

Tackling antimicrobial resistance in France



Antimicrobial resistance is an international health security issue that needs coordinated regional, national, and international approaches. In France, the first antimicrobial resistance programme was launched in 2002, when data from the European surveillance network showed France had troubling rates of antibiotic consumption and resistance. This programme, mainly based on a public national awareness campaign, was widely adopted. Subsequently, antibiotic use in the community decreased by 26%.¹ Surveillance was also strengthened through the development of national reference centres and surveillance networks for antimicrobial use and resistance coordinated by the National Institute of Public Health.² These are now major contributors to the European Centre for Disease Prevention and Control's European Antimicrobial Resistance Surveillance Network (EARS-Net)³ and European Surveillance of Antimicrobial Consumption Network (ESAC-Net).

During the second national plan in 2006–10, media campaigns aimed at the public highlighted the risk of antimicrobial resistance associated with bad prescribing practices. An educational programme was also implemented in schools. These campaigns were less successful than the first one.

The ongoing third plan^{4,5} is based on new steps. First, I have provided incentives for better use of antimicrobials in hospitals. These incentives require hospitals to have antibiotic stewardship teams and to report actions taken to improve antibiotic use and prevent and control infection and antimicrobial resistance, as part of hospital quality indicators publicly released on a dedicated website.⁶ Second, I have requested a list of "critical antibiotics for human use" from the Agence Nationale de Sécurité des Médicaments et Produits de Santé, with specific recommendations for restricted use, and for mandatory enhanced surveillance and follow-up of prescriptions. This list, first disseminated in 2013, is regularly updated.⁷ Third, I have passed a new law for the modernisation of France's health-care system⁸ that empowers the health regional agencies (ARS) to organise, monitor, and coordinate actions to reduce antimicrobial resistance at the regional level. This law also includes measures to reduce the length of antibiotic treatment and to promote the vaccination of health-care professionals.

In parallel, the first national plan for preserving the effectiveness of antibiotics in animals was launched⁹ with a target of a 25% reduction of antibiotic consumption over 5 years. The French Parliament passed a law in November, 2014,¹⁰ to enforce good practices in antibiotic use. Subsequently, antibiotic volume used in the agricultural sector was reduced by nearly 40% from 1200 tons in 2007 to about 800 tons in 2013.¹¹

Although the elements needed for an effective policy are now in place, more efforts are required in some areas and at the organisational level. I therefore convened a dedicated task force in early 2015 to make proposals for improving our organisation and action against antimicrobial resistance. This group of 120 experts proposed four major objectives aligned with the WHO Global Action Plan on Antimicrobial Resistance,¹² including strengthening research, improving surveillance and antibiotic stewardship, and increasing awareness of antimicrobial resistance among the public and health professionals. The task force estimated that in France about 12 500 deaths per year could be attributed to antimicrobial resistance.¹³ I have therefore set a new objective to reduce this number to less than 10 000 deaths in the next 3 years, in addition to the targeted 25% decrease in overall antibiotic consumption.

I have appointed a delegate to coordinate a cross-departmental committee in charge of the national antimicrobial resistance action plan addressing human, animal care, and environmental issues.

A specific subgroup of the task force, led by the Institut National de la Santé et de la Recherche Médicale, has prepared a plan aligned with the Joint Programming Initiative on Antimicrobial Resistance,¹⁴ including research on neglected areas, such as interactions between human activities, animal husbandry, and the environment, and research on new compounds through public-private partnership.

National initiatives are essential but not sufficient. Therefore, France is pushing to have antimicrobial resistance high on the global agenda, including at the G7, G20, European Union (EU), and United Nations. The High Level Meeting at the UN General Assembly in September will raise awareness at the highest political level and help create the conditions for international action to combat antimicrobial resistance.



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Marisol Touraine

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In addition to political awareness, we need concrete action. At the last meeting of G7 Ministers of Health under the German presidency, I suggested a list be drawn up of existing antibiotics that have been progressively abandoned as new molecules were developed over the years; some of these drugs could be reintroduced in clinical practice. Most of these drugs are generics and industry is no longer interested in them. The G7 can help give these drugs new life by calling for this list to be drawn up. This measure could be implemented promptly.

What else needs to be done? First, I think there is a need for companies to be incentivised to develop new drugs and diagnostic tools. The current business model for drug development, intellectual property, and reimbursement is inappropriate for health products related to antimicrobial resistance because new molecules must be developed but their use must be highly restricted—ie, a very tight market. We need to develop new rules through constructive dialogue with the pharmaceutical industry. Therefore, I have asked the European Commission to set up a specific group to make concrete proposals so that health products that qualify for “antimicrobial resistance prevention” benefit from fast-track evaluation by the European Medicines Agency, preliminary marketing approval, extended patent, tax refund mechanisms, or volume/pricing decoupling. I believe the EU can pave the way.

