refrigerated vaccine transport van to enable movement of vaccines from the central government stores to the regional centers whence districts can collect the vaccines from for more effective outputs. Regional centers with freezers or cold rooms that can store vaccines up to -20°C as is required by some manufacturers.

## Contribution to Uganda's livestock development agenda

This study was useful for establishing the status of the cold chain infrastructure and identifying the gaps and possible solutions for improvement of the cold chain in Uganda. A functional cold chain is critical for effective vaccination programme for most vaccines.



Source: OIE and FAO (2015).

Uganda's roadmap for stepwise approach for control of PPR														
Years	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Uganda	1	1	2	2	2	3	3	3	4	4	4	5	5	5

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