

**A behaviour changing syringe : making invisible risk,  
visible to deter the reuse of syringes in a curative context**

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# Second WHO Global Forum

## on **Medical Devices:**

Priority Medical Devices for Universal Health Coverage

Centre International de Conférences Genève (CICG)  
Geneva, Switzerland  
22–24 November 2013



# Acknowledgements

The Second WHO Global Forum on Medical Devices is a demonstration of the WHO commitment towards improved access to safe, effective and innovative, quality medical devices as a contribution to universal health coverage. This area of work is carried out under the leadership and guidance of: Mary Paul Kieny, Assistant Director General of the Health Systems and Innovation Cluster; Kees de Joncheere, Director of the Department of Essential Medicines and Health Products; and Gilles Forte, Coordinator of the Policy, Access and Rational Use Unit.

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The European Commission

The members of the Programme Committee and the Local Organizing Committee.

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# Welcome

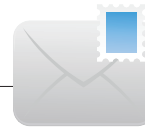
Distinguished ladies and gentlemen:

On behalf of the World Health Organization, we welcome you to Geneva, Switzerland for The Second WHO Global Forum on Medical Devices: Priority Medical Devices for Universal Health Coverage, providing the global public health community an opportunity for unprecedented collaboration to increase access to high-quality, safe, and appropriate-priority medical devices. Our global health initiative aims to impact all aspects of healthcare delivery, from diagnosis to treatment, and further enable those from academia, international organizations, industry, and NGOs to exchange their own experiences and challenges in our common endeavour to provide more equitable access to medical devices, particularly in limited-resource settings.

We thank you for your enthusiastic response to the call for abstracts, which has enabled us to organize a 3-day program that includes 28 workshops, 159 oral presentations in parallel sessions, 144 posters, and 8 films. You will join approximately 700 of your colleagues from 108 countries in 4 plenary sessions that will address the key issues facing the medical device community in 2013.

Thank you very kindly for your attendance and participation,

The Local Organizing Committee



**Contact information:**

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## Meeting Objectives

- To define methods of increasing access to priority medical devices under the Universal Health Coverage initiative.
- To share evidence on best practices in health technology assessment, management and regulation of medical devices.
- To demonstrate the development and use of appropriate and innovative technologies that respond to global health priorities.
- To present the outcomes of the implementation of the World Health Assembly resolution on health technologies (WHA60.29) and the status of actions resulting from the First Global Forum on Medical Devices.

## Background

The adoption of the first resolution on health technologies in May 2007 by the World Health Assembly (WHA 60.29) set the framework for an unprecedented focus on health technologies. Medical devices involve those health technologies that are critical to delivery within health systems. However, attention to issues of equity, quality and access is insufficient, and often the most essential medical devices are not available.

The 1<sup>st</sup> Global Forum on Medical Devices took place in Bangkok in September 2010, with participants coming from 107 Member States. The event raised awareness and served as a forum to share ideas on how to increase access to safe and effective medical devices.

Now, 3 years later, the 2<sup>nd</sup> Global Forum on Medical Devices will address the development of lists of medical devices by clinical intervention and disseminate information about innovative, appropriate, and affordable devices for low-resource settings in accordance with the WHA 60.29 resolution.

2<sup>nd</sup> WHO Global Forum on Medical Devices

22–24 NOVEMBER 2013

CICG, GENEVA, SWITZERLAND

## Friday 22 November 2013

09:00–18:00	<b>WORKSHOP TRACKS</b> WHO/UN Tools to Improve Healthcare Delivery Health Technology Assessment Nomenclature, Standards and Regulations Health Tech Management and Clinical Engineering Radiation Safety / Biomedical Engineering Innovation Reproductive, Maternal, Newborn and Child Health / Approaches to Improving Healthcare Delivery	Salle 1 Salle 18 Salle 3 Salle 2 Salle 5/6 Salle 4 Salle 15
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## Saturday 23 November 2013

09:00–10:00	<b>PLENARY SESSION 1</b> "Medical devices for Universal Health Coverage"	Salle 1
10:30–12:00	<b>PARALLEL SESSIONS</b> Health Technology Assessment: Networks and Societies around the Globe * Spanish translation available * Health Technology Management: Country Initiatives Regulation of Medical Devices Innovation in Medical Devices Health Care Delivery / Health Care Infrastructure * French translation available *	Salle 4 Salle 2 Salle 3 Salle 1 Salle 5/6
12:00–13:00	<i>Lunch</i>	
13:00–14:00	<b>POSTER SESSION 1</b>	
14:00–15:30	<b>PARALLEL SESSIONS</b> How to Prioritize Medical Devices Health Technology Management: Country Initiatives * French translation available * Regulation of Medical Devices: Country Initiatives * Spanish translation available * Innovation in Medical Devices for Maternal and Child Health Medical Imaging	Salle 4 Salle 2 Salle 3 Salle 1 Salle 5/6
16:00–17:00	<b>PLENARY SESSION 2</b> "The unfinished agenda: medical devices are indispensable for reaching the MDG targets"	Salle 1
17:00–19:00	Film viewing	Salle 2
	Social networking / poster viewing	

## Sunday 24 November 2013

09:00–10:00	<b>PLENARY SESSION 3</b> "Medical devices for the Non-Communicable Diseases (NCD) agenda"	Salle 1
10:30–12:00	<b>PARALLEL SESSIONS</b> Health Technology Assessment Policies for Medical Devices / Technical Specifications Safety of Medical Devices * Spanish translation available * Innovative Medical Devices for Low-Resource Settings Human Resources in BME * French translation available *	Salle 4 Salle 2 Salle 3 Salle 1 Salle 5/6
12:00–13:00	<i>Lunch</i>	
13:00–14:00	<b>POSTER SESSION 2</b>	
14:00–15:30	<b>PARALLEL SESSIONS</b> Local Production in Low-Resource Settings Procurement of Medical Devices * French translation available * Patient safety / Medical Software Innovative Medical Devices for Low-Resource Settings * Spanish translation available * Human Resources for Technology Life Cycle Management / Human Resources in Medical Physics	Salle 4 Salle 2 Salle 3 Salle 1 Salle 5/6
16:00–16:45	<b>PLENARY SESSION 4</b> "Policies, innovation, regulation, assessment, management and safe use of medical devices for increasing access"	Salle 1
16:45–17:00	<b>CLOSING SESSION</b> Summary of recommendations from parallel sessions and closure of Forum	Salle 1
17:00	<b>ADJOURN</b>	

\* All plenary sessions will have French and Spanish translation available \*

WORKSHOP PROGRAMME (AS OF 18 NOVEMBER 2013)  
FRIDAY 22 NOVEMBER

PLENARY / WELCOME / LOGISTICS							
	Salle 1	Salle 18	Salle 3	Salle 2	Salle 5/6	Salle 4	Salle 15
	<b>WHO/UN Tools to Improve Healthcare Delivery</b>	<b>Health Technology Assessment</b>	<b>Nomenclature, Standards and Regulations</b>	<b>Health Tech Management / Clinical Engineering</b>	<b>Medical Imaging and Radiation Safety</b>	<b>Innovation</b>	<b>Reproductive, Maternal, Newborn and Child Health</b>
09:15–10:00	Supporting integrated national strategic health planning, costing and health impact analysis: the OneHealth Tool (UNAIDS, UNDP, WHO, WB, UNFPA, UNICEF, the Futures Institute)	Creating synergies between national HTA and regional HTA agencies and hospitals in the assessment of medical devices (HTAi)	GMDN - a requirement for Unique Device Identification (GMDN Agency)	Healthcare Technology Management (HTM): ACCE advanced clinical engineering workshops (ACCE)	Role of medical physics in promoting radiation safety culture in health care (IOMP)	Innovation Sandbox Workshop: engaging medtech entrepreneurs to improve health in low- and middle-income countries through the power of co-creation (CAMTech, Mass. General Hospital)	MANDATE: priority setting for medical devices to reduce maternal, fetal and neonatal mortality (RTI International)
10:00–10:45	Service Availability and Readiness Assessment (SARA) tool for health system planning and management (WHO)						
10:45–11:10	<b>Health break</b>						
11:10–12:00	Crucial role of medical devices in emergency & essential surgical care (WHO)		Partnership on regulatory harmonization (AHWP, APEC)	Improving data quality and technology management with mobile devices (Health Partners International)	Medical imaging education in developing countries (ISR, WFUMB, ISRR)		Medical device introduction: adding the Non-pneumatic Anti Shock Garment (NASG) for obstetric haemorrhage to programs and policies (UCSF)
12:00–13:30 <b>Lunch / WHO visit</b>							
	<b>WHO/UN Tools to Improve Healthcare Delivery</b>	<b>Health Technology Assessment</b>	<b>Nomenclature, Standards and Regulations</b>	<b>Health Tech Management / Clinical Engineering</b>	<b>Biomedical Engineering</b>	<b>Innovation</b>	<b>Approaches to Improving Healthcare Delivery</b>
13:30–14:20	Kits for humanitarian health response (WHO/UNFPA/UNICEF)	How to set up an HTA agency (INAHTA)	International standards – state of play and future trends in the medical domain (DITTA)	Computerized Maintenance Management Systems (CMMS): essential features and pitfalls to avoid (ACCE)	Human resources for medical devices: the role of the Biomedical Engineer (WHO)	Training for local innovation of affordable and appropriate medical devices in developing countries: learning from the Stanford India Biodesign Experience (All India Inst. of Medical Sciences)	Améliorer les pratiques des projets d'appui à l'équipement médical intégrant des dons (Improving practices in medical equipment support projects which include donations) (HUMATEM)
14:30–15:20			Medical software – regulatory and legal trends (DITTA)	WHO template for technical specifications of medical equipment (WHO)	How to define the basic academic curriculum to train clinical engineers (CED/IFMBE)		* in French and English, not translated *
15:20–16:00 <b>Health break</b>							
16:00–16:50	Interagency list of medical devices for reproductive, maternal, newborn and child health (WHO/UNFPA/UNICEF)	Information retrieval for HTA (NOKC)	National Regulatory Assessment tool (WHO)	A new generation web-based medical technology management system (INBIT, U. Patras)	Harmonization of biomedical engineering education: status and challenges (IFMBE)	Local production of medical devices in Africa: characterizing the landscape and assessing feasibility (WHO)	A tool for prevention and early diagnosis of neuro-degenerative diseases (Intl. U. of Japan)
17:00–17:50	WHO Medical Device Information System (WHO)		Digital hospital 21st century: you certainly can't manage it if you don't understand it [YCCMIYDUI] (CHIRP)	Medical equipment donations: a toolkit for UK – developing country partnerships (THET)	Enhancing biomedical engineering education through innovation experiences (Nat. Univ. of Singapore)	Optimizing the WHO Compendium of Innovative Health Technologies for Low-Resource Settings (WHO)	Disaster preparedness for health technology managers (IUPESM)



