



EMCA 2025
CONFERENCE XII
ANTWERP | 25-28 MARCH
INSTITUTE OF TROPICAL MEDICINE

Aedes albopictus suppression during two Dengue outbreaks in the Emilia-Romagna region (Italy) in 2024

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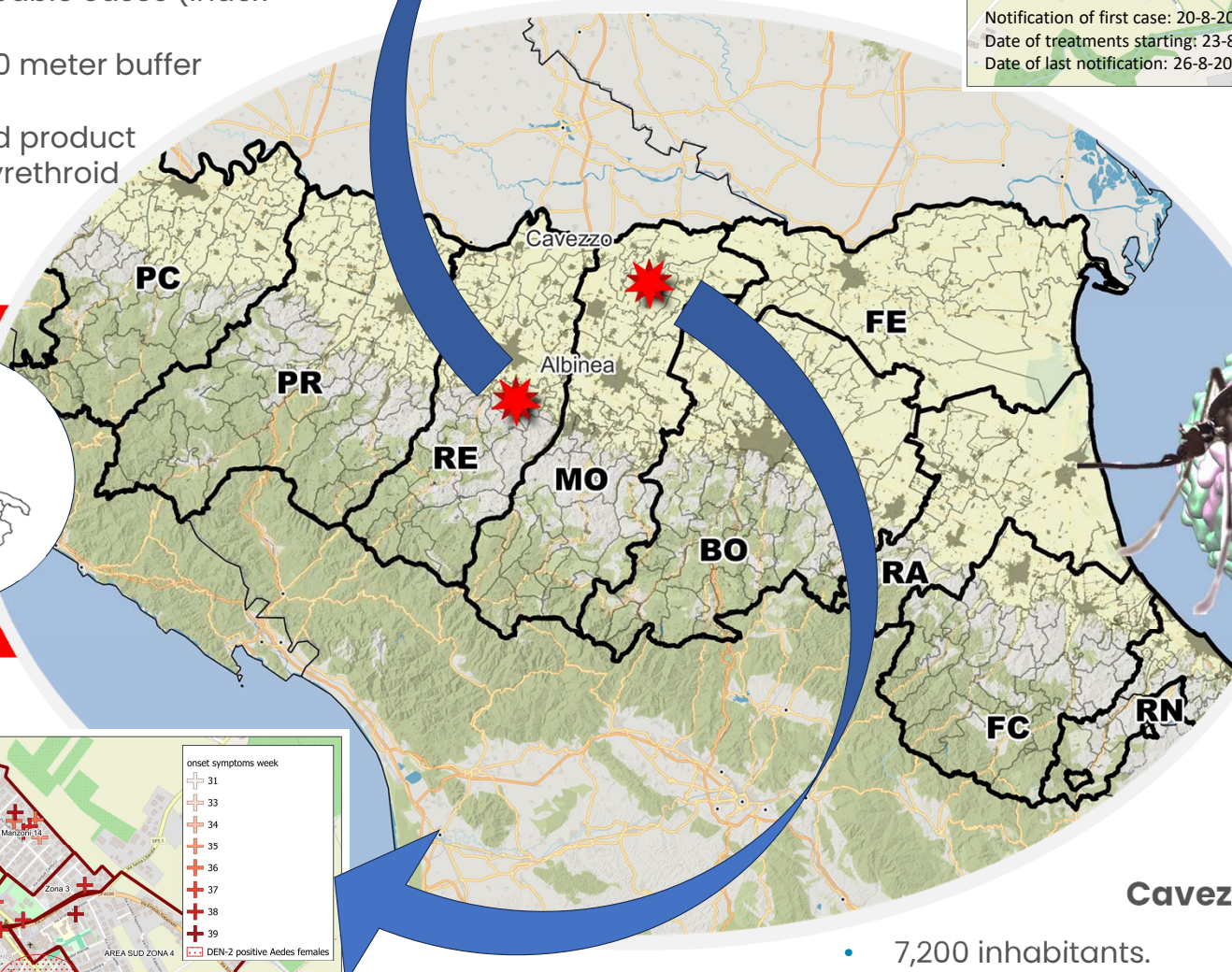
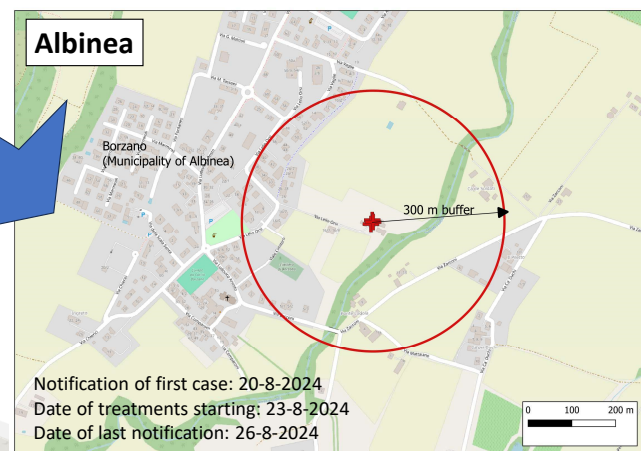
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In the summer 2024, two Dengue serotype 2 outbreaks occurred, in the Emilia-Romagna region (Northern Italy), one in the municipality of **Cavezzo** and the other in the municipality of **Albinea** (locality of **Borzano**). In both contexts *Aedes albopictus* control measures provided by the **Regional Plan for the Surveillance and Control of Arboviruses** were promptly activated including: public communication, **larvicidal** and **adulticidal** treatments both in public and private (door-to-door) areas, **breeding sites removal** in the territorial sectors into which the urban areas were divided.

