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### The

# **G20** Research Group

at Trinity College at the Munk School of Global Affairs in the University of Toronto with the

# **International Organisations Research Institute**

at the National Research University Higher School of Economics, Moscow present the

# **2014 Brisbane G20 Summit Final Compliance Report**

17 November 2014 to 1 October 2015

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"The University of Toronto ... produced a detailed analysis to the extent of which each G20 country has met its commitments since the last summit ... I think this is important; we come to these summits, we make these commitments, we say we are going to do these things and it is important that there is an organisation that checks up on who has done what."

— David Cameron, Prime Minister, United Kingdom, at the 2012 Los Cabos Summit

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# 11. Health: Antimicrobial Resistance

2014-109: We also commit to fight anti-microbial resistance.

G20 Leaders' Brisbane Statement on Ebola

### **Assessment**

Country	No Compliance	Work in Progress	Full Compliance
Argentina			+1
Australia			+1
Brazil			+1
Canada			+1
China			+1
France			+1
Germany			+1
India			+1
Indonesia			+1
Italy			+1
Japan			+1
Korea			+1
Mexico			+1
Russia		0	
Saudi Arabia			+1
South Africa			+1
Turkey			+1
United Kingdom			+1
United States			+1
European Union			+1
Average		+0.95	

# **Background**

The G20 addressed the issue of anti-microbial resistance (AMR) for the first time at the Brisbane summit within the special Statement on Ebola. 1655

The World Health Organization (WHO) defines AMR as "resistance of a microorganism to an antimicrobial drug that was originally effective for treatment of infections caused by it."1656 In that case standard treatments become ineffective, increasing the risk of infection spread to others. While "the evolution of resistant strains is a natural phenomenon" their emergence is accelerated by "the use and misuse of antimicrobial drugs," including in animal husbandry, "poor infection control practices, inadequate sanitary conditions and inappropriate food-handling."1657

In 2014, WHO published its first global report on surveillance of antimicrobial resistance, with data provided by 114 countries. The report revealed that "antibiotic resistance is no longer a prediction for the future; it is happening right now, across the world, and is putting at risk the ability to treat common infections in the community and hospitals." The WTO noted that "without urgent, coordinated action, the world is heading

 $<sup>^{1655}</sup>$  G20 Leaders' Brisbane Statement on Ebola, G20 Information Centre 15 November 2014.

http://www.g20.utoronto.ca/2014/2014-1115-ebola.html.

<sup>5</sup> Antimicrobial resistance. Fact sheet N°194, WHO April 2014. http://www.who.int/mediacentre/factsheets/fs194/en/.

Antimicrobial resistance. Fact sheet N°194, WHO April 2014. http://www.who.int/mediacentre/factsheets/fs194/en/.

towards a post-antibiotic era, in which common infections and minor injuries, which have been treatable for decades, can once again kill."1658

### **Commitment Features**

When making the commitment on AMR the G20 also noted that "interested G20 members are supporting this goal through initiatives to accelerate action across the Economic Community of West African States and other vulnerable regions and will report progress and announce a time frame by May 2015 at the World Health Assembly." Given that it does not constitute a separate commitment and does not cover all G20 members these actions should not be regarded as binding for achieving full compliance. However, they should be included in the report as additional actions.

As measures, which policymakers can take to tackle AMR, the WHO defines the following:

- 1. strengthening resistance tracking and laboratory capacity;
- strengthening infection control and prevention;
- 3. regulating and promoting appropriate use of medicines;
- promoting cooperation and information sharing among all stakeholders.
- fostering innovation and research and development of new vaccines, diagnostics, infection treatment options and other tools.1659

# **Scoring Guidelines**

-1	Member does not take actions to fight anti-microbial resistance in any of five areas defined by the World Health Organization.
0	Member takes actions to fight anti-microbial resistance in less than four out of five areas defined by the World Health Organization.
+1	Member takes actions to fight anti-microbial resistance in four or five areas defined by the World Health Organization.

# Argentina: +1

Argentina has fully complied with the commitment on fighting anti-microbial resistance (AMR). It has taken actions to fight antimicrobial resistance as defined by the World Health Organization (WHO).

On 18 November 2014, a delegation from Argentina's Ministry of Health attended a meeting on health cooperation agreement with Caribbean countries signed in 2013. According to the agreement, its sides are to collaborate in such spheres as organ procurement and transplantation, strengthening antimicrobial resistance and control of chronic noncommunicable diseases. During the two days of the conference, the sides analyzed the current outcomes of collaboration as well as proposed new measures to foster cooperation. In that way, Argentina, on the one hand, strengthened resistance tracking and, on the other hand, promoted international cooperation in the field. 1660

On 8 January 2015, Argentina started a nationwide rotavirus vaccination, which will be compulsory and free for all children born after 1 November 2014. The vaccine has been included into the official national vaccination calendar and is available in all public hospitals and health centres. In Argentina, rotavirus is

http://www.who.int/drugresistance/documents/surveillancereport/en/.

<sup>&</sup>lt;sup>1658</sup> Antimicrobial resistance: global report on surveillance 2014, WHO.

Antimicrobial resistance. Fact sheet N°194, WHO April 2014. http://www.who.int/mediacentre/factsheets/fs194/en/. <sup>1660</sup> Argentina asiste a reunión por acuerdo de cooperación sanitaria con los países del Caribe, Ministerio de Salud de Argentina. 18 November 2014. Access: 7 April 2015. http://www.msal.gov.ar/prensa/index.php/noticias/noticias-de-la-semana/2404argentina-asiste-a-reunion-por-acuerdo-de-cooperacion-sanitaria-con-los-paises-del-caribe.

reported to cause between 100,000 to 165,000 cases of acute diarrhea annually among the children under five years old. As a result, Argentina has strengthened infection control and prevention. 1661

On 15 January 2015, Argentina announced the vaccination of children against chickenpox that is due to start in the second quarter of 2015. The vaccination is already included into the National Immunization Schedule and will be compulsory and free for all children at the age of 15 months. Chickenpox leads to about 400,000 new cases, 1,000 hospitalizations and between 15 to 20 deaths every year. Therefore, this vaccination will be a step to greater infection control and prevention. 1662

On 3-4 March 2015, the Ministry of Health held a two-day training course on the prevention and treatment of the Chikungunya virus. The event was organized in cooperation with the Pan American Health Organization (PAHO) of WHO to prepare for possible outbreaks of the virus that has already been detected in several Caribbean and South American countries. By holding this training course, Argentina has strengthened infection control and prevention. 1663

On 6 March 2015, the Ministry of Health announced the start of registration for a free online course "Drugs in Primary Care Health Care: Medication Management Cycle" organized in close collaboration with PAHO. The ones who enroll for the course will get acquainted with the production, distribution and medication use. Thus, Argentina has taken steps to promoting appropriate use of medicines. 1664

On 17 March 2015, the Ministry of Health of Argentina introduced a two-day Remediation Programme that is aimed at promoting the importance of rational drug use. The event was attended by teachers from a number of Argentinian universities and institutes and can be rated as a step to promoting appropriate use of medicines. 1665

On 22 March 2015, Daniel Gollan, the Minister of Health, officially included the meningococcal vaccination into the official national vaccination calendar. The vaccine will be free for all children under one year old (one dose of the vaccine used to cost almost USD 100). In Argentina, 200-300 cases of meningococcal disease are recorded annually (with the 100% hospitalization rate), in 1 case out of 10 the infection leads to fatal outcome. Therefore, this vaccination will improve infection control and prevention. 1666

On 26 March 2015, Gollan received Francisco Osuna Ortega, the Secretary for Health of the Federal District of Mexico. During the meeting, the officials discussed the potential areas of future cooperation including the possibility for the exchange of the medical staff as well as the practical experience in the prevention of various

<sup>1662</sup> Confirmó Manzur que en el segundo trimestre de 2015 comenzará vacunación gratuita y obligatoria contra la varicella, Ministerio de Salud de Argentina. 15 January 2015. Access: 7 April 2015.

http://www.msal.gov.ar/prensa/index.php/noticias/noticias-de-la-semana/2497-confirmo-manzur-que-en-el-segundo-trimestre-de-2015-comenzara-vacunacion-gratuita-y-obligatoria-contra-la-varicela.

Abren la inscripción al curso virtual de cuidado de medicamentos en atención primaria de la salud, Ministerio de Salud de Argentina. 6 March 2015. Access: 7 April 2015. http://www.msal.gov.ar/prensa/index.php/noticias/noticias-de-la-semana/2552-abren-la-inscripcion-al-curso-virtual-de-cuidado-de-medicamentos-en-atencion-primaria-de-la-salud.

<sup>1665</sup> El Programa Remediar capacitará a equipos docentes de universidades públicas y privadas de todo el país, Ministerio de Salud de Argentina. 17 March 2015. Access: 7 April 2015. http://www.msal.gov.ar/prensa/index.php/noticias/noticias-de-la-semana/2565-el-programa-remediar-capacitara-a-equipos-docentes-de-universidades-publicas-y-privadas-de-todo-el-pais#sthash.Lq6gRpBl.dpuf.

<sup>1666</sup> Vacuna contra Meningococo quedó incluida oficialmente en el Calendario Nacional de Vacunación, Ministerio de Salud de Argentina. 12 March 2015. Access: 7 April 2015. http://www.msal.gov.ar/prensa/index.php/noticias/noticias-de-la-semana/2559-vacuna-contra-meningococo-quedo-incluida-oficialmente-en-el-calendario-nacional-de-vacunacion.

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Desde Jujuy, autoridades sanitarias pusieron en marcha la vacunación contra el rotavirus en todo el país, Ministerio de Salud de Argentina. 8 January 2015. Access: 7 April 2015. http://www.msal.gov.ar/prensa/index.php/noticias/noticias-de-la-semana/2489-desde-jujuy-autoridades-sanitarias-pusieron-en-marcha-la-vacunacion-contra-el-rotavirus-en-todo-el-pais.

Ministerio de Salud de la Nación impulsa capacitación sobre chikunguña para trabajadores sanitarios, Ministerio de Salud de Argentina. 3 March 2015. Access: 7 April 2015. http://www.msal.gov.ar/prensa/index.php/noticias/noticias-de-la-semana/2544-ministerio-de-salud-de-la-nacion-impulsa-capacitacion-sobre-chikunguna-para-trabajadores-sanitarios.

diseases. In this way, Argentina took actions on promoting cooperation and information sharing among the G20 stakeholders.<sup>1667</sup>

On 20 May 2015, the National Administration of Drugs, Food and Medical Technology (ANMAT) warned about the rational use of such drugs as Paracetamol and Ibuprofen. In its announcement ANMAT indicated the recommended doses for treatment of various deseases, which might be considered as a step promoting appropriate use of medicines.<sup>1668</sup>

On 1 June 2015, Argentina set up a contest for health projects. The jury of the contest is to select 15 projects, which will receive USD 100,000 each for its implementation. The project is aimed at strengthening health networks and enhance access of the population to primary care. Therefore, it fosters innovations in the domain and is somewhat related to the G20 obligations of Argentina. 1669

Moreover, on 22 June 2015, the Minestry for Health of Argentina launched a strategy for the responsible use of antibiotics. 1670

On 25 June 2015, the national vaccination against varicela was launched in Tucuman, Argentina. The vaccination is free and will hopefully help to avoid an average of 17 deaths of children, 400,000 medical consultations and 1,000 hospitalizations annually. This step might be viewed as an action towards greater infections control.<sup>1671</sup>

On 31 July 2015, a comprehensive plan aimed at fighting microbial resistance was announced by the Ministry for Health of Argentina. One of the primary points of the plan is to increase the awareness between the professionals and promote rational use of drugs. 1672

On 30 September 2015, the national meeting of health workers started. The topics discussed included infection control and prevention as well as health in schools; vector-borne diseases; epidemiology, etc.<sup>1673</sup>

On 7 October 2015, 2 new medical centres were opened in the provinces La Matanza and Cañuelas. The total cost of the project has exceeded USD 96 million. The new hospitals are well-equipped and are aimed at

<sup>&</sup>lt;sup>1667</sup> Gollan recibió a Secretario de Salud del Distrito Federal de México, Ministerio de Salud de Argentina. Access: 7 April 2015. http://www.msal.gov.ar/prensa/index.php/noticias/noticias-de-la-semana/2576-gollan-recibio-a-secretario-de-salud-del-distrito-federal-de-mexico.

