Leading experts concerned at increasing challenges and new threats in infectious diseases

26 April 2013, BERLIN: Experts about to gather at the world’s largest conference on infectious diseases acknowledge that they are facing a number of increasing challenges and emerging new threats in infectious diseases. The European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), which opens tomorrow in Berlin (27 – 30 April), brings together more than 10,000 scientists and clinicians from around the world to share state of the art updates, experience and information on cutting edge science and technology.

New and emerging infections that are currently being tracked, and a response planned for, include a new strain of the avian influenza virus – A (H7N9) – centred in Eastern parts of China, with more than 100 human cases confirmed and some 20 deaths. The A (H7N9) strain, normally found in birds and not previously known to infect humans until March this year, appears to be well-adapted to infect humans.

Health officials are also closely monitoring the emergence of a new coronavirus – a variant of the respiratory virus that can cause the common cold, but was also the cause of the SARS (severe acute respiratory syndrome) outbreak ten years ago which swept across the world killing more than 700 people. First detected in a patient in Saudi Arabia in September 2012, the new coronavirus, which can cause severe pneumonia and kidney failure, has infected patients in a number of countries and killed 11. There are encouraging signs a treatment may be found by scientists using a combination of antiviral drugs.

“Whilst we do not know whether the A (H7N9) virus could eventually cause a pandemic, or how the new coronavirus will play out, further cases of infections with both viruses are expected and the health community must remain vigilant in tracking the spread of these infections,” said world leading virologist Professor Ab Osterhaus from Erasmus Medical Centre in Rotterdam who is presenting a session on influenza pandemics past, present and future at the Congress. “As with any emerging viruses we must be prepared, learn from past lessons, and expect the unexpected”.

Europe has also witnessed several new and ongoing outbreaks of measles - something that has increased in recent years due to stagnating vaccine coverage as a result of misinformation, misfounded fears, vaccine sceptics and complacency about the seriousness of the disease. France had some of the highest rates of measles across the region in 2011, together with Italy, Romania, Spain and Germany. A current epidemic in Britain has seen more than 800 cases so far, with an estimated two million schoolchildren believed to be unprotected. The outbreak is being blamed in part to a discredited report – and the media coverage of it - by Andrew Wakefield that wrongly linked the MMR vaccine to autism in 1998. Only Iceland and Cyprus remained measles-free in the region in 2011.

“Whilst anti-vaccination activists continue to spread misinformation and the message that childhood immunisations are unnecessary and harmful, the impact on unvaccinated or under-vaccinated pockets of populations is currently being seen across Europe today,” said Professor Giuseppe Cornaglia, Past President of the European Society of Clinical Microbiology and Infectious Diseases (ESCMID) who organise the annual ECCMID. “There is no room for misleading or scientifically unsound statements about the risks of childhood
vaccines when dealing with highly infectious diseases that have a range of complications and will inevitably cause some deaths.”

Measles has been virtually eliminated in North and South America, but Western Europe is lagging behind. The target to eliminate measles transmission by 2015, agreed by all 53 countries in the WHO European Region, will only be possible if vaccination coverage is above 95%, with two doses of the MMR vaccine in all population groups, in all geographical areas. Public education and vaccine catch-up activities are key.

Other critical challenges facing scientists and health professionals being discussed at the Congress include the alarming increase in antibiotic resistance with warnings that if no action is taken we could be faced with a devastating scenario where routine operations, cancer treatments and organ transplants would no longer be possible. With no new class of antibiotics since 1987, and few in the drug development pipeline, attention is being focused on calling for coordinated action between governments, the medical community, the pharmaceutical industry and general public.

Misuse of antibiotics is one of the key factors underlying the crisis. Experts are concerned about inappropriate use such as overprescribing or self-medication where antibiotics are available over the counter, as well as failure to complete a full course of prescribed treatment. It is also thought that the widespread use of antibiotics in animals has led to resistant strains of some bacteria being transmitted to humans via the food chain, although Europe has banned the use of antibiotics to boost the growth of livestock.

Professor Patrice Nordmann, a renowned French Scientist who will be presented with the annual ESCMID Excellence Award for his work in emerging resistance worldwide to antibiotics, warned; “We are seeing the number of infections resisting most known antibiotics explode and there are genuine fears that we could return to the times when antibiotics did not exist which could risk a paralysis of modern medicine.” Professor Nordmann is Chief of the Department of Microbiology at the Hospital Bicetre, South-Paris Medical School, where he founded the INSERM Unit 914 focused on cutting edge research in this field. “When faced with such a worrying scenario there is a pressing need for increased investment in innovative research, as well as coordinated action between countries.”

The European Committee on Antimicrobial Susceptibility Testing (EUCAST), which ESCMID established in the mid-1990s, focuses on harmonizing antimicrobial susceptibility testing across Europe. “Without uniformity across Europe on the definition of what is resistance, it is impossible to compile uniform data to help guide both policy and clinical practice,” said Professor Gunnar Kahlmeter, ESCMID President. “Consortiums such as EUCAST that bring together national bodies and official health agencies have a powerful contribution to the resistance crisis which is ever-evolving and cause for intensified and collective action.”

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