



## **THE OVERALL ANNUAL COST OF INFECTIONS DUE TO BACTERIAL RESISTANCE IN FRENCH HOSPITALS NOW ESTIMATED UP TO 290 MILLION EUROS**

**A team of researchers from Versailles Saint-Quentin-en-Yvelines University (UVSQ), Inserm and Pasteur Institute (Unité Mixte de Recherche 1181 Biostatistique, biomathématique, pharmacoépidémiologie et maladies infectieuses – B2PHI) has been able to provide for the first time an accurate estimate of both the incidence (annual number of new cases) and added direct cost of infections due to antibiotic-resistant bacteria in patients hospitalised in French hospitals during 2015 and 2016.**

The results of these studies, conducted by Mehdi Touat and by Marion Opatowski under the direction of Laurence Watier, in collaboration with Prof. Christian Brun-Buisson within the research group conducted by Prof. Didier Guillemot, appeared respectively on 3/12/2018 in Applied Health Economics and Health Policy and on 12/3/2019 in Epidemiology & Infection.

**In 2016, close to 140 000 new cases of infections due to antibiotic-resistant bacteria were identified, accounting for 12% of all bacterial infections needing**

**hospitalisation.** Infections of the urinary tract, of the respiratory tract and intra-abdominal infections represented about two-thirds of such cases. Most antibiotic-resistant infections were caused by third-generation cephalosporin-resistant E.coli, meticillin-resistant S.aureus (MRSA) and P.aeruginosa.

Compared to infections caused by antibiotic-susceptible bacteria, infections due to antibiotic-resistant bacteria were associated with a 20% higher in-hospital death rate.

**The researchers estimated that, from the payer's perspective, the mean added cost of hospital stay associated with infection due to resistant bacteria amounted to € 1100, leading to an overall population-based estimate of up to € 290 million in French hospitals.**

Based on diagnosis coding information routinely collected during each and every hospital stay in France, and using data collected on over 10 millions annual hospital stays, **these studies are based on data of outstanding comprehensiveness (French Health Data System).** Initiated 3 years ago, these studies were made possible through grants from the French Ministry of Health and the social security system (Assurance Maladie).

The algorithms created for these studies will be made publicly available. This will now make it possible to quickly carry out the analyses for the following years and the years to come.

## **References:**

*M. Opatowski, P. Tuppin, K. Cosker, M. Touat, G. De Lagasnerie, D. Guillemot, J. Salomon, C. Brun-Buisson and L. Watier. Hospitalisations with infections related to antimicrobial-resistant bacteria from the French nationwide hospital discharge database, 2016.*

*Epidemiology and infection 2019 Jan;147:e144. doi: 10.1017/S0950268819000402.*

*Touat M, Opatowski M, Brun-Buisson C, Cosker K, Guillemot D, Salomon J, Tuppin P, de Lagasnerie G, Watier L. A Payer Perspective of the Hospital Inpatient Additional Care Costs of Antimicrobial Resistance in France: A Matched Case-Control Study.*

*Appl Health Econ Health Policy. 2018 Dec 3. doi: 10.1007/s40258-018-0451-1*

## ADDITIONAL INFORMATION

### Contact scientifique

Professeur Didier Guillemot (UVSQ/Inserm/Institut Pasteur), [didier.guillemot@uvsq.fr](mailto:didier.guillemot@uvsq.fr),  
06 32 55 25 55

### Contacts presse

- » Inserm : [presse@inserm.fr](mailto:presse@inserm.fr)
- » Institut Pasteur : Myriam Rebeyrotte et Aurélie Perthuisson, [presse@pasteur.fr](mailto:presse@pasteur.fr), 01 45 68 81 01 / 81 09
- » UVSQ : Camille Jonville, [camille.jonville@uvsq.fr](mailto:camille.jonville@uvsq.fr), 01 39 25 78 52