GVIRF 2014: Workshop 4: How to Optimize Immunization Coverage? -A Case Study from Measles-Rubella vaccination	
Rapporteurs: Christopher Karp (BMGF) and Marie-Pierre Preziosi (WHO)	
Session Outline	Chair: David Durrheim
	Opening remarks: Chair
	Presentations:
	Thomas Cherian: Progress, Challenges, and Lessons learned in Achieving Measles and Rubella Goals
	William Moss: Prioritizing the Research Agenda for Measles and Rubella (SAGE working group)
	Discussants: Thomas Cherian, William Moss, Helen Rees, Walter Orenstein
	Closing Remarks: Chair: comments will be taken back to the WG
Objectives of the session	Measles is 'eradicable' and measles eradication could serve as a 'model' for disease elimination goals
Main outcome	To focus on main research categories: failure to vaccinate all children timeously; fostering political engagement;
	studying vaccine acceptance through engaging behavioural scientists; and disseminating success stories.
Summary	Progress, Challenges and Lessons Learned in Achieving Measles and Rubella Goals
	Measles is the 'canary in the coal mine' as outbreaks can signal that routine immunization coverage is not optimal. Control requires high homogeneous coverage as demonstrated by historical data on measles vaccine coverage and cases. The global milestones include by the end of 2015 to reduce global measles deaths by 95% compared to 2000, and the global goal to achieve measles and rubella elimination in at least 5/6 WHO regions by 2020, Global Vaccine Action Plan (GVAP). However, the world is currently not on track to reach the 2015 milestones towards elimination.
	Country experiences were shared to illustrate the relationship between measles outbreaks and low vaccination coverage (<95%). Examples included Ecuador, where there is a need for adjusting recommendations to effectively reach specific cohorts and provinces to achieve homogeneous coverage >90%, and maintain elimination. Another example is France, where an outbreak occurred in 2008 due to low and uneven coverage mostly due to personal choice of parents, or health care worker resistance to the vaccination and lack of implementation of catch-up campaigns. In England the "Wakefield effect" resulted in a transient reduction in coverage in mid-2000, leading to a re-establishment of measles transmission due to unvaccinated cohorts. In Malawi a massive epidemic resurgence occurred in 2010 despite high apparent administrative coverage in both the routine vaccination programme and follow-up SIAs, highlighting the importance of good quality data and SIAs. Cambodia had successfully implemented a 3-fold strategy: (i) defining unreached/high risk
	communities (HRC); (ii) mapping and assessing true coverage and risk; (iii) targeting High Risk Communities for routine EPI improvements. As a result no measles outbreaks had been reported since 2011. In summary, it was concluded that prevention of outbreaks demands very high, homogenous coverage; outbreaks highlight gaps in coverage and data; pursuit of measles elimination drives improvements in universal health care. Prioritizing the Research Agenda for Measles and Rubella
	SAGE Working Group on Measles and Rubella
	The prioritization process was presented. Despite the limitations of the survey, the 3 top research areas and 6 of the top 12 address how to optimize immunization coverage which was then endorsed by SAGE. One of the main concerns related to effectively motivating politicians/policy makers to take action. Health burden data is needed with illustrative anecdotal data for the media. There was an imperative to improve surveillance to identify the

specific preventable program failures. In addition, there is a need for means to document the immunization status of the individual child, the true magnitude of vaccine hesitancy, define optimal outbreak responses and missed opportunities evaluation. New tools are also needed, including point of care diagnostics, point of care assessment of immunity, and alternative vaccine delivery systems. The research categories are broad and would benefit from further refinement. Best practices should be catalogued and shared, e.g. at finding susceptibles; motivation of poorer communities through incentives; and assessment of vaccine confidence. The potential of new tools, such as cell phone technology for monitoring, user reminders, smart card technology, should be systematically explored. There is lack of evidence showing the scale of hesitancy problems. PAHO highlighted the sustained uptake of MR in South America following communication on Congenital Rubella Syndrome which is perceived as threat. As vaccine hesitancy relates to how services interact with people, there is a need for sociological research to understand human behaviour. The same rigor applied to vaccine development should be applied to research on vaccine acceptance. Key references or quotes