



# WORKSHOP REPORT

ROME, ITALY  
DECEMBER 12-15, 2016



**COMBATING THE EMERGENCE AND SPREAD  
OF ANTIMICROBIAL RESISTANCE:  
A WORKSHOP TO STRENGTHEN  
FAITH-BASED ENGAGEMENT**





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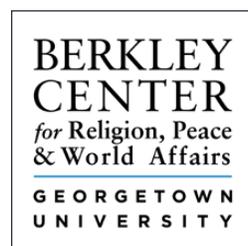
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## Acknowledgements

The workshop served to initiate a call to action informed by faith-based organizations (FBOs) for strengthening capacity among FBOs to reduce the emergence and spread of drug-resistant disease and address the associated health, social, and development impacts of such illnesses. The success of this landmark workshop is due to the commitment, dedication, and active involvement of all who participated:

**Steering Committee Members** for their expert guidance: **Sister Barbara Brilliant**, Franciscan Missionary of Mary, Dean of Mother Patern College of Health Sciences, and Chair of the National Catholic Health Council of Liberia; **Father Kevin FitzGerald S.J., Ph.D.**; Dr. David Lauler Chair, Catholic Health Care Ethics in the Center for Clinical Bioethics at Georgetown University; **Dr. Jesse Goodman**, Founding Director, Georgetown University Center on Medical Product Access, Safety and Stewardship; **Amy Lillis**, Team Lead, U.S. Department of State's Office of Religion and Global Affairs; **Msgr. Charles Namugera**, Pontifical Council for Healthcare Workers; **Stefano Nobile**, Advocacy Officer, Caritas Internationalis; **Dr. Jessica Petrillo**, Senior Health Security Officer, U.S. Department of State, Office of International Health and Biodefense; and **Msgr. Robert Vitillo**, Attaché, Permanent Mission of the Holy See to the UN in Geneva and Secretary General and Chair, International Catholic Migration Commission.

**Presenters** for their insights and inspiration: **Cardinal Peter Turkson**, Prefect, Dicastery for the Promotion of Integral Human Development, Holy See; **Mr. Kenneth Hackett**, United States Ambassador to the Holy See; **Gary Cohen**, Executive Vice President of Becton Dickinson Pty. Ltd.; and **Hajime Inoue**, Senior Advisor to the Director-General and Special Representative for Antimicrobial Resistance, WHO.

**Session Facilitators:** **Dr. Prince Bosco**, Director of Health Services, Caritas Rwanda; **Dr. Dianne Francois**, Director of Catholic Medical Mission Board Program, Haiti; **Dr. Mirfin Mpundu**, Executive Director of the Ecumenical Pharmaceutical Network; and **Dr. Davide Mosca**, Director, Migration Health Department, International Organization for Migration.

**Participants:** **Mohammad Rasheed Ahmed**, Executive Director, Islamic Medical Association of North America; **Pascal Ahodegon**, General Counselor, Brothers of St. John of God; **Susan Barnett**, Founder, Faiths for Safe Water; **Fr. Dan Cancino**, Secretary of the Health Commission, Catholic Bishops' Conference of the Philippines; **Dr. Bruce Compton**, Director for International Outreach, Catholic Health Association of the United States; **Fr. Michael Czerny**, S.J., Undersecretary, Section for Refugees and Migrants, Dicastery for the Promotion of Integral Human Development; **Dr. Dennis Falzon**, Scientist, Laboratories Diagnostics and Drug Resistance, Global TB Program, WHO; **Dr. Timothy Flanigan**, Professor, Infectious Disease Department, Brown University Hospital; **Alexia Kelley**, Executive Director, Foundations and Donors Interested in Catholic Activities (FADICA); **Br. Michael Koroma**, General Counselor, St. John of God Hospital; **Dr. Faith McLellan**, Office of the Director-General, WHO; **Dr. Mario Merialdi**, Senior Director, Becton Dickinson, Pty. Ltd.; **Fr. Aristelo Miranda**, General Counselor, Camillian Disaster Service International; **Msgr. Jean-Marie Misivi Mupendawatu**, Secretary, Pontifical Council for Healthcare Workers; **Felix Mushobozi**, Executive Secretary, Justice, Peace and Integrity of Creation (JPIC) Commission; **Fr. Paul Ouedraogou**, Secretary, Health Commission, Burkina Faso Episcopal Conference; **Fr. Mathew Perumpil**, Secretary, Health Commission, Catholic Bishops' Conference of India; **Dr. Jaidev Singh**, Acting Director, Center for Faith Based and Community Initiatives, USAID; **Fr. John Toai**, Director and Founder of the Mai Tam House of Hope, Camillian Religious Order; **Jonathan Trapp**, Director, Emergency Management Branch, CDC (ELCA); and **Dr. Stefano Vella**, Director, Department of Pharmacology and Therapeutic Research, Center for Global Health, Istituto Superiore di Sanità (ISS).

*Cover photo courtesy of Camillian Task Force.*



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*SECTION 1*

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**INTRODUCTION**





Good health underpins social, human, and economic development, as well as security. The emergence and spread of drug-resistant disease destabilizes this foundation.

Drug-resistant disease, also known as antimicrobial resistance (AMR), occurs when microorganisms (such as bacteria, fungi, viruses, and parasites) become able to survive in the presence of drugs (such as antibiotics, antifungals, antivirals, and antimalarials) resulting in infections that are no longer treatable. The development of resistance is a natural phenomenon; however, human actions can promote avoidable emergence and spread of drug-resistant disease.

Drug-resistant disease is a current and growing challenge throughout the world. Left unaddressed, it is projected to result in a reduction of 2 to 3.5 percent in global GDP and put at risk a cumulative \$100 trillion of economic output by 2050.

The ramifications of drug-resistant disease are profound. Infectious diseases that can survive existing treatments have the potential to reverse global progress made on HIV, tuberculosis, malaria, and maternal and child health. Drug-resistant disease also puts at risk modern medical advances such as surgery, transplants, and chemotherapy, due to the threat of infection. It can also exacerbate economic and social disparities. People living in poverty face the heaviest burdens of infectious disease and are most vulnerable to the economic impacts of infections that are resistant to treatments; such infections often last longer and are more expensive to treat. Additionally, women and girls may face more demands to serve as primary caregivers for family members suffering from prolonged illness.

National leaders throughout the world have recognized the urgency of this issue and have committed action through the World Health Organization, the Food and Agriculture Organization of the United Nations, the World Organisation for Animal Health, and the United Nations. Addressing the emergence and spread, as well as the health, social, and development impacts of drug-resistant disease is complex.

Inter-governmental and governmental collaboration with faith-based organizations (FBOs) is critical for building local and global capacity to limit the emergence and spread of AMR. To realize this potential, the U.S. Department of State, Caritas Internationalis, the Berkley Center for Religion, Peace, and World Affairs at Georgetown University, and the Gerald and Henrietta Rauenhorst (GHR) Foundation sponsored a four-day workshop in December 2016, with the support of the Dicastery for the Promotion of Integral Human Development and the Pontifical Council for Health Care of the Holy See, to assess and recommend steps to strengthen capacity among faith-based organizations and religious healthcare providers to reduce the emergence and spread of drug-resistant disease and address the associated health, social, and developmental impacts of such illnesses.

The workshop brought together over 35 experts of primarily religiously affiliated organizations involved in medicine, education, communications, and logistics to outline current challenges to and offer recommendations for addressing drug-resistant disease throughout the world.

This report assembles the workshop's outcomes, lessons shared by participants, and information to support the hosting of similar workshops as a means for faith-based and secular stakeholders to take action to address drug-resistance.



# *SECTION 2*

# WORDS OF WELCOME



# Words of Welcome to the Participants at the Conference on Combating the Emergency and Spread of Antimicrobial Resistance: A Workshop to Strengthen Faith-Based Engagement

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*By Msgr. Jean-Marie Mupendawatu,  
Secretary of the Pontifical Council for Health Care Workers*

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*December 12 – 15, 2016, Il Cantico Hotel, Rome*

In the first place, good afternoon to everybody. Once again, I wish to extend a warm welcome to this eternal city, to all participants, and wish you an enjoyable and fruitful stay.

That said, I would like to thank the organizers of this workshop: the U.S. Department of State, Caritas Internationalis, Georgetown University and the Gerald and Henrietta Rauenhorst (GHR) Foundation, for the invitation extended to the Pontifical Council for Health Care Workers, to be part of this noble venture, which among others wishes to identify ways to empower faith-based institutions and organizations in their endeavor to combat the emergence and spread of antimicrobial resistance.

Antimicrobial resistance poses a great challenge to global public health today, for it threatens the effective prevention and treatment of a growing number of infections caused by bacteria, parasites, viruses, and fungi. Reports from official institutions like the World Health Organization (WHO) reveal that this is no longer a problem of the future. It is happening now, and it is unfortunately increasing and being propagated among others by misuse of antibiotics, inadequate programs for infection prevention and control, poor-quality medicines, and insufficient regulation of the use of antimicrobial medicines. All this puts us at the risk of being plunged into an era where common infections and minor injuries can once again kill. Moreover, the resistance to first-line treatment drugs may require using more expensive drugs, which are out of reach for low-income communities.