# Useful information

## Forum venue

Centre International de Conférences Genève  
Rue de Varembe 17  
1211 Geneva

### Internet

WiFi login: OMS  
Password: WHO



### For SpotMe updates

Username: WHO13  
Password: geneva13

Transportation to the CICG: Near all pre-booked hotels (except Ibis Nations), tram 15 can take you in the direction of the CICG terminus stop *Nations*. From Ibis Nations, bus 8 can transport you to the CICG stop *UIT* in the direction OMS/Appia.

## Food at the venue

CICG restaurant in the venue offers reasonably priced meals (around 10–20 CHF).

## Currency

Local currency is Swiss Francs (CHF) not Euros. Exchange rate is around US \$ 0.93.

## Geneva tourism sites:

<http://www.geneve-tourisme.ch>  
<http://www.geneva.com>

<http://myswitzerland.com>  
<http://search.ch.com>

## Geneva transportation:

Geneva bus and tram information:

<http://www.tpg.ch/>

Swiss train information:

<http://www.sbb.ch/ticketshop>

Taxi stands are at almost all main squares. The Forum venue (CICG) is about 10 minutes from the airport (25-30 CHF). A taxi from the airport to the town centre costs 35–50 CHF.

Taxi-phone SA Geneva: +41 22 33 141 33 [www.taxi-phone.ch](http://www.taxi-phone.ch)

AA Genève Central Taxi: +41 22 3 202 202 [www.geneve-taxi.ch](http://www.geneve-taxi.ch)

# Presenter guidelines

## Speakers

- Speakers should deliver their slides to conference organizers the day before the presentation or before the start of the plenary session the morning of their talk.
- Speakers should arrive 15 minutes prior to the session start.
- To allow sufficient time for panel discussion, time limits will be strictly enforced.
- Speakers are expected to be present for the duration of the session.

## Posters

- Posters should be set up before 08:00 on Saturday 23 November.
- Posters must be removed between 17:00 and 19:00 on 24 November.
- Poster presenters should be at the designated poster area at least 10 minutes before their assigned poster session begins and, if possible, during the lunch hour and coffee breaks.

## Films

- Film presenters should arrive 15 minutes prior to the start of the film viewing.
- Each presenter may give a brief (1 minute or less) introduction before his/her video.
- After all films are completed, film presenters will participate in panel discussion.

# Collaborating organizations

## UN agencies



## Non-governmental organizations in official relations with WHO

International Federation for Medical and Biological Engineering



International Federation of Hospital Engineering



International Society of Radiology



International Society of Radiographers & Radiological Technologists



International Union of Architects



World Federation for Ultrasound in Medicine and Biology



## Organizations with memoranda of understanding with WHO

International Information Network on New and Emerging Health Technologies



Health Technology Assessment International



International Network of Agencies for Health Technology Assessment



Organization of Medical Physics



## Other collaborating organizations

American College of Clinical Engineering



Diagnostic Imaging, Healthcare IT & Radiation Therapy Trade Association



Global Medical Technology Alliance



Institute of Biomedical Technology



International Union for Physical and Engineering Sciences in Medicine







## 2<sup>nd</sup> WHO Global Forum on Medical Devices

### Plenary Sessions (as of 20 November 2013)

Time	Plenary session 1 - Saturday 23 <sup>rd</sup> November 2013	Room	
Sat. 9:00 - 10:00	<b>Medical devices for Universal Health Coverage</b>	Salle 1	
	Chair: Dr. Marie-Paule Kiény, Assistant Director General Health Systems and Innovation, WHO		
	Welcome Message and Inauguration of the 2 <sup>nd</sup> WHO Global Forum on Medical Devices Dr Margaret Chan, Director General, WHO (video message)		
	Challenges in Universal Health Coverage, a Japanese perspective Dr. Masato Mugitani, Ex-chair, Global Health Workforce Alliance		
	Health Technology Assessment to select priority interventions, HITAP perspective Dr. Suwit Wilboprasert, HITAP, Thailand		
	Follow up on the Priority Medical Devices Report: Managing the Mismatch Dr. Hugo Hurts, Ministry of Health, Welfare and Sport, Netherlands		
	Financing for Universal Health Coverage Dr. Andreas Seiter, World Bank		
	Medical technology industry to respond to global health needs Ms. Gisela Abbam, Global Medical Technology Alliance		
<b>Plenary session 2 - Saturday 23<sup>rd</sup> November 2013</b>			
Sat. 16:00 - 17:00	<b>The unfinished agenda: medical devices are indispensable for reaching the MDG targets</b>	Salle 1	
	Chair: Dr. Elizabeth Mary Mason, Director Maternal, Newborn, Child and Adolescent Health, WHO		
	Supporting infrastructure and health products for maternal and newborn care Dr. Feng Zhao, African Development Bank		
	Supply of appropriate medical devices for women and children's health Dr. Helen Moller, United Nations Children's Fund (UNICEF)		
	Medical technology industry developing affordable new technologies of global health concerns Dr. Trevor Gunn, Global Medical Technology Alliance		
	Quality assured of medical devices in Doctors Without Borders (MSF) Ms. Monique Dory, MSF		
	Challenges in the delivery and training for use of medical devices for reproductive health Dr. Wilma Doedens, United Nations Population Fund (UNFPA)		
<b>Plenary session 3 - Sunday 24<sup>th</sup> November 2013</b>			
Sun. 9:00 - 10:00	<b>Medical devices for the Non-Communicable Disease (NCD) Agenda</b>	Salle 1	
	Chair: Dr. Shanthi Mendis, WHO		
	Scientific and technological advances for health applications Dr. Steven Myers, CERN		
	The advances in medical imaging and the importance of increasing access Dr. Ian Labuscagne, President, International Society of Radiology		
	Medical devices indispensable for cardiology diagnosis and treatment Prof. Alan G. Fraser, European Society of Cardiology		
	Inclusion of medical devices in Clinical Practice Guidelines, particularly for NCDs and disabilities Dr. Josee Hansen, Ministry of Health, Welfare and Sport, Netherlands		
	Medical technology industry to target non communicable diseases Ms. Nicole Denjoy, Diagnostic Imaging, Healthcare IT, Radiation Therapy Association (DITTA)		
<b>Plenary session 4 - Sunday 24<sup>th</sup> November 2013</b>			
Sun. 16:00 - 17:00	<b>Policies, innovation, regulation, assessment, management and safe use of medical devices for increasing access</b>	Salle 1	
	Chair: Mr. Kees de Joncheere, Director, Essential Medicines and Health Products, WHO		
	The way forward to improve the regulation of medical devices Dr. Saleh Al Tayyar, Saudi Food and Drug Authority, Saudi Arabia		
	The way forward to educate the next generation of biomedical engineers Dr. Ratko Magjarevic, International Federation for Medical and Biological (IFMBE)		
	The way forward to use clinical guidelines to guide procurement decisions when equipping hospitals Ms. Maria Luisa Gonzalez, Centro Nacional de Excelencia Tecnologica en Salud (CENETEC), Mexico		
	The way forward to enhance and expand the use of effective Health Technology Assessment Dr. Jani Muller, International Network of Agencies for Health Technology Assessment (INAHTA)		
	The way forward to ensure the safe use of medical equipment Prof. Alan Murray, Newcastle University, United Kingdom		
	The way forward to develop innovative technologies to meet global health needs Prof. Kathleen Sienko, University of Michigan, United States of America		
	The way forward for WHO to facilitate improved access to health technologies that expand health coverage Ms. Adriana Velazquez Berumen, WHO		
	Closing remarks Mr. Kees de Joncheere, Director, Essential Medicines and Health Products, WHO		

