

RESEARCHERS OF THE FUTURE: 21ST CENTURY APPROACHES FOR EFFECTIVE, GLOBAL RESEARCH

Day 2 Discussion, 03 November 2015

Topic 2: "Future of research: What does an increased emphasis on holistic approaches mean for research?"

WHO HIFA-Fr in collaboration with the **AURA Programme Consortium** convened a three day online learning event and facilitated discussion which began on Monday, 02 November and will run until Wednesday, 04 November 2015 with various African Universities and other global stakeholders. The purpose of the event was to bring together academics and researchers, from a wide range of disciplines, who are interested in refining their understanding of holistic and integrated approaches to research in a global context or who are already using these approaches in their work. The event is aimed at: academics, researchers, policy makers, and knowledge professionals, who are conducting, or using research, to inform policy or practice in order to solve socio-economic problems in society at local, national, regional or international levels.

Isabelle Wachsmuth an expert from (WHO) facilitated the day 2 discussion drawing on the work of experts from the World Health Organisation. A question posed was "What areas do you need to know about to strengthen your capabilities in a range of research paradigms"? Scholars from the World Health Organisation (WHO) shared their experiences from the field.

What follows is a summary of the key points **Joachim Hombach**, Global Vaccine and Immunization Research Forum (for March 2016) World Health Organisation, made in a pre-recorded video.

Joachim Hombach World Health Organisation, (WHO) is based in Geneva at the WHO headquarters in the Department of Immunization, Vaccines and Biologicals (IVB) and deals with research related to both vaccine development and immunization (improving immunization programmes and systems).

Joachim Hombach shared information about a forum called the Global Vaccines and Immunizations Research Forum (GVIRF) which convenes every second year to discuss a major plan of action around vaccines and immunization in general, called the Global Vaccine Action Plan. The forum addresses research issues and tries to discuss research and development, along with implementation research questions that need to be tackled in order to make the Global Vaccine Action Plan a successful endeavour. The next forum will be held in March 2016 in Johannesburg in South Africa. The forum is organised by three entities with a strong interest in health research and in vaccines specifically. These are: WHO, US; the National Institute of Allergy and Infectious Diseases (NIAID) as well as the Bill and Melinda Gates Foundation. To some extent these three agencies have an emphasis on different aspects of the research landscape. **Joachim Hombach** explains that the forum tries to bring a specific angle to the discussion. First of all by gathering people from various disciplines, from academia, from public health but also from the private sector, from regulation and so forth. Regulatory authorities too are interested in how to address these issues in their daily work.

Joachim Hombach reflects on two examples which have direct relevance to vaccines and public health in low and middle income countries. Questions about the evaluation and the use of vaccines and why it does not confer very high levels of efficacy was discussed. He states that "We've traditionally been conferring with vaccines that have a very high level of protection, 80/90%. Nowadays there's a number of vaccines in the pipeline or about registration, a prominent one is malaria vaccine, that confer only modest efficacy which raises a lot of questions in terms of how

these vaccines will be used, actually also already at this stage of development, how they will be developed. How they will be used and how they will be rolled-out, how one has to communicate around these vaccines". An important issue highlighted is the influence of macro-biome on immune responses - particularly immune-responses triggered by vaccines - have been receiving a lot of coverage lately. "Macro-biome is essentially the totality of micro-organisms that everybody carries in his or her gut and where, over the last years, we have learned have a profound impact on health in general as well on immune responses. And as we know that vaccines behave quite differently in different settings, and population groups. We try to understand what is the impact of micro-biome so this, for instance, an example of a more fundamental science issue". He highlighted some key topics of discussion for the upcoming forum, a "request to monitor progress, in certain areas of vaccine development such as progress against... vaccines against HIV, TB, malaria". Joachim indicates that the discussion will focus on "bottlenecks" and how communities can collaborate with the various health system stakeholders to overcome these bottlenecks by adopting holistic strategies.

In addressing the question **What are the main barriers in implementation research today?**, **Joachim's** response indicated the complexities to vaccine programme implementation and how it relates to sub-optimal coverage or even eradication efforts. He argues that "glitches in coverage always means that there is inequity", in certain populations and problems in reaching marginalized populations. The speaker emphasises the need for "implementation research" claiming that there may be multiple reasons linked to poor functioning health services. Joachim concluded his presentation stating clear outcomes are required to bring about change: "the capacity at a country level to be analytical and to map out what is the problem, where the problem is, and develop tailor-made approaches to test and see what works and what doesn't work". In closing he boldly refers to having "A culture of implementation research and proper programme planning, and monitoring that at country (level) needs to be available and highlights the capacities within various scientific disciplines and backgrounds". Have we been under estimating social sciences in this area to support research? "It is research of high value even though it may not necessary result in glamorous publications. It is nevertheless equally important".

Further contributions from WHO will follow to include key reflections from:

Philippe Duclos from the World Health Organisation (WHO) an expert in evidence based recommendations and the use of research results for vaccine and immunization area. **Philippe Duclos'** scope and depth of research at WHO, extends to research on new vaccines, making decisions on the introduction of new vaccines, impact of vaccines and how to adjust decision-making.

Kamel Senouci, Expert in evidence based recommendations and the use of research results for vaccine and immunization area - In charge of **GIVAP, WHO**.