Although many international organizations and ministries of health recognize it as a problem, not all countries have a response plan to deal with antimicrobial resistance.<sup>1</sup> The scenario depicted by the “Worldwide country situation analysis” promoted by the WHO sounds an alarm bell which calls for action. It revealed, among others, that “the sale of antimicrobial medicines without prescription was widespread in many countries... many lacked standard treatment guidelines for health care. Thus, the potential for overuse of antimicrobial medicines by the public and by the medical profession was common in countries in all regions. Moreover, public awareness of antimicrobial resistance was low in all regions.”<sup>2</sup> Combating such a problem of global magnitude will require a collaborative approach from all countries and actors in many sectors, such as human and veterinary medicine, agriculture, finance, environment, and consumers.

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<sup>1</sup> World Health Organization, “Worldwide country situation analysis: response to antimicrobial resistance,” (Geneva, 2015), [http://apps.who.int/iris/bitstream/10665/163468/1/9789241564946\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/163468/1/9789241564946_eng.pdf).

<sup>2</sup> *Ibid.*, 2.

Faith-based health institutions and organizations as the number one partners of the State in providing health services have a key role to play in combating antimicrobial resistance. Through their network of health and educational institutions, faith communities can promote several effective and sustainable initiatives to address the problem.

The “Global Action Plan on Antimicrobial Resistance” outlines five objectives.<sup>3</sup> Without prejudice to the others, I wish to point out the first three, which represent areas of immediate action for faith-based engagement, promoting a variety of effective initiatives to address antimicrobial resistance.

Given the old maxim that prevention is better than cure, one of the key areas of our action ought to be the prevention of infections in order to reduce the need for antibiotics, through better hygiene, access to clean water and sanitation, infection control in healthcare facilities, and vaccination.

Another area where our action is urgently needed concerns conducting awareness campaigns to improve the knowledge and understanding of antimicrobial resistance through effective communication, education, and training. For this purpose, our healthcare institutions and educational facilities, as well as church premises, can provide useful platforms for action, while the moral authority and trust invested in the faith-based institutions by the communities can be of benefit to the initiative.

Thirdly, faith-based engagement can also help to optimize the use of antimicrobial medicines in human and animal health. This will help to address the widespread problems of self-medication without the prescription of a health professional, not completing the full prescription, as well as the offhand practice of sharing antibiotics with others or using leftover prescriptions.

Without forgetting the other two objectives, that is, the need to strengthen knowledge and the evidence base through surveillance and research, as well as increasing investment in new medicines, diagnostic tools, and vaccines, I do believe that the discussion at this workshop can be a moment for enriching sharing of knowledge and experience from the participants around the first three objectives, which will help to enhance the effectiveness of faith-based engagement to combat the emergence and spread of antimicrobial resistance (AMR).

As we begin this third week of Advent, I pray that the Son of God, who came to dwell among us, that we “may have life and have it to the full” (John 10:10), may also bless us at this meeting with the enlightenment of the Holy Spirit to inspire and accompany our discussions.

I thank the organizers once again for this noble and important initiative, bringing together a broad spectrum of participants to address a topical issue of global public health. I wish you all fruitful deliberations.

Thank you for your attention!

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<sup>3</sup> World Health Organization, “Global Action Plan on Antimicrobial Resistance,” (Geneva, 2015), [http://www.wpro.who.int/entity/drug\\_resistance/resources/global\\_action\\_plan\\_eng.pdf](http://www.wpro.who.int/entity/drug_resistance/resources/global_action_plan_eng.pdf).



# SECTION 3

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# CALL TO ACTION



Imagine this

COMBATING THE EMERGENCE AND SPREAD OF ANTIMICROBIAL RESISTANCE: A WORKSHOP TO STRENGTHEN MULTI-BASED ENGAGEMENT





## Limiting the Emergence and Spread of Antimicrobial Resistance: A Workshop to Strengthen Faith-Based Engagement

12-15 December 2016

### *A Call to Action*

On 12-15 December 2016, representatives from Catholic-inspired and other faith-based organizations (FBOs) were convened in Rome to initiate a call to action for strengthening capacity among FBOs to reduce the emergence and spread of drug-resistant disease and address the associated health, social, and development impacts of such illnesses. The participants included persons with expertise in medicine, education, communications, and logistics, who addressed the realistic and current challenges facing all sectors throughout the world in addressing antimicrobial resistance (AMR). The workshop functioned as a starting point for Catholic-inspired organizations and as a model for other FBOs in addressing this significant threat to individual and community well-being.

The event was organized by the U.S. Department of State, Caritas Internationalis, and the Berkley Center for Religion, Peace, and World Affairs at Georgetown University, and was supported by the GHR Foundation. The Ambassador of the United States of America to the Holy See, His Excellency Mr. Kenneth Hackett, and the Secretary of the Pontifical Council for Health Care Workers, Monsignor Jean-Marie Mupendawatu, as well as Mr. Stefano Nobile of Caritas Internationalis and Ms. Amy Lillis, representing the U.S. Department of State's Special Representative for Religion and Global Affairs, provided opening remarks.

The emergence and spread of drug-resistant disease is recognized as a global threat to human development.<sup>1,2</sup> Infections with drug-resistant diseases can cause longer illnesses, more complicated illnesses, more doctor visits, the use of stronger and more expensive medicines, and more deaths. Left unaddressed, the continued emergence and spread of drug-resistant disease puts at risk modern medicine and achievement of the Sustainable Development Goals of 2030, including ending poverty, ending hunger, ensuring healthy lives, and reducing inequality and injustice.

AMR is the acquired ability of microorganisms to survive in the presence of the drugs meant to treat the infections they cause. The development of this resistance is a natural phenomenon but also is propelled by health system failures. Using medications on preventable infections, using them when they are not

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<sup>1</sup> World Health Organization, "Global action plan on antimicrobial resistance," (Geneva, 2015), [http://www.wpro.who.int/entity/drug\\_resistance/resources/global\\_action\\_plan\\_eng.pdf](http://www.wpro.who.int/entity/drug_resistance/resources/global_action_plan_eng.pdf).

<sup>2</sup> "High-level meeting on antimicrobial resistance," (United Nations. Last modified 2016), <http://www.un.org/pga/71/event-latest/high-level-meeting-on-antimicrobial-resistance/>.

needed, not taking the full course, and taking poor quality medicines all encourage the development of resistance.

The development and spread of drug-resistant disease requires addressing critical needs in the health ecosystem, including:

- Enhancing access to, quality of, and continuity of healthcare;
- Increasing education, training, trust, and understanding among the public, educators, and healthcare workers;
- Prioritizing the common good in health education and treatment;
- Advocating for improved policies and regulations related to access to quality medications.

FBOs are well positioned to encourage ongoing high-level support, mobilize individual and community action, and advance social and medical practices to combat the emergence and spread of AMR. The Catholic Church is the largest non-governmental provider of education and medical services in the world, reaching and serving individuals from all faith backgrounds that government services may not. The Church also is a platform for health advocacy with extensive reach, including through their own healthcare institutions, for example managing local dispensaries and training healthcare workers at all levels. Thus, faith communities, both at institutional and local levels, are well positioned to promote several effective and sustainable initiatives to address the problem.

During the High-Level Meeting on Antimicrobial Resistance, held on 21 September 2016 during the United Nations General Assembly, Cardinal Pietro Parolin, Secretary of State to His Holiness Pope Francis, shared the deep concern of the Holy See regarding the prevalence and impact of antimicrobial resistance in all parts of the world. The Cardinal noted that as the Catholic Church is engaged with the sponsorship of tens of thousands of healthcare centers and institutions of higher medical education in many parts of the world, it is deeply and extensively engaged in healthcare and in preventive health education.

The Cardinal observed that there are interrelated causes of this complex public health challenge. He noted various causes of the rapid spread of AMR, including inappropriate use of antimicrobial medicines in human, animal, food, agriculture, and aquaculture sectors; lack of access to healthcare services, including diagnostics and laboratory tests; and the contamination of soil, water, and crops with antimicrobial residues. In this regard, Pope Francis has warned that “the degree of human intervention, often in the service of business interests and consumerism, is actually making our earth less rich and beautiful, ever more limited and grey, even as technological advances and consumer goods continue to abound limitlessly.”<sup>3</sup>

The Pope called for public health measures, medical research, and diagnostic development to facilitate the development of accessible and equitable solutions to this public health threat and thus to provide “a genuine service... to care for our common home and the integral development of persons, especially those in greatest need.”<sup>4</sup>

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<sup>3</sup> Pope Francis, *Laudato Si: On Care for Our Common Home* (Encyclical, 2015), 34.