ANMAT informa sobre uso adecuado de Paracetamol e Ibuprofeno, Ministerio de Salud de Argentina. 20 May 2015. Access: 11 October 2015. http://www.msal.gob.ar/prensa/index.php/noticias/noticias-de-la-semana/2683-anmat-informa-sobre-uso-adecuado-de-paracetamol-e-ibuprofeno

El Ministerio de Salud convoca a equipos de salud a llevar a cabo proyectos innovadores, Ministerio de Salud de Argentina. 1 June 2015. Access: 11 October 2015. http://www.msal.gob.ar/prensa/index.php/noticias/noticias-de-la-semana/2706-el-ministerio-de-salud-convoca-a-equipos-de-salud-a-llevar-a-cabo-proyectos-innovadores

Salud y Agricultura ponen en marcha estrategia para garantizar uso responsable de antimicrobianos, Ministerio de Salud de Argentina. 22 June 2015. Access: 11 October 2015. http://www.msal.gob.ar/prensa/index.php/noticias/noticias-de-la-semana/2737-salud-y-agricultura-ponen-en-marcha-estrategia-para-garantizar-uso-responsable-de-antimicrobianos

Gollan lanzó oficialmente en Tucumán la vacunación nacional contra la varicela, Ministerio de Salud de Argentina. 25 June 2015. Access: 11 October 2015. http://www.msal.gob.ar/prensa/index.php/noticias/noticias-de-la-semana/2740-gollan-lanzo-oficialmente-en-tucuman-la-vacunacion-nacional-contra-la-varicela

<sup>&</sup>lt;sup>1672</sup> Gollan to control antimicrobial resistance must be addressed from the control and awareness of health professionals, Ministerio de Salud de Argentina. 31 July 2015. Access: 11 October 2015.

http://www.msal.gob.ar/prensa/index.php/noticias/noticias-de-la-semana/2777-para-gollan-control-de-la-resistencia-antimicrobiana-se-debe-abordar-desde-la-fiscalizacion-y-la-concientizacion-de-los-profesionales-de-la-salud

<sup>&</sup>lt;sup>1673</sup> Comienza el encuentro nacional de trabajadores de la Salud, Ministerio de Salud de Argentina. 30 September 2015. Access: 11 October 2015. http://www.msal.gob.ar/prensa/index.php/noticias/noticias-de-la-semana/2878-comienza-manana-el-encuentro-nacional-de-trabajadores-de-la-salud-

infection control and prevention. The 115 ambulances also provided by the government will also benefit the community.<sup>1674</sup>

Argentina has taken actions to fight AMR in four of the five areas defined by WHO. Thus, it is awarded a score of +1.

Analyst: Anton Markov

### Australia: +1

Australia has fully complied with the commitment on fighting anti-microbial resistance (AMR).

Australian Government plans to develop the National AMR Strategy, focusing on bacterial resistance and the use of antibiotics. The development is being led by the Australian Antimicrobial Resistance Prevention and Containment (AMRPC) Steering Group, which includes government officials from the Departments of Health and Agriculture, as well as Chief Medical Officer and Chief Veterinary Officer. The Steering Group employing scientific and clinical expert advice promotes infection prevention and control activities, while ensuring integration of AMR policies across health and agriculture. 1676

The Australian Strategic and Technical Advisory Group on AMR was created by the Departments of Health and Agriculture "to develop and provide technical, scientific and clinical advice to the Steering Group to inform the development of the National AMR Strategy, and strategic advice to help ensure actions under the strategy are effectively and efficiently implemented." <sup>1677</sup>

According to the Australian Strategic and Technical Advisory Group on Antimicrobial Resistance Terms of reference, published in November 2014, the group will, in addition to the functions mentioned above, ensure "effective linkages between governments, industry, professional bodies, educational institutions and other key stakeholders." The group also provides advice to the Pharmaceutical Benefits Advisory Committee (PBAC), the Therapeutic Goods Administration (TGA) and the Australian Pesticides and Veterinary Medicines Authority (APVMA) on the availability and conditions of use of specific antimicrobial products. 1678

On 1 June 2015, the National Antimicrobial Resistance Strategy 2015-2019 was released by the Department of Health. The strategy contains seven major objectives:

- Increase awareness and understanding of antimicrobial resistance, its implications and actions to combat it, through effective communication, education, and training.
- Implement effective antimicrobial stewardship practices across human health and animal care settings to ensure the appropriate and judicious prescribing, dispensing and administering of antimicrobials.
- Develop nationally coordinated One Health surveillance of antimicrobial resistance and antimicrobial usage.
- Improve infection prevention and control measures across human health and animal care settings to help prevent infections and the spread of resistance

<sup>&</sup>lt;sup>1674</sup> President and Minister of Health put up in modern hospitals in La Matanza and Cañuelas, Ministerio de Salud de Argentina. 7 October 2015. Access: 11 October 2015. http://www.msal.gob.ar/prensa/index.php/noticias/noticias-de-la-semana/2896-presidenta-y-ministro-de-salud-pusieron-en-marcha-modernos-hospitales-en-la-matanza-y-canuelas

<sup>&</sup>lt;sup>1675</sup> Antimicrobial resistance (AMR), Australian Government. Access 16 May 2015.

http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-amr.htm.

Australian Strategic and Technical Advisory Group on Antimicrobial Resistance Terms of Reference, Australian Government. Access 16 May 2015. https://www.health.gov.au/internet/main/

publishing.nsf/Content/1803C433C71415CACA257C8400121B1F/\$File/ASTAG-TOR.pdf.

Antimicrobial resistance (AMR), Australian Government. Access 16 May 2015.

http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-amr.htm.

<sup>&</sup>lt;sup>1678</sup> Australian Strategic and Technical Advisory Group on Antimicrobial Resistance Terms of reference, Australian Government November 2014. Access 14 May 2015.

http://www.health.gov.au/internet/main/publishing.nsf/Content/1803C433C71415CACA257C8400121B1F/\$File/ASTAG-TOR.pdf.

- Agree a national research agenda and promote investment in the discovery and development of new products and approaches to prevent, detect and contain antimicrobial resistance.
- Strengthen international partnerships and collaboration on regional and global efforts to respond to antimicrobial resistance.
- Establish and support clear governance arrangements at the local, jurisdictional, national and international levels to ensure leadership, engagement and accountability for actions to combat antimicrobial resistance. 1679

The Australian government also pledged to continue funding the Australian Commission on Safety and Quality in Health Care (ACSQHC) to establish national surveillance of AMR and antibiotic usage. The statement also stipulated the establishment "of a national surveillance system for antimicrobial resistance and antibiotic usage across hospital and community settings" as a deliverable of the Safety and Quality in Health Care program for 2015-2016. 1680

Thus, Australia takes actions conforming to the following recommendations by the WHO: strengthening resistance tracking and laboratory capacity, strengthening infection control and prevention, regulating and promoting appropriate use of medicines, promoting cooperation and information sharing among all stakeholders.

During the compliance period Australia has taken steps aimed at fighting anti-microbial resistance in four out of five areas defined by WHO. Thus, it has been awarded a score of +1.

Analyst: Andrei Sakharov

# Brazil: +1

Brazil has fully complied with the commitment on fighting anti-microbial resistance (AMR). Brazil has taken actions to fight AMR as defined by the World Health Organization (WHO).

On 19 November 2014, ANVISA suspended distribution, sale and use of D713005 Lot Aldosterin medicine (Spironolactone 100 mg tablet with 16 tablets). The product was manufactured by Aspen Pharma Ind. Farm. Ltda and is valid until 04/2016. The measure was taken because of the unsatisfactory results obtained in the description of sample essays and Appearance. The action refers to regulating and promoting appropriate use of medicines.

On 27 November 2014, Brazil closed first stage of restructuring Haiti's public health. Brazil financed the reconstruction of two specialized laboratories in epidemiological surveillance, responsible for carrying out the main examinations necessary for the identification of relevant diseases such as malaria, dengue, tuberculosis, leprosy and cholera, and the vector control and insects. Brazil also made other measures aimed at health surveillance, such as hiring of professionals specializing in the prevention and control of communicable diseases. Other actions were promoted by supporting vaccination campaigns and sending vaccines — Brazil sent nearly 6 million doses to the Caribbean island, worth about USD 1.9 million. The actions refer to strengthening resistance tracking and laboratory capacity; strengthening infection control and prevention.

<sup>&</sup>lt;sup>1679</sup> Antimicrobial resistance (AMR), Australian Government Department of Health 1 June 2015. Access: 21 October 2015. http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-amr.htm.

Budget 2015-2016, Portfolio Budget Statement, Health portfolio, Australian Government 2015. Access 16 May 2015. http://www.health.gov.au/internet/budget/publishing.nsf/Content/2015-2016\_Health\_PBS\_sup1/\$File/2015-16 Health\_PBS\_0.0 Complete.pdf.

Suspenso Lote de Medicamento, Brazilian ANVISA 19 November 2014. Access: 1 April 2015. http://s.anvisa.gov.br/wps/s/r/cWCZ

Brasil Encerra Primeira Etapa da Restruturação da Saúde Pública do Haiti, Brazilian Portal da Saúde 4 December 2014. Access: 1 April 2015. http://portalsaude.saude.gov.br/index.php/o-ministerio/principal/secretarias/570-secretaria-executiva-raiz/secretaria-se/desid-raiz/15923-brasil-encerra-primeira-etapa-da-restruturacao-da-saude-publica-do-haiti

On 1 December 2014, ANVISA updated antimicrobial list prescription. New substances included in the list are: Besifloxacino, rifabutin, Ceftarolina fosamila, dactinomycin, mitomycin, Nitrofural, Sulfacetamide Chlorphenesin and Gramicidin. The new determination came into force from 16 December 2014. The purpose of the standard is to reduce the damage due to the misuse of antibiotics. Incorrect use of these products leads to increased microbial resistance and the medium term makes them less effective. 1683 The action refers to regulating and promoting appropriate use of medicines.