ADJOURN

Time	Parallel sessions - Saturday 23rd November 2013	Room
Sat. 10:30- 12:00	<b>Health Technology Assessment: Networks and Societies Around the Globe</b> Session Chair: Dr. H. David Banta <span style="float: right;"><i>(Spanish translation available)</i></span> Session Co-Chair: Mr. Alexandre Lemgruber	Salle 4
	Health Technology Assessment International (HTAi) Dr. Carole Longson, NICE, United Kingdom	
	International Network of Agencies of Health Technology Assessment (INAHTA) Dr. Wendy Babidge, Royal Australasian College of Surgeons, Australia	
	European network of Health Technology Assessment (EUnetHTA) Dr. Marina Cerbo, National Agency for Regional Healthcare (AGENAS), Italy	
	Network of Health Technology Assessment of the Americas (REDETSA) Dr. Alexandre Lemgruber, PAHO	
	The International Information Network on New and Emerging Health Technologies (EuroScan International Network) Dr. Brendon Kearney, HealthPACT, Australia	
	HTAsiaLink Dr. Sripen Tantivess, HITAP, Thailand	
	International Federation of Medical and Biological Engineering, Health Technology Assessment Division, (IFMBE-HTAD) Prof. Nicolas Pallikarakis, INBIT, Greece	
	Sat. 10:30- 12:00	
Policy and its implementation for medical equipment management in Laos Mr. Thanom Insal, Medical Products Supply Center, Ministry of Health of Lao People's Democratic Republic		
Status of medical equipment in Bangladesh Dr. Md Aminul Hasan, Ministry of Health & Family Welfare, Dr. SAJ Md. Musa, PHC, DGHS, Bangladesh		
Improvement of medical device management in Ugandan maternal and newborn health units through capacity building Mr. Robert Ssekitoleko, Louise Ackers, Sarah Hoyle, Uganda Maternal And Newborn Hub, Uganda		
Audit of emergency obstetric and neonatal care (EmONC) equipment in Zambia Ms. Shauna Mullally, Canada; Mr Sitwala Machbani, Senanga District Hospital, Zambia; Mr. Emmanuel Musiwa, Lusaka District Health Office, Zambia		
Biomedical equipment management model for rural areas: A public private partnership approach in India Dr. Jitendar Kumar Sharma, National Health Systems Resource Centre, India; Mohammed Ameer, Vatsal Chhaya, T Sundararaman, NHRSC, Ministry of Health, India; Michael Zess, Kristy, Greg Ranger, Subhashree Rajan, John T Surgener, Trimedx Foundation		
Planning for essential perinatal equipment: how to deal with hardware, software and people? Mr. Claudio Marco Zaugg, Swiss Tropical and Public Health Institute, Switzerland		
Evidence-based decision making for improving access to healthcare technology in low resource settings Mr. Dane Emmerling, Chelsea Whittle, Alex Dahinten, Robert Malkin, Duke University, United States of America		
Combining device innovations and strategic technology management for population care in Peru Ms. Rossana Rivas Tarazona, Pontificia Universidad Católica del Perú; Fred Hosea, Consultant; Herbert Voigt, Boston University IUPESM; Tobey Clark, University of Vermont/Healthcare Technology Foundation, United States of America		
Sat. 10:30- 12:00	<b>Regulation of Medical Devices</b> Session Chair: Ms. Kimberly Trautman Session Co-Chair: Ms. Robyn Meurant	Salle 3
	Harmonization and in-country implementation of regulations Ms. Agnes Kijo, TFDA, Tanzania; Irena Prat, WHO, Switzerland; Shelley Tang, TGA, Australia; Hiti Sillo, TFDA, Tanzania	
	Developing a competent regulatory workforce for medical devices in the global environment Mr. Rainer Voelksen, Regulatory Affairs Professionals Society (RAPS), United States of America; Philippe Auclair, RAPS European Advisory Committee, Belgium; Sherry Keramidis, RAPS, United States of America	
	IMDRF medical device single audit program pilot program Ms. Kimberly Trautman, US Food and Drug Administration Center for Devices and Radiological Health, United States of America; Ana Paula Teles Ferreira Barreto, ANVISA, Brazil; Mike Ward, Health Canada, Canada; Larry Kelly, TGA, Australia; Hideyuki Kondo, Ministry of Health, Labour and Welfare, Japan	
	IMDRF review of the NCAR exchange program: challenges and opportunities Dr Isabelle Demade, European Commission, Belgium	
	Best international PMS practice and in-country implementation of PMS systems Ms. Shelley Tang, TGA, Australia; Irena Prat, WHO, Switzerland; Hiti Sillo, TFDA, Tanzania	
	Harmonizing the regulation of in vitro diagnostic (IVD) medical devices in developing countries Dr. Ruth McNerney, London School of Hygiene & Tropical Medicine, United Kingdom	
	Single-use medical devices: re-use and re-processing Mr. Antonio Jose G. Hernandez, American College of Clinical Engineering, United States of America	
	Codification of medical devices in Portugal Ms. Emilia Alves Da Silva, INFARMED, National Authority of Medicines and Health Products, IP, Portugal	
	Japanese approach of nomenclature system Mr. Tomomichi Nakazaki, Tokyo Women's Medical University, Waseda University Joint Institution for Advanced Biomedical Sciences, Japan	
	Harmonization of standards and regulations should be addressed through collaboration of government and the private sector Mr. Anil Nanubhai Patel, Abel Torres, UL (Underwriters Laboratories), United States of America	

Time	Parallel sessions - Saturday 23rd November 2013	Room
Sat. 10:30- 12:00	<b>Innovation in Medical Devices</b> Session Chair: Dr. Klaus Schonenberger Session Co-Chair: Prof. James Abbas	Salle 1
	Medical device innovation – South Africa as a case study Mr. Mladen Poluta, University of Cape Town; Tony Bunn, Medical Research Council, South Africa	
	Understanding the broader context of design; the use of design ethnography in engineering global health technologies Prof. Kathleen Sienko, Mr. Amir Sabet Sarvestani, Mr. Ibrahim Mohedas, University of Michigan, United States of America	
	Partnership in medical technology innovation: avoiding the prototype graveyard Mr. Timothy Prestero, Design that Matters, United States of America	
	Health economics for device developers: a framework for assessing commercial viability Dr. Amanda Chapman, Burn Samantha, University of Birmingham, United Kingdom	
	Medical devices for non-communicable diseases: opportunities for innovation Mr. Amir Sabet Sarvestani, Prof. Kathleen H Sienko, University of Michigan, United States of America	
Sat. 10:30- 12:00	<b>Health Care Delivery</b> <i>(French translation available)</i> Session Chair: Dr. Ricardo Silva Session Co-Chair: Ms. Hanne Bak Pedersen	Salle 5/6
	Health First Europe model for community care Ms. Amanda Bogg, Health First Europe, Belgium	
	Accessibility network Mr. German Jose Giles, Dr. Alejandro Ferro, Dr. Alejandro Cristaldi, Municipality of General Pueyrredon, Argentina	
	Adequacy of medical devices at primary level facilities and impact on service delivery: case study of 3 districts in South Africa Mr. Mladen Poluta, University of Cape Town; Zithulele Hleko, Pule Mogorosi, Department of Health, North West Province, South Africa	
	<b>Health Care Infrastructure</b> Session Chair: Dr. Ricardo Silva Session Co-Chair: Ms. Hanne Bak Pedersen	
	Risks assessment during a construction or remodeling of health care facilities JCI methodology Ms. Claudia Cardenas Alanis, Maria Eugenia Moreno Carbajal, Hospital Medica Sur, Mexico	
	Energy in healthcare Mr. Paul Merlevede, International Federation of Hospital Engineering (IFHE), Belgium	
	Réfrigérateur domestique pour le stockage des vaccins Dr. Ramzi Ouhichi, WHO, Tunisia; John Llyod, Patrick Lydon, Haithem Aouinet	
	Eradication of climate-induced neonatal hyperthermia through nursery building design Dr. Hippolite Amadi, Imperial College London, United Kingdom; Dr Mohammed B Kawuwa, Obstetrics And Gynaecology Department, Federal Medical Centre Nguru, Nigeria; Dr Lawal I Mohammed, Ms Hajjah Mohammed, Dr Abdulquddus Oyedokun, Paediatrics Department Federal Medical Centre Nguru, Nigeria	
	Audit in centre steriles service department of tertiary hospital Mr. Jean Marie Vianney Namahoro, Marina Aucamp, Stellenbosch University, South Africa	

