

## Highlights from the fourth ICPIC

Experts from around the world gathered in Geneva, Switzerland, in June 2017 for the fourth International Conference on Prevention and Infection Control. Sean Cleghorn reports.

Antimicrobial resistance (AMR) is increasingly becoming a global priority, and its importance was emphasised at this year's International Conference on Prevention and Infection Control. International initiatives on infection control, and particularly AMR, were outlined in several talks. Carmem Pessoa (WHO, Geneva) outlined the five pillars of WHO's global AMR programme. First, to improve awareness, largely through AMR awareness weeks. Second, to strengthen evidence through surveillance, with 40 countries enrolled in global AMR surveillance systems and 11 more underway, including in sub-Saharan Africa. Third, to reduce infections, relying mainly on WHO's hand-hygiene strategy. Fourth, to optimise use of antimicrobials; in the latest list of essential medicines, antibiotics are grouped according to how often they should be used. And fifth, to increase investment in new medicines, helped by WHO's Priority Pathogens list, which identifies the main pathogens that need new drugs. Pessoa called on countries to initiate national action plans for AMR, saying that "no country will be free until all countries have addressed AMR".

Tim Walsh (Cardiff University, UK) discussed the Fleming Fund, which is working to tackle AMR in low-income and middle-income countries. The Fund has secured £265 million of investment up to 2020–21 from the UK Department of Health. Through grants to non-governmental organisations, and individual countries, the fund will foster sustainable investment in laboratories, human resources, surveillance systems, and rational use of antimicrobials. There will be no expensive high-throughput sequencing bankrolled by the Fund; resources are relatively tight, but much simple and effective work can be



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done, Walsh said, provided that those involved are committed. "What is the difference between a ham sandwich and an egg sandwich? The chicken was involved, the pig was committed. We want people who are committed. We don't want egg sandwiches."

Policy aside, there was much research presented to inform delegates. Friederike Maechler (Charité Universitätsmedizin Berlin, Berlin) presented findings from the R-Gnosis WP5 trial, which tested contact isolation for carriers of ESBL-producing Enterobacteriaceae (ESBL-E) in non-intensive care unit wards. In a cluster-randomised crossover trial done in 20 wards across Europe, they compared contact isolation (single room if possible, barrier precautions with gloves and gowns) with standard precautions (use of gloves and gown only when contacting bodily fluids). They analysed 11803 pairs of samples (one on admission, one a week later or at discharge), from patients with a median length of stay of 5 days (IQR 3–8). The primary outcome, ESBL-E-free days, was 4.6 in both groups, with no difference by hospital or by organism. These findings accord with previous studies, suggesting that contact isolation is

not an effective means of reducing acquisition of infection.

The results of the SoM study, on the effectiveness of contact precautions in a single-bed versus multiple-bed room, were presented by Marjolein Kluytmans-van den Bergh (University Medical Center Utrecht). This cluster-randomised controlled trial was done at 16 Dutch hospitals in 2011–14, assessing 634 patients with ESBL-E: 326 in single rooms versus 308 in multiple-bed rooms. The investigators assessed horizontal transmission by whole genome multilocus sequence typing of isolates from swabs taken from wardmates 5–8 days after enrolment. 16 transmissions occurred among 326 patients assigned to single rooms versus 18 among 308 patients in multiple-bed rooms (4.9% vs 5.8%). There was no significant difference between groups (risk difference 0.9%, 90% CI –2.2 to 4.4). This finding suggests that multiple bedrooms are not inferior to single rooms for preventing transmission; although non-compliance with contact precautions and crossover between groups could weaken the conclusions.

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