1. Tackling antibiotic resistance and the role of hygiene in India

On Jan 12th 2019, a round table was hosted by IFH SEA Kolkata in collaboration with Center for Disease Dynamics, Economics & Policy (CDDEP), New Delhi, with support from All India Institute Medical Science (AIIMS), New Delhi & All India Institute of Hygiene & Public Health (AIH&PH). In India, although there is significant investment in hygiene/IPC in healthcare settings at one end of the spectrum, and on sanitation water and hygiene (mostly hand washing) in low income communities at the other, currently there is relatively little investment in between these 2 extremes i.e. people living in urban homes with access to water and sanitation. As in Europe and USA, a key issue where hygiene is important is antibiotic resistance. WHO now recognize that, across the world, preventing infections including through hygiene in home and everyday life is as important as antibiotic stewardship in reducing antibiotic prescribing. This is particularly important in
countries like India where antibiotics are freely available.

The object of this roundtable was to bring together experts in health, antibiotic resistance and environmental science from research & academic institutions, along with representatives of the corporate sector and NGO's to evaluate the issue of hygiene in home and everyday life settings and agree a proposal for a pilot study to evaluate hygiene behaviour change in households.

The morning session included presentations from key experts:

- **Hygiene & health in the Home – a call for an integrated strategy** Prof KJ Nath, IFH, President, IPHE, Prof Sally Bloomfield, IFH, LSHTM
- **Behavioural change for effective promotion of home hygiene.** Prof. Madhumita Dobe , Department of Health Promotion & Education, AIH&PH
- **Antimicrobial Resistance: The Challenges Ahead.** Dr. Amit Dinda, AIIMS
- **Impact of WASH and Hygiene Interventions on AMR and Health** Dr. Jyoti Joshi, Head - South Asia & GARP Asia Coordinator of CDDEP
- **Implementation of E-bug school hygiene education programme in Thanjavur, India experience from a pilot project.** Dr. Satish & Priyadarshini.
- **Modeling the impact and cost effectiveness of different interventions.** Dr. Isabel Frost, CDDEP,

In the afternoon, Dr. Ashok Mallick, AIH&PH presented a proposal for a pilot study on home hygiene promotion. The objectives of the study are to:

- Identify hygiene perceptions and behaviours among household members and the factors which influence perception and behaviours.
- Develop strategies and material for targeting hygiene behaviours and conduct interventions to prevent infection transmission through hygiene.
- Assess changes in hygienic behaviour among household members after intervention.

The study will be conducted in households of urban/rural areas of Kolkata/Singur, West Bengal. A range of home hygiene behaviours (e.g. Hand hygiene, food hygiene, toilet hygiene, respiratory hygiene) will be studied through interviews of adult household members and focus group discussions. Microbiological samples will be taken from household surfaces at sites most likely to be involved in transfer of infection. Based on findings at baseline, interventions will be designed and implemented and behaviour change assessed using objectives and indicators of improved hygiene behaviours agreed prior to the intervention.

The proposal was discussed by roundtable participants and resource persons including Dr. Jyoti Joshi, Dr. Rupak Mitra, Hindustan Lever, B Sengupta, Secretary General IPHE, Dr D N Guha Mazumdar, epidemiologist. It was agreed that a collaborative pilot study should be launched as soon as possible for promoting hygiene with the objective of reducing of infectious diseases and consequent reduction of AMR.
2. Tackling antimicrobial resistance 2019–2024 The UK’s five-year national action plan emphasizes the role of the public

On January 27th 2019 the UK government published a new pioneering 5 year national action plan (NAP) and 20 year vision for tackling antimicrobial resistance (AMR). The NAP focuses on three key ways of tackling AMR as outlined in Fig 1:

- reducing need for, and unintentional exposure to, antimicrobials;
- optimizing use of antimicrobials;
- investing in innovation, supply and access to antimicrobials

The new plan has strong focus on infection prevention and control including in the community. It states “Health and social care providers can only do so much to prevent infections; when it comes to acquiring and transmitting infections in the community (which requires exposure to antimicrobials), the public have a huge part to play”.

Handwashing compliance is known to be poor, in both high and low-income settings. Globally, only 19% of people consistently wash their hands at key times. In the UK, most people know they should wash their hands but whether they do or not varies significantly.

To promote better IPC practices among the public, it is proposed that the UK will:

- Develop more targeted interventions to improve behaviour around hand hygiene.
- Work with educators and local authorities to ensure all school leavers understand how to wash hands, prevent infections and use antimicrobials appropriately.
Survey public attitudes to and awareness of AMR and self-reported behaviours through new technologies, including social media; and use these to assess the impact of national public health campaigns and local awareness-raising activities.

The action plan features e-Bug as an evidence based resource to educate school children about infection prevention and highlights the need for all children to leave school with a basic understanding of AMR.