Time	Parallel sessions - Saturday 23rd November 2013	Room
Sat. 14:00- 15:30	<b>How to Prioritize Medical Devices</b> Session Chair: Ms. Dessislava Dimitrova Session Co-Chair: Ms. Olumurejiwa Fatunde	Salle 4
	Is the provision of medical equipment enough? Addressing the need for adequate training and support to maximise the effectiveness of introducing modern equipment into the developing world. Dr. Maurice Paul David Burke, University College London/University College Hospital London/ Royal Berkshire Hospital, Reading; James Annkah, Ivan Rosenberg, Gary Royle, University College London; Abiodun Adeyemi, Paula Horne, Kate Ricketts, Royal Berkshire Hospital; Shauna Mullally, Tropical Health and Education Trust (THET), United Kingdom; Eric Addison, Komfo Anokye Hospital; Theophilus Sackey, Korle Bu Teaching Hospital, Ghana	
	Rational selection and prioritization of medical devices in low- and middle-income countries Ms. Karin-Daniela Diaconu, Samantha Burn-Harris, Semira Manaseki-Holland, Carole Cummins, Richard Lilford, University of Birmingham, United Kingdom	
	Applying health technology assessment methods for the selection and prioritization of medical devices: a practical example within the Republic of South Sudan Prof. Richard Lilford, Samantha Burn-Harris, Karin Diaconu, Semira Manaseki-Holland, Carole Cummins, University of Birmingham, United Kingdom	
	Prioritizing criteria for medical equipment assessment in a health care facility Ms. Maria Moreno Carbajal, Claudia Cardenas Alanis, Hospital Medica Sur, Mexico	
	Methodological guidelines for medical equipment assessment studies Mr. Eduardo Coura Assis, Ministry of Health of Brazil; Marcus Tolentino Silva, Department of Science and Technology/ Secretariat of Science, Technology and Strategic Inputs/ Ministry of Health; Renato Garcia Ojeda, Institute of Biomedical Engineering/Federal University of Santa Catarina (IEB-UFSC); Saide Jorge Calil, Center for Biomedical Engineering - University of Campinas (CEB-UNICAMP), Brazil	
	RENEM – Brazilian national list of equipment and materials Mr. Murilo Contó, Clarice Petramale, Vania Canuto, Erlon Cesar Dengo, Marcio Luis Borsio, Darcio Guedes Junior, Ministry of Health, Brazil	
	A web tool to support the user need elicitation for the Health technology assessment (HTA) in emerging countries. Dr. Leandro Pecchia, University of Warwick, United Kingdom; S Mullally, Canada; F Crispino, Solution Engineering, Italy; S P Morgan, Electrical Systems and Optics Research Division, University of Nottingham, United Kingdom	
	Electronic categorization of medical devices in Slovakia Dr. Branislav Jadud, Ministry of Health of the Slovak Republic, Slovakia	
	Using population health data analytics to optimize medical device investment decisions in the Kingdom of Saudi Arabia Dr. Mazen Hassanain, Halah Eldoseri, Ghada Farhat, Dr. Nabeel Abdulaziz, Dr Mohammed F Zamakhshary, Dr Mohammed Yemni, Dr Mohammed Hamzah Khoshim, Ministry of Health of the Kingdom of Saudi Arabia; Mitchell K. Higashi, Denise T Kruzikas, GE Healthcare; Charles Macal, Michael North, Center for Complex Adaptive Agent Systems Simulation, Decision and Information Sciences Division, Argonne National Laboratory, United States of America	
Sat. 14:00- 15:30	<b>Health Technology Management: Country Initiatives</b> <i>(French translation available)</i> Session Chair: Prof. Saide Calil Session Co-Chair: Ms. Jennifer Barragan	Salle 2
	Health technology management in Uganda Mr. Sam Steve Balayo Wanda, Ministry of Health, Uganda	
	Healthcare technology management in Kenya Mr. Philip Amoko Anyango, Martin Owino, Ministry of Health, Kenya	
	Impact of MDGs attainment on medical equipment management in Rwanda Mr. Didier Mukama, BMIT, Rwanda	
	Immediate impacts of an inventory on the procurement, donations, maintenance and use of medical equipment at Connaught Government Hospital in Freetown, Sierra Leone Mr. Alusine Bobson Kabia, Dr. Oliver Johnson, Ministry of Health of Sierra Leone	
	Maintenance des dispositifs médicaux et démarche qualité au Senegal Dr. Mamadou Sow, Valoris Santé Services/Horizons-Sahel, Senegal	
	Example maintenance management of medical devices in Benin: The case of Papané Hospital Mr. Charles Pascal Soroheye, Maliki Seidou Adjarath, Aboubakar Moufalilou, Ministry of Health; Virgile Megnigbeto, Papané Hospital, Benin	
	The governance problem in medical equipment donation projects: Case of Togo Mr. Komi Agbeko Tsolenyanu, NGO ASMENE (Association for Maternal, Neonatal and Child Health), Togo	
	Building management capacities for essential equipment and essential medicines supply in Tanzania. A case study. Mr. Reinhold Werlein, Swiss Tropical and Public Health Institute, Basel, Switzerland	
	Developing HTM capacity for Haiti Mr. Thomas Judd, Kaiser Permanente, United States of America	
	Maintenance of eye hospital services in Cameroon Mr. Nekongo Willy Moliki, Presbyterian Church in Cameroon Eye Hospital Services, Cameroon; Mr. Josef Riha, GIZ/EPOS, Nepal	

Time	Parallel sessions - Saturday 23rd November 2013	Room
Sat. 14:00- 15:30	<b>Regulation of Medical Devices: Country Initiatives</b> <i>(Spanish translation available)</i> Session Chair: Mr. Rainer Voelksen Session Co-Chair: Ms. Irena Prat	Salle 3
	Medical devices regulations in Cuba. Progress, challenges and opportunities for regulatory strengthening in the region of the Americas Ms. Dulce María Martínez Pereira, Lic. Silvia Delgado Ribas, Centro de Control Estatal de Equipos y Dispositivos Médicos (CECMED), Cuba	
	Moving towards harmonization of medical devices in Peru Ms Lida Esther Hildebrandt Pinedo, Headquarters of Medicines Inputs and Drugs, DIGEMID, Department of Health of Poland	
	Regulatory rules in the registration and importation of medical devices in Jordan Dr. Anan Abu Hassan, Food and Drug Authority, Jordan	
	Post market surveillance in Saudi Arabia Dr. Saleh Al Tayyar, Saudi Food and Drug Authority, Abdullah Thabit, Medical Devices Sector of Saudi Food and Drug Authority, Saudi Arabia	
	Regulation on changes to registered medical devices and challenges faced in Singapore Dr. Huiling Debbie Ko, Health Sciences Authority, Singapore	
	Regulation of medical devices in Tanzania Ms. Agnes Sitta Kijo, Adam Mitangu Fimbo, Rehema Mariki, Tanzania Food And Drug Authority, United Republic of Tanzania	
	Enacting regulation for health products and technologies in Kenya Dr. Lucy Musyoka, Ministry of Health of Kenya	
	A new horizon for the medical device sector in South Africa Ms. Debjani Mueller, CMeRC, University of Witwatersrand, South Africa	
	Regulatory affairs of medical devices in Africa; The Nigeria scenario Dr. Charity Ilonze, National Agency for Food And Drug Administration and Control, Nigeria	
	Towards the implementation of medical devices regulation based on the WHO model in Malaysia and its challenges Mr. Zamane Abdul Rahman, Medical Device Authority, Malaysia	
	Sat. 14:00- 15:30	
The five typical misfits of medical technology in the developing world: Why devices designed for high-income countries don't work and what to do about it Mr. Timothy Presterro, Design that Matters, United States of America		
Helping babies breathe: igniting coverage and quality of newborn resuscitation Ms. Ingrid Laerdal, Tore Laerdal, Ida Neuman, Laerdal Global Health, Norway, Sweden		
Evaluation and implementation of a bubble continuous positive air pressure system for newborns Ms. Kelley Maynard, Z Maria Oden, Jocelyn Brown, Mary Kate Quinn, Rebecca Richards, Rice University, United States of America; Robert Miros, 3rd Stone Design, Heather Machen, Suzanne Iniguez, Alfred Gest, Texas Children's Hospital, United States of America; O'Brian Smith, Baylor College of Medicine, United States of America, Zondiwe Mwanza, Kondwani Kawaza, Elizabeth Molyneux, College of Medicine, Queen Elizabeth Central Hospital, Malawi		
Innovative robust CPAP for respiratory therapy of neonates in low resource settings Mr. Grzegorz Dajer, Medical Technology Transfer and Services Ltd., Vietnam		
Ventouse delivery in a low resource setting - A innovative device Dr. Tanya Robbins, MCAI (Maternal and Child Health Advocacy International), United Kingdom; Mr. Arfang Faye, Bansang Hospital, Bansang, Gambia		
Efficacy of the embrace infant warmer to treat neonatal hypothermia Dr. Sudhir Borgonha, Jane Chen, Embrace Innovations, United States of America		
Diagnostic devices for pneumonia: A new perspective Prof. Michael Script, Guardit Technologies, Research & Development, LLC; Dr. Andre Muelenaer, Pediatric Medical Device Institute (PDMI), Section of Pediatric, Pulmonology / Allergy at the Carilion Clinic, Pediatrics at the Carilion School of Medicine, United States of America		
Unexplored success route to Nigeria's MDG4 target on neonatal mortality Dr. Hippolite Amadi, Imperial College London, United Kingdom; Prof. Jonathan C Azubuikwe, Paediatrics Department Enugu State University Teaching Hospital; Prof Gilbert N Adimora, Paediatrics Department, University of Nigeria Teaching Hospital Enugu; Prof. Akin O Osibogun, Public Health Department University of Lagos Teaching Hospital; Dr. Peter Alabi, University of Abuja Teaching Hospital; Dr. Angela C Uwakwem, Federal Medical Centre Owerri, Nigeria		
The potential impact of disruptive technology using a taskshifting model in rural Tanzania Mr. Denver Phiri, GE Healthcare, United Kingdom; Janeen Uzzell, GE GG&O, Ghana; Seleman Mbuyita, Godfrey Mbaruku, Ifakara Health Institute, Tanzania; Kallol Mukherji, GE Healthcare, India		