<sup>4</sup> Pope Francis, “Address during Visit to the United Nations Office” (speech, Nairobi, Kenya, November 26, 2015).

On another occasion, Pope Francis summarized the practical goals and focus of the rich social and moral doctrine of the Catholic Church as follows:

Poverty, hunger, diseases, and oppression are not inevitable; they cannot represent permanent situations. With trust in the power of the Gospel, we can make a real contribution to changing things, or at least to making them better. We can uphold the dignity of all those who await a sign of our love...<sup>5</sup>

Dr. Hajime Inoue, Special Representative for AMR in the Office of the Director-General of the World Health Organization, affirmed that FBOs are critical community-based actors necessary for achieving objectives for effective and comprehensive responses to AMR. Inter-governmental and governmental collaboration with FBOs is critical for building local and global capacity to limit the emergence and spread of AMR through:

- animating necessary behavior change;
- strengthening awareness and action on infection prevention and control;
- promoting the appropriate stewardship of antimicrobials.

Following reflection on their own experiences, workshop participants offered the following recommendations for more effectively contributing to these objectives.

***Action in the community and religious settings:***

We cannot overemphasize the importance of engaging communities in achieving immediate and sustained behavior change. Community participation and ownership is essential for reducing the emergence and spread of AMR.

1. Enhance awareness and education on methods to prevent and control infections;
2. Create understanding of the individual and community impact of the misuse of and self-medication with antimicrobials;
3. Build trust within the community to enhance surveillance and improve infection prevention and control, particularly trust in vaccines;
4. Enable reliable and sustainable access to, and use of, water, sanitation, and hygiene;
5. Identify and mobilize sustainable and flexible funding.

***Action in the clinical setting:***

1. Enhance workforce numbers and safety; improve workforce training, including on infection prevention and control, and antimicrobial medicine use and stewardship;
2. Improve production, supply chain, and procurement to ensure the availability, affordability, and quality of infection prevention and control resources (*inter alia*, appropriate personal protective equipment);

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<sup>5</sup> Pope Francis, “Address to Members of the Representative Council and Personnel of Caritas Internationalis” (speech, Vatican City, November 17 2016), The Vatican, [http://w2.vatican.va/content/francesco/en/speeches/2016/november/documents/papa-francesco\\_20161117\\_caritas-internationalis.html](http://w2.vatican.va/content/francesco/en/speeches/2016/november/documents/papa-francesco_20161117_caritas-internationalis.html)

3. Create collaborative methods to ensure reliable access to water, sanitation, and hygiene;
4. Strengthen vaccination programs through improved production, access, availability, and delivery mechanisms;
5. Improve production, supply chain, and procurement to ensure the sustainability, availability, affordability, and quality of diagnostic tools;
6. Identify sustainable and flexible funding to ensure continued access to supplies and training;
7. Improve production, supply chain, procurement, and oversight to ensure the sustainability, access and appropriate availability, affordability, and quality of medications;
8. Improve capacity to collect, monitor, evaluate, and address healthcare-acquired infections. Include collaboration with Ministries of Health, WHO, FAO, and other international, national, and local organizations on training on collection and submission of data on infection rates, possibly through sentinel sites;
9. Improved surveillance of incidence and prevalence of antimicrobial resistance.

***Recommendations to improve FBO capacity to limit the emergence and spread of AMR:***

**Implementation**

1. Strengthen the implementation and monitoring of infection prevention and control requirements in health facilities;
2. Work with international nongovernmental organizations and health organizations to assess the quality of locally produced products and potential for local production of other materials necessary for infection prevention and control;
3. Develop and/or strengthen platforms across FBOs and nongovernmental organizations to share resources among various providers within a country or region to prevent supply disruptions;
4. Develop and/or strengthen FBO pharmaceutical production and supply chain networks for safe, affordable, secure, and trusted access to quality medications;
5. Develop a system of accountability and checks and balances among local FBOs to enhance access to international and government procurement mechanisms;
6. Implement twinning programs and partnerships with healthcare facilities to enhance capacity, including between facilities in different countries;
7. Develop support groups of key affected communities for those living with drug-resistant disease.

**Education and Awareness Raising**

1. Integrate infection prevention and control and antimicrobial stewardship education in existing FBO health programs (inter alia, HIV, TB, malaria, and maternal and child health), education programs, and community outreach programs;
2. Train pharmaceutical and healthcare providers, local government, and educators to enable effective infection prevention and control and appropriate use of antimicrobials. Consider developing, strengthening, or enhancing implementation of training modules as appropriate, and use existing information and educational tools;

3. Enable local community-led messaging to promote ownership and ensure the messaging is effective and appropriate for the local context.
4. Opportunities to promote awareness and action to limit the emergence and spread of drug-resistant disease include:
  - a. Mobilizing champions such as AMR survivors, opinion leaders, and as appropriate celebrities/musicians/artists;
  - b. Use existing occasions of observance such as WHO's World Hand Washing day in October and Antibiotics Awareness Week in November;
5. Work with traditional healers;
6. Recommend the development of pastoral letters and messages that highlight the global and local challenge of AMR and identify the threat of counterfeit production to the health of the community.

### **Collaboration and Advocacy**

1. Proactively engage faith leadership, governmental and inter-governmental organizations, and communities to take action to reduce the emergence and spread of AMR;
2. Proactively engage governments and inter-governmental agencies on the development and implementation of national action plans on AMR, including the development, strengthening, enactment, and enforcement of necessary policies, laws, and regulations;
3. Develop, enhance, and/or integrate local, national, and regional networks of faith-based organizations to enable local capacity to address AMR, including within clinical, community, and educational settings;
4. Proactively identify opportunities for collaboration with other FBOs, the government, private sector, international non-governmental organizations, and civil society to develop approaches and solutions that support all people in need, including the most vulnerable;
5. Create ecumenical and interreligious platforms for sharing common problems and best practices for effective communication, education, and training on AMR;
6. Proactively engage inter-governmental organizations and governments on the development, implementation, and enforcement of policies, regulations, and legal action promoting the production and distribution of quality medicines;
7. Identify and mobilize sustainable and flexible funding.

### ***Proposal for the way forward:***

At the conclusion of the workshop, the participants identified recommendations that FBOs could operationalize independently, including:

1. Collaborating with Catholic Health Associations; religious orders of sisters, brothers, and priests; and other networks to host an FBO-led side event on AMR at the next convening of the 2017 World Health Assembly;
2. Sharing the needs and recommendations document throughout their religious, health, and education organizations and networks and taking appropriate measures to implement the actions;

3. Collaborating with existing platforms, such as Medical Mission Institute’s “MedBox” and EPN/ReACT’s toolbox, to share educational tools, behavior change resources, and information related to limiting the emergence and spread of AMR;
4. Conducting regional consultations;
5. Engaging local and headquarter WHO and other international organizations.

Workshop participants asked the conveners (the Berkley Center at Georgetown University, Caritas Internationalis, and GHR Foundation) to propose a draft of a five-year action plan with concrete steps, roles, and responsibilities animated by the recommended actions outlined above.

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“We need to become more creative in responding to the health challenges around the world. It is important to plan ahead. Faith-based organizations are present on the ground, particularly in rural areas, and can make a big contribution. We need to learn how to be more accountable and more effective to provide continuity to health services. We cannot exclude, cannot be judgmental, and must be helpful.”

— Archbishop Silvano Tomasi, Importance of Planning for Health Service Continuity

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*SECTION 4*

**LESSONS SHARED**



# Meaningful Community Engagement in AMR Response

*By Fr. Dan Vicente Cancino Jr., M.I.*

As AMR poses a global threat to life and relationships, the same relationships are key to reduce and eliminate AMR. Building relationships among members of key affected communities of diseases, like those with multi-drug resistant (MDR) TB, is an innovative step to address the threat of AMR.

Very often, the populations most vulnerable to disease are the same populations that do not have access to healthcare. Factors such as stigma, discrimination, and criminalization drive these populations underground and away from the health services they need.

To solve this problem, we must provide services for key affected communities as well as invest in programs that address the barriers that keep people and communities away from services. The best way to do this is to involve affected communities in the design, delivery, monitoring, and evaluation of those health services—a way to reduce AMR and provide a path in sustaining the program at the community level.

FBOs can effectively contribute to community systems strengthening. FBOs strongly believe there is a role for affected communities to address health problems like AMR. The integration of these affected communities into social networks and organizations for support, advocacy, preventive messaging and education, treatment partnership, and kinship is crucial. Strengthening these social networks and organizations can have a positive impact on the ability of affected communities to contribute to the achievement of the goal of universal access to health. The development of these affected communities can build national, regional, and local capacity to advocate for and provide services to those key affected communities.