Second, although strong political commitment is paramount, involvement of health professionals and society as a whole is also essential to tackle antimicrobial resistance. A new French campaign is planned for 2017, and France strongly supports the launch of a coordinated European awareness campaign among the public and health-care professionals.

Third, I have suggested to my European counterparts harmonisation of our surveillance programmes for antimicrobial resistance to optimise our knowledge on antimicrobial resistance related burden in EU countries, including attributable mortality. Thus, France supports setting up a “one health European network”.

Fourth, our efforts should focus on better coordination of the various national and international initiatives in

preclinical, translational, and clinical research. Similarly, funding programmes from national agencies should be more coordinated with EU funding programmes.

Marisol Touraine

Ministry of Social Affairs and Health, 75350 Paris 07 SP, France
marisol.touraine@sante.gouv.fr

I am French Minister of Social Affairs and Health. I declare no competing interests.

- 1 Sabuncu E, David J, Bernède-Bauduin C, et al. Significant reduction of antibiotic use in the community after a nationwide campaign in France, 2002–2007. *PLoS Med* 2009; **6**: e1000084.
- 2 French Institute for Public Health Surveillance. Surveillance of antibiotic consumption in hospitals ATB-Raisin, 2013. http://www.invs.sante.fr/en/Invs_en/Publications/Surveillance-of-antibiotic-consumption-in-hospitals (accessed April 20, 2016).
- 3 European Centre for Disease Prevention and Control. Annual epidemiological report 2014: antimicrobial resistance and healthcare-associated infections. Stockholm: European Centre for Disease Prevention and Control, 2015.
- 4 Ministry of Social Affairs and Health. Plan national d'alerte sur les antibiotiques. <http://www.plan-antibiotiques.sante.gouv.fr/> (accessed April 20, 2016).
- 5 Ministry of Social Affairs and Health. Programme national d'actions de prévention des infections associées aux soins (Propias). 2015. http://social-sante.gouv.fr/IMG/pdf/plan_antibiotiques_2011-2016_DEFINITIF.pdf (accessed April 20, 2016).
- 6 National Authority for Health (HAS). Scope santé. 2015. http://www.has-sante.fr/portail/jcms/c_2044551/en/health-care-user-website-scope-sante (accessed April 20, 2016).
- 7 Agence Nationale de Sécurité des Médicaments et Produits de Santé (ANSM): Liste des antibiotiques critiques: actualisation 2015. http://ansm.sante.fr/var/ansm_site/storage/original/application/91feadb5d6bf2cbc3d6e9de9ca7bec06.pdf (accessed April 20, 2016).
- 8 Government of France. Loi n° 2016-41 du 26 Janvier 2016 de modernisation de notre système de santé. 2016. <https://www.legifrance.gouv.fr/affichLoiPubliee.do?idDocument=JORFDOLE000029589477&type=general&legislature=14> (accessed April 20, 2016).
- 9 Ministry of Agriculture, Food and Forestry. Le plan d'action ecoantibio 2012–2017. 2012. <http://agriculture.gouv.fr/le-plan-d'action-ecoantibio-2012-2017> (accessed April 20, 2016).
- 10 Government of France. Loi n° 2014-1170 du 13 Octobre 2014 d'avenir pour l'agriculture, l'alimentation et la forêt. 2014. <https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000029573022&categorieLien=id> (accessed April 20, 2016).
- 11 Agence nationale de sécurité sanitaire de l'alimentation, de l'environnement et du travail. Suivi des ventes de médicaments vétérinaires contenant des antibiotiques en France en 2014 Rapport annuel. 2015. <https://www.anses.fr/fr/system/files/ANMV-Ra-Antibiotiques2014.pdf> (accessed April 20, 2016).
- 12 WHO. Global action plan on antimicrobial resistance. Geneva: World Health Organization, 2015. http://apps.who.int/iris/bitstream/10665/193736/1/9789241509763_eng.pdf?ua=1 (accessed April 20, 2016).
- 13 Carlet J, Le Coz P. Together let's save antibiotics: report for the special working group for keeping antibiotics effective. June, 2015. http://social-sante.gouv.fr/IMG/pdf/rapport_antibiotiques.pdf (accessed April 22, 2016).
- 14 Joint Programming Initiative on Antimicrobial Resistance, JPIAMR. Strategic research agenda. <http://www.jpamr.eu/activities/strategicresearchagenda/> (accessed April 20, 2016).