Time	Parallel sessions - Saturday 23rd November 2013	Room
Sat. 14:00- 15:30	<b>Medical Imaging</b> Session Chair: Dr. Jan Labuscagne Session Co-Chair: Dr. Miriam Mikhail	Salle 5/6
	SOMATOINFRA : The use and application of functional anatomic imaging in disaster medicine, war zones, and its great potential in health screening programmes in developing countries Mr. Szego John, Ortho-trauma International LLP, United Kingdom; Prof. Mihaly Szacszy, Budapest Technical University	
	Digital tomosynthesis after detection of suspicious lesions on chest radiography: effect on diagnostic imaging costs Prof. Emilio Quaia, Guido Grisi, Elisa Baratella, Roberto Cuttin, Gabriele Poillucci, Sara Kus, Maria Assunta Cova, Department of Radiology, University of Trieste, Italy	
	Experience review on digital imaging, PACS and tele-radiology from a middle income country Prof. Dorria Salem, Swiss Tropical Institute, Egypt	
	Availability of computed tomography and magnetic resonance imaging devices in the WHO European region Ms. Alena Usava, Ivo Rakovac, Enrique Loyola, Natela Nadareishvili, Valentina Hafner, Hanne Bak Pedersen, Claudia Stein, WHO Regional Office for Europe, Denmark	
	Accessible and affordable point-of-care ultrasound imaging for resource limited settings Dr. Sailesh Chutani, Mobisante Inc., United States of America	
	Is digital imaging helping to achieve service coverage? Experience review from a middle income country Mr. Martin Raab, Swiss Tropical and Public Health Institute, Basel, Switzerland; Dr. Tarek Badr, Dr. Dorria Salem, Dr. Seham ElSaadany, Directorate General of Radiology of Ministry of Health and Population, Egypt	
	Special communications systems for digital mammography in the Amazon rainforest Mr Leonardo Melo, Diagnext.com; Alessandro Severo Alves De Melo, Julio Cesar Rodrigues Dal Bello, Eduardo Rodrigues Vale, Universidade Federal Fluminense, Brazil	

Time	Parallel session - Sunday 24th November 2013	Room
Sun. 10:30- 12:00	<b>Health Technology Assessment</b> Session Chair: Dr. Hans-Peter Dauben Session Co-Chair: Mr. Alexandre Lemgruber	Salle 4
	EUnetHTA: a network for added value of European collaboration on HTA Dr. Marina Cerbo, Italy	
	Common European HTAs of medical devices Dr. Katrine B Fronsdal, Norway	
	Health technology assessment for medical devices: Does one size fit all? Dr. Joseph Lazar Mathew, Post Graduate Institute of Medical Education and Research; Thalakkotur Lazar Mathew, Psg Institute Of Advanced Studies, Coimbatore, India	
	Hospital-based Health Technology Assessment in France and Europe - A tool for decision making based on evidence Dr. Alexandre Barna, Mr. Emmanuel Charpentier, Mr. Björn Fahlgren, Mr. Marc Vanicatte, CEDIT, Hôpitaux de Paris, France	
	A national system for introduction of new health technologies in Norway - formalized coordination of hospital-based and national HTA Dr. Vigdis Lauvrak, Helene Arentz-Hansen, Brynjar Fure, Inger Natvig Norderhaug, Norwegian Knowledge Centre for the Health Services (NOKC), Norway	
	Mini-HTA to support evidence-based decisions for new health technologies in Norwegian hospitals Dr. Helene Arentz-Hansen, Vigdis Lauvrak, Brynjar Fure, Norwegian Knowledge Centre for the Health Services (NOKC), Norway	
	<b>Policies for Medical Devices</b> Session Chair: Mr. Mladen Poluta Session Co-Chair: Dr. Yukiko Nakatani	
The role of policymakers for health technologies Dr. Masato Mugitani, Ex-chair for Global Health Workforce Alliance, Japan		
Brazilian industrial health complex: Availability of access, industrial development and innovation policy Dr. Paulo Henrique Dantas Antonino, Eduardo Jorge Valadares Oliveira, Leonardo Batista Paiva, Carlos Augusto Grabois Gadelha, Ministry of Health of Brazil		
Interaction of HTA and regulation in medical devices: A tool for decision-making Dr. Ana Maria Perez Galan, Catherine Ausqui, Health Technology Department, Ministry of Health, Uruguay		
Analysis of therapeutic appliances using the information of health accounts Ms. Xuedan Yuan, David Morgan, OECD, France		
<b>Technical Specifications</b> Session Chair: Mr. Mladen Poluta Session Co-Chair: Dr. Yukiko Nakatani		
WHO collaboration on a national, EU-funded program for medical equipment procurement Ms. Dessislava Dimitrova, Results for Development Institute, Bulgaria; Prof. Nicolas Pallikarakis, Institute of Biomedical Technology (INBIT), Greece		
Specifications for procurement of medical technologies especificaciones para contratacion de tecnologias médicas Dr. Mery Wilma Teran Carreon, Unidad de Medicamentos y Tecnologia en Salud, Brazil; Victoria De Urioste, OPS/OMS, Bolivia		
<b>Safety of Medical Devices</b> <i>(Spanish translation available)</i> Session Chair: Mr. Alusine Bobson Kabia Session Co-Chair: Dr. Maria del Rosario Perez	Salle 3	
Impact of radiation safety standards on patient safety in the medical Imaging digital era Dr. Caridad Borrás, IUPESM, United States of America		
Engaging with healthcare professionals in India to improve medical device safety: Medical equipment safety workshop series (India 2013) Dr. Niranjana D Khambete, Sree Chitra Tirunal Institute for Medical Sciences and Technology, India; Alan Murray, University of Newcastle, United Kingdom		
Review of 134 reported clinical medical device incidents Prof. Alan Murray, Newcastle University, United Kingdom		
Assessment of adverse events related to the use of the computed tomography equipment Mr. Ricardo Alcoforado Maranhão Sá, Secretaria De Estado Da Saúde De Goiás, Brazil; Walter Vieira Mendes Júnior, Escola Nacional de Saúde Pública Sérgio Arouca, Fundação Oswaldo Cruz, Brazil		
Turkish medical device tracking system (MDTS) Ms. Funda Guler Ozdiler Copur, Ömer Faruk Kuru, Isbara Alp Sezen, Ismet Köksal, Osman Nacar, Ercan Simsek, Turkish Medicine and Medical Devices Agency, Turkey		
Learning from medical devices incidents in the national health service in the United Kingdom Ms. Dagmar Luettel, Dr. David Cousins, Patient Safety for Safe Medication Practice and Medical Devices, NHS England, United Kingdom		
Medical devices vigilance and patient safety: need for global information extraction and dissemination means Dr. Kallirroi Stavrianou, Zhivko Bliznakov, Nicolas Pallikarakis, University of Patras, Greece		