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**“We are here as equals and partners, not beneficiaries so as not to leave no one behind.”**

**— STOP TB Partnership Conference 2015**

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The community systems’ strengthening framework as a strategy to reduce AMR:

- Evidence shows that community- and peer-led education and services are a key intervention for infection prevention and control. FBO-animating and facilitating programs can scale up community-oriented and peer-led service delivery as an effective strategy.
- FBOs can develop robust and systematic advocacy strategies to ensure the meaningful involvement of key affected communities in national health strategic plans.
- Where appropriate, FBOs can embed services for affected communities in health mainstream programs.

# An Exercise in Moral and Ethical Reflection and Discernment, within the Catholic Church Tradition and in Relation to AMR Response

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By Fr. Kevin FitzGerald, S.J.

Catholic Church-inspired perspectives relevant to the objectives of this workshop are rooted in:

- **The Catholic Healthcare Tradition** — healing ministry of Jesus;
- **The Catholic Moral Tradition** — “Be perfect as your heavenly Father is perfect” and the upgraded Golden Rule of “do unto others as God has already done for you”; and,
- **The Catholic Intellectual Tradition** — Judeo-Christian theology influenced by Greek philosophical thought.

What did this mean practically for the workshop reflection and discussions? We were challenged to make explicit the values and reasoning that inform and support the issues we raised and the recommendations we made in each and all of the areas considered during the workshop, also taking into account each participant’s own values and worldview.

The overall template utilized for the reflection was the following, with an example below each discussion point:

- Here is a key opportunity, problem, or issue—here is why I/we think it is a key opportunity, problem, or issue.
  - *Counterfeit drugs are a key theological, moral, and pastoral problem. Why? Because it is the sin of murder, and it creates confusion and distrust in the community. It preys on the vulnerable and creates sources of AMR that may/will affect the world.*
- Here is my/our recommendation—here is why I/we think it is an appropriate recommendation.
  - *Invest our resources more directly in the locales most affected by this problem. Why? Because pastorally you get the best chance for efficacy in spite of the risk of additional corruption of resources, and morally it signals direct awareness, care, and trust by the funders for that local community. Theologically it empowers the local community to take better care for its own (i.e. follows the principle of subsidiarity—work on the most appropriate societal level with preference given to the most local possible).*

# Migrants, Refugees, and Internally Displaced Persons

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*By Davide Mosca*

Meeting participants engaged in a discussion, moderated by Davide Mosca, Director, Migration Health Department, International Organization for Migration (IOM), on enhancing the role of faith-based organizations in addressing drug resistance within the context of migrants, refugees, and internally displaced persons. The discussion outcomes are described below.

Setting up the scene, against the background of:

- The size and scope of migration and displacement is unprecedented (one in seven of the global population), owing to crises and growing disparities worldwide, and the trend is only growing. Yet a safe, orderly, and regular migration process is far from being achieved, and the health needs of migrants remain misunderstood and unmet. This can have negative consequences.
- AMR is present across the world, in all countries, yet the poorest populations and those who are marginalized are facing most of its life-threatening consequences—encompassing those who cannot access effective antimicrobials due to resource limitations and other barriers, and those who are the least resilient to cope with an emergency. This includes various categories of vulnerable migrants such as labour migrants, refugees and asylum seekers, undocumented migrants, and those who are trafficked and internally displaced. These categories have varying degrees of vulnerability and resiliency but share the common denominators of limited access to quality healthcare, lack of continuity of care and prevention, and lack of social capital of support, stigmatization, and xenophobia. All of these elements aggravate the global burden of AMR associated with migration and human mobility.
- Indeed, there is a real correlation between mobility and the spread of diseases, including the spread of AMR bacteria/viruses/parasites, but thinking that migrants, refugees, and internally displaced persons (IDPs) are the cause of the introduction of AMR organisms into their host communities is an oversimplification of the problem and a stigmatizing argument.
- Poor living conditions that many migrants, refugees, and IDPs endure render them more susceptible to infections of all sorts, including infections with AMR organisms, due to their poor immunity level. Restricted access to healthcare in host communities, notably when a different country/language/social norm is involved, further aggravates this situation, as migrants/refugees/IPDs face additional barriers to access to healthcare.
- Migrant workers who work in the agriculture sector are at higher risk of exposure to AMR organisms from animals and crops, yet their ability to access proper information and preventive measures is frequently more limited than the general population.

## **State of Knowledge**

### **What are the social, pastoral, and spiritual responsibilities associated with this topic?**

- Migration remains a divisive topic, characterized by political sensitivity, sensationalist narrative, and xenophobic attitudes. This impedes the recognition that migration is fundamentally a positive coping strategy for migrants and displaced persons, and a contributing development factor for countries of origin and destination.
- Conducive policies and attitudes are needed to minimize negative outcomes of migration, including as they relate to AMR.
- It is fundamental to recognize the human dimension of the problem and address the problem rationally and with compassion, in the best (public health) interest of all.

### **How does the topic relate to your daily work?**

- FBOs, NGOs, and the Church are on the frontline at the community level in addressing the needs of vulnerable migrants, whether in refugee or IDP camps, in detention centers, or in communities where migrants are a sizeable percentage of the population. They can provide advocacy, protection, and services, including pastoral and spiritual support and care.

### **What are you doing/could you do to address this topic?**

- Provide pastoral, spiritual, and material assistance to people in need.
- Sensitize hierarchy about the importance of addressing AMR as it relates to the health of migrants and communities.

### **What are the challenges?**

- Lack of clarity, understanding, and guidance on how to address the needs of a population that remains controversial, difficult to access, and mobile (e.g. fear of breaching national rules; different cultures).
- The call from the Holy Father to welcome migrants and respond to their needs has not yet been taken broadly and comprehensively by the religious community.

### **What are the opportunities?**

- The Holy Father's leadership in the pastoral for migrants.<sup>1</sup>
- FBOs and the broader religious community have networks that cross strata of societies and national borders. This can enable unique opportunities for community engagement, including opportunities to educate and convince;
- Skills and moral resources in the migrant and hosting communities.

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<sup>1</sup> [http://w2.vatican.va/content/francesco/en/speeches/2017/february/documents/papa-francesco\\_20170221\\_forum-migrazioni-pace.html](http://w2.vatican.va/content/francesco/en/speeches/2017/february/documents/papa-francesco_20170221_forum-migrazioni-pace.html)

## **Recommendations**

**What tools and products could the community develop to facilitate progress?**

- Information, general education, and health education on prevention, infection control, hygiene, safe use of medications, and compliance with prescribed treatment.
- Outreach to communities.

**Are there immediate steps that can be taken?**

- Sensitize the hierarchy.
- Sensitize communities.
- Enhance dialogue.
- Enhance education and prevention.
- Have in place good referral systems for migrants with health needs, locally and across borders, building on FBO networking.

**What are your top three recommendations to strengthen/enable faith-based action?**

- Engage locally and globally.
- Strengthen cross-sector and cross-border partnerships and networking.
- Put upfront the human dimension of the issue, and provide evidence and facts.

# Stewardship, Creation Care, and Antimicrobial Resistance: A Brief Introduction

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*By Jonathan Trapp*

*Originally published by the Evangelical Lutheran Church in America, Southeastern Synod*

When most of us think about the idea of creation care, the images that come to mind are of being more green: recycling, use energy-efficient products, driving vehicles that get better fuel mileage. But there is actually a lot more to it than that. If creation care involves the proper stewardship of the resources with which we have been blessed, that stewardship is all-encompassing. It is inclusive not just of things like fuel and water and electricity, but it is also about the proper stewardship of medicines and of doing what we can to ensure not only our own health, but to also help ensure the health and well-being of all of our brothers and sisters. I say this because as we misuse and abuse medical resources we are moving ourselves towards a future where the drugs won't be effective and our ability to combat what should be a simple virus or infection will no longer be possible.

Early in December I and around 30 other individuals from all over the world were invited by the State Department, the Vatican, Georgetown University, and the GHR Foundation, to the Vatican for a workshop to discuss the role of faith based organizations in combating antimicrobial resistance (AMR). Now if you're like me at all, you may be wondering what, exactly, is AMR?

As brief background, AMR is something that occurs when any type of disease-causing organism (be it a virus, bacteria, or another category of disease) evolves so that the treatments used previously to combat it no longer work. Part of the reason this happens is because microbes are constantly evolving and changing to survive, but it also happens as we misuse tools like medications, either by not taking the proper dosage, not taking it for long enough, or by taking drugs which are expired or don't offer the full benefits of quality medication.

Currently around 700,000 people a year die from AMR-related illnesses, and by 2050, that number is projected to increase to 10 million per year. That would make AMR a more significant killer than cancer. However, AMR is more than an issue of the number of fatalities; it threatens human development with care-giving and health impacts that extend beyond the individual, affecting the family and community. Infection with drug-resistant diseases can cause longer illnesses, more complicated illnesses, more doctor visits, and the use of stronger and more expensive drugs—which can have significant side effects and more deaths. The costs associated with treating AMR in 2050 would rise to around 100 trillion dollars.

