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► To cite this version:

Viviane Hénaux, Henok A. Tegegne, Frederick T. A. Freeth, Carlijn Bogaardt, Emma Taylor, et al.. Challenges and opportunities in implementing One Health surveillance: lessons learned from applying the OH-EpiCap assessment tool. International One Health Symposium (OneH2024), Jun 2024, Saint Brieuc, France. anses-04827463

HAL Id: anses-04827463

<https://anses.hal.science/anses-04827463v1>

Submitted on 9 Dec 2024

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Challenges and opportunities in implementing One Health surveillance: lessons learned from applying the OH-EpiCap assessment tool

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As the complexity of health systems has increased over time, there is an urgent need for developing multi-sectoral and multi-disciplinary collaborations within the domain of One Health (OH) (1). Despite the efforts to promote such collaborations and break through disciplinary and sectoral silos, implementing OH surveillance in practice remains difficult. Thus, it is key to identify the main challenges and barriers for the effective implementation and functioning of an integrated OH surveillance system (2).

OH-EPICAP

We developed a generic tool, OH-EpiCap, to characterize and assess OH epidemiological surveillance capacities (3). The tool focuses on multiple OH aspects, across three dimensions: organization, operational activities, and impacts of the OH surveillance. Each dimension includes four targets (Fig. 1), themselves made up of four indicators.

Each evaluation is conducted by a panel of surveillance representatives (during a half-day workshop), using a free web application (QR code below) to score indicators (with a standardized semi-quantitative scale) and visualize results.

Eleven evaluations of surveillance systems for foodborne pathogens (*Listeria*, *Campylobacter* and *Salmonella*) and other zoonotic hazards (antimicrobial resistance, psittacosis) were conducted using this tool in eight European countries (4).

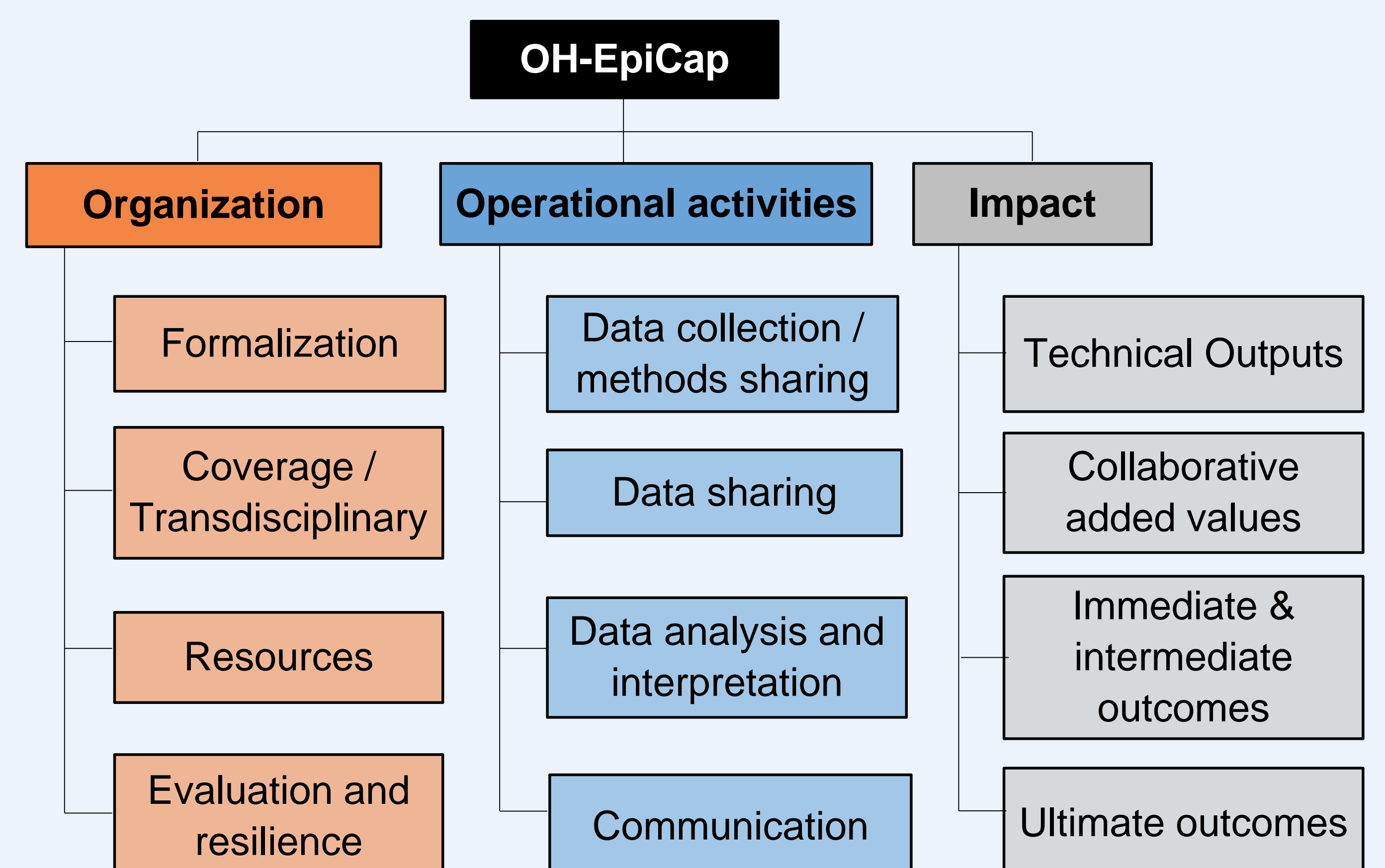


Fig. 1: Structural overview of the OH-EpiCap targets grouped by dimension of integrated surveillance.