Time	Parallel session - Sunday 24th November 2013	Room
Sun. 10:30- 12:00	<b>Innovative Medical Devices for Low-Resource Settings</b> Session Chair: Mr. Brendon Kearney Session Co-Chair: Prof. James Abbas	Salle 1
	A low-cost, disposable incubator for enabling point-of-care nucleic acid based diagnostics in low resource settings Mr. Jered Singleton, Dylan Guelig, Chris Zentner, Bernhard Weigl, Paul LaBarre, PATH, United States of America; Josh Buser, Paul Yager, University of Washington, United States of America	
	Fully-automated point-of-care detection of malaria and other infectious diseases with a disc-shaped diagnostic platform Dr. Konstantinos Mitsakakis, Sebastian Hin, Oliver Strohmeier, Daniel Mark, Felix von Stetten, Roland Zengerle, Laboratory for MEMS Applications, IMTEK - Department of Microsystems Engineering, University of Freiburg, HSG-IMIT, Germany	
	A behaviour changing syringe: Making invisible risk, visible to deter the reuse of syringes in a curative context Dr. David Swann, University of Huddersfield, United Kingdom	
	A novel device to screen newborns for hearing loss in resource constrained settings to prevent speech loss Mr. Nitin Sisodia, Neeti Kailas, Sohum Innovation lab, Dr. Chandrasekhar, IISc, Dr. Rakesh Lodha, Dr. Ramesh Agarwal, AIIMS, India	
	GlobalDiagnostiX: Development of an entirely new, low cost and robust, digital diagnostic imaging system for low-resource contexts Dr. Klaus Schöenberger, Bertrand Klaiber, Beat Stoll, Program EssentialTech, Cooperation and Development Center, The EssentialMed Foundation, Lausanne, Switzerland, Social And Preventive Medicine Unit, University of Geneva, Switzerland	
	Disruptive innovation for sustainable healthcare - Enabling technologies for portable ultrasound devices Prof. Daniel Steenstra, Dr. John Ahmet Erkoyuncu, Cranfield University, United Kingdom	
Sun. 10:30- 12:00	<b>Human Resources in BME</b> <i>(French translation available)</i> Session Chair: Prof. Herbert Voigt Session Co-Chair: Mr. Adham Ismail Abdel Moheim	Salle 5/6
	Biomedical engineers' involvement of health technology assessment of medical devices Prof. Nikolas Pallikarakis, International Federation for Medical and Biological Engineering (IFMBE), Greece	
	Academic models for undergraduate biomedical engineering Dr. Shankar Muthu Krishnan, Wentworth Institute of Technology, United States of America	
	IFMBE role in the network of training programs in BME on low-resource countries Prof. Mario Forjaz Secca, International Federation on Medical and Biological Engineering (IFMBE), Portugal; Andre Linnenbank, IFMBE, Netherlands; Ratko Magjarevic, IFMBE, United States of America; Herbert Voigt, IUPESM, Croatia	
	Undergraduate engineering student clinical immersion experiences: outcomes and management of expectations Prof. Kathleen H. Sienko, University of Michigan, United States of America; Kwabena A. Danso, Henry S. Opare-Addo, Alexander T. Odoi, Komfo Anokye Teaching Hospital, Samuel Obed, Korle Bu Teaching Hospital, Elsie Effah Kaufmann, University of Ghana; Aileen Huang-Saad, Amir Sabet Sarvestani, Frank W. J. Anderson, Timothy R. B. Johnson, University of Michigan, United States of America	
	Mise en oeuvre d'un programme de specialisation pour les biomédicaux d'afrique francophone Mr. Mwamba Mukendi Arnaud, Association Des Ingenieurs Et Techniciens Biomedicaux De La Rd Congo, AITB en Sigle, Democratic Republic of the Congo	
	The role of the regulatory professional in shaping good regulatory policy Dr. Philippe Auclair, Sherry Keramidas, Regulatory Affairs Professionals Society (RAPS), United States of America; Rainer Voelksen, RAPS, Switzerland	
	Safe care: An initiative for regulations in Kuwait Ms. Hanan Al-awadhi, Kuwait Association for Biomedical Engineers/Kuwait Society of Engineers, Kuwait	
	Should we train users in equipment care? Mr. Andrew Gammie, Fishtail Consulting Ltd, United Kingdom	
	A survey on the training and performance of medical engineering of professionals in Kenya Mr. Peter Matoke, Association of Medical Engineering of Kenya (AMEK), Martin Owino, Mary Ngugi, Medical Engineering Services Division-Ministry of Health; Gordon Agalo, Peter M. Guchu, KMTC-Nairobi Campus; Shadrack Wamwayi, Francis O. Mbanga, Kenyatta National Hospital; George O. Odongo, Isaac Cheptiony, KMTC-Nairobi Campus, Kenya	

Time	Parallel session - Sunday 24th November 2013	Room
Sun. 14:00- 15:30	<b>Local Production in Low-Resource Settings</b> Session Chair: Mr. Amir Sabet Sarvestani Session Co-Chair: Dr. Heike Hufnagel	Salle 4
	Importance of indigenous R&D and manufacture of medical devices in the light of Bangladesh experience Prof. Khondkar Siddique-e Rabbani, University of Dhaka, Bangladesh	
	Challenges in local production of medical devices by domestic manufacturers in India Mr. Balram Sankaran, Sree Chitra Tirunal Institute For Medical Sciences And Technology, India	
	Facilitating local production for improved access to in-vitro diagnostics Dr. Ruth McNerney, London School of Hygiene & Tropical Medicine, United Kingdom	
	Assessing feasibility of local production of medical devices in Sub-Saharan Africa to improve access to quality medical care using the WHO Feasibility Tool Prof. James Abbas, Arizona State University, USA; Amir Sabet Sarvestani, University of Michigan, USA; Mladen Poluta, University of Cape Town & University of Pretoria, South Africa; Peng Si, Nanyang Technological University, Singapore; Adriana Velazquez-Berumen, WHO	
	Seating fabrication system for clinical rehabilitation settings in low income countries. The experience of Mexico and Colombia Dr Jorge Letechipia, Abel Arredondo, Aldo Alessi, Luis Hernández, Graciela Fregoso, Andrés Torres, Robinson A. Torres, Yeison J. Montagut, Ibero Ciudad de Mexico, Mexico	
Sun. 14:00- 15:30	<b>Procurement of Medical Devices</b> <i>(French translation available)</i> Session Chair: Mr. Andrew Gammie Session Co-Chair: Mr. Prem Prakash Chopra	Salle 2
	Free trade agreements and medical technology: implications for policy makers and others Dr. Trevor Gunn, GMTA, United States of America	
	Global price system - project to collaboration in economic information about medical devices Mr. Murilo Contó, Eduardo Coura Assis, Clarice Petramale, Vania Canuto, Ministry of Health of Brazil	
	Need for care operators to increase efficiency in medical device procurement through volume pooling, resources and expertise Mr. Charles-Edouard Escurat, GIP Resah-Idf, France	
	Mechanisms for introducing large medical devices into developing countries. Avoiding the pitfalls of the past and providing possible solutions for the future Dr. Maurice Paul David Burke, Abiodun Adeyemi, Paula Horne, Kate Ricketts, Royal Berkshire Hospital, James Annkah, Ivan Rosenberg, Gary Royle, University College London, Shauna Mullally, Tropical Health and Education Trust (THET), United Kingdom; Eric Addison, Komfo Anokye Hospital, Theophilus Sackey, Korle Bu Teaching Hospital, Ghana	
	HIV diagnostics: Procurement, selection and use Dr. Elliot Cowan, Dr. Gaby Vercauteren, Anita Sands, WHO, Switzerland	
	Experience of procurement in Myanmar Prof. Tun Tun Lin, Yangon General Hospital, Ministry of Health of Myanmar	
	Challenges facing medical engineering services in Kenya Ms. Salome Wangari Mwaaura, Ministry of Health of Kenya	
	PROCOT – Cooperation program to capture technical and economics information about medical equipment Mr. Murilo Contó, Erlon Cesar Dengo, Marcio Luis Borsio, Ministry of Health of Brazil	
Sun. 14:00- 15:30	<b>Patient Safety</b> Session Chair: Dr. Yadin David Session Co-Chair: Dr. Sunil Senanayake	Salle 3
	Injection safety: a new WHO global initiative building upon recent progress Dr. Selma Khamassi, WHO, Switzerland	
	The burden of unsafe injections worldwide: highlights on recent improvements and areas requiring urgent attention Prof. Benedetta Allegranzi, WHO, Switzerland	
	Lessons learned and challenges in implementation planning for injection safety initiatives Ms. Lisa Hedman, WHO, Switzerland	
	Perspectives of a new WHO injection safety initiative focusing on therapeutic services Dr. Edward Kelley, WHO, Switzerland	
	<b>Medical Software</b> Session Chair: Dr. Yadin David Session Co-Chair: Dr. Sunil Senanayake	
	Safe medical devices – Do not forget software Prof. Ratko Magjarevic, International Federation for Medical and Biological Engineering (IFMBE), Croatia, Marc Nyssen, Faculteit Geneeskunde en Farmacie Vrije Universiteit Brussel, Belgium	
	Medical software: are clinical engineers ready to face the challenge? Dr. Ernesto Iadanza, Clinical Engineering Division/ IFMBE, Italy	
	When official training in telemedicine will be available for doctors & nurses? Prof. Olga Ferrer-Roca, UNESCO Chair Of Telemedicine, Spain	
	Developing interoperability standards for personal health devices Prof. Daidi Zhong, Chongqing University, Xiaolian Duan, Chongqing Academy of Science & Technology, China, Michael Kirwan, Continua Health Alliance, United States of America	

