ARTEMISININ RESISTANCE IN THE GREATER MEKONG SUBREGION

Key messages

- The situation in the Greater Mekong Subregion is critical.
- We are at a tipping point. If resistance to artemisinin emerges elsewhere, particularly in Africa, it would also be a huge setback to international efforts over recent years to combat the threat of malaria.
- This is why a vigorous response to resistance in the Greater Mekong Subregion is so important.
- Containment activities are going on in all four affected countries (Cambodia, Myanmar, Thailand and Viet Nam), but much more needs to be done.
- Support is needed at the very highest levels of government.
- On 25 April, in Phnom Penh, WHO is launching its "Emergency Response to Artemisinin Resistance in the Greater Mekong Subregion" framework (known as ERAR).
- The framework will provide the six countries of the Greater Mekong Subregion with the strategic direction they will need to take on and beat resistance.
- The launch will be accompanied by the setting-up of a regional hub in the Cambodian capital to provide coordination and technical assistance and support for the intensified containment and preventive efforts set out in the framework.
Background

- Artemisinin-resistant malaria has emerged in Cambodia, Myanmar, Thailand and Viet Nam. This is a serious situation as artemisinin-based combination therapies (ACTs) are the first-line treatment for uncomplicated falciparum malaria in most endemic countries.

- ACTs have been central to the remarkable recent successes in global malaria prevention and control. ACTs also help counter the threat of antimalarial drug resistance by combining two drugs with different mechanisms into one treatment.

- Attempts to contain artemisinin resistance first started in 2008 on the Cambodia-Thailand border. Containment activities are currently going on in all four affected countries, which are situated in the Greater Mekong Subregion (GMS).

- (The Greater Mekong Subregion is made up of Cambodia, China's Guangxi Zhuang Autonomous Region and Yunnan province, the Lao People's Democratic Republic, Myanmar, Thailand and Viet Nam.)

- A joint assessment carried out between November 2011 and February 2012 by development partners (AusAID, the Bill and Melinda Gates Foundation, DFID and USAID), jointly with WHO, concluded that "a good, if delayed", start has been made to containing artemisinin resistance in the affected countries. The assessment said that in some areas the impact had already been impressive.

- However, the report also said: "It is impossible to avoid the conclusion that not enough is yet being done, with enough intensity, coverage and quality …"

- The report called for "a very large increase in attention to the issue."

- There is historical precedent for today's concern. Resistance to a number of formerly effective malaria drugs originated along the Cambodia-Thailand border.
and then spread west to South Asia, then Africa – where most malaria deaths occur.

- If this were to occur with artemisinin, it would be a huge setback for national and international achievements over recent years in combatting the threat of malaria.

- Each year, malaria kills some 660,000 people globally – and this is when a very effective treatment is still available. If these artemisinin-based drugs were lost to resistance, the consequences could be serious.

- Falciparum malaria is the most serious form of malaria, causing the most deaths worldwide. Falciparum malaria is the only malaria parasite to have shown resistance to artemisinin derivatives.

- Exposure of the parasite to artemisinin monotherapies for over 30 years, and the availability of substandard or counterfeit artemisinin, have probably been the main cause of resistance.

- When treated with an artemisinin monotherapy, patients may discontinue treatment prematurely following the rapid disappearance of malaria symptoms. This can lead to the development of resistance.

- WHO believes that 31 companies are still marketing oral artemisinin monotherapies, and 14 countries continue to permit their use, eight of them in Africa.

**The response**

- With financial support from the Bill & Melinda Gates Foundation and AusAID, WHO is spearheading a multi-stakeholder, emergency regional response to support affected countries in the region and address cross-border issues.
WHO has developed the "Emergency Response to Artemisinin Resistance in the Greater Mekong Subregion" framework (known as ERAR). The framework was based on the November 2011-February 2012 joint assessment and was endorsed by the Greater Mekong Subregion countries and partners.

The emergency response framework lays out four areas of priority action to be implemented by a consortium of endemic countries, UN agencies, and country-based malaria partners:

1. Full coverage with quality interventions in priority areas;
2. Tighter coordination and management of field operations;
3. Better information for artemisinin resistance containment;
4. Regional oversight and support.

The framework also calls for:

- A rapid scaling-up of prevention, diagnostic testing and treatment interventions to cover all at-risk groups, including migrants and mobile populations.
- A strengthening of drug efficacy and insecticide resistance monitoring, as well as improved surveillance.
- Better pharmaceutical regulations.
- More cross-border collaboration.
- The framework is focused on the GMS but recognizes that artemisinin resistance is an issue of global concern. A concerted and coordinated effort at local, regional and global level is needed.

The framework is focused on the GMS but recognizes that artemisinin resistance is an issue of global concern. A concerted and coordinated effort is needed at local, regional and global level.
• Activities directed at the containment of artemisinin resistance must build on efforts to control and eventually eliminate malaria.

• As part of the response, WHO is also establishing a regional hub in Phnom Penh, Cambodia, to coordinate the response and provide support for intensified containment and prevention efforts, with support from partners.

• From the regional hub, the support will strengthen national monitoring and evaluation systems with a view to an exchange of information across borders.

• The hub will also establish a regional database containing data on resistance, epidemiology, policies and programme implementation, providing close-to-real-time monitoring. The data will be made available to countries and partners.

• WHO believes support is needed at the very highest levels of government – an element that is largely missing at the moment.

------------------------

For more information, please contact:

Dr Eva-Maria Christophel
Team Leader, Malaria, other Vectorborne and Parasitic diseases
Tel.: +632 528 9723
E-mail: christophele@wpro.who.int

Mr Timothy O’Leary
Public Information Officer
Tel.: +632 528 9992
E-mail: olearyt@wpro.who.int