Critically Important Antimicrobials for Human Medicine

2nd Revision

World Health Organization

WHO Advisory Group on Integrated Surveillance of Antimicrobial Resistance (AGISAR)

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1. History of the current document

The 1st WHO Expert Meeting on Critically Important Antimicrobials (CIA) for Human Health was held in Canberra, Australia, in 2005. During this meeting, participants considered the list of all antimicrobial classes used in human medicine and categorized antimicrobials into three groups of *critically important, highly important,* and *important* based on criteria developed.

The 2nd WHO Expert Meeting on Critically Important Antimicrobials for Human Health was held in Copenhagen, Denmark, in May 2007. In this meeting, participants reviewed the two criteria and re-examined the categorization of all human antibacterial classes in light of new drug development and scientific information since 2005. Participants were also requested to prioritize agents within the critically important category in order to allow allocation of resources on the agents for which management of the risks from antimicrobial resistance are needed most urgently.

The 1st AGISAR meeting held in Copenhagen, 2009 was a follow-up of these two previous expert consultations. Experts from the meeting reviewed the Copenhagen 2007 list of CIA (1st revision of the CIA list) and came up with the 2nd revision of the WHO list of critically important antimicrobials for human medicine, taking into account new scientific information and new drugs.

2. What should the list be used for?

The list of Critically Important Antimicrobials can be used as a reference to help formulate and prioritize risk assessment and risk management strategies for containing antimicrobial resistance due to non-human antimicrobial use. Specific examples include:

- Prioritization of the antimicrobials characterized as *critically important* for most urgent development of risk management strategies in order to preserve their effectiveness in human medicine.

- Elevating the categorization of specific antimicrobials in regions/countries where it is warranted

- Designing antimicrobial susceptibility testing platforms for use in national programmes to monitor antimicrobial resistance

- Informing national policies related to antimicrobial resistance
- Developing appropriate new drugs and vaccines that will preserve critically important antimicrobial agents

3. What should the list NOT be used for?

- As the sole source of information for developing risk management strategies.
- As the sole source of treatment guidelines for either animals or humans.
- To minimize the importance of other critically important antimicrobials in the same category.

4. The criteria

Criterion 1:
Antimicrobial agent is used as sole therapy or one of few alternatives to treat serious human disease.

Explanation: It is self-evident that antimicrobials that are the sole or one of few alternatives for treatment of serious infectious diseases in humans have an important place in human medicine. Serious disease refers to those illnesses which, if left untreated, are likely to result in irreversible morbidity or mortality. Seriousness of disease may relate to the site of infection or the host (e.g. pneumonia, meningitis). Multidrug resistance alone may or may not influence patient outcomes. For instance, multidrug resistance in *S. aureus* limits options in the treatment of pneumonia, but incision and drainage alone appears effective without antimicrobials in the treatment of skin abscesses. Therefore drug resistance does not influence the treatment of patient