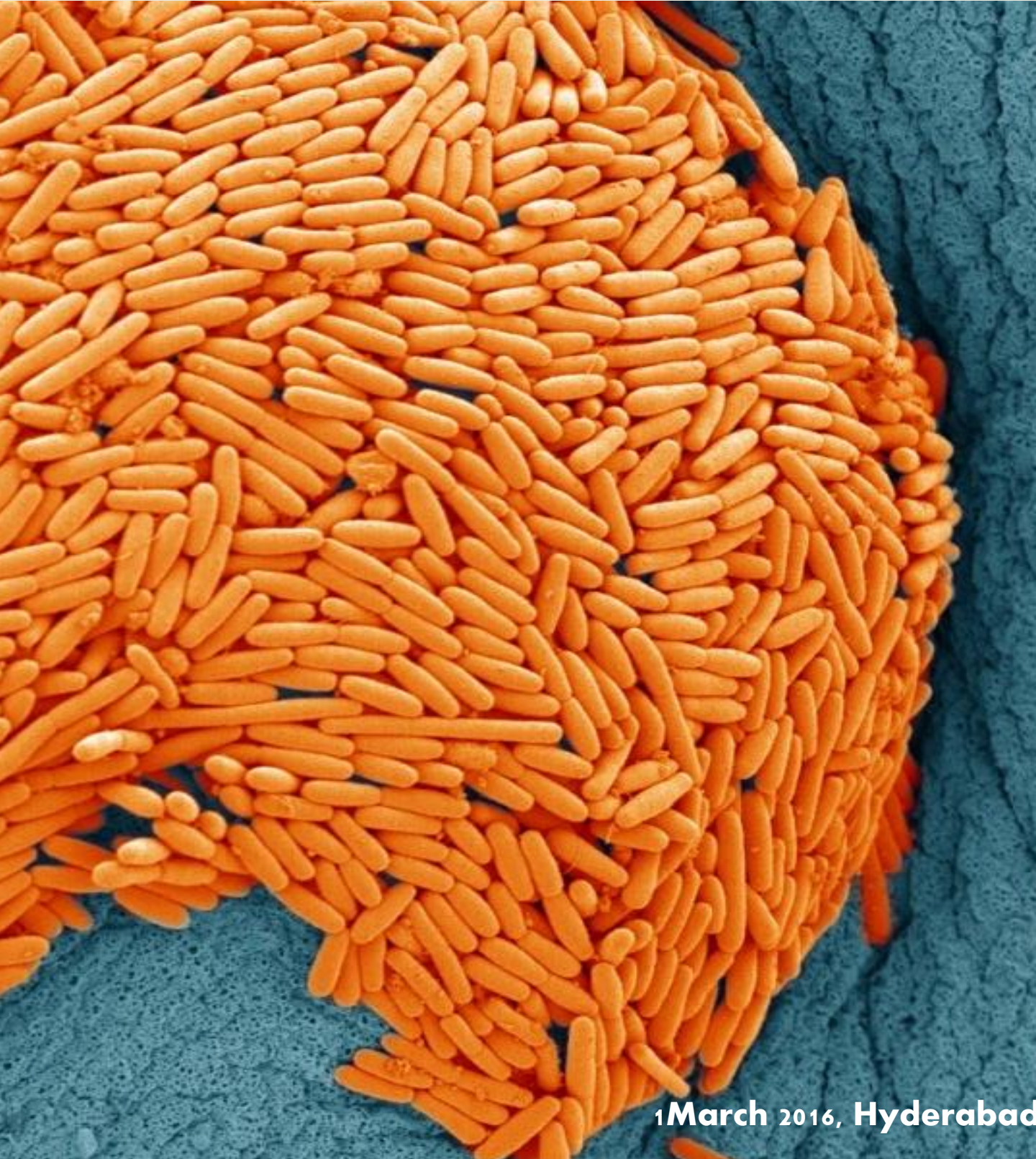


**VOICES FOR HEALTH**

# **Rise of the Deadly Superbugs- How can we respond?**

*GROWING EPIDEMIC ANTIBIOTIC-RESISTANT INFECTIONS*



**1 March 2016, Hyderabad**

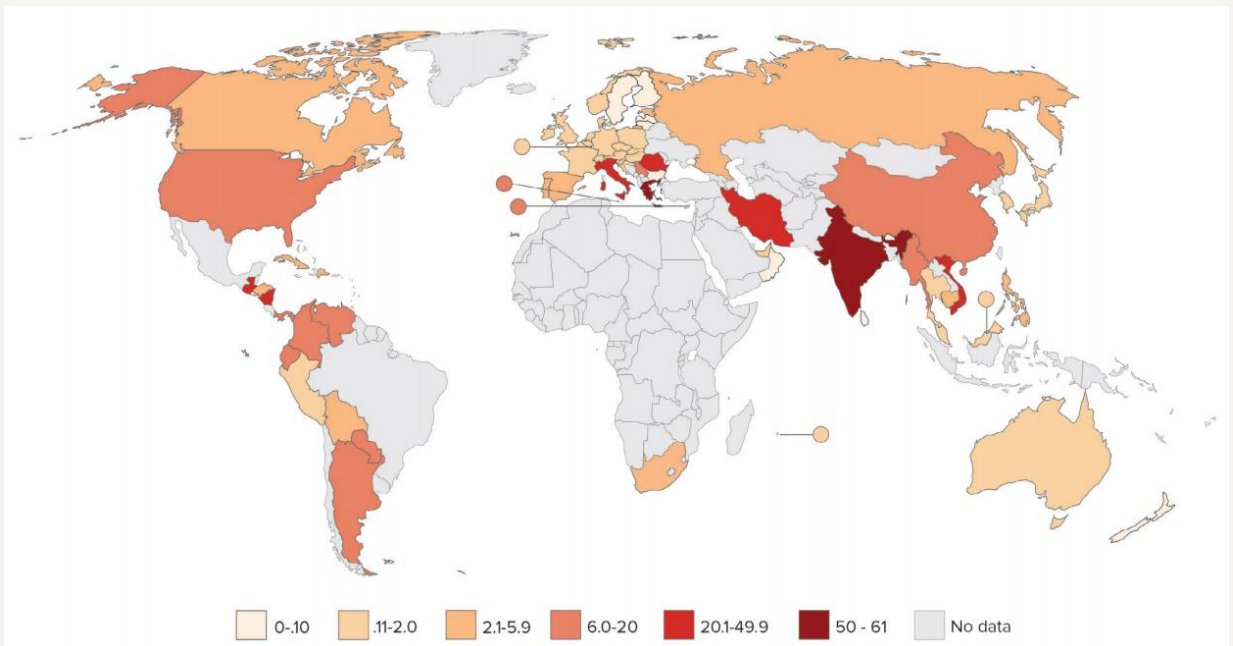


## What are antibiotic-resistant infections?

After their discovery in 1920s, antibiotics have been the most vital and commonly-used medication to combat life-threatening infections caused by disease-causing bacteria (not viruses!), but using antibiotics can have side effects. So we should exercise caution when taking antibiotics. Antibiotic-resistant infections are bacterial infections that do not respond to antibiotics. Antibiotic resistance occurs when bacteria no longer respond to the antibiotics that are designed to kill them. The bacteria survive and continue to multiply causing more harm. Misuse of antibiotics is the major cause of antibiotic resistance.

## Should I be concerned about antibiotic-resistant infections?

Antibiotic-resistant infections have been called one of the world's most pressing public health problems. Almost every type of bacteria has become stronger and less responsive to antibiotic treatment. A common misconception is that a person's body becomes resistant to specific antibiotics. However, it is the bacteria and other microbes, not people that become resistant to the antibiotics. If a bacteria is resistant to many antibiotics, treating the infections it causes becomes difficult or even impossible. In addition, these antibiotic-resistant bacteria can quickly spread from person to person – in this way a hard-to-treat infection can spread through the community. Antibiotic resistance also means that children and adults who have common infections, once easily treatable with antibiotics, can no longer be treated.



