

N gonorrhoeae stem from basic research on the biology of the organism, the development of diagnostic capabilities, and the availability of more effective drugs. The “bench to practise” translation of this research is vital to building capacity.

This presentation will focus on the gonorrhoea resistance research and training opportunities to contribute to the prevention and control efforts.

S8.4 LABORATORY HARMONISATION AND QUALITY-ASSURANCE ISSUES: CHALLENGES AND OPPORTUNITIES

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There are significant gaps in gonococcal susceptibility data particularly in high-burden countries. Laboratory detection of gonococci with reduced susceptibility to azithromycin and cephalosporins is of particular concern. Coordinated and standardised laboratory testing approaches that ensure quality assurance are vital to detect emerging resistance and optimise treatment.

This presentation will explore current gaps and identify opportunities, including roles of laboratory networks, in building regional diagnostic capacity.

S8.5 GLOBAL ACTION PLAN TO COMBAT ANTIMICROBIAL RESISTANCE IN *NEISSERIA GONORRHOEAE*: CHALLENGES AND OPPORTUNITIES

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The WHO is drafting a strategic response to the threat of untreatable *Neisseria gonorrhoeae*. The main objective of the Global Action Plan to combat AMR in *N gonorrhoeae* is to devise nationally and regionally appropriate public health actions to address this global threat. This includes technical and programmatic guidance to countries, regions and global stakeholders.

This presentation will discuss the basic elements of the draft WHO Action Plan.

Symposium 9: Applications of program science in the field of STI

S9.1 THE ROLE OF MATHEMATICAL MODELS IN PLANNING AND EVALUATING PROGRAMMES

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The potential use of mathematical models in programme science will be reviewed. The adoption, planning, implementation, and evaluation of programmes in global health should be an iterative process where the collection and analysis of data plays a significant role in planning and evaluation. Mathematical models provide a framework for the integration of data from multiple sources, predicting the impact of programmes based on efficacy data for the range of interventions combined and providing counterfactuals to estimate effect sizes in evaluating impact. Mathematical models describing the impact of alternative interventions are central in health economic analyses. Models can usefully be combined with theories describing why programmes should have an impact in the design and evaluation of the programmes. Synergies in interventions can be considered at multiple levels: in the individual both in

enhancing behaviour changes and combining to reduce risks; in populations changing the epidemiological context; in programme activities; and in creating environments where interventions can succeed. Models explain what we can expect from these synergies and help us identify how to integrate new technologies into programmes.

S9.2 MONITORING AND EVALUATION: LINKING PROGRAMMING AND RESEARCH

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Researchers are becoming increasingly interested in the evaluation of STI/HIV interventions that take place in “real world” programmatic or health systems settings. Likewise, programme and health service managers are facing ever growing demands to demonstrate results and achieve “value for money”. Monitoring and evaluation (M&E) systems are fundamental to both efforts. However, research and programme efforts are often not closely linked, with data being collected and analysed independently.

This presentation will examine M&E from a researchers’ perspective. It will outline how a programme science perspective can contribute to the development of robust and useful M&E systems and processes. We will present two case studies. The first, the Integra project, evaluates the integration of HIV and SRH services in Kenya and Swaziland. It illustrates how research complemented routine M&E systems in a “real world” setting. This case demonstrates the benefits to programme managers of combining M&E data with economic research to enhance service performance. At the same time Integra researchers were able to use M&E data to examine the impact of “real world” issues like drug stock-outs on their research results. The second case study, the CHARME project, is an evaluation of the Avahan HIV prevention programme in India. This case illustrates the value of linking monitoring systems with research efforts to establish plausible evidence of the relationship between cost, programme activities and intensity and impact of an HIV prevention programme; where no control areas or “stepped wedge” evaluation design was feasible, due to rapid scale-up.

Finally, the presentation will identify a number of over-arching lessons learnt from these cases, and other experiences. It will highlight the importance of investing in a wide range of monitoring and evaluation activities, that go beyond Management Information Systems and qualitative peer evaluation. It will explore ways of enhancing and linking research and programme efforts, so that M&E can relate STI/HIV inputs, outputs and outcomes in a robust and logical way; but, at the same time, remains feasible and “value for money” in large scale “real world” settings.

S9.3 THE PROGRAMME SCIENCE OF SCALE: THE AVAHAN EXPERIENCE

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A RamaKrishnan. *Bill & Melinda Gates Foundation, India*

The Avahan HIV prevention programme of the Bill & Melinda Gates Foundation in India has achieved scale/quality/coverage, and is beginning to show signs of HIV impact on high risk groups and the general population. The approach of the programme has been to combine business principles of scaling up with technical aspects of HIV programming to develop a model for scaling up public health interventions through designing, organising, executing and sustaining for scale. This presentation will share the background of the Avahan programme, its results, and a framework for the programme science of scaling up.