On 4 December 2014, it was reported that Brazil's government had provided more than USD 9.76 million to help efforts against Ebola in Guinea, Liberia, and Sierra Leone. The donation was allocated to multiple UN divisions. Half was given to WHO to provide care to infected populations and support prevention efforts. The United Nations High Commissioner for Refugees (UNHCR) received USD 2.54 million for basic services including healthcare. The World Food Programme received USD 1.76 million to provide food. The remaining USD 590,000 was channeled into the United Nations Mission for Ebola Emergency Response. According to a statement from the Foreign and Health Ministries, Brazil had provided another USD 1.17 million to WHO and the Pan American Health Organization in November for the same purpose. 1684

On 5 December 2014, Ministers of Health of Brazil, Russia, India, China and South Africa developed joint strategy to expand supply of medicines to patients with the disease in the BRICS and in low-income countries. 1685 The action refers to promoting cooperation and information sharing among stakeholders.

On 8 December 2014, ANVISA registered two generic drugs as alternatives to Nitazoxanide and Mebeverine Hydrochloride. The registration of generics results in drop in prices of medicines and provides both patients and physicians with variety of options for treatment. 1686 The action refers to fostering innovation and research and development of new vaccines, diagnostics, infection treatment options and other tools.

On 10 December 2014, Brazil conducted a training exercise for Ebola suspected case in Port of Santos. The objective was to put into practice the developed protocol for this situation, serving as training institutions involved in conditions simulating a real case. 1687

On 10 December 2014, The Inter-American System Rapid Alerts (Siar) was launched during the meeting of the Organization of American States Permanent Council on 10 December in Washington DC. ANVISA contributed technical information and financial resources to develop the project. The Siar is a tool to exchange information and experience on the safety of consumer products and their impact on health. 1688 The action refers to strengthening infection control and prevention; promoting cooperation and information sharing among all stakeholders.

On 1 January 2015, ANVISA granted a registration application for a new drug to treat hepatitis C, the Daklinza (daclatasvir). Thus, physicians and patients now have another treatment option for the disease. 1689

<sup>&</sup>lt;sup>1683</sup> Mais Nove Antibióticos Passam a Ter Retenção de Receita, Brazilian ANVISA 1 December 2014. Access: 1 April 2015. http://s.anvisa.gov.br/wps/s/r/cWPy

<sup>&</sup>lt;sup>1684</sup> Brazil Donates \$9.76 Million to Help Fight Ebola, Agência Brasil 4 December 2014. Access: 1 April 2015. http://agenciabrasil.ebc.com.br/en/internacional/noticia/2014-12/brazil-donates-976-million-help-fight-ebola

<sup>&</sup>lt;sup>1685</sup> BRICS: Países Propõe Acesso Universal aos Medicamentos Contra Tuberculose, Brazilian Associação de Imprensa da Barra 5 December 2014. Access: 1 April 2015. http://aibnews.com.br/noticias/plantao-mundo/2014/12/brics-paises-propoe-acessouniversal-aos-medicamentos-contra-tuberculose.html

<sup>1686</sup> Anvisa Aprova Mais Dois Genéricos Inéditos para o Mercado, Brazilian ANVISA 8 December 2014. Access: 1 April 2015. http://s.anvisa.gov.br/wps/s/r/cWW3

Porto de Santos Realiza Simulado para Ebola, Brazilian Portal da Saúde 10 December 2014. Access: 1 April 2015. http://portalsaude.saude.gov.br/index.php/o-ministerio/principal/secretarias/svs/noticias-svs/15977-porto-de-santos-realizasimulado-para-ebola

<sup>1688</sup> Sistema Interamericano com Alertas de Segurança de Produtos já Está Funcionando, Brazilian ANVISA 26 December 2014. Access: 1 April 2015. http://s.anvisa.gov.br/wps/s/r/cXjJ

<sup>&</sup>lt;sup>1689</sup> Anvisa Registra Novo Medicamento para Tratamento da Hepatite C, Brazilian ANVISA 14 January 2015. Access: 1 April 2015. http://s.anvisa.gov.br/wps/s/r/cXnQ

The action refers to fostering innovation and research and development of new vaccines, diagnostics, infection treatment options and other tools.

On 20 January 2015, the law 13,097/15 was introduced, which has a number of innovations to the work of health surveillance in Brazil. The new law brings innovations that will change the way of doing the sanitary regulation in the country, giving more flexibility to ANVISA and the National Health Surveillance System to prioritize risk situations. The standard will also allow an expansion of the laboratory network that perform control and supervision of analyzes for the health surveillance, that because ANVISA or own official laboratories may accredit other public or private laboratories for this purpose. <sup>1690</sup> The action refers to strengthening resistance tracking and laboratory capacity; strengthening infection control and prevention.

On 5 February 2015, ANVISA approved the new standard which requires that in case the Agency does not perform the evaluation of the Drug Clinical Development Briefings (DDCM) containing clinical trials projects to be held in Brazil within 90 days, the study can be started, if approved by the bodies that assess the ethical aspects of research. Thus, Clinical trials which are necessary for the development of new medicines and health products gained more agility in the country. The action refers to fostering innovation and research and development of new vaccines, diagnostics, infection treatment options and other tools.

On 19 February 2015, the National Health Fund transferred USD 16.2 million to the State and Municipal Health Funds. The funds will be used for investments in Public Health Network. These investments are allocated to the construction of the Health Clubs; UBS Renewal Program and the Basic Health Units (BHU). The action refers to strengthening resistance tracking and laboratory capacity; strengthening infection control and prevention.

On 25 February 2015, the Ministry of Health announced it was selecting 50 young people between 18 and 26 to monitor and supervise the public health policies on HIV and AIDS area. The goal is to form a group to participate in the New Training Course Leaders Population Key Aiming at the Social Control of the Unified Health System in the context of HIV and AIDS. The course is performed by the STD, AIDS and Viral Hepatitis Surveillance Secretariat of Health of the Ministry of Health, together with the Joint United Nations Programme on HIV/AIDS (UNAIDS) the United Nations Children's Fund (UNICEF) and the United Nations Educational, Scientific and Cultural Organization (UNESCO). The action refers to promoting cooperation and information sharing among stakeholders.

On 9 March 2015, Health Minister Arthur Chioro launched the vaccination campaign against human papillomavirus, which is being held across the country. The action refers to strengthening infection control and prevention.

On 7 June 2015, by resolution of the National Health Surveillance Agency published in the Official Gazette, the distribution, marketing and use of the drug Amoxicillin 500 was suspended. The action refers to regulating and promoting appropriate use of medicines.

<sup>&</sup>lt;sup>1690</sup> Nova Lei Moderniza o Trabalho da Vigilância Sanitária no País, Brazilian ANVISA 21 January 2015. Access: 1 April 2015. http://s.anvisa.gov.br/wps/s/r/cYqf

<sup>&</sup>lt;sup>1691</sup> Brasil Moderniza Regras para Pesquisa Clínica, Brazilian ANVISA 6 February 2015. Access: 1 April 2015. http://s.anvisa.gov.br/wps/s/r/cYEW

FNS Transfere Recursos para Investimentos na Rede Pública de Saúde, Brazilian Fundo Nacional de Saúde 20 February 2015. Access: 1 April 2015. http://www.fns.saude.gov.br/visao/carregarInformacao.jsf

Brasil e ONU Formam Líderes para Controle do HIV e Aids, Portal Brasil 25 February 2015. Access: 1 April 2015.

http://www.brasil.gov.br/saude/2015/02/brasil-e-onu-formam-lideres-para-controle-do-hiv-e-aids

Ministério da Saúde Lança Campanha de Vacinação Contra HPV, Brazilian Portal da Saúde 6 March 2015. Access: 1 April 2015. http://portalsaude.saude.gov.br/index.php/cidadao/principal/agencia-saude/16948-ministerio-da-saude-lanca-campanha-de-vacinacao-contra-hpv

Anvisa Suspende Distribuição do Antibiótico Amoxicilina, Portal Brasil 7 June 2015. Access: 11 October 2015. http://www.brasil.gov.br/saude/2015/07/anvisa-suspende-distribuicao-do-antibiotico-amoxicilina

On 30 June 2015, the International Seminar: Challenges and trends in the field of health monitoring took place in Brazil. More than 380 health surveillance professionals and representatives of national and international organizations attended the seminar in order to exchange experience in tracking appropriate use of medicine. 1696 The event refers to promoting cooperation and information sharing among stakeholders.

On 28 July 2015, The National Health Surveillance Agency of Brazil registered a new drug indicated for the treatment of patients with chronic lymphocytic leukemia or lymphocytic lymphoma small cell.<sup>1697</sup> The action refers to fostering innovation and research and development of new vaccines, diagnostics, infection treatment options and other tools.

On 14 August 2015, the vaccination of children from six months to five years of age against polio was launched in Brazil. The purpose of the campaign is to immunize 12 million children. 1698 The action refers to strengthening infection control and prevention.

On 8 October 2015, National Health System incorporated a new survey to assess the degree of impairment of the liver of patients with hepatitis C. It will facilitate the diagnosis of patients who need new drugs for hepatitis C treatment. 1699 The action refers to fostering innovation and research and development of new vaccines, diagnostics, infection treatment options and other tools.

Brazil has taken actions to fight anti-microbial resistance in all five areas defined by the WHO. Thus, it is awarded a score of +1.

Analyst: Sergey Burok

### Canada: +1

Canada has fully complied with the commitment on fighting anti-microbial resistance (AMR).

Canada has taken actions to fight AMR in five areas defined by the World Health Organization (WHO).

On 13 April 2015, the government of Canada announced investing CAD 4 million to support researchers to work with international partners on projects that focus on identifying new targets for antimicrobial drug development, new approaches to treating drug-resistant bacterial infections, and methods for preserving the effectiveness of existing antibiotics. 1700

On 17 April 2015, Health Canada proposed new measures and strengthen regulations to minimize the global emergence and spread of antimicrobial resistance (AMR), and conserve the effectiveness of available antimicrobials. 1701 These actions will protect public health and food safety. These initiatives are part of the Government of Canada's recently released Action Plan on Antimicrobial Resistance (AMR) and Use in Canada.<sup>1702</sup> This Plan refers to actions in all five areas.

<sup>&</sup>lt;sup>1696</sup> Seminário Internacional Promove Intercambio de Experiências em Vigilância Sanitária, Brazilian ANVISA 30 June 2015. Access: 11 October 2015. http://s.anvisa.gov.br/wps/s/r/dtvl

Anvisa Registra Novo Medicamento para Leucemia, Portal Brasil 28 July 2015. Access: 11 October 2015.

http://www.brasil.gov.br/saude/2015/07/anvisa-registra-novo-medicamento-para-leucemia

<sup>&</sup>lt;sup>1698</sup> Sábado é Dia D da Vacinação Contra a Paralisia Infantil, Portal Brasil 14 August 2015. Access: 11 October 2015.

http://www.brasil.gov.br/saude/2015/08/sabado-e-dia-d-da-vacinacao-contra-a-paralisia-infantil

<sup>&</sup>lt;sup>1699</sup> SUS Oferece Novo Exame para Hepatite C, Portal Brasil 8 October 2015. Access: 11 October 2015.

http://www.brasil.gov.br/saude/2015/10/sus-oferece-novo-exame-para-hepatite-c

Government of Canada supports world-class research on antimicrobial resistance. Access: 25 April 2015.

http://news.gc.ca/web/article-en.do?mthd=tp&crtr.page=1&nid=962359

Health Canada proposes new measures to address antimicrobial resistance. Access: 25 April 2015.

http://news.gc.ca/web/article-en.do?nid=965249

<sup>&</sup>lt;sup>1702</sup> Federal Action Plan on Antimicrobial Resistance and Use in Canada: Building on the Federal Framework for Action. Access: 25 April 2015. http://healthycanadians.gc.ca/publications/drugs-products-medicaments-produits/antibiotic-resistanceantibiotique/action-plan-daction-eng.php

During the compliance period Canada has taken actions to AMR in five areas defined by WHO. Thus, it has been awarded a score of +1.

