

Original article

Human resources needed to perform antimicrobial stewardship teams' activities in French hospitals[☆]

Ressources humaines nécessaires aux équipes multidisciplinaires en antibiothérapie dans les établissements de santé français

P. Le Coz^{a,*}, J. Carlet^c, F. Roblot^{d,e}, C. Pulcini^{f,g}

^a Inserm, IAME, UMR 1137, UFR de médecine Paris 7 Denis-Diderot, 16, rue Henri-Huchard, 75018 Paris, France

^b Université Paris Diderot, Sorbonne Paris Cité, 16, rue Henri-Huchard 75018 Paris, France

^c World Alliance Against Antimicrobial Resistance (WAAAR), 92100 Boulogne-Billancourt, France

^d Inserm 1070, faculté de médecine et de pharmacie, université de Poitiers, 86022 Poitiers, France

^e Service de médecine interne et maladies infectieuses, CHU de Poitiers, 2, rue de la Milétrie, 86000 Poitiers, France

^f EA 4360 APEMAC, faculté de médecine, université de Lorraine, université Paris Descartes, 9, avenue de la Forêt-de-Haye, 54505 Vandœuvre-lès-Nancy cedex, France

^g Service de maladies infectieuses et tropicales, hôpitaux de Brabois, CHU de Nancy, bâtiment des spécialités médicales, allée du Morvan, 54511 Vandœuvre-lès-Nancy cedex, France

Received 19 November 2015; accepted 17 February 2016

Available online 24 March 2016

Abstract

Objective. – In January 2015, the French ministry of Health set up a task force on antibiotic resistance. Members of the task force's "antimicrobial stewardship" group conducted a study to evaluate the human resources needed to implement all the required activities of the multidisciplinary antimicrobial stewardship teams (AST – antibiotic/infectious disease lead supervisors, microbiologists, and pharmacists) in French healthcare facilities.

Methods. – We conducted an online cross-sectional nationwide survey. The questionnaire was designed based on regulatory texts and experts' consensus. The survey took place between March and May 2015. We used the mailing list of the French Infectious Diseases Society (SPILF) to send out questionnaires.

Results. – A total of 65 healthcare facilities completed the questionnaire. The human resources needed to implement all AST's activities were estimated at 3.6 full-time equivalent (FTE) positions/1000 acute care beds for antibiotic/infectious disease lead supervisors, at 2.5 FTE/1000 beds for pharmacists, and at 0.6 FTE/1000 beds for microbiologists. This almost amounts to a total of 2000 FTE positions for all healthcare facilities (public and private) in France and to an annual cost of 200 million euros.

Conclusion. – Dedicated and sustainable funding for AST is urgently needed to implement comprehensive and functional AST programs in all healthcare facilities.

© 2016 Elsevier Masson SAS. All rights reserved.

Keywords: Antibiotic stewardship; Infectious disease specialist; Pharmacist; Microbiologist

Résumé

Objectif. – En janvier 2015, la ministre de la santé française a constitué un groupe de travail sur l'Antibiorésistance. Le groupe « Bon usage des antibiotiques » a mené une étude pour évaluer les ressources humaines nécessaires afin d'assurer toutes les missions des équipes multidisciplinaires en antibiothérapie (EMA, associant référents en antibiothérapie/infectiologie, microbiologistes et pharmaciens) dans les établissements de santé (ES) français.

[☆] This study was presented as a poster with discussion at the Interdisciplinary meeting on anti-infection chemotherapy (RICAI 2015, December 13–15th, 2015, Palais des congrès, Paris).

* Corresponding author.

E-mail address: pierre.lecoz.scpo@gmail.com (P. Le Coz).

Méthodes. – Nous avons mené une enquête nationale à l'aide d'un questionnaire disponible sur Internet, conçu à partir de textes réglementaires et de consensus d'experts. L'enquête s'est déroulée de mars à mai 2015. Nous avons utilisé la liste de diffusion mail de la Société de pathologie infectieuse de langue française (SPILF).

Résultats. – Au total, 65 ES ont participé à l'étude. Les ressources humaines nécessaires pour mener à bien toutes les missions des EMA ont été évaluées à 3,6 postes équivalents temps pleins (ETP) de référents en antibiothérapie/infectiologie pour 1000 lits de médecine-chirurgie-obstétrique, 2,5 ETP pharmaciens/1000 lits et 0,6 ETP microbiologistes/1000 lits. Ceci équivaut à près de 2000 postes ETP pour tous les ES français (publics et privés), soit un coût annuel d'environ 200 millions d'euros.