Time	Parallel session - Sunday 24th November 2013	Room
Sun. 14:00- 15:30	<b>Innovative Medical Devices for Low-Resource Settings</b> <i>(Spanish translation available)</i> Session Chair: Mr. Martin Raab Session Co-Chair: Ms. Keiko Fukuta	Salle 1
	Assessment of male circumcision devices for HIV prevention in East and Southern Africa Ms. Julia Samuelson, Tim Farley, Gaby Vercauteren, Irena Prat, WHO, Switzerland; Renee Ridzon, United States of America; Tim Hargreave, Scotland; Stephen Watya, Uganda	
	Design to improve pressure ulcer care in the community Mr. Gianpaolo Fusari, Jonathan West, Ed Matthews, The Helen Hamlyn Centre for Design, Royal College of Art, United Kingdom	
	Increasing accessibility to safe surgical practices by training non-physician clinicians (NPCs) using a battery-powered anesthesia device. Mr. Denver Phiri, Gisela Abbam, GE Healthcare, United Kingdom; Janeen Uzzell, GE Africa, Ghana; Kallol Mukherji, GE Healthcare, India; Karim Asaad, GE Healthcare, Egypt; Thomas Muithya, Kenyatta University, Kenya	
	Development of a telemedicine device for underserved areas in the Philippines Mr. Randy Joseph Fernandez, Portia Grace F. Marcelo, University of the Philippines Manila National Telehealth Center; Luis G. Sison, University of the Philippines; Diliman, Electrical and Electronics Engineering Institute; Engr. Peter Antonio B. Banzon, Department of Science and Technology, Advanced Science and Technology Institute, Philippines	
	mHealth tool kit for low resource countries Prof. Saroj Kanta Mishra, Repu Daman Chand, Indra Pratap Singh, School of Telemedicine & Biomedical Informatics (STBMI); Sanjay Gandhi Post Graduate Institute of Medical Sciences (SGPGIMS), India	
	Using mobile technology to collect medical device usage data in real time Ms. Hallie Sue Cho, OttoClave, United States of America	
	Phase I results of a simplified negative pressure wound therapy device for use in low resource settings Dr. Gita Mody, Robert Riviello, Brigham and Women's Hospital; Danielle Zurovcik, Massachusetts Institute of Technology, United States of America; Grace Kansayisa, Dominique Mugenzi, Georges Ntakiyiruta, National University of Rwanda and Kigali University Teaching Hospital, Gemimah Uwimana, Rwinkwavu District Hospital, Rwanda	
Sun. 14:00- 15:30	<b>Human Resources in Technology Life Cycle Management</b> Session Chair: Dr. Kin Yin Chueng Session Co-Chair: Dr. Pablo Jimenez	Salle 5/6
	Improving patient outcome through technology life cycle management: The role of biomedical engineers Prof. Nicolas Pallikarakis, Institute of Biomedical Technology (INBIT), Greece	
	Improving patient outcome through technology life cycle management: The role of clinical engineers Dr. Yadin David, IUPESM/Health Technology Task Group (HTTG), United States of America	
	Improving patient outcome through technology life cycle management: The role of medical physicists Dr. Caridad Borrás, IUPESM, United States of America	
	<b>Human Resources in Medical Physics</b> Session Chair: Dr. Caridad Borrás Session Co-Chair: Dr. Maria del Rosario Perez	
	A new initiative of IOMP to support professional development of medical physicists in Africa Dr. Slavik Tabakov, IOMP, United Kingdom; Kin Yin Cheung, IOMP, Hong-Kong; Fridtjof Nuesslin, IOMP, Germany; Madan Renahy, IOMP, Austria; Raymond Wu, IOMP, United States of America; Joannis Damilakis, IOMP, Greece; Stephen Keevil, IPEM, United Kingdom; Ahmed Ibn Seddick, FAMPO, Morocco; Rebecca Nakatudde, FAMPO, Uganda; Taofeeq Ige, FAMPO, Nigeria	
	Pivotal role of the medical physicist in diagnostic imaging: The new challenges of hybrid imaging technology Prof. Habib Zaidi, Geneva University Hospital, Switzerland	
	Medical imaging training in low-resource countries - a case study in Mozambique Prof. Mario Forjaz Secca, International Federation on Medical and Biological Engineering (IFMBE); Clara Ramalhão, Hospital Pedro Hispano, Portugal	
The role of medical physicist on strategic planning and acquisition of appropriate technology in radiation medicine Dr. Kin Yin Chueng, IOMP, China		
Professional accreditation of medical physicists, IOMP perspective Dr. Kin Yin Chueng, IOMP, China; Raymond Wu, IOMP and Barrow Neurological Institute, United States of America		

## Second WHO Global Forum on Medical Devices All Posters

### A. Economics of medical devices

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| A.01 | Atrial septal defect (ASD) device closure using a device sizing formula without balloon sizing or invasive echocardiography is safe, cost effective and increases access to treatment<br><br>Gamini Galappatthy, Ruwan Ekanayaka, <i>The National Hospital of Sri Lanka, Sri Lanka</i>   |
| A.03 | Medical device procurement strategies at a glance in Turkish public hospital organization<br>Ali Riza Demirbas, <i>Ministry of Health, Turkey</i> ; Fetin Rüstü Yildiz, Zehra Yaman, <i>Turkish Public Hospital Organization, Turkey</i>   |
| A.04 | Computerization and rationalization of the investment in medical technologies in hospitals<br><br>Lisa Giuliani, Fugieri Stefania, <i>Elettronica Bio Medicale, TBS Group, Italy</i> ; Tulli Giorgio, <i>Azienda Sanitaria Locale Nr 10, Italy</i>   |
| A.05 | Cost effectiveness of medical devices to reduce mortality from pre-eclampsia in low-resource settings<br><br>Zoë M McLaren, John P Hessburg, Amir Sabet Sarvestani, Ethan Parker, Timothy R B Johnson, Kathleen H Sienko, <i>University of Michigan, United States of America</i> ; James Akazili, <i>Navrongo Health Research Centre, Ghana</i>             |
| A.06 | Comparison of reimbursement systems: Turkey, Germany and United Kingdom<br>Gorkey Turgut, <i>Turkey</i> ; Funda Özdiler, Ismet Köksal, Osman Nacar, Ercan Simsek, <i>Turkish Medicine and Medical Devices Agency, Turkey</i>   |
| A.08 | Cost-effectiveness of the WelTel mHealth program to improve adherence rates to antiretroviral therapy in Kenya<br><br>Anik Patel, Richard Lester, Zafar Zafari, Carlo Marra, <i>University of British Columbia, Canada</i> ; Scott Braithwaite, <i>New York University, United States of America</i> ; Mia Van Der Kop, <i>Karolinska Institutet, Sweden</i> |
| A.09 | Portuguese approach in promoting a rational use of medical devices<br><br>Mariana Madureira, Emilia Alves da Silva, Helder Mota Filipe, <i>INFARMED - National Authority of Medicines and Health Products, Portugal</i>  |



## B. eHealth

B.02 Empowering consumers and medical supply chain systems with the mobile phone as a health device

Selorm Branttie, *mPedigree Network, Ghana*

B.03 Better informed pregnancy referrals towards increased health coverage

Goncalo Salvador Ribeiro e Castro, *Swiss Tropical and Public Health Institute, Switzerland*

B.04 MEDBOX - quality assurance of health related humanitarian action

Joost Butenop, *Medical Mission Institute - The Advisory Group for International Health, Germany*

B.05 Priority needs assessment at Guayaquil University Hospital

Ricardo Silva, *National Secretary of Higher Education, Science and Technology, Ecuador*, Jorge Medina, *School of Medicine, Guayaquil University, Ecuador*; Luis Villavicencio, *University Hospital at Guayaquil, Ecuador*

B.06 Healthcare continuum, a turning point for Colombia

Vladimir Quintero, Mendez Alexis Messino, *Simon Bolivar University, Colombia*; Paul Pelaez, *Chamber of Commerce Barranquilla, Colombia*; Antonio Hernandez, *American College of Clinical Engineering, United States of America*; Mario Castañeda, *United States of America*

B.07 Inter-observer reliability in the use of cellphone technology as a community based limb loss screening tool

Jose Alvin Mojica, Josephine R. Bundoc, *University of the Philippines, Manila*

B.08 Telemedicine: can we start today?

Miguel Pro Quintana, *France*

B.09 Lab tests online – Patient-centric, non-commercial, peer-reviewed resource for limited resource settings

Shweta Kulkarni, Philippe Jacon, *European Diagnostic Manufacturers Association, Belgium*; George Linzer, *American Association for Clinical Chemistry, United States of America*

B.11 Exploring the implementation of e-Health practices in a low income country: A case study

Pedro Galvan, M. Samudio, M. Cabral, M. Ascurra, V. Cane, *Department of Biomedical Engineering and Imaging, Research Institute for Health Sciences, National University of Asuncion*; A. Cabello, I. Allende, *Department of Control of Health Facilities and Medical Devices, Ministry of Public Health and Social Welfare, Paraguay*; X. Basogain, F. Hilario, *University of Basque Country, Spain*

B.12 Implementation of mHealth projects in Africa: what works? what doesn't? and why?