LESSONS LEARNED AND CHALLENGES IDENTIFIED

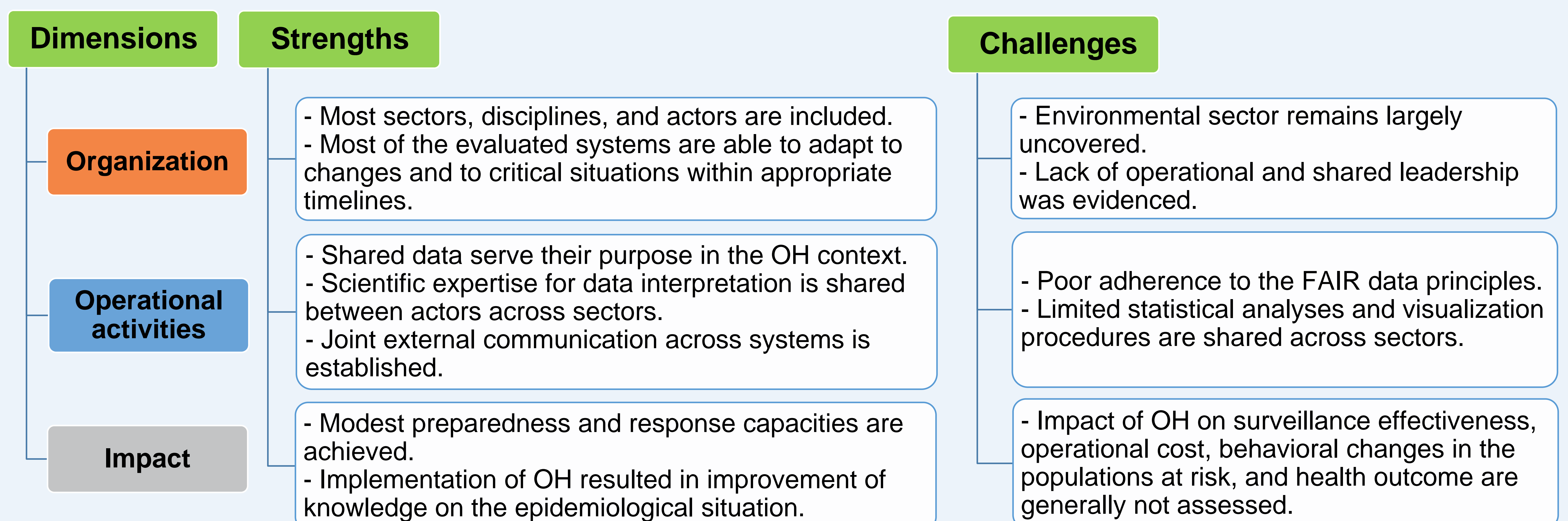


Fig. 2: Opportunities and challenges towards the implementation of OH surveillance system. Based on the results from the eleven study cases.

Although not representative of the diversity of OH situations, these study cases provide a general overview of strengths and weaknesses regarding multiple OH aspects (Fig. 2) (4). The establishment of a formal governance body with representatives from each sector could assist in overcoming long-standing barriers. Demonstrating the impact of OH on the surveillance and prevention of health risks is key to encourage managers to make surveillance more integrated.

OH-EpiCap has been described as easy-to-use and valuable by users (5). It helps to identify concrete and direct actions to improve collaborative activities at all steps of surveillance and to build a foundation for professional networks, acculturation to practices in other health sectors and disciplines, and long-term collaborations.



QR code to the web application (and user guide)

ACKNOWLEDGEMENTS

We thank the surveillance representatives who participated to the evaluations. The MATRIX project received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 773830. MATRIX logo was designed by Guido Benedetti (SSI, Denmark), coordinator of the MATRIX project.

REFERENCES

1. Johnson et al. (2018). The challenges of implementing an integrated One Health surveillance system in Australia. *Zoonoses Public Health* 65(1), e229-e236.
2. Bordier et al. (2019). One health surveillance: a matrix to evaluate multisectoral collaboration. *Front. Vet. Sci.* 6, 109.
3. Tegegne et al. (2023). OH-EpiCap: a semi-quantitative tool for the evaluation of One Health epidemiological surveillance capacities and capabilities. *Front. Public Health* 11: 1053986.
4. Tegegne et al. (2024). Implementation of One Health surveillance systems: Opportunities and challenges - lessons learned from the OH-EpiCap application. *One Health* 18: 100704.
5. Moura et al. (2023). Users' perception of the OH-EpiCap evaluation tool based on its application to nine national antimicrobial resistance surveillance systems. *Front. Public Health* 11:1138645.