

INTRODUCTION

The impact of infectious diseases on human demography and the economy is significant(1). Rapid identification of agents responsible for emerging and re-emerging infectious diseases is required and their real-time surveillance is therefore critical to improve their prevention and epidemiological management. Since 2002, weekly automated epidemiological surveillance systems have been in place in the Marseille Public Hospitals(AP-HM) public hospitals network, Marseille, France(1,2,3). These systems include EPIMIC (2), and BALYSES and MARSS, implemented in 2013, more specifically to survey bacteria and antibiotic resistance (1,3). We present here results from the weekly surveillance by BALYSES from 2015 to 2016.

MATERIALS AND METHODS

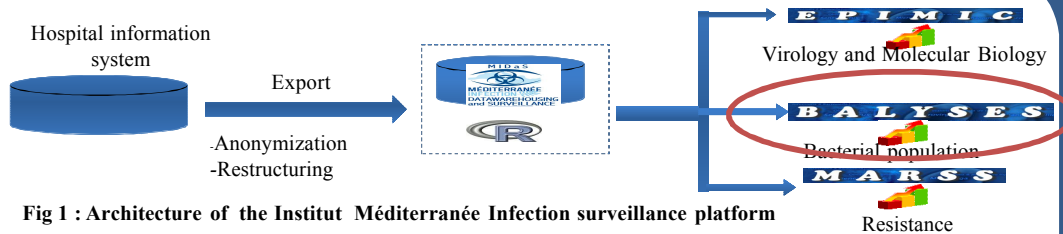


Fig 1 : Architecture of the Institut Méditerranée Infection surveillance platform

BALYSES (the BACTERIAL real-time Laboratory-based Surveillance System): around 480 bacterial species



Fig 2 : Screenshot of BALYSES showing the evolution of the monthly number of clinical samples positive to *Escherichia coli* (April 2014 to March 2017)

CONCLUSION

- 32 alarms issued by systems, 11 validated as epidemiological alerts, whose 2 sent to the ARS for 2016 year
 - Weekly: retro - information sent to the epidemiological surveillance members of IHU and ARS
- Our study confirms the capacity of MALDI-TOF to correctly identify bacterial species in clinical microbiology including new and or emerging pathogens. Real time surveillance with automatic alarm extends its usefulness in public health, allowing to better define the epidemiology and clinical significance of these new and/or emerging pathogens.

RESULTS

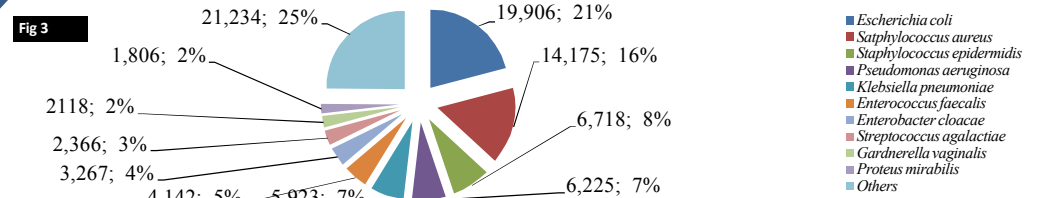


Fig 3 : Top 10 of the bacterial species the most isolated in the AP-HM clinical laboratory (Nb; %)

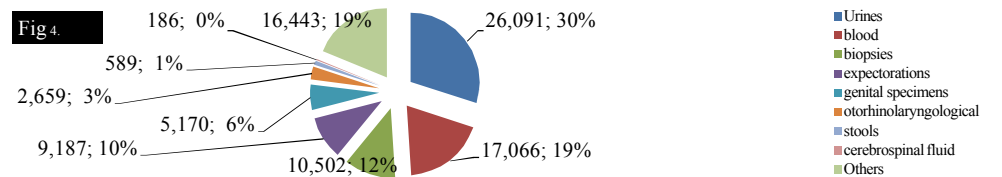


Fig 4. Main kind of samples collected and cultured for bacterial pathogens in the AP-HM clinical laboratory (Nb; %)

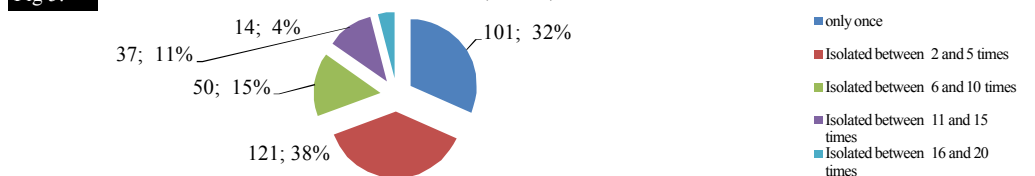


Fig 5: Main kind the rare bacterial species isolated in the AP-HM clinical laboratory (Nb; %)

REFERENCES

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