Outbreaks and control actions

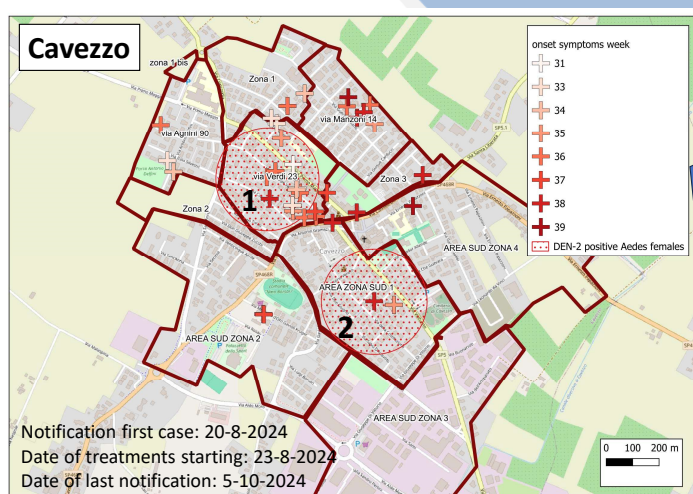
Albinea (Reggio-Emilia province)

- Borzano is a locality in the municipality of Albinea.
- 2 confirmed + 1 probable cases (index case identified).
- 1 treated area of 300 meter buffer around first case.
- PDMS Silicone based product as larvicides and pyrethroid (cypermethrin and tetramethrin) as adulticides.



Cavezzo (Modena province)

- 7,200 inhabitants.
- 44 Dengue cases.
- Aedes* females positive to DENV-2 collected in two areas before treatments.
- 10 sub-areas treated.
- PDMS Silicone based product as larvicides and pyrethroid (deltamethrin and prallethrin) as adulticides.



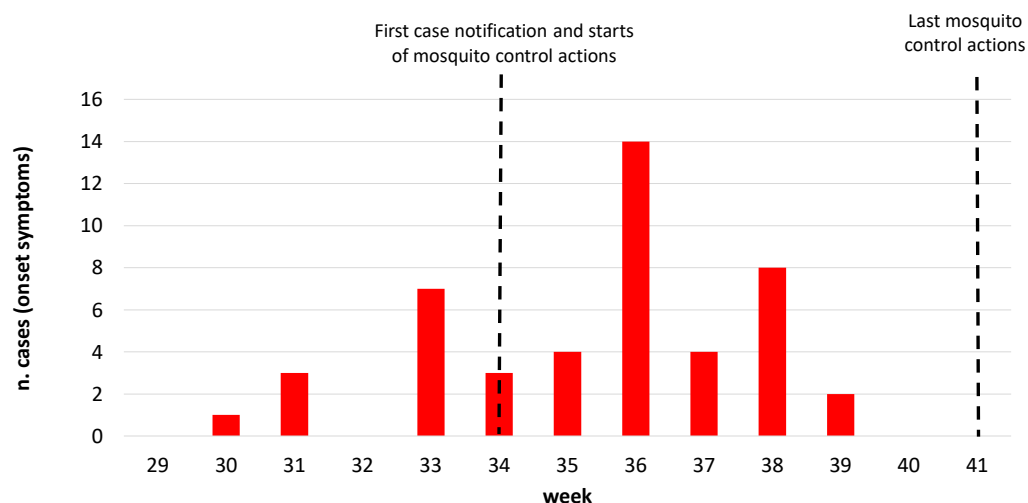
Area 1: 243 females collected (23 pools; 3 positive to DEN-2)

Area 2: 115 females collected (20 pools; 1 positive to DEN-2)

Discussion

The outbreak of Albinea (Borzano) was stopped immediately following notification of the index case (imported).

In Cavezzo, the index case (imported) was not found and retrospectively it has been possible to clarify that the first notification was **received 4 weeks after the start of the epidemic event**. The vector control treatments were started **within 48 hours** from the first notification and the **synergy** between pest control operators, entomologists, public health, citizens and the local administration **was critical** for the rapid containment of the outbreak.



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