**India reports of the highest cases of antibiotic-resistant bacteria in the world (see that deep maroon on the map?) Source: CDDEP Report, 2015**





## Are antibiotics being used that carelessly in India & globally?

Yes, you would be surprised. In most countries 80% of antibiotics are used outside hospitals and healthcare facilities, either with a prescription from a healthcare provider or are obtained directly from pharmacies without one. 20-50% of this use outside the hospital use is inappropriate. According to the 2015 report by Center for Disease Dynamics, Economics & Policy (CDDEP), in 2010 India had the highest consumption of antibiotics in the world. On average, an Indian citizen consumed about 7.4 antibiotic pills (per year) in 2000, which increased to about 11.7 antibiotic pills in 2010. The report also revealed that between 2000 and 2010, antibiotic consumption increased by 36% worldwide, however in India it increased by 68%.

## How can I protect my family from antibiotic-resistant infections?

- Stay away from infections by regular hand-washing, avoid close contact with sick people and keep your vaccinations up to date
- In case of an illness, check with your doctor on whether you need a course of antibiotics
- Only use antibiotics when prescribed by a doctor or certified health professional
- Are you aware that colds, flu, most sore throats, and bronchitis are caused by viruses? Did you know that antibiotics do not help fight viruses? It's true. Plus, taking antibiotics when you have a virus may do more harm than good. Taking antibiotics when they are not needed increases your risk of getting an infection later that resists antibiotic treatment.
- If you do commence on a course of antibiotics; please ensure you finish the course
- Never use leftover antibiotics

## How can we act together to address this problem?

- Patients, healthcare providers, hospital administrators, and policy makers must work together to use effective strategies for improving antibiotic use—ultimately improving medical care and saving lives. Tackling antibiotic resistance requires efforts at multiple levels. This includes:
- Careful use of antibiotics
- Improved communication and public awareness
- Improved hygiene
- Developing a national tracking program on antibiotic-resistant bacterial infections and antibiotic consumption
- Improving Antibiotic Stewardship Programs- coordinated efforts that promote the appropriate use of antibiotics), improve patient outcomes, and decreases the spread of infections caused by antibiotic-resistant bacteria
- Infection control programs to prevent spread of antibiotic-resistant bacteria

## Where can I find additional resources?

**World Health Organisation (WHO)** [www.who.int](http://www.who.int)

**Center for Disease Dynamics, Economics & Policy (CDDEP)** [www.cddep.org](http://www.cddep.org)

**Wellcome Trust** [www.wellcome.ac.uk](http://www.wellcome.ac.uk)

**Review on Antimicrobial Resistance** [www.amr-review.org](http://www.amr-review.org)

**Centre for Disease Control and Prevention (CDC)** [www.cdc.gov/drugresistance](http://www.cdc.gov/drugresistance)

**The Lancet** [www.thelancet.com/series/antimicrobials-access-and-sustainable-effectiveness](http://www.thelancet.com/series/antimicrobials-access-and-sustainable-effectiveness)

## Organisers



17<sup>th</sup> ICID

Wellcome Images

**Voices for Health** is an effort aimed at engaging people and communities to better understand public health and to educate them about key determinants of emergent health issues. This initiative is planned as a series of public engagement events that will bring together biomedical researchers with policy makers, social scientists, health workers, media and other stakeholders to talk about important health issues. Each event will focus on a public health topic of contemporary interest. The series will aim to demystify science and myths, disseminate latest health research and share perspectives of experts and people. The first of the series focuses on antibiotic resistance.

**Voices for Health** is an initiative of the **Wellcome Trust/DBT India Alliance**. This effort is implemented with technical support from the **Public Health Foundation of India**.

Join "**Voices for Health**" [www.facebook.com/voicesforhealth](http://www.facebook.com/voicesforhealth)

**Cover Image credit Wellcome Images** : *Clostridium difficile* colony. *Clostridium difficile* is a strain of bacteria which is a major cause of antibiotic-associated diarrheal disease.