Conclusion. – Un financement dédié et pérenne des EMA est indispensable à court terme si nous souhaitons mettre en place des programmes de bon usage des anti-infectieux complets et effectifs dans tous les ES.

© 2016 Elsevier Masson SAS. Tous droits réservés.

Mots clés : Bon usage des antibiotiques ; Infectiologue ; Pharmacien ; Microbiologiste

1. Introduction

France has one of the highest rates of human antibiotic consumption in Europe [1]. Although antibiotic prescription is on the rise in community settings, it is quite steady in hospital settings [2]. This controlled use of antibiotics may be due to the compulsory implementation of antibiotic stewardship for hospitals to be certified. It may also be due to actions taken by antimicrobial stewardship teams (AST, consisting of antibiotic/infectious disease lead supervisors, pharmacists, and microbiologists).

The antibiotic/infectious disease lead supervisor is in charge of implementing antibiotic stewardship in the hospital and of interacting with prescribers for a better use of antibiotics [3]. Just like hygiene task forces, the lead supervisor works in close collaboration with several key players of antibiotic resistance control. ASTs consist of at least three specialists: an antibiotic/infectious disease lead supervisor, a microbiologist, and a pharmacist. AST's activities significantly improve the quality of antibiotic prescriptions [4]. They are also cost-effective, as demonstrated by French [5–7] and foreign studies [8–10].

The composite index used to assess the proper use of antibiotics (ICATB2) in French healthcare facilities includes a target number for full-time equivalents (FTE) related to the antibiotic/infectious disease lead supervisor's activities. The target number is based on the number of hospital beds. It was therefore suggested to dedicate to these activities a working time equivalent to 0.1 FTE per 400 rehabilitation ward/long-term care or psychiatry beds and 0.3 FTE per 400 acute care beds [11]. However, no guideline is supporting such figures. Pharmacist's and microbiologist's working time has never been evaluated and is not mentioned in any guideline.

Although most healthcare facilities declare to have an antibiotic lead supervisor, ICATB2 scores vary by facility [12]. These discrepancies suggest that antibiotic stewardship programs are not optimally implemented in France.

No study has, to the best of our knowledge, been conducted to assess the human resources required to adequately implement all activities of the AST. The European society of clinical microbiology and infectious diseases (ESCMID) recently conducted a European study to assess available hospital human resources for infectious disease, microbiology, and hygiene activities. However, the study did not focus on the AST's activities [13].

We conducted our study within the frame of the antibiotic preservation project launched in January 2015 by the French minister of health (Antibiotic resistance task force [14]). We aimed to assess human resources required to implement all activities of the ASTs in French healthcare facilities.

2. Material and methods

2.1. Questionnaire design

ASTs must undertake 19 activities which have been defined on the basis of regulatory texts (ICATB2 and instructions issued by the ministry of Health [15]), suggestions put forward by the members of the task force, and on an experts' consensus (Table 1). The questionnaire (Appendix) was first completed by five infectious disease specialists on the SurveyMonkey® platform. We then mailed it to a hospital panel (exploratory survey) to later send it to a large sample of French antibiotic/infectious disease lead supervisors so that they could contribute to making suggestions on antibiotic preservation.

2.2. Conducting the studies

We first sent the questionnaire to eight infectious disease lead supervisors of our choice (six working in university hospitals and two in general hospitals). This exploratory survey was conducted between March and April 2015 in hospitals with long-established antibiotic stewardship programs.

We then emailed the questionnaire to all French antibiotic lead supervisors registered on the Infectioflash list published by the French Infectious Diseases Society (French acronym SPILF). We received the completed questionnaires between April and May 2015. Lead supervisors who took part in the exploratory survey could also participate in the national one.

For both surveys, we first sent an email to invite lead supervisors to take part in the study and then sent two reminder emails after 2 and 4 weeks. Lead supervisors were advised to consult with the members of their AST to complete the questionnaire (only one completed questionnaire per healthcare facility). Participants were asked to indicate the time required to perform each activity, for each member of the AST (based on a 15-minute consultation time for the lead supervisor) and to describe how

Download English Version:

<https://daneshyari.com/en/article/3412279>

Download Persian Version:

<https://daneshyari.com/article/3412279>

[Daneshyari.com](https://daneshyari.com)