Analyst: Vitaly Nagornov

### China: +1

China has fully complied with the commitment on fighting anti-microbial resistance (AMR). It has taken actions in four areas defined by the World Health Organization (WHO).

On 3 December 2014, members of the China-aided Ebola centre in Liberia reported that they could start to receive and diagnose suspected Ebola patients. The medical treatment procedures includes patients' reception, diagnosis and nursing care to be provided in accordance with a carefully designed process and a very strict standard.<sup>1703</sup> Thus China cooperates with Liberia to fight AMR.

On 14 January 2015, the China Food and Drug Administration stated that it "approved the production of the first inactivated poliomyelitis vaccine made from Sabin strains (single component), which was researched and developed by the Institute of Medical Biology, Chinese Academy of Medical Sciences. The vaccine protects children against infecting poliovirus by injection. The launch of the Sabin IPV will be critical to eradicating poliomyelitis in China." This fact demonstrates that China develops new vaccines to fight AMR.

On 31 January 2015, China's first laboratory to study highly contagious and fatal diseases opened in Wuhan city, which provides scientists possibility to research live Ebola viruses. China thus strengthened its laboratory capacity to fight AMR.<sup>1705</sup>

On 2 March 2015, Botswana and China signed a protocol on the 14th China Medical Team to work in Botswana. Botswana Minister of Health Dorcas Makgato said China will also provide scholarships for short-and long-term training in different health programs, particularly in medicine, nursing, laboratory sciences, HIV/AIDS and pharmacy. <sup>1706</sup> China thus provides Botswana with specialized medical personnel to promote cooperation, and shares information in health sphere with them.

On 11 March 2015, China opened a biosafety laboratory in Sierra Leone to support lab testing for contagious diseases and provide a foundation for redeveloping Sierra Leone's health system. This lab will play a major role in preventing and controlling Ebola.<sup>1707</sup> China thus promotes cooperation and information sharing with Sierra Leone specialists, and strengthens infection control and prevention.

On 27 March 2015, at a China-Africa health roundtable director of the Foreign Ministry's African Affairs Department, Lin Songtian stated that China will help the African Union to construct a disease prevention and control centre, which will join epidemic surveillance facilities in each member. It will improve Africa with its public health system post-Ebola.<sup>1708</sup> Consequently China not only promotes cooperation with the African Union, but also strengthens infection control and prevention in African countries.

<sup>1704</sup> The first Sabin IPV approved by CFDA, China Food and Drug Administration 14 January 2015. Access: 25 April 2015. http://eng.sfda.gov.cn/WS03/CL0757/112461.html

<sup>&</sup>lt;sup>1703</sup> China-aided Ebola center in Liberia to receive patients, the Ministry of National Defence of the People's Republic of China 3 December 2015. Access: 25 April 2015. http://eng.mod.gov.cn/DefenseNews/2014-12/05/content 4555783.htm

Top-level lab gears up to study Ebola virus, the State Council of the People's Republic of China 31 January 2015. Access: 25 April 2015. http://english.gov.cn/news/top\_news/2015/02/02/content\_281475048993472.htm

Botswana: More Chinese Medical Workers Coming to Botswana, the Chinese Government Forum on China-Africa Cooperation 2 March 2015. Access: 25 April 2015. http://www.mfa.gov.cn/zflt/eng/jlydh/mtsy/t1241679.htm

<sup>&</sup>lt;sup>1707</sup> Chinese bio-safety lab put in place in Africa, the National Health and Family Planning Commission of the People's Republic of China 11 March 2015. Access: 25 April 2015. http://en.nhfpc.gov.cn/2015-03/16/content\_19825809.htm

<sup>&</sup>lt;sup>1708</sup> China to help Africa strengthen post-Ebola health system, the State Council of the People's Republic of China 27 March 2015. Access: 25 April 2015. http://english.gov.cn/news/international\_exchanges/2015/03/28/content\_281475079091506.htm

On 10 July 2015, at the International Ebola Recovery Conference China ambassador Liu Jieyi stated that China will actively support and participate in the building of disease control systems and medical and health infrastructure in Africa, help the African countries establish and improve their public health systems and improve their capacity to respond to public health emergencies. In order to support the UN in continuing to play a leading and coordinating role in the recovery process of the affected areas, the Chinese government will make an additional donation of USD 5 million to the UN Ebola Response Multi-Partner Trust Fund. <sup>1709</sup> China thus strengthened infection control and its prevention in Africa.

On 8 August 2015, China Foreign Minister Wang Yi said that China will help Sierra Leone establish a West African prevention and treatment center covering medical treatment, study and scientific research of tropical diseases and offer more scholarship quotas in medicine, boost technical cooperation and personnel training and give priorities in implementation of exemplary projects in public health. <sup>1710</sup> China thus strengthened infection control and its prevention in Sierra Leone.

During the compliance period China has taken actions to fight AMR in four areas defined by WHO. Thus, it has been awarded a score of +1.

Analyst: Svetlana Nikitina

### France: +1

France has fully complied with the commitment on fighting anti-microbial resistance (AMR). France has taken actions in four areas defined by the World Health Organization (WHO).

France supports a large number of projects on resistance to Ebola and other viruses in Guinea and other African countries.<sup>1711</sup> In 2015 France continues financing retrovirus actions to eradicate Ebola.<sup>1712</sup> This action refers to strengthening resistance tracking and laboratory capacity, as well as strengthening infection control and prevention.

On 4 December 2014, France proposed special network coordinated by professor Delfraissy to serve as a host panel to unite researchers and health authorities to discuss current microbial issues.<sup>1713</sup> Also Institute Pasteur's Ebola Task Force is fighting the virus on the ground and in the laboratory in France, together with the WHO and non-governmental organizations including Médecins Sans Frontières and the Red Cross and Red Crescent. <sup>1714</sup> This action is in line with promoting cooperation and information sharing among all stakeholders, as recommended by the WHO.

On 27 January 2015, French Minister of Finance and Public Accounts, French Minister of State for Development and Francophony and the Bill & Melinda Gates Foundation announced the innovative mechanism aimed at increasing funding to support vaccination and immunization programs, and to improve the efficiency of the health sector, in the Sahel region. The pilot initiative will amount to EUR 100 million over the period 2016-2020.<sup>1715</sup> This action refers to fostering innovation and research and development of new vaccines, diagnostics, infection treatment options and other tools.

<sup>1709</sup> http://www.fmprc.gov.cn/ce/ceun/eng/hyyfy/t1280588.htm

http://english.gov.cn/news/international\_exchanges/2015/03/28/content\_281475079091506.htm

<sup>1710</sup> http://www.fmprc.gov.cn/ce/ceun/eng/hyyfy/t1280588.htm

http://english.gov.cn/news/international exchanges/2015/03/28/content 281475079091506.htm

Lutte contre Ebola. Access: 22 April 2014. http://www.transparence-aide.gouv.fr/ebola/

<sup>&</sup>lt;sup>1712</sup> Que faire face à Ebola ? Access: 22 April 2014. http://www.afd.fr/home/projets\_afd/sante-health/ebola-afd

<sup>&</sup>lt;sup>1713</sup> Plan interministériel de prévention et de lutte contre le virus Ebola. Access: 22 April 2015. http://www.developpement-durable.gouv.fr/Plan-interministeriel-de.html

<sup>&</sup>lt;sup>1714</sup> Fighting Ebola on All Fronts. Access: 22 April 2015.. http://www.project-syndicate.org/commentary/ebola-institut-pasteur-africa-by-christian-br-chot-2014-12

La France et la Fondation Bill & Melinda Gates annoncent une initiative commune de 100 millions d'euros pour accélérer l'accès à la vaccination au Sahel. Access: 22 2015. http://www.afd.fr/home/presse-afd/communiques?actuCtnld=124658

During the compliance period France has taken actions to fight anti-microbial resistance in four areas defined by WHO. Thus, it has been awarded a score of +1.

Analyst: Vitaly Nagornov

# Germany: +1

Germany has fully complied with the commitment on fighting anti-microbial resistance (AMR) as defined by the World Health Organization (WHO).

On 10 December 2014, the German Ministry of Health posted on its website a report concerning the main measures already taken against Ebola. Among them are measures that correspond with the following guidelines:

- In the course of strengthening resistance tracking and laboratory capacity 24-hour hotline was set up at the Robert Koch Institute, the Bernhard Nocht Institute for Tropical Medicine and the Institute for Virology of the University of Marburg provide a 24-hour emergency service for diagnosis-related questions;
- In the course of strengthening infection control and prevention all airports have special emergency plans and special spaces, the Robert Koch Institute cooperated with the health authorities of the Federal Länder and the scientific medical societies to draw up the Ebola virus disease framework;
- In the course of promoting cooperation and information sharing among all stakeholders a special human pathogen information sheet about the Ebola virus was issued, regular training and simulation exercises are conducted under the supervision of the competent health authorities (for example, by Robert Koch Institute, the National Association of Statutory Health Insurance Physicians, the German Hospital Federation and the Federal Union of German Associations of Pharmacists).

On 26-27 January 2015, Germany hosted the GAVI pledging conference to replenish the fund for 2016-2020.<sup>1717</sup> (GAVI is an international organization bringing together the public and private sectors to create equal access to new and underused vaccines for children living in the world's poorest countries.) On the whole, USD 7.539 billion were pledged. From 2016 to 2020, there will be EUR 600 million just from the increases in German support. These funds are also intended to support efforts to develop an Ebola vaccine and establish basic healthcare structures in the affected countries.<sup>1718</sup> Apart from that, a six-point plan based on the lessons to be learned from the Ebola crisis and aimed at better mastering international health emergencies was proposed by Federal Chancellor Angela Merkel. It contains measures that correspond with all five guidelines.<sup>1719</sup>

On 13 May 2015, new German Antibiotic Resistance Strategy (DART 2020) was adopted by the Cabinet. 1720 Its aim is to take an overarching approach in order to stem the spread of resistant pathogens. Among the measures outlined in DART are strict rules governing the use of antibiotics in medicine and stock farming, R&D of new antibiotics, alternative treatment methods and tests permitting swift diagnoses, as well as better informing people about antimicrobial resistance and hygiene in hospitals. The document was elaborated on the eve of the adoption of Global Action Plan on Antibiotic Resistance on the 68th World Health

http://www.gavi.org/Funding/Resource-mobilisation/Process/Gavi-pledging-conference-January-2015/

 $http://www.g7germany.de/Content/EN/Artikel/2015/01\_en/2015-01-27-gavi-sechs-content/EN/Artikel/2015/01\_en/2015-01-27-gavi-sechs-content/EN/Artikel/2015/01\_en/2015-01-27-gavi-sechs-content/EN/Artikel/2015/01\_en/2015-01-27-gavi-sechs-content/EN/Artikel/2015/01\_en/2015-01-27-gavi-sechs-content/EN/Artikel/2015/01\_en/2015-01-27-gavi-sechs-content/EN/Artikel/2015/01\_en/2015-01-27-gavi-sechs-content/EN/Artikel/2015/01\_en/2015-01-27-gavi-sechs-content/EN/Artikel/2015/01\_en/2015-01-27-gavi-sechs-content/EN/Artikel/2015/01\_en/2015-01-27-gavi-sechs-content/EN/Artikel/2015/01\_en/2015-01-27-gavi-sechs-content/EN/Artikel/2015-01-27-gavi-sechs-content/EN/Ar$ 

punkte en.html;jsessionid=79AD939E98676F0B1D97701C778474D6.s1t2.