And if that sounds terrifying, it is. If left unaddressed AMR has the possibility to take the world back to a pre-antibiotic age. And while the most vulnerable face the heaviest burdens and economic impacts of infections, AMR equally poses a threat to developed countries like the United States as it does to the developing world. In a world without antibiotics, modern medical advances including cancer treatment and surgeries will not be possible due to the threat of infection. AMR poses a threat to rich and poor alike.

Combating AMR will require that we rethink how we use medicine (only taking what is appropriate for our illness, taking the right dosage, and taking the full course of the medicine). It will ask us to be vigilant about hygiene and infection control (washing our hands regularly). It will ask us to help build healthcare capacity in the developing world and to help ensure that all people have ready access to clean, safe water and to electricity so that they can practice proper infection control procedures that we often take for granted.

Combating AMR will require real behavioral change from all 7.4 billion people on the planet. For those with resources and easy access to medicine, it will ask us to not take medicine for granted and to not overuse or misuse it.

And while it may seem like a massive and amorphous challenge, the fight against AMR is closely aligned with many of the things that we as a church are already doing, and it aligns with what so many of you are already doing.

When the ELCA works to build healthcare capacity in the developing world, it is combating AMR. When the ELCA helps to fight malaria, the infrastructure that is created can help combat AMR. When the ELCA builds wells, the access to safe water helps combat AMR.

And closer to home, your individual actions help combat AMR. Through simple things like hand washing, staying up to date on your vaccinations, only taking medications when you actually need them and following the instructions regarding how much to take and for how long, and supporting the work of organizations engaged around the world to help improve access to healthcare and to build healthcare infrastructure in those places it is lacking are all very simple ways that you can help fight AMR.

AMR is a threat to everybody on earth and, if left unaddressed, one of our greatest killers. But it doesn't have to be this way. By recognizing that how we treat the gift of modern medicine and how we exercise stewardship over the blessings which we have received is truly part of our calling to be good stewards, we can help live into our calling to love and care for creation.

After spending a week with the amazing workshop participants, I have come to understand the fight against AMR as being a fight that requires the involvement of the faith community if it is to succeed, because the faith community can help spread the word about the issue and can help incorporate it into the mission work we are already engaged in, and because we can help educate the people we serve and worship with and can help influence those around us.

I look forward to talking with all of you more about this important issue and what you can do to help address this concern in your own context. Please contact me at [jonathan.t.trapp@gmail.com](mailto:jonathan.t.trapp@gmail.com) if you would like to talk further.

# MULTIDRUG-RESISTANT TUBERCULOSIS (MDR-TB)

## 2016 UPDATE

### GLOBAL BURDEN

In 2015, there were an estimated 480 000 new cases of multidrug-resistant TB (MDR-TB) and an additional 100 000 people with rifampicin-resistant TB (RR-TB) who were also newly eligible for MDR-TB treatment.

Drug resistance surveillance data show that 3.9 percent of new and 21 percent of previously treated TB cases were estimated to have had **rifampicin-** or **multidrug-resistant** tuberculosis (MDR/RR-TB) in 2015.

MDR/RR-TB caused 250 000 deaths in 2015. Most cases and deaths occurred in Asia.

About 9.5 percent of MDR-TB cases have additional drug-resistance, **extensively drug-resistant TB (XDR-TB)**. To date, 117 countries worldwide have reported at least one XDR-TB case.

### TREATMENT OUTCOMES

Only 52 percent of the MDR/RR-TB patients who started treatment in 2013 were successfully treated, while 17 percent of patients died and in 9 percent of patients their treatment failed (22 percent were lost to follow up or not evaluated). The treatment success rate in XDR-TB patients was only 26 percent.

### ENROLLMENT ON MDR-TB TREATMENT

A total of 125 000 patients were enrolled on MDR-TB treatment in 2015 (up from 111 000 cases in 2014). This however represents only about 22 percent of incident MDR/RR-TB cases in 2015. The gap between detected MDR/RR-TB cases and enrolments on treatment appears to have narrowed globally over time. Over 7000 XDR-TB patients were started on treatment in 2015.

### DETECTION

In 2015, 30 percent of TB patients notified globally were tested for MDR/RR-TB, up from 22 percent in 2014. This improvement is partly due to the continued expansion in the use of rapid molecular tests.

In spite of increased testing, the number of MDR/RR-TB cases detected in 2015 only reached 132,000, a slight increase over 2014 (up from 122,000 cases).



**480 000** people fell ill with MDR-TB in 2015. There were an additional **100 000** people with rifampicin-resistant TB who also required second-line treatment

**132 000**

MDR/RR-TB cases detected in 2015

**125 000**

patients started on MDR-TB treatment in 2015

**52%** 

treatment success in MDR/RR-TB patients starting treatment in 2013

### WHAT ARE MDR/RR-TB AND XDR-TB?

Anti-TB medicines have been used for decades, and resistance to them is widespread. Disease strains that are resistant to at least one anti-TB medicine have been documented in every country surveyed.

**Rifampicin-resistant tuberculosis** is caused by bacteria that do not respond to rifampicin, one of the most powerful anti-TB medicines. These patients require MDR-TB treatment.

**Multidrug-resistant tuberculosis (MDR-TB)** is caused by bacteria that do not respond to, at least, isoniazid and rifampicin, the two most powerful anti-TB medicines.

Patients with **rifampicin-resistant** or **multidrug-resistant tuberculosis (MDR/RR-TB)** require treatment with second-line treatment regimens, which are more complex than those used to treat patients without drug-resistant TB.

**Extensively drug-resistant TB (XDR-TB)** is a form of multidrug-resistant tuberculosis that responds to even fewer available medicines, including the most effective second-line anti-TB medicines.



*SECTION 5*

**WORKSHOP  
'HOW TO'**



The workshop (“Limiting the Emergence and Spread of Antimicrobial Resistance: A Workshop to Strengthen Faith-Based Engagement”) was designed as a forum for faith-based organizations to systematically assess how to strengthen their role in addressing the emergence, spread, and individual and community needs associated with drug-resistant disease. This sections provides methods and materials used to facilitate this assessment. These materials can serve as a model toolkit to assist other FBOs, secular institutions, and any interested communities to systematically assess and strengthen their role in addressing this significant threat.

## Pre-meeting Preparations

### Objective

The objective of the workshop informs all other aspects of the workshop preparations. Our intent was to develop a starting point for enhancing engagement by faith-based organizations, institutions, and communities in local, regional, national, and global efforts to address drug-resistant disease.

### Collaborators

Collaborating with partners is a valuable opportunity to incorporate needed resources (e.g., technical expertise, financial, knowledge-base, contacts) into the planning and execution of the workshop. Identifying desired outcomes (the objective of the workshop) will help influence which partners are needed.

For this workshop, the initial collaborators included:

- U.S. Department of State, Office of International Health and Biodefence
- U.S. Department of State, Office of Religion and Global Affairs
- Holy See, Permanent Mission of the Holy See to the UN in Geneva
- Caritas Internationalis
- Georgetown University, Berkeley Center for Religion, Peace, and World Affairs
- GHR Foundation

### Steering Committee

A steering committee can provide guidance on key issues throughout the planning and execution of the meeting.

### Workshop Structure/Agenda

The workshop agenda needed to:

- **Reinforce a common starting point** for all meeting participants including: technical baseline, understanding of how the workshop would progress, what is expected of participants, and the desired outcomes.

We set up the agenda so that the opening remarks and technical briefs occurred on the first day, permitting participants to ask questions and think about the information overnight before being called upon to take an active role.

- **Effectively solicit expert knowledge** of the participants.

Days 2 and 3 of the meeting focused on guided/facilitated group discussion on specific topics. To help draw out the expertise of all participants, each session included 45 minutes of small group discussion (approximately five people), 30 minutes of large group discussion during which each table shared their views, and five minutes at the end of each session when participants filled out the session template.

The session template (example in Annex I: Pre-meeting Packet, pages 37-38) served as the guiding document to facilitate discussion during the sessions and the collection of information that informed the basis of the meeting report. The same template was used for each session.

- **Generate a consensus outcome document.**

The session templates were a critical tool for collecting input from each session.

In addition, the final agenda included two steps for reaching a consensus outcome document:

- 1. Agreement on substance:**

The afternoon of Day 4 focused on securing agreement on the substance that would be communicated in the final text. Before the group discussion, a small group of facilitators:

- a. Compiled the data from each session (night of Day 2 and after the morning of Day 3) and circulated the compilation with meeting participants, giving them a couple of hours to review.
- b. Generated a synthesis of the priority elements. This document served as the basis of discussion; physical copies were provided to participants.

During the session, an electronic version of the priority elements document was projected on a screen and group input was incorporated into the document in real time.

- 2. Agreement on text:**

The night of Day 3 and the morning of Day 4, a small group converted the agreed upon priorities from Day 4 into a draft outcomes document (our “Call to Action”). The afternoon session on Day 4 consisted of a line-by-line review of the document, with real-time incorporation of edits/suggestions. Having agreed on substantive points the day before made the process of agreeing on final text much easier.

