Research project IZSVe 12/14

Optimise the sensitivity of IZSVe surveillance on antimicrobial resistance and other emerging hazards of public health interest

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Each year the regional IZSVe laboratories process about one and a half million of samples originating from the public health scanning and targeted surveillance, from syndromic and passive surveillance, and from diagnostic services delivered to firms and customers. This activity is hereafter referred as “IZSVe current surveillance”.

The collection of samples is among the most expensive and time consuming tasks of a planned survey. We propose to reuse the samples the regional IZSVe laboratories receive in the framework of current surveillance for monitoring AMR, zoonotic agents and agents of unclear zoonotic capacity. These samples may suit studies aimed to rise alerts that have to be further investigated, since the reference population is indeed different and the sampling strategies are not standardized.

The project aims to enhance the sensitivity of specific study questions by using samples from all current surveillance performed by IZSVe using a study enrolment tool (SET) that processes almost instantly all samples registered in the IZSVe laboratory information management system (named Izilab) and enrols them after running the question(s) on whether the sample matches the study design of the three pilot sub-projects chosen to set up and test the system.

The sub-projects are surveys for MRSA in dairy cattle, for Clostridium difficile in shellfish and for ESBLs producing Escherichia coli in bovine, swine and companion animals.