<sup>&</sup>lt;sup>1716</sup> Protection Against Infection In Germany, Federal Ministry of Health of Germany 10 December 2014. Access: 22 April 2015. http://www.bmg.bund.de/en/ministry/news/protection-against-infection-in-germany.html

<sup>&</sup>lt;sup>1717</sup> GAVI Pledging Conference January 2015, GAVI 26 January 2015. Access: 22 April 2015.

<sup>&</sup>lt;sup>1718</sup> Target Of 7.5 Billion Us Dollars For GAVI, The Vaccine Alliance Is Surpassed, Federal Ministry for Economic Cooperation and Development of Germany 27 January 2015. Access: 22 April 2015. http://www.bmz.de/20150127-2en

<sup>&</sup>lt;sup>1719</sup> White Helmets Against Ebola, German G7 Presidency 27 January 2015. Access: 14 October 2015.

<sup>&</sup>lt;sup>1720</sup> New Strategy To Fight Antimicrobial Resistance, Federal Government of Germany 13 May 2015, Access: 22 April 2015. https://www.bundesregierung.de/Content/EN/Artikel/2015/05\_en/2015-05-13-kabinett-dart-2020.html.

Assembly.<sup>1721</sup> Under this global initiative Member States of WHO are called upon to adopt national cross-sectoral action plans within the coming two years, thus Germany has already complied with its obligations.

Additionally, antibiotic resistance was specified by Germany as one the priorities within the framework of its G7 Presidency. On 8 June 2015, the G7 Summit was held in Schloss Elmau. Heads of State and Government of G7 countries adopted a Summit Declaration in which they clearly affirmed their support of the above mentioned Global Action Plan. 1722 In particular they attached importance to the mandatory prescription requirements in human medicine as well as to an analogous procedure in veterinary medicine.

Germany has taken actions to fight AMR in all areas defined by WHO. Thus, it is awarded a score of +1.

Analyst: Sergei Titov

### India: +1

India has fully complied with the commitment on fighting anti-microbial resistance (AMR). It has taken actions as defined by the World Health Organization (WHO).

On 10-13 November 2014, in Jaipur at the Regional Meeting on Antimicrobial Resistance India and 11 other member states of the South-East Asian Region, pledged to carry out research studies in order to assess trend of AMR and address local challenges and to make the communities aware of the particular risks connected with self-medication. This action strengthens infection control.

According to the conclusions of the meeting, India will use social institutes to raise awareness of the issue of AMR, which promotes information sharing.

The countries have to create a system to test and assess the quality of drugs, recovery methods and conditions of sale to promote appropriate use of medicines.<sup>1723</sup>

Acting within the WHO Regional Office for South-East Asia, the Indian government published booklets on prevention of antibiotic resistance<sup>1724</sup> and on how to use antibiotics rationally<sup>1725</sup> in order to promote both appropriate use of medicines and information sharing.

On 27 February 2015 the Department of Community Medicine and Family Medicine (All India Institute of Medical Sciences) published an article that stated that according to the recommendation of the National Technical Advisory Group on Newer Antimicrobials four new vaccines would be included in the Universal Immunization Program.<sup>1726</sup> The establishment of National Technical Advisory Group was an obligation of the government of India (National Centre for Disease Control) according to the incumbent National Policy

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<sup>&</sup>lt;sup>1721</sup> Federal Minister of Health Hermann Gröhe attends the 68th World Health Assembly in Geneva, Federal Ministry of Health of Germany 18-20 May 2015, Access: 22 April 2015. http://www.bmg.bund.de/en/ministry/news/68th-world-health-assembly.html.

<sup>&</sup>lt;sup>1722</sup> The G7 Summit Sends Out A Strong, Joint Signal In The Area Of Health, Federal Ministry of Health of Germany 8 June 2015,

Access: 22 April 2015. http://www.bmg.bund.de/en/ministry/news/g7-summit.html.

1723 Regional Meeting on Antimicrobial Resistance Jaipur, WHO Regional Office for South-East Asia 10-13 November 2014.

Access: 11 October 2015. http://www.searo.who.int/entity/antimicrobial\_resistance/con\_recom\_amr2014.pdf?ua=1.

<sup>1724</sup> Seasonal Communicable Diseases and Prevention of Antibiotic Resistance, WHO Regional Office for South-East Asia Access:

<sup>11</sup> October 2015. http://www.searo.who.int/entity/antimicrobial\_resistance/WHD-11\_cds-info.pdf?ua=1.

 $<sup>^{1725}</sup>$  Use Antibiotics Rationally, WHO Regional Office for South-East Asia Access: 11 October 2015.

 $<sup>\</sup>underline{\text{http://www.searo.who.int/entity/antimicrobial\_resistance/links/WHD-11\_UAR-poster.pdf?ua=1.}$ 

Four new vaccines for routine immunization in India: What about hemophilus influenza B and pneumococcal vaccine? Journal of Family Medicine and Primary Care, Official Publication of the Academy of Family Physicians of India 27 February 2015. Access: 11 October 2015. http://www.jfmpc.com/article.asp?issn=2249-

<sup>4863;</sup>year=2015;volume=4;issue=1;spage=9;epage=12;aulast=Paul.

for Containment of Antimicrobial Resistance and aimed at fostering research and development of new drugs and vaccines.<sup>1727</sup>

India's Ministry of Health and Family Welfare and Department of Health and Family Welfare announced that 12 medical college labs are collaborating with the National Centre for Disease Control and nine with the Indian Council of Medical Research.<sup>1728</sup> The Ministry of Health set up a goal to establish 10 medical college labs by the year of 2015.<sup>1729</sup> Thus, India is strengthening its laboratory capacity.

On 14-16 May 2015, under the aegis of the Integrated Disease Surveillance Programme, a National Review Workshop was held. The meeting aimed at assessing the progress made by the programme. <sup>1730</sup> Moreover, on 15-16 May 2015 joint Workshop on Risk Communication, attended by officers of Indian surveillance teams as well as by WHO experts, was organized. During the meeting the principles and concepts of risk communication, based on Indian experience and challenges, were developed. <sup>1731</sup> These events can be considered as tools contributing to information sharing among stakeholders.

On 30 July 2015, Ministry of Health and Family Welfare declared that it lacked data on death due to antibiotic resistance. In order to gather data on AMR negative consequences, it was decided to establish a National Anti-Microbial Resistance Research and Surveillance Network. Besides, to control the sales of drugs falling under Schedule H1 (that is, medications the use of which might lead to the development of AMR), the Ministry obliged producers to label these drugs and to record all the sales giving the information concerning as the prescriber, as the patient.<sup>1732</sup>

India has acted to fight AMR in the five areas defined by WHO. Thus, it is awarded a score of +1.

Analyst: Anastasiia Matiukhina

# Indonesia: +1

Indonesia has fully complied with the commitment on fighting anti-microbial resistance (AMR). It has taken actions as defined by the World Health Organization (WHO).

On 24 March 2015, Indonesian vice president Jusuf Kalla and minister of health Nila F. Moeloek launched the National Strategy of Tuberculosis Control for 2015-2019. The strategy provides for a number of measures to address tuberculosis, including those related to tackling drug resistance. The measures included in the strategy correspond with the following areas defined by the WHO: strengthening resistance tracking and laboratory capacity; strengthening infection control and prevention; regulating and promoting appropriate use of medicines.<sup>1733</sup>

On 5 August 2015, Indonesian Ministry of Health in partnership with the Foundation for Concerned Parents (YOP) and the WHO organized a workshop aimed at improving understanding of the dangers of

<sup>&</sup>lt;sup>1727</sup> National Policy for Containment of Antimicrobial Resistance, Centre for Disease Control, Directorate General of Health Services, Ministry of Health & Family Welfare, Government of India. Access: 11 October 2015. http://www.ncdc.gov.in/writereaddata/linkimages/amr\_policy1600931343.pdf.

Laboratories under the IDSP (NCDC) and ICMR network with capacity of testing Influenza virus, Government of India Ministry of Health & Family Welfare, Department of Health & Family Welfare 26 February 2015. Access: 11 October 2015. http://mohfw.gov.in/WriteReadData/l892s/58722977381424952600.pdf.

Review of Performance, Government of India, Ministry of Health & Family Welfare, Department of Health & Family Welfare 30 July 2014. Access: 11 October 2015. http://mohfw.nic.in/WriteReadData/l892s/8ReviewofPerformance2906.pdf.

<sup>&</sup>lt;sup>1730</sup> IDSP National Review Workshop held at Hyderabad, NCDC Newsletter, April-June 2015, National Center for Desiase Control Government of India. Access: 11 October 2015. http://ncdc.gov.in/writereaddata/linkimages/Newletter08157953137651.pdf.

<sup>1731</sup> Workshop on Risk Communication to strengthen IHR. Ibid.

Measures to Contain Death from Antibiotic Resistance, Government of India, Ministry of Health & Family Welfare 30 July 2015. Access: 11 October 2015. http://pib.nic.in/newsite/PrintRelease.aspx?relid=123915.

<sup>&</sup>lt;sup>1733</sup> Cadre Knocking the Door to Control TB, Ministry of Health of Indonesia 24 March 2015. Access date: 17 April 2015. http://www.depkes.go.id/article/view/15040100001/kader-ketok-pintu-untuk-kendalikan-tb.html.

antimicrobial resistance in the community and developing joint recommendations as the basis for fighting it.<sup>1734</sup> This action is in line with the objective to promote cooperation and information sharing among all stakeholders defined by WHO.

Indonesia has taken actions to fight anti-microbial resistance in four areas defined by WHO. Thus, it is awarded a score of +1.

Analyst: Andrey Shelepov

# Italy: +1

Italy has fully complied with the commitment on fighting anti-microbial resistance (AMR). It is cooperating with the European Union on a number of policies aimed at fighting AMR.