## Participants

The workshop convened over 35 senior professionals, including members of Catholic orders; members of Islamic and Lutheran health service networks; implementers of programs in the Caribbean, Africa, South Asia, and Southeast Asia; representatives of funding agencies and the diagnostics industry; communications and logistics experts; and representatives from the WHO and other global health and migration agencies.

- **Emcee/Facilitator:** an individual (or more) who is responsible for the process of the meeting.
- **Presenters:** These include individuals who provide: (1) **Words of Welcome**, often senior representatives from the sponsoring entities; (2) **Scene Setters**, technical or institutional leads who provide a common foundation for meeting participants on technical issues and expectations for the meeting; and (3) **Remarks**, which can include representatives of key partner entities.
- **Session leads:** individuals who facilitate the session; define purpose/objective of the session, provide background information, and oversee the process of the session.
- **Participants/experts:** individuals whose input is solicited. In our workshops some of the keynote presenters and all of the session leads also served as participants.
- **Note takers and administrative support**

## Participant Preparation

Preparing participants in advance helps promote a successful outcome. Preparations typically focus on establishing a common understanding among participants of: (1) the purpose of the workshop, (2) their role/what is expected of them during the workshop; (3) desired outcomes, and (4) technical knowledge.

The workshop brought together experts across diverse fields, many of whom did not have technical backgrounds in drug-resistant disease. To prepare participants for the meeting we provided them with a pre-meeting packet that included: Antimicrobial Resistance - Introduction; Roles and Responsibilities; Template for Guiding Discussion; Pre-workshop Survey; Draft Agenda; and a digital library of relevant documents. A copy of the pre-meeting packet can be found in Annex I on pages 31-43.

In addition, we worked individually with keynote speakers and session leads to address questions and help inform their leadership roles during the workshop.

## Assessment/Improvement

Pre- and post-workshop surveys can help meeting organizers assess how well the meeting structure achieved its goals and what changes should be made in future efforts. In addition, pre-assessments can help meeting organizers identify gaps in participant knowledge—which can be used to identify additional pre-meeting materials to share with participants and/or specific topics/issues that should be addressed in the section of the meeting focused on reinforcing a common starting point for all participants. A copy of the pre- and post-meeting survey can be found in Annex II: Pre- and Post-workshop Surveys, pages 45-52.



# Antimicrobial Resistance - Introduction

## Combating the Emergence and Spread of Antimicrobial Resistance: A Workshop to Strengthen Faith-Based Engagement

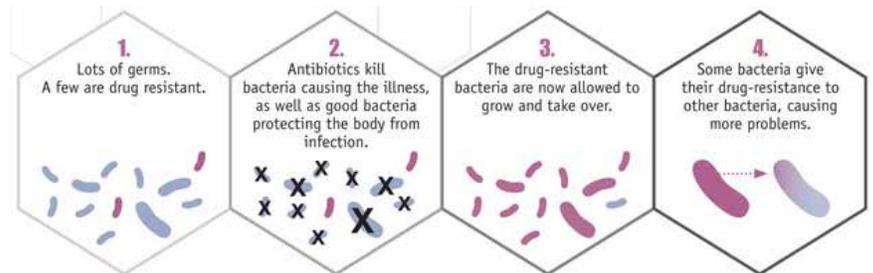
*December 12-15, 2016; Rome, Italy*

**Antimicrobial resistance (AMR):** the acquired ability by microbes to survive and grow in the presence of drugs meant to treat the infections they cause.

AMR is a growing global threat. Left unaddressed AMR undermines achievement of the Sustainable Development Goals for 2030, including ending poverty, ending hunger, ensuring healthy lives, and reducing inequality. Infection with drug-resistant diseases can cause longer illnesses, more complicated illnesses, more doctor visits, the use of stronger and more expensive drugs, and more deaths. The care-giving and health impacts related to drug-resistant disease extend beyond the individual, affecting the family and community.

**The development of resistance is a natural phenomenon; however, human actions can promote avoidable emergence and spread of AMR.**

The exposure of microbes to antimicrobial agents creates an environment that selects for microbes with existing genetic mutations that enable them to survive longer than sensitive microbes. This “selective pressure” results in the emergence of microbes that are resistant to the antimicrobial agents.<sup>1</sup>



Controlling the emergence and spread of AMR, and addressing the health, social, and development impacts of drug-resistant disease is complex. Steps to reduce the emergence and spread of AMR include:

- **Infection Prevention and Control** (community and healthcare settings)

Every infection prevented is one that needs no treatment. Prevention of infection can be cost-effective and implemented even where resources are limited. Good sanitation, hygiene

<sup>1</sup>“How Antimicrobial Resistance Happens,” figure from the Center for Disease Control and Prevention. <https://www.cdc.gov/getsmart/community/about/antibiotic-resistance-faqs.html>

(including access to reliable energy), and other infection prevention measures, such as vaccinations, can slow the development and restrict the spread of drug-resistant infections.

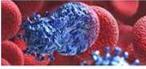
- **Appropriate management of antimicrobials**

Getting the right drug to the right patient at the right time is essential for proper care and to reduce the emergence and spread of AMR; however, currently conditions exist where large quantities of antimicrobials, in particular antibiotics, are wasted globally on patients who do not need them, while others who need them do not have access. Issues of antimicrobial use that contribute to the emergence of AMR include:

- **Using antibiotics when they are not needed.** The vast majority of antibiotic prescriptions are made outside the hospital setting, either by doctors or by pharmacists or self-medicating patients buying antibiotics over-the-counter. When doctors decide whether to prescribe an antibiotic, the decisions are often made without diagnostic tests.
- **Sub-therapeutic doses.** Use of antimicrobials at a dosage less than the amount required for a therapeutic effect—from a biological perspective—is one of the most effective ways of encouraging the development of drug-resistant infections. This provides a pathogen with enough exposure to the drug to give a selective advantage to the drug-resistant microbes, but not enough of the drug to kill off the infection. Conditions that can lead to sub-therapeutic doses include: use of counterfeit or substandard drugs; self-medication/access without prescription; cost; lack of reliable access to drugs; lack of education/information about the importance of taking the full dose.

**Additional Points of Note**

**Antibiotic resistance** is a subset of AMR. It refers to the resistance of bacteria to antibiotics and includes significant public health threats such as: multidrug-resistant tuberculosis (MDR-TB) and extensively drug-resistant TB (XDR-TB), carbapenem-resistant enterobacteriaceae (CRE), methicillin-resistant staphylococcus aureus (MRSA), ceftriaxone-resistant neisseria gonorrhoeae, and clostridium difficile.<sup>2, 3, 4, 5</sup>

<b>Antimicrobial Resistance</b>	Viruses	HIV		Antivirals
	Fungi	Valley Fever		Antifungals
	Parasites	Malaria		(antimalarials)
	Bacteria	Tuberculosis		Antibiotics

- **Tuberculosis (TB).** In 2015, the WHO reported that TB surpassed HIV as the leading cause of death from a single infectious disease. TB disproportionately affects the poor, who are

<sup>2</sup>Center for Disease Control and Prevention. HIV. Image. <http://www.who.int/tb/areas-of-work/drug-resistant-tb/>

<sup>3</sup>Center for Disease Control and Prevention. Valley Fever. Image. <https://www.cdc.gov/fungal/diseases/coccidioidomycosis/definition.html>

<sup>4</sup>Wikipedia. Malaria. Image. [https://en.wikipedia.org/wiki/Plasmodium\\_falciparum#/media/File:Plasmodium\\_falciparum\\_01.png](https://en.wikipedia.org/wiki/Plasmodium_falciparum#/media/File:Plasmodium_falciparum_01.png)

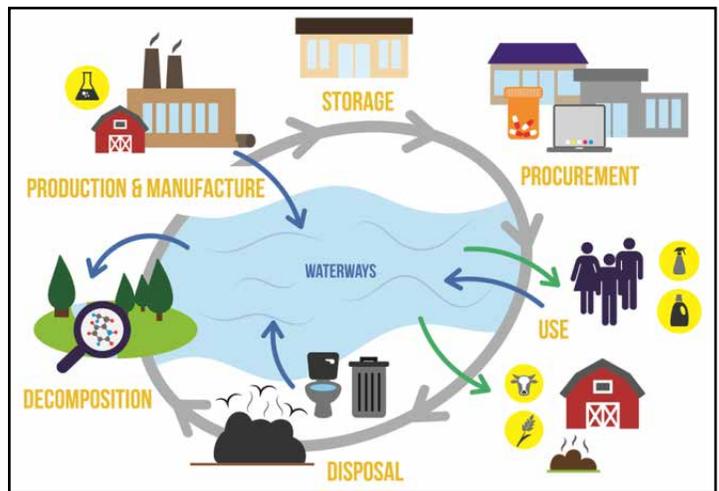
<sup>5</sup>Center for Disease Control and Prevention. Tuberculosis. Image. [https://phil.cdc.gov/phil/details\\_linked.asp?pid=16881](https://phil.cdc.gov/phil/details_linked.asp?pid=16881)

unlikely to have adequate nutrition and access to healthcare. It is also a danger to people with compromised immune systems due to human immunodeficiency virus (HIV), diabetes, or other conditions. The impact of the disease on individuals and families is often economically devastating. An average TB patient can lose up to four months of work and 30 percent of their annual income.