Neo M Mohutsiwa-Dibe, *Ministry of Health, Botswana*; Clara Aranda Jan, *Institute of Manufacturing, University of Cambridge, United Kingdom*; Svetla Loukanova, *Institute of Public Health, University of Heidelberg, Germany*

## C. Healthcare delivery: the role of medical devices

C.01	Complete mobile care units in rural areas Jean Marie Jigte, Kamdem Moyou, Samuel Joel Ildevertadjeme, <i>Care Help Cameroun, Cameroon</i>
C.02	Situational analysis of an NGO delivering health care services and medical devices, and their needs in Togo Komi Agbeko Tsolenyanu, <i>Association for Maternal, Neonatal and Child Health, Togo</i>
C.03	Web-based self-check software screening test to determine susceptibility to indoor chemical exposure and prevent adverse effects on children's health Emiko Todaka, Hiroko Nakaoka, Masamichi Hanazato, Chisato Mori, <i>Center for Preventive Medical Science, Chiba University, Japan</i>
C.04	Optimal benefits from international aid and support of medical devices for developing countries Faisal Mujamal, <i>Ministry of Public Health and Population, Yemen</i> ; Hanady Ahmad AlDughaish, <i>Civil Society Organization IT, Yemen</i>
C.05	Destruction of waste from care in health centers in Burkina Faso Zida Ouambi Emmanuel, <i>Ministry of Health, Burkina Faso</i>
C.06	Trends in colistin use in 60 countries, 2000-2010 Aditi Sharma, Ramanan Laxminarayan ( <i>Princeton University</i> ), Nikolay Braykov, <i>Center for Disease Dynamics, Economics and Policy, Public Health Foundation of India, India</i>
C.07	Health care delivery in rural India: A dream or reality? Adithya Pasupuleti, M Basava Kumar, Jovis Johnny, <i>Stanford India Biodesign, India</i>
C.08	Assessment of the calibration of measuring cups and spoons of paediatric liquid dosage forms John Kofi Agbesi Korbuvi, <i>Health Service, Ghana</i>
C.09	A meeting, a plan and the creation of a dialysis centre in Benin Jean Pierre Garcia Perez, <i>Benin</i>

## D. Healthcare Technology Management (HTM) (Clinical Engineering)

D.01	A new validation method proposal for electrical performance in electroscalpels using finite element analysis (FEA) Sebastian Torres Montoya, Yesid Montoya Goez, Claudia E. Echeverri Cuartas, <i>Antioquia Engineering School, CES University</i> ; Lina María Tapias, <i>IO Interquiroyanos, Colombia</i>
D.04	Protegedemed – An alternative to reduce electric microshock risk during surgery Luiz Eduardo Schardong Spalding, <i>Universidade de Passo Fundo and Hospital São Vicente de Paulo, Brazil</i> ; Marcelo Trindade Rebonatto, <i>Universidade de Passo Fundo and Pontificia Universidade Catolica, Brazil</i> ; Kristofer Becker Kochhann, <i>Hospital São Vicente de Paulo, Brazil</i>
D.05	Healthcare Technology Foundation - Advancing the safety of healthcare technology John Tobey Clark, <i>University of Vermont, United States of America</i> ; Yadin David, <i>United States of America</i>
D.06	Matchmaking between low-end medical devices and primary care units via a non-profit platform -- experience from China Li Yang, Daidi Zhong, Xingmin Guo, Xiaolin Zheng, Xuelong Tian, Wenshen Hou, Xitian Pi, Zhong Ji, Yanjian Liao, Jin Tan, <i>Chongqing University, China</i>
D.07	Certification of biological safety cabinets Beth W Wanjohi Njaramba, <i>Ministry of Health, Kenya</i>
D.08	Tools for management of genomic research technology Beatriz Hernandez, Reina Patricia Rivera Dominguez, Oscar Gutierrez Villegas, <i>National Institute of Genomic Medicine, Mexico</i>
D.09	Importance & benefits of clinical engineering departments in Turkey Omer Faruk Kuru, Cihan Karınca, Serbay Bahceci, Ismet Koksall, Osman Nacar, Ali Sait Septioglu, <i>Turkish Medicine and Medical Devices Agency, Turkey</i>
D.10	Effective maintenance program in Cameroon Nekongo Willy Moliki, <i>Presbyterian Church in Cameroon, Cameroon</i> ; Jurgen Clauss, <i>Ministry of Water Resources, Stuttgart Urban Council, Germany</i>
D.11	Evidence-based mathematical maintenance model for medical equipment Abdelbaset Khalaf, <i>A Tshwane University of Technology, South Africa</i> ; K Djouania, Y Hamama, <i>University of Paris</i> ; Y Alayli, <i>France</i>
D.12	Second hand medical equipment challenges in a remote area of a LDC: Experience of cardiac centre Shisong Emmanuel Kouemo Tchokodjeu, <i>St Elizabeth Catholic General Hospital, Cameroon</i> ; Roberto Musi, <i>Associazione Bambini Cardiopatici nel Mondo, Italy</i>
D.14	Capacity building and supporting clinicians in medical equipment refurbishment Mideksa Mulugeta, <i>Addis Ababa University, HSC, Tikur Anbessa Specialized Hospital, Ethiopia</i>
D.15	Qualification of medical technology management in a health care network Eduardo Coura Assis, <i>Department of Science and Technology, Secretariat of Science, Technology and Strategic Inputs, Ministry of Health, Brazil</i> ; Murilo Conto, <i>Department of Management and Incorporation of Health Technology, Secretariat of Science, Technology and Strategic Inputs, Ministry of Health, Brazil</i>
D.16	The use of oxygen concentrators in the Gambia: A study of over five years of experience in a setting with BMET support Beverly Bradley, Samantha Chow, Yu-Ling Cheng, <i>University of Toronto, Canada</i> ; Ebrima Nyassi, <i>Biomedical Engineering Unit, Medical Research Council, The Gambia</i> ; David Peel, <i>United Kingdom</i> ; Stephen RC Howie, <i>Child Survival, Medical Research Council</i>

D.17 The problem of acquisition and maintenance of biomedical equipment in Burkina Faso

Zida Ouambi Emmanuel, *Ministry of Health, Burkina Faso*

D.18 Impact of rational medical device management on health economics

Olgun Sener, *Ministry of Health, Turkey*

D.19	Health technology management model applied in primary healthcare in Brazil Rubia Santos, Renato Garcia Ojeda, <i>Institute of Biomedical Engineering, Federal University of Santa Catarina, Brazil</i> ; Carlos Daniel M S Moutinho Junior, <i>Secretaria Municipal de Saude de Florianopolis, Brazil</i>
D.21	Improving maintenance of medical equipment in Uganda Keiko Fukuta, <i>Japan Association for Clinical Engineering, Japan and University of Leeds, Nuffield Centre for International Health and Development, United Kingdom</i>
<b>E. Health Technology Assessment (HTA) for medical devices</b>	
E.01	Health technology assessment : Specificity of medical devices evaluation in Singapore Laurent Dominique Michel Metz, <i>Singapore</i> ; Jayashree Mapari, <i>India</i>
E.02	Healthcare technology assessment for non-pneumatic anti shock garment for obstetric shock prevention Vatsal Chhaya, Jitendra Kumar Sharma, Mohammed Ameer, <i>National Health Systems Resource Centre, India</i>
E.03	Mini HTA: An effective tool for clinical governance, resource allocation and conflict management at local (regional) level Gaddo Flego, Cardinale Francesco, <i>Azienda Sanitaria Locale Nr 4, Italy</i>
E.04	A systematic review of health technology assessment tools in resource-limited settings: How much do we know about the assessment of medical devices in Sub-Saharan Africa? Christine Kriza, <i>University of Erlangen-Nuremberg, Germany</i> ; Jill Hanass-Hancock, Nicola Deghaye, <i>Health Economics and HIV/AIDS Research Division, University of KwaZulu-Natal, South Africa</i> ; Emmanuel Ankrah Odame, <i>Ghana College of Physicians and Surgeons, Accra, Ghana</i> ; Rashid Aman, <i>Centre for Research in Therapeutic Sciences, Nairobi, Kenya</i> ; Peter Kolominsky-Rabas, <i>Interdisciplinary Centre for Health Technology Assessment and Public Health, Germany</i>
E.05	The signet programme: A model for capacity and capability building in health technology assessment and management Thalakkotur Lazar Mathew, <i>PSG Institute of Advanced Studies, India</i> ; Joseph Mathew, <i>Advanced Pediatrics Centre, Postgraduate Institute of Medical Education and Research, Chandigarh, India</i> ; Jeremy Lim, <i>Insights Health Associates, Singapore</i>

## F. Biomedical engineering education

F.01 Improving medical devices management in the hospitals by introducing a health technology lecture in the syllabus of the national advanced school of administration and magistracy in Cameroon.

Vincent Ngaleu Toko, *Cameroon*

F.02 Characterizing the next generation of medical device innovators: Ghanaian student perceptions of biomedical engineering

Elsie Effah Kaufmann, *University of Ghana, Ghana*; Ibrahim Mohedas, Shanna R Daly, Kathleen Sienko, *University of Michigan, United States of America*;

F.03 Undergraduate biomedical engineering students as design ethnographers

Ibrahim Mohedas, Shanna R. Daly, Kathleen Sienko, *University of Michigan, United States of America*

F.04 Multinational undergraduate engineering student clinical immersion experience in obstetrics

Kathleen Sienko, Amir Sabet Sarvestani, *University of Michigan, United States of America* ; Elsie Effah Kaufmann, *University of Ghana* ; Moses Musaaazi, *Makerere University, Uganda*; Samuel Obed, *Korle Bu Teaching Hospital, Ghana*

F.07 The role of clinical engineering in the process of incorporating technology based on procedures

Marcelo Hayashide, Priscila Sousa de Avelar, Renan Feltrin, Renato Zaniboni, Renato Garcia Ojeda, *Institute of Biomedical Engineering, Federal University of Santa Catarina, Brazil*

F.08 Brazilian industrial complex and innovation in health: Biomedical engineering training in Brazil, achievements and challenges

Sergio Santos Mühlen, *Universidade Estadual de Campinas, Brazil*; Paulo Henrique Dantas Antonino, Eduardo Jorge Valadares Oliveira, Carlos Augusto Graboys Gadelha, *Ministry of Health, Brazil*



## G. Innovation

G.01	Biomedical device standards vs. industrial property rights? Towards a fair solution of the healthcare related standard essential patents licensing problem <i>Vasileios (Basile) Spyropoulos, Technological Education Institute of