Italian Ministry of Health in accordance with the EU guidelines for the control of antibiotic resistance in the veterinary field, guarantees the application of the EU requirements in development and production of veterinary medicines containing antibiotics, provides instructions to ensure the prudent use of antibiotics and monitors educational and outreach initiatives to inform farmers and veterinarians on the conscious use of antibiotics and chemotherapeutics. At the same time it is taking steps to make available national guidelines on prudent use of antibiotics in veterinary.<sup>1735</sup>

The Experimental veterinary institutes (Istituti zooprofilattici sperimentali) network serves as an important mechanism of surveillance for the National Health Service of Italy, monitoring animal diseases and of their transmissibility to humans and supporting veterinaries through providing, upon request, specific diagnostic services for anti-microbial resistance assessment.<sup>1736</sup>

On 20 October 2015, Italy's General Directory for Development Cooperation approved a EUR 1 million concession to UNICEF to fight Ebola virus epidemic in Sierra Leone. This contribution to the international effort is a part of the overall EUR 4 million package of the Italian assistance to fight the disease in 2015.<sup>1737</sup>

Thus, Italy takes actions which correspond with the following recommendations by the WHO: strengthening resistance tracking and laboratory capacity, strengthening infection control and prevention, regulating and promoting appropriate use of medicines, promoting cooperation and information sharing among all stakeholders.

During the compliance period Italy has taken steps aimed at fighting anti-microbial resistance in four out of five areas defined by WHO. Thus, it has been awarded a score of +1.

Analyst: Andrei Sakharov

<sup>&</sup>lt;sup>1734</sup> PENGGUNAAN ANTIBIOTIK BIJAK DAN RASIONAL KURANGI BEBAN PENYAKIT INFEKSI, Ministry of Health of Indonesia 5 August 2015. Access date: 13 October 2015. http://www.depkes.go.id/article/print/15081100001/penggunaan-antibiotik-bijak-dan-rasional-kurangi-beban-penyakit-infeksi.html.

<sup>&</sup>lt;sup>1735</sup> Politiche comunitarie contro l'antibiotico-resistenza e attività degli organismi nazionali e sovranazionali, Italian Ministry of Health 28 January 2015. Access: 18 May 2015.

 $http://www.salute.gov.it/portale/temi/p2\_6.jsp?lingua=italiano\&id=1449\&area=veterinari\&menu=antibiotici.$ 

Politiche comunitarie contro l'antibiotico-resistenza e attività degli organismi nazionali e sovranazionali, Italian Ministry of Health 28 January 2015. Access: 18 May 2015.

http://www.salute.gov.it/portale/temi/p2\_6.jsp?lingua=italiano&id=1449&area=veterinari&menu=antibiotici.

<sup>1737</sup> Sierra Leone: contributo di un milione di euro all'Unicef per risposta all'epidemia di Ebola, Italian International Cooperation Agency 20 October 2015. Access: 20 October 2015.

 $http://www.cooperazioneallosviluppo.esteri.it/pdgcs/index.php?option=com\_content\&view=article\&id=12894:20-10-2015-sierra-leone-contributo-di-un-milione-di-euro-all-unicef-per-risposta-all-epidemia-di-ebola\&catid=8\&Itemid=515.$ 

# Japan: +1

Japan has fully complied with the commitment on fighting anti-microbial resistance (AMR). It has taken actions in five areas defined by the World Health Organization (WHO).

Japan surveys 110 infectious diseases including seven AMR bacterial infections using National Epidemiological Surveillance of Infectious Disease (NESID).<sup>1738</sup> This action refers to strengthening resistance tracking and laboratory capacity, as well as strengthening infection control and prevention.

On 18 December 2015, UK-Japan Workshop on AMR was held in Tokyo. The workshop brought together expert scientists, clinicians, academics and veterinarians from UK and Japan to discuss this threat and to explore ways of mutually tackling antimicrobial resistance in a joint collaborative manner.<sup>1739</sup> This action refers to the promoting cooperation and information sharing among all stakeholders action area defined by the WHO.

On 1 January 2015, about 1600 hospitals are participating to Japan Nosocomial Infections Surveillance (JANIS) designed to fight AMR.<sup>1740</sup> JANIS<sup>1741</sup> is organized by Ministry of Health Labour and Welfare<sup>1742</sup> and JANIS management office at National Institute of Infectious Diseases.<sup>1743</sup> This action refers to the area of fostering innovation and research and development of new vaccines, diagnostics, infection treatment options and other tools, and also with regulating and promoting appropriate use of medicines especially among children.

During the compliance period Japan has taken actions to fight anti-microbial resistance in five areas defined by the WHO. Thus, it has been awarded a score of +1.

Analyst: Vitaly Nagornov

### Korea: +1

Korea has fully complied with the commitment on fighting anti-microbial resistance (AMR).

The Korean National Institute of Health operates a laboratory surveillance system to track AMR. The monitoring within this system is conducted for 12 weeks annually. This action refers to strengthening resistance tracking and laboratory capacity.

The Korean Centers for Disease Control and Prevention under the Ministry of Health and Welfare is operating an AMR surveillance program to prevent nosocomial infections, known as KONIS. Approximately 200 health care institutes are participating in this program. This action refers to strengthening infection control and prevention.

On 14-15 May 2015, Korea hosted the 10th International Symposium on Antimicrobial Agents and Resistance to discuss strategies and actions. The conference was supported by the Seoul based Asia Pacific

<sup>&</sup>lt;sup>1738</sup> Surveillance system of antimicrobial resistance and healthcare-associated infections in Japan. Access: 22 April 2015. http://www.e-jmii.com/article/S1684-1182(15)00179-6/fulltext

<sup>&</sup>lt;sup>1739</sup> UK-Japan Antimicrobial Resistance Workshop. Access: 22 April 2015. http://bsac.org.uk/news/uk-japan-antimicrobial-resistance-workshop/

<sup>&</sup>lt;sup>1740</sup> Participating medical institutions List January 2015. Access: 22 April 2015. http://www.nih-janis.jp/hospitallist/index.html

Japan Nosocomial Infections Surveillance (JANIS) . Access: 22 April 2015. http://www.nih-janis.jp/about/index.html

Ministry of Health Labour and Welfare. Access: 22 April 2015. http://www.mhlw.go.jp/english/

<sup>&</sup>lt;sup>1743</sup> National Institute of Infectious Diseases.(NIID) . Access: 22 April 2015. http://www.nih.go.jp/niid/

<sup>&</sup>lt;sup>1744</sup> Laboratory monitoring of antimicrobial resistant bacteria, Centers for Disease Control and Prevention 21 August 2015. Date of Access: 11 November 2015.

http://www.cdc.go.kr/CDC/contents/CdcKrContentView.jsp?cid=24323&viewType=CDC&menuIds=HOME001-MNU1175-MNU1192-MNU1195.

<sup>&</sup>lt;sup>1745</sup> Korean nosocomial infections surveillance system. Date of Access: 11 November 2015. http://konis.cdc.go.kr/konis/index.jsp.

Foundation for Infectious Diseases (APFID). 1746 This action refers to the promoting cooperation and information sharing among all stakeholders action area defined by the World Health Organization (WHO).

On 10-12 June 2015, Korea hosted the 6th Annual Meeting of the Advisory Group on Integrated Surveillance of Antimicrobial Resistance (AGISAR). On of the objectives of the meeting was to "develop a five-year strategic plan following the adoption of the WHO Global Action Plan on Antimicrobial Resistance at the Sixty-eighth World Health Assembly in May 2015." This action refers to the promoting cooperation and information sharing among all stakeholders action area defined by WHO.

The National Institute of Health conducts on a permanent basis research on antimicrobial resistance mechanism of major pathogens which cause nosocomial infections, resistance mechanism for the prevention of AMR transmission, and the molecular epidemiology attributes of resistant bacteria. This action refers to the area of fostering innovation and research and development of new vaccines, diagnostics, infection treatment options and other tools.

During the compliance period Korea has taken action to fight anti-microbial resistance in four of the five areas defined by WHO. Thus, it has been awarded a score of +1.

Analyst: Vitaly Nagornov

### Mexico: +1

Mexico has fully complied with the commitment on fighting antimicrobial resistance (AMR).

Mexico observes Antibiotic Awareness Day on 18 November.<sup>1749</sup> The materials with information on a wide range of antibiotic related topics, including antimicrobial resistance are disseminated this day.

Individual Mexican specialists as well as Mexican Society of Infectious Diseases and Clinical Microbiology supported the World Alliance Against Antibiotic Resistance declaration against antibiotic resistance. The declaration advocates 10 actions aimed at adopting proactive strategies to preserve efficacy of antibiotics. These actions include promoting awareness of all the stakeholders of the threat represented by AMR; elaborating in each country a national plan for the containment of antibiotic resistance; development and implementation of new rapid, cost-effective and accurate diagnostic tests to aid in distinguishing bacterial and nonbacterial etiologies; and stimulating research of new drugs and vaccines.

The priority research areas indicated in the annual work program of Mexican National Institute of Public Health for 2015 include antimicrobial resistance.<sup>1751</sup>

On 3 February 2015, during his visit to Tlaxcala state Mexican Minister of Health Mercedes Juan inaugurated new units of State Laboratory of Public Health.<sup>1752</sup> Medical equipment of new units will help to address

<sup>&</sup>lt;sup>1746</sup> 10th International Symposium on Antimicrobial Agents and Resistance, Hong Kong Society for Infectious Diseases. Date of assess: 25 May 2015. http://www.hksid.org/pdf/temp/ISAAR%202015%20program.pdf.

<sup>&</sup>lt;sup>1747</sup> 6th Meeting of the WHO Advisory Group on Integrated Surveillance of Antimicrobial

Resistance (AGISAR), WHO 10 June 2015. Access: 16 June 2015. http://www.who.int/foodsafety/areas\_work/antimicrobial-resistance/disclaimer\_public\_notice\_comment\_final.pdf.

Antimicrobial Resistance Research, Centers for Disease Control and Prevention 21 August 2015. Date of Access: 11 November 2015.

http://www.cdc.go.kr/CDC/contents/CdcKrContentView.jsp?cid=24322&viewType=CDC&menuIds=HOME001-MNU1175-MNU1192-MNU1194.

<sup>1749</sup> Objective 1. Date of assess: 22 September 2015.

http://www.who.int/drugresistance/global action plan/Objective 1 related activities amr dec 2014.pdf?ua=1.

<sup>&</sup>lt;sup>1750</sup> The WAAAR declaration against antibiotic resistance. June 2014. Date of assess: 23 February 2015.

http://www.ac2bmr.fr/index.php/en/waaar-declaration.

<sup>&</sup>lt;sup>1751</sup> Programa annual del trabajo 2015. Date of assess: 23 February 2015.

 $http://www.insp.mx/images/stories/Planeacion/Docs/pi/141106\_programaTrabajo2015.pdf.$ 

health risks and strengthen epidemiological surveillance. A sum of USD 2.9 million was allocated to expand the State Laboratory of Public Health areas of work by including molecular biology, epidemiology and bacterial control spheres. The laboratory will provide an opportunity to detect contagions such as HIV and rotavirus.

On 16 February 2015, new rules on adoption of biotech pharmaceuticals were approved,<sup>1753</sup> including the requirements on control of biotech pharmaceuticals production. According to new rules all biotech pharmaceuticals should be approved by Committee on New Molecules and Subcommittee on Evaluation of Biotech Products comprising of specialists and researchers in biotechnologies to test safety, quality and efficiency of new pharmaceuticals.

In May 2015, Mexico as a member of the World Health Organization (WHO) endorsed the global action plan on antimicrobial resistance.<sup>1754</sup> The action plan sets five strategic objectives, including "to improve awareness and understanding of antimicrobial resistance; to strengthen knowledge through surveillance and research; to reduce the incidence of infection; to optimize the use of antimicrobial agents; and develop the economic case for sustainable investment that takes account of the needs of all countries, and increase investment in new medicines, diagnostic tools, vaccines and other interventions."