- **MRSA** is methicillin-resistant staphylococcus aureus, a type of staph bacteria that is resistant to many antibiotics. In a healthcare setting, such as a hospital or nursing home, MRSA can cause severe problems such as bloodstream infections, pneumonia, and surgical site infections. If not treated quickly, MRSA infections can cause sepsis and death.

**AMR is a “One Health” Issue.** The workshop will focus on the human health components of AMR. However, it is critical to note that:

1. AMR also can undermine animal health, crop health, and ecosystem health.
2. The development of resistance and resistant genes can spread between microorganisms.
3. The use of antimicrobials in any one sector (human health, terrestrial agriculture, aquaculture, or on crops) can result in unintended exposure for other sectors.



Combating the emergence and spread of AMR, ensuring the long-term efficacy of antimicrobials, and managing the individual and community impacts of drug-resistant disease will require whole-of-society action.

### **Antibiotics**

The supply of new medicines is insufficient to keep up with the increase in drug resistance as older medicines are used more widely and microbes evolve to resist them. Over the last several decades, there has been a continual withdrawal of pharmaceutical companies engaged in developing new antibiotics. In 1990, there were at least 18 large pharmaceutical companies actively developing antibiotics. Today, there are four.

# Combating the Emergence and Spread of Antimicrobial Resistance: A Workshop to Strengthen Faith-Based Engagement

*December 12-15, 2016; Rome, Italy*

### Meeting Participants Roles and Responsibilities

The workshop will serve as a forum in which Catholic faith-based organizations and other faith-based organizations, including health associations, can jointly identify and develop individual and collaborative actions to combat the emergence and spread of antimicrobial resistance (AMR). The workshop is intended to serve as a starting point for Catholic faith-based organizations and a model for other faith-based institutions in addressing this significant threat to individual and community well-being.

### Roles and Responsibilities

The workshop is the first holistic and systematic assessment by faith-based communities on how to strengthen their medical, social, educational, and pastoral structures to combat the emergence and spread of AMR and address individual and community needs associated with drug-resistant disease. **Workshop participants are asked to contribute their expertise actively in this assessment.**

Each session of the workshop will explore a different facet of the AMR issue. Participants will be asked to contribute insights, based on their experience, on the social, pastoral, and spiritual responsibilities of faith-based institutions, opportunities for engagement, and an assessment of what tools, resources, etc. are needed to strengthen faith-based engagement on AMR. These discussions will serve as the basis of a workshop outcome document that articulates for each facet of the AMR issue identified the current *State of Knowledge* and top *Recommendations* to strengthen faith-based engagement on AMR.

The attached template will guide discussion and solicit insights and recommendations from workshop participants.

### Spheres of Influence

Throughout the workshop, participants are asked to consider the diverse areas in which faith and faith-inspired institutions and communities can have influence and take action, including:

- **Pastoral Response:** Faith-based communities have a unique capacity and mandate to attend to the physical, emotional, and spiritual needs of those who are sick and suffering. Participants are asked to explore the opportunities and needs to enable local dioceses, parishes, religious congregations, and Catholic-inspired and other faith-based organizations to serve the pastoral and spiritual needs of individuals suffering with drug-resistant disease, their family members, and members in local communities.
- **Healthcare:** For example, the Catholic Church and affiliated organizations are the largest non-government providers of medical services in the world, reaching and serving individuals from all faith backgrounds. In addition to direct provision of care, the Church and affiliated

organizations are an essential source globally for training healthcare workers at all levels and critical ancillary services such as managing local dispensaries.

- **Community Outreach:** Community outreach represents an important means to provide (1) information as a trusted institution in local communities; (2) support to individuals and families, including access to adequate nutrition and other essential needs; and (3) advocacy.
- **Education:** Faith-based schools and universities throughout the world are educational communities that integrate research, thinking, and life experience.

## Template for Guiding Discussion

This template will be the guiding document used to facilitate discussion during the sessions and the collection of information that will form the basis of the meeting report. Please consider the questions identified below as we explore how to strengthen faith-based engagement to combat AMR and address the impacts of drug-resistant diseases. For each question, please consider each of the following spheres of influence: **Pastoral Response; Healthcare** (provision and/or training); **Community Outreach; and Education.**

State of Knowledge
What are the social, pastoral, and spiritual responsibilities associated with this topic?
How does the topic relate to your daily work?
What are you doing/could you do to address this topic?
What are the challenges?
What are the opportunities?

## Recommendations

What tools and products could the community develop to facilitate progress?

Are there immediate steps that can be taken?

What are your top three recommendations to strengthen/enable faith-based action?

Can you identify a timeline for the development/application of these recommendations?

# Combating the Emergence and Spread of Antimicrobial Resistance: A Workshop to Strengthen Faith-Based Engagement

*December 12 -15, 2016; Rome, Italy*

### Overview

The workshop will serve as a forum in which Catholic and other faith-based organizations, including health associations, can jointly identify and develop individual and collaborative actions to combat the emergence and spread of antimicrobial resistance (AMR). The workshop is intended to serve as a starting point for Catholic faith-based organizations and a model for other faith-based institutions in addressing this significant threat to individual and community well-being.

### Workshop Format:

The proposed format is intended to facilitate dialogue as well as individual and community ownership of anti-AMR initiatives. To accomplish this, we propose the following structure for each topic-based session:

- **Scene setter:** Brief introduction to the session topic (15 minutes). When possible, we will seek speakers from religious organizations already engaged on the topic.
- **Facilitated small group discussions:** Participants in these sessions could be organized by similar areas of responsibility or a mix of responsibilities. Core questions to facilitate discussion: How does the topic relate to your daily work? What are you doing/could you do to address this topic? What are the challenges? What are the opportunities? What recommendations would you make?
- **Discussion:** The small groups rejoin and share insights from their discussions.

### Communities of Effort:

Faith-based organizations are well positioned to encourage ongoing high-level support, mobilize individual and community action, and advance social and medical practices to combat the emergence and spread of AMR. The Catholic Church is the largest non-government provider of education and medical services in the world, reaching and serving individuals from all faith backgrounds that government services may not. The Church is also a platform for health advocacy with extensive reach including through their own healthcare institutions, for example managing local dispensaries and training healthcare workers at all levels. The workshop would empower the engagement of faith-based organizations with the following audiences:

- Consumers of antimicrobials (e.g. students, parishioners, patients)
- Purveyors of antimicrobials (medical and pharmacy staff)
- Decision makers (including government and community leaders)

## Outputs and Outcomes:

The conference will bring expertise in medicine, education, communications, and logistics to bear in addressing the realistic challenges facing all sectors in the global north and global south in combating AMR. The conference discussions are intended both for an exchange of challenges and best practices, and to inform the design of a practical roadmap for implementation by faith-based organizations in their contributions to the global effort.

## Agenda

### DAY 1: December 12

**12:00 – 14:00 Registrations [Lunch for speakers/invited guests]**

**14:00 – 14:15 Opening**

**14:15 – 15:30 Words of Welcome**

14:15 – 14:30 **Kenneth Hackett**, U.S. Ambassador to the Holy See

14:30 – 14:45 **Msgr. Mupendawatu**, Secretary for the Pontifical Council for Healthcare Workers

14:45 – 15:00 **Shaun Casey**, U.S. Special Representative for Religion and Global Affairs

15:00 – 15:15 **Mr. Michel Roy**, Secretary General of Caritas Internationalis

**15:30 – 16:00 Tea/Coffee Pause**

**16:00 – 16:30 Ice-breaker, Meeting Logistics, and Photo**

**16:30 – 16:50 “Scene Setter” Purpose of the Conference**

**Msgr. Robert Vitillo**, Attaché, Permanent Mission of the Holy See to the UN in Geneva

**Jessica Petrillo**, Ph.D., Senior Advisor at Department of State

**16:50– 17:40 Opening Panel**

16:50 – 17:00 **Juan Lubroth**, FAO

17:00 – 17:10 **Gary Cohen**, Becton Dickinson

17:10 – 17:40 Moderated dialogue and Q&A with participants

**17:40 – 18:00 Wrap-up**

**18:00 – 18:15 Closing**

**DAY 2: December 13**

**09:00 – 09:15 Opening**

**09:15 – 09:30 Welcome Day 2**

**09:30 – 11:00 Session 1: Ethical, Theological, and Pastoral Perspectives**

Facilitated by: **Fr. Kevin FitzGerald, S.J.**

09:30 – 09:45 “Scene Setter” **The Ethical and Pastoral Dimensions of the AMR Challenge**