On 27-30 May 2015, XL National Congress on Infectious Diseases and Clinical Misctobiology was held in San Luis Potosí. 1755 The discussion among other topics focused on an overview of anti-microbial resistance in Mexico, new antimicrobial agents etc. 1756

In July 2015, the Mexican company Grupo Nutec manufactured a new product, Plofora, based on plant extracts. Plofora activates specific genes that strengthen animals' immune systems to viral and digestive diseases and prevents development of resistance to medical antibiotics "replacing them with a mixture of oleoresins (resin and oil) with herbal extracts and phytobiotics." <sup>1757</sup>

During the compliance period Mexico has taken steps aimed at fighting antimicrobial resistance in four out of five areas defined by the World Health Organization. Thus, it has been awarded a score of +1.

Analyst: Elizaveta Safonkina

# Russia: 0

Russia has partially complied with the commitment on fighting anti-microbial resistance (AMR). It has taken actions in five areas defined by the World Health Organization (WHO).

In December 2014, an aid to Russia's Minister of Healthcare participated in WHO high-level meeting on AMR in Stockholm, where the development of a Global Action Plan on AMR was discussed.<sup>1758</sup>

<sup>&</sup>lt;sup>1752</sup> Se refuerza la infraestructura sanitaria del país. 3 February 2015. Date of assess: 23 February 2015.

 $<sup>\</sup>label{lem:http://www.presidencia.gob.mx/articulos-prensa/se-refuerza-la-infraestructura-sanitaria-del-pais/. \\$ 

<sup>&</sup>lt;sup>1753</sup> COMUNICAD O DE PRENSA No.096. 16 February 2015. Date of assess: 23 February 2015.

http://portal.salud.gob.mx/redirector?tipo=0&n\_seccion=Boletines&seccion=2015-02-16\_7465.html.

Global action plan on antimicrobial resistance. Date of assess: 22 September 2015.

http://www.who.int/drugresistance/global\_action\_plan/en/.

<sup>&</sup>lt;sup>1755</sup> XL CONGRESO NACIONAL DE INFECTOLOGÍA Y MICROBIOLOGÍA CLÍNICA 2015. Date of assess: 22 September 2015. http://www.amimc.org.mx/evento/con2015/

PROGRAMA FINAL DEL XL CONGRESO NACIONAL DE INFECTOLOGÍA Y MICROBIOLOGÍA CLÍNICA 2015, SAN LUIS POTOSÍ. Date of assess: 22 September 2015. http://www.amimc.org.mx/wp-content/uploads/2015/05/PROGRAMA-final.pdf

With plant extracts, preventing antibiotic resistance in farm animals. Date of assess: 22 September 2015.

http://phys.org/news/2015-07-antibiotic-resistance-farm-animals.html

Meeting of the APEC Working Group on Healthcare 27 January 2015. http://www.rosminzdrav.ru/news/2015/01/27/2210-sostoyalos-zasedanie-rabochey-gruppy-po-zdravoohraneniyu-foruma-aziatsko-tihookeanskogo-ekonomicheskogo-sotrudnichestva.

In January 2015, representatives of the Ministry of Healthcare participated in the meeting of the APEC Working Group on Healthcare in Philippines. A special working plan for 2015 was adopted by the Asia Pacific Economic Co-operation (APEC) forum. Russia supported the need of developing a new strategic cooperation plan after 2016 and a roadmap on implementation of the Healthy Asia-Pacific 2020 initiative. Russia supported APEC economies' initiatives on universal health coverage and infectious diseases control, including AMR.<sup>1759</sup>

On 11 March 2015, Russian Minister of Healthcare Veronika Skvortsova adopted an order creating a special position within the ministry — senior specialist on clinical microbiology and antimicrobial resistance. 1760

In May 2015, Russian Minister of Healthcare attended the 68th session of the World Health Assembly. In her address to the assembly Minister Skvortsova mentioned that Russian specialists together with other partners had been actively working on drafting a Global Plan on Antimicrobial Resistance. She expressed hope for a constructive discussion of this issue and its adoption by the member-states.<sup>1761</sup>

Russia has taken actions to fight antimicrobial resistance in less than four out of five areas defined by the WHO. Thus, it has been awarded a score of 0.

Analyst: Mark Rakhmangulov

### Saudi Arabia: +1

Saudi Arabia has fully complied with the commitment on fighting anti-microbial resistance (AMR). It has taken actions in five areas defined by the World Health Organization (WHO).

On 2 January 2015, the Minister of Health, Dr. Muhammad bin Ali Alhayaza, announced reshuffling leadership of the Command and Control Center (CCC), and activating it to combat Corona virus, Ebola and others infectious diseases. The center will undertake control of all infectious diseases and the early preparation for the protection against them. This action refers to strengthening resistance tracking and laboratory capacity, as well as strengthening infection control and prevention of risks.

On 3 December 2014, the Acting Minister of Health, Adel Faqih, meet WHO's and CDC's experts to develop the responding to the risks of coronavirus. This comes within the framework of the ongoing cooperation between the MOH and the international health organizations aiming at combating coronavirus. This action refers to promoting cooperation and information sharing among all stakeholders.

On 16-18 May 2015, the Saudi Health Exhibition was held in Riyadh. The second session was on the microbes resisting antibiotics and discussed several important topics about the burden of antibiotic-resistant microbes, including a lecture on how to overcome antibiotics resistance and on the antibiotics management

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<sup>&</sup>lt;sup>1759</sup> Meeting of the APEC Working Group on Healthcare 27 January 2015. http://www.rosminzdrav.ru/news/2015/01/27/2210-sostoyalos-zasedanie-rabochey-gruppy-po-zdravoohraneniyu-foruma-aziatsko-tihookeanskogo-ekonomicheskogo-sotrudnichestva.

<sup>&</sup>lt;sup>1760</sup> Russian Ministry of healthcare 11 March 2015. http://www.rosminzdrav.ru/news/2015/03/11/2254-vneseny-izmeneniya-v-prikaz-o-glavnyh-vneshtatnyh-spetsialistah-minzdrava-rossii.

<sup>&</sup>lt;sup>1761</sup> Minister Veronika Skvortsova participated in the 68<sup>th</sup> session of the World Health Assembly, Russian Ministry of Healthcare 19 May 2015. http://www.rosminzdrav.ru/news/2015/05/19/2347-ministr-veronika-skvortsova-prinyala-uchastie-v-68-oy-sessii-vsemirnoy-assamblei-zdravoohraneniya.

Minister of Health Issues a Resolution to Transfer the CCC from Jeddah to the Ministry's Headquarter. Access date: 18 May 2015. http://www.moh.gov.sa/en/Ministry/MediaCenter/News/Pages/News-2015-01-02-001.aspx

<sup>&</sup>lt;sup>1763</sup> Fruitful Cooperation between MOH, WHO, and CDC Targeting Control of MERS-CoV http://www.moh.gov.sa/en/Ministry/MediaCenter/News/Pages/News-2014-12-03-001.aspx

program.<sup>1764</sup> This action is in line with fostering innovation and research and development of new vaccines, diagnostics, infection treatment options and other tools area defined by WHO.

On 1 February 2015, the Ministry of Health launched three months vaccination campaign against pneumococci. PCV13 vaccine is secure and provides broader protection against the most common and serious types than the previous vaccines due to antimicrobial resistance measures. This action is in line with fostering innovation and research and development of new vaccines, diagnostics, infection treatment options and other tools area defined by WHO, and also with regulating and promoting appropriate use of medicines especially among children.

During the compliance period Saudi Arabia has taken actions to fight anti-microbial resistance in five areas defined by WHO. Thus, it has been awarded a score of +1.

Analyst: Vitaly Nagornov

### South Africa: +1

South Africa has fully complied with the commitment on fighting anti-microbial resistance (AMR). The fight against AMR in South Africa is carried out under the Antimicrobial Resistance National Strategy Framework 2014-2024, which provides for four objectives:

- Strengthen, coordinate and institutionalize interdisciplinary efforts;
- Optimize surveillance and early detection of antimicrobial resistance;
- Enhance infection control and prevention;
- Promote appropriate use of antimicrobials in human and animal health. 1766

During the compliance period South Africa has taken actions to fight anti-microbial resistance in four areas defined by WHO. Thus, it has been awarded a score of +1.

Analyst: Lyudmila Tarasenko

### Turkev: +1

Turkey has fully complied with the commitment on fighting anti-microbial resistance (AMR). It has taken actions as defined by the World Health Organization (WHO).

On 19 November 2014, Turkish ministry of health and the Istanbul Provincial Health Directory organized a symposium for medical and academic societies aimed at raising awareness on the misuse and overuse of antibiotics. The representative of the ministry of health Ali Alkan said that there was an increasing trend of antibiotics consumption between 2007 and 2013, and the government had taken measures to promote their adequate use to avoid stronger resistance. Thus, Turkey took actions in regulating and promoting appropriate use of medicines.

On 15 April 2015, Turkish ministry of foreign affairs announced measures Turkey had taken to help fight the Ebola outbreak. These include delivering medical supplies worth TRY2.5 million to Guinea, Sierra Leone and Liberia, and granting grant USD 1 to the mechanism established by the African Union to support the fight

http://www.aa.com.tr/en/health/423181--turkey-leads-europe-in-antibiotics-consumption.

<sup>&</sup>lt;sup>1764</sup> Saudi Health Exhibition. Access date: 18 May 2015. http://www.saudihealthexhibition.com/en/ConferenceZone/ConferenceProgrames/IPaCConference/Agenda/

MOH to Launch Pneumococcal Vaccinations Campaign for Children . Access date: 18 May 2015.

http://www.moh.gov.sa/en/Ministry/MediaCenter/News/Pages/News-2015-01-29-001.aspx

Antimicrobial Resistance, Department of Health of South Africa 10 October 2014. . Access: 29 April 2015.

http://www.fundisa-academy.com/downloads/New-Anti-infective-Drugs-AMR-10Oct2014-G-Steel.pdf.

Turkey leads Europe in antibiotics consumption, Anadolu Agency 19 November 2014. Access: 27 April 2015.

against the Ebola virus (Africa Union Support to Ebola Outbreak in West Africa, ASEOWA).<sup>1768</sup> Thus, Turkey took actions in strengthening resistance tracking and laboratory capacity, as well as strengthening infection control and prevention.

On 23 April 2015, minister of health of Turkey Dr. Mehmet Müezzinoğlu participated in the "World Malaria Day" in Saudi Arabia organized in the cooperation with the Islamic Development Bank. One of the goals of this event was delivering the Turkish experience in implementing its "Malaria Elimination Program." Turkey took actions in promoting cooperation and information sharing among all stakeholders.

Turkey has taken actions to fight anti-microbial resistance in 4 areas defined by the WHO. Thus, it is awarded a score of +1.

Analyst: Nadezhda Sporysheva

# United Kingdom: +1

The United Kingdom has fully complied with the commitment on fighting anti-microbial resistance (AMR). It has taken actions as defined by the World Health Organization (WHO).