09:45 – 10:30 **Facilitated Small Group Discussions**

10:30 – 11:00 **Discussion**

**11:00 – 11:30 Tea/Coffee Pause**

**11:30 – 13:00 Session 2: Infection Prevention and Control**

Facilitated by: **Sr. Barbara Brilliant, FMM and Dr. Tim Flanigan**

11:30 – 11:45 “Scene Setter” **Infection Prevention and Control, Key Challenges, Lessons Learned, and What Can Be Done**

11:45 – 12:30 **Facilitated Small Group Discussions**

12:30 – 13:00 **Discussion**

**13:00 – 14:30 Lunch**

**14:30-14:45 Remarks**

**Hajime Inoue M.D., M.P.H.** Special Representative of the Director-General for Antimicrobial Resistance, World Health Organization

**14:45 – 16:15 Session 3: Anti-Microbials - Access Issues**

Facilitated by: **Dr. Jesse Goodman**

14:30 – 14:45 “Scene Setter”

14:45 – 15:30 **Facilitated Small Group Discussions**

15:30 – 16:00 **Discussion**

**16:15 – 16:30 Tea/Coffee Pause**

**16:30 – 18:00 Session 4: Anti-Microbials - Use and Responsible Management**

Facilitated by: **Dr. Jesse Goodman**

16:30 – 16:45 “Scene Setter”

16:45 – 17:30 **Facilitated Small Group Discussions**

17:30 – 18:00 **Discussion**

**18:00 – 18:15 Closing Prayer/ Reflection**

### **DAY 3: December 14**

**09:00 – 09:15 Opening**

**09:15 – 09:30 Welcome Day 3**

**09:30 – 11:00 Session 5: Messaging**

Facilitated by: **Dr. Prince Bosco** and **Dr. Mirfin Mpundu**

09:30 – 09:45 “Scene Setter” Types of messaging and examples

09:45 – 10:30 Facilitated Small Group Discussions

10:30 – 11:00 Discussion

**11:00 – 11:30 Tea/Coffee Pause**

**11:30 – 13:00 Breakout Sessions**

11:30 – 11:45 “Scene Setter” for each Breakout

11:45 – 13:00 Facilitated Small Group Discussions

- **Traditional Healers and Self-Medication**  
Facilitated by: **Dr. Dianne Francois**, CMMB
- **Migrants, Refugees, and Displaced Persons**  
Facilitated by: **Dr. Davide Mosca**, IOM

**13:00 – 14:30 Lunch**

**14:30 – 16:00 Breakout Sessions Continued**

14:30 – 15:00 Readout of Breakout Sessions

15:00 – 16:00 Discussion

**16:00 – 16:30 Tea/Coffee Pause**

**16:30 – 17:45 Review Workshop Discussion Findings and Discuss**

Using a template for feedback, walk through what we have developed over the two days and formulate recommendations for future action by faith-based organizations.

**17:45 – 18:00 Closing**

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#### **\*Discussion Questions**

- What are the social, pastoral, and spiritual responsibilities associated with this topic?
- How does the topic relate to your daily work?
- What are you doing/could you do to address this topic?
- What are the challenges?
- What are the opportunities?
- What tools and products could the community develop to facilitate progress?
- Are there immediate steps that can be taken?
- What are your top three recommendations to strengthen/enable faith-based action?
- Can you identify a timeline for the development/application of these recommendations?

**DAY 4: December 15**

**9:00 – 9:15    Opening**

**9:15 – 9:30    Welcome Day 3**

**9:15 – 13:00   Visit St. Peter’s Basilica**

**13:00 – 14:30   Lunch**

**14:30 – 16:00   Next Steps: Creating an AMR Network and Path Forward**

- Review meeting report (state of knowledge and recommendations) reflecting the discussions and recommendations from the workshop. Identify any necessary corrections.
- Break into small groups for half-hour discussion on: how to use the meeting report; how to communicate it through networks; identify upcoming events at which to present it/ apply it.
- Present final meeting report.

**16:00 – 17:00   Coffee/Tea and Transportation to U.S. Ambassador’s Residence**

**17:00 – 19:00   Closing**

Conference participants, as well as guests from Diplomatic Corps accredited to the Holy See and from the press corps

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“Change is impossible without motivation and  
a process of education.”

— Laudato Si

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# ANNEX II: PRE- AND POST- WORKSHOP SURVEYS



## Pre-workshop Survey

### Combating the Emergence and Spread of Antimicrobial Resistance: A Workshop to Strengthen Faith-Based Engagement

*December 12-15, 2016; Rome, Italy*

NAME

QUESTIONS

How familiar are you with antimicrobial resistance (AMR)?									
Not at all									Expert
1	2	3	4	5	6	7	8	9	10

How familiar are you with the ethical, theological, and pastoral perspectives of AMR?									
Not at all									Expert
1	2	3	4	5	6	7	8	9	10

How familiar are you with role of infection prevention and control in combating AMR?									
Not at all									Expert
1	2	3	4	5	6	7	8	9	10

How familiar are you with the roles of faith-based organizations in infection prevention and control?									
Not at all									Expert
1	2	3	4	5	6	7	8	9	10

How familiar are you with issues of antimicrobial access and AMR?									
Not at all									Expert
1	2	3	4	5	6	7	8	9	10

How familiar are you with the roles of faith-based organizations in addressing the issues of antimicrobial access?									
Not at all									Expert
1	2	3	4	5	6	7	8	9	10

How familiar are you with the roles of faith-based organizations in addressing issues of antimicrobial use and responsible management?									
Not at all									Expert
1	2	3	4	5	6	7	8	9	10

How familiar are you with the opportunities for faith-based organizations to message on health?									
Not at all									Expert
1	2	3	4	5	6	7	8	9	10

How familiar are you with faith-based communities' collaboration with traditional healers and practices of self-medication to advance shared health objectives?									
Not at all									Expert
1	2	3	4	5	6	7	8	9	10

How familiar are you with religious gatherings and the potential emergence and spread of AMR?									
Not at all									Expert
1	2	3	4	5	6	7	8	9	10

How familiar are you with the conditions of migrants, refugees, and displaced persons and the emergence and spread of AMR?									
Not at all									Expert
1	2	3	4	5	6	7	8	9	10

How familiar are you with the objectives of the workshop?

Not at all

Expert

1	2	3	4	5	6	7	8	9	10

How well do you think your skills fit in achieving the objectives of the workshop?

Not at all

Very

1	2	3	4	5	6	7	8	9	10

What do you hope to gain from the workshop?

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# Post-workshop Survey

## Combating the Emergence and Spread of Antimicrobial Resistance: A Workshop to Strengthen Faith-Based Engagement

*December 12-15, 2016; Rome, Italy*

NAME

QUESTIONS

How familiar are you with antimicrobial resistance (AMR)?									
Not at all									Expert
1	2	3	4	5	6	7	8	9	10

How familiar are you with the ethical, theological, and pastoral perspectives of AMR?									
Not at all									Expert
1	2	3	4	5	6	7	8	9	10

How familiar are you with role of infection prevention and control in combating AMR?									
Not at all									Expert
1	2	3	4	5	6	7	8	9	10

How familiar are you with the roles of faith-based organizations in infection prevention and control?									
Not at all									Expert
1	2	3	4	5	6	7	8	9	10

**How familiar are you with issues of antimicrobial access and AMR?**

Not at all									Expert
1	2	3	4	5	6	7	8	9	10

**How familiar are you with the roles of faith-based organizations in addressing the issues of antimicrobial access?**

Not at all									Expert
1	2	3	4	5	6	7	8	9	10

**How familiar are you with the roles of faith-based organizations in addressing issues of antimicrobial use and responsible management?**

Not at all									Expert
1	2	3	4	5	6	7	8	9	10

**How familiar are you with the opportunities for faith-based organizations to message on health?**

Not at all									Expert
1	2	3	4	5	6	7	8	9	10

**How familiar are you with faith-based communities' collaboration with traditional healers and practices of self-medication to advance shared health objectives?**

Not at all									Expert
1	2	3	4	5	6	7	8	9	10

**How familiar are you with religious gatherings and the potential emergence and spread of AMR?**

Not at all									Expert
1	2	3	4	5	6	7	8	9	10

**How familiar are you with the conditions of migrants, refugees, and displaced persons and the emergence and spread of AMR?**

Not at all									Expert
1	2	3	4	5	6	7	8	9	10

How familiar are you with the objectives of the workshop?

Not at all									Expert
1	2	3	4	5	6	7	8	9	10

How well do you think your skills fit in achieving the objectives of the workshop?

Not at all									Very
1	2	3	4	5	6	7	8	9	10

What did you gain from the workshop?

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How satisfied were you with the contacts you made at this workshop?

Not at all									Very
1	2	3	4	5	6	7	8	9	10

What were the strengths of the workshop?

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**What about the workshop could be improved?**

**What actions will you take as a direct result of this workshop?**

**Any additional comments, feedback?**