On 2 September 2013, the UK Department of Health published the Five Year Antimicrobial Resistance Strategy 2013 to 2018, providing for actions in all five areas defined by WHO.<sup>1770</sup>

According to the Annual progress report and implementation plan published on 11 December 2014, progress has been achieved on all action areas defined in the Antimicrobial Resistance Strategy.<sup>1771</sup> In particular, the Public Health England (PHE) established a new system enabling hospital laboratories that submit data on resistance to PHE to interrogate their own local data. PHE also contributes data on antibiotic resistance and prescribing to pan-European surveillance, and works with the WHO to support development of a Global Action Plan to tackle antibiotic resistance.<sup>1772</sup>

The UK has taken actions to fight AMR in five areas defined by WHO. Thus, it is awarded a score of +1.

Analyst: Andrey Shelepov

### United States: +1

The United States has fully complied with the commitment on fighting anti-microbial resistance (AMR). It has taken actions in five areas defined by the World Health Organization (WHO).

On 23 March 2015, the U.S. Department of Health and Human Services announced USD 31 million arrangement with Emergent BioSolutions Inc. that will develop an improved anthrax vaccine to provide

<sup>&</sup>lt;sup>1768</sup> No: 116, 15 April 2015, Press Release Regarding the Turkey's Assistance for the Struggle Against Ebola Virus Outbreak, Ministry of Foreign Affairs of Turkey 15 April 2015. Access: 27 April 2015. http://www.mfa.gov.tr/no\_-116\_-15-april-2015\_-press-release-regarding-the-turkey\_s-assistance-for-the-struggle-against-ebola-virus-outbreak.en.mfa.

<sup>&</sup>lt;sup>1769</sup> Müezzinoğlu, "Dünya Sıtma Günü" Etkinliğine Katıldı, the Ministry of Health of the Turkish Republic 23 April 2015. Access: 27 April 2015. http://www.saglik.gov.tr/TR/belge/1-39905/muezzinoglu-dunya-sitma-gunu-etkinligine-katıldı.html.

<sup>&</sup>lt;sup>1770</sup> UK Five Year Antimicrobial Resistance Strategy 2013 to 2018, UK Government 2 September 2013. Access date: 17 April 2015. https://www.gov.uk/government/uploads/system/uploads/attachment\_data/file/244058/20130902\_UK\_5\_year\_AMR\_strategy.pdf.

<sup>1771</sup> UK 5 Year Antimicrobial Resistance (AMR) Strategy 2013–2018. Annual progress report and implementation plan, 2014, UK Government 11 December 2014. Access date: 17 April 2015.

https://www.gov.uk/government/uploads/system/uploads/attachment\_data/file/385733/UK\_AMR\_annual\_report.pdf PHE leading initiatives on surveillance and the evaluation of antibiotics, UK Government 5 February 2015. Access date: 17 April 2015. https://www.gov.uk/government/news/phe-leading-initiatives-on-surveillance-and-the-evaluation-of-antibiotics.

protection in fewer doses and with lower costs than currently used vaccine.<sup>1773</sup> This action fosters innovation and research and development of new vaccines.

On 27 March 2015, the White House released the National Action Plan for Combating Antibiotic-Resistant Bacteria. The aims of the plan by 2020 include creating detect network of antibiotic resistance regional laboratories, improving international cooperation and capacities for antibiotic resistance prevention and control, supporting research and development for new antibiotics and other drugs, as well as vaccines, reducing the inappropriate antibiotic use and eliminating the use of medically important antibiotics for growth stimulation in animals. 1774 Thus, this action contributes to all five areas defined by WHO.

On 31 March 2015, the Office of the Assistant Secretary for Preparedness and Response of the US Department of Health and Human Services granted USD 12 million to BioCryst Pharmaceuticals to develop a promising experimental medicine for Ebola. <sup>1775</sup> This action fosters innovation and research and development of new vaccines.

On 1 July 2015, the U.S. Department of Health and Human Services opened the National Ebola Training and Education Center to train healthcare providers in the sphere of Ebola and other infection diseases management. For this aim the department will provide USD 12 million to three academic institutions during the next 5 years. <sup>1776</sup> This strengthens infection control and prevention.

On 16 September 2015, the U.S. Department of Health and Human Services' Office of the Assistant Secretary for Preparedness and Response (ASPR) announced a public-private partnership with AstraZeneca to develop a portfolio of drugs to combat life-threatening bacterial infections and bioterrorism threats. According to the agreement, BARDA will spend USD 50 million and could spend up to USD 170 million to develop additional drugs in the next 5 years.<sup>1777</sup> This contributes to fostering innovation and research and development of new infection treatment options.

On 21 September 2015, the Biomedical Advanced Research and Development Authority (BARDA) of the ASPR awarded USD 38 million to develop and start manufacturing of a new Ebola antibody drug for use in studies, through an agreement with Regeneron Pharmaceuticals. 1778 This also contributes to fostering innovation and research and development of new infection treatment options.

During the period under review, the United States has taken steps to fight AMR in all five areas defined by WHO. Thus, it has been awarded a score of +1.

Analyst: Tatiana Lanshina

# European Union: +1

The European Union has fully complied with the commitment on fighting anti-microbial resistance (AMR). It has taken actions in five areas defined by the World Health Organization (WHO).

<sup>&</sup>lt;sup>1773</sup> HHS seeks to develop improved anthrax vaccine, the U.S. Department of Health & Human Services 23 March 2015. Access: 29 April 2015. http://www.hhs.gov/news/press/2015pres/03/20150323a.html.

Fact Sheet: Obama Administration Releases National Action Plan to Combat Antibiotic-Resistant Bacteria, The White House 27 March 2015. Access: 5 May 2015. https://www.whitehouse.gov/the-press-office/2015/03/27/fact-sheet-obama-administration-releases-national-action-plan-combat-ant.

HHS contracts to develop new Ebola drug, the U.S. Department of Health & Human Services 31 March 2015. Access: 29 April 2015. http://www.hhs.gov/news/press/2015pres/03/20150331a.html.

HHS launches National Ebola Training and Education Center, the U.S. Department of Health & Human Services 1 July 2015. Access: 8 October 2015. http://www.hhs.gov/news/press/2015pres/07/20150701a.html.

HHS enters into strategic alliance to accelerate new antibiotic development, the U.S. Department of Health & Human Services 16 September 2015. Access: 8 October 2015. http://www.hhs.gov/news/press/2015pres/09/20150916a.html.

HHS advances development of new monoclonal antibody drug for Ebola, the U.S. Department of Health & Human Services 21 September 2015. Access: 8 October 2015. http://www.hhs.gov/news/press/2015pres/09/20150921a.html.

On 17 November 2014, the new aid was announced by Christos Stylianides, EU Ebola Coordinator and Commissioner for Humanitarian Aid and Crisis Response. New funding of USD 36 million was made by the European Commission to fight Ebola including improvement of local health facilities and provision of early detection and public awareness measures in the affected countries. 1779 These measures will strengthen infection control and prevention.

On 18 November 2014, the European Commission confirmed USD 199 million funding for a multisectoral research program until 2020 to address Ebola-related challenges such as vaccines development, clinical trials, storage and transport, as well as diagnostics and treatments to tackle Ebola. The European Commission also announced that the first projects are expected to begin in early 2015. These projects will assess the safety of several potential vaccines and the level of protection they offer against the disease. These measures will foster innovation and research and development of new vaccines, diagnostics and infection treatment options.

To stop the Ebola epidemic from spreading further, mobile laboratories for early detection of the virus are deployed by the European Union in the affected region. For example, on 4 December 2014, one more mobile laboratory was deployed to Guinea with support of the EU Civil Protection Mechanism.<sup>1781</sup> These measures will strengthen laboratory capacity.

On 26 February 2015, the European Commission also published a progress report on its five-year Action Plan on Antimicrobial Resistance adopted in 2011. Among the new measurers there is the commitment of the European Commission to develop a strategic approach to the pollution of water by pharmaceuticals by September 2015. There is also confirmed the commitment of the European Commission to fund EUR 25 million for HIV vaccine research in 2015. These measures will foster innovation and research and development of new vaccines, diagnostics and infection treatment options.

On 26 February 2015, the European Commission announced a USD 1.1 million prize to the person or team that develops a rapid test to tell whether a patient needs to be treated with antibiotics or not. The aim of this prize was to stop overuse of antibiotics and prevent the growing antimicrobial resistance. These measures will help to regulate appropriate use of medicines.

On 2 April 2015, the European Parliament published the draft report "Safer Healthcare in Europe: Improving Patient Safety and Fighting Antimicrobial Resistance." The document contains a wide range of measures including regulating and promoting appropriate use of antibiotics, launching awareness campaigns on the rational use of antibiotics, engaging in a dialogue with all stakeholders and develop a EU strategy for patient safety. These proposed measures should help to regulate appropriate use of medicines and

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<sup>&</sup>lt;sup>1779</sup> EU boosts anti-Ebola aid after Commissioners' mission to worst-hit countries, European Commission 17 November 2014. Access: 18 April 2015. http://europa.eu/rapid/press-release\_IP-14-1862\_en.htm

<sup>&</sup>lt;sup>1780</sup> The European Union's response to Ebola emergency, European Commission 18 November 2014. Access: 18 April 2015. http://europa.eu/rapid/press-release MEMO-14-1903 en.htm

EU Ebola Response: Member States send additional health personnel to the region, European Commission 6 December 2014. Access: 18 April 2015. http://europa.eu/rapid/press-release\_IP-14-2440\_en.htm

Progress report on the Action plan against the rising threats from Antimicrobial Resistance, European Commission 26 February 2015. Access: 18 April 2015.

http://ec.europa.eu/health/antimicrobial\_resistance/docs/2015\_amr\_progress\_report\_en.pdf

Antimicrobial Resistance: Commission launches a €1 million prize and publishes a progress report of its Action Plan, European Commission 26 February 2015. Access: 18 April 2015. http://europa.eu/rapid/press-release\_MEX-15-4514\_en.htm

Draft report on Safer healthcare in Europe: Improving patient safety and fighting antimicrobial resistance, European Parliament 2 April 2015. Access: 18 April 2015. http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-

promote cooperation and information sharing among all stakeholders. On 19 May 2015, the European Parliament adopted the related resolution. 1785

On 1 June 2015, the European Parliament and the European Union Council reached a political agreement on the Commission's proposal for a revised EU legislation on the animal health. This agreement covers the issues of combating transmissible animal diseases, including the issues of antimicrobial resistance or biodiversity.<sup>1786</sup> These measures will strengthen infection control and prevention

During the compliance period the European Union has taken actions to fight AMR in five areas defined by WHO. Thus, it has been awarded a score of +1.

Analyst: Mark Rakhmangulov

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<sup>&</sup>lt;sup>1785</sup> MEPs propose blueprint for safer healthcare, European Parliament 19 May 2015. Date of Access: 10 October 2015. http://www.europarl.europa.eu/news/en/news-room/content/20150513IPR55317/html/MEPs-propose-blueprint-for-safer-healthcare

<sup>&</sup>lt;sup>1786</sup> Commissioner for Health and Food Safety Vytenis Andriukaitis welcomes the political agreement on animal health, European Commission 1 June 2015. Access: 10 October 2015. http://europa.eu/rapid/press-release\_STATEMENT-15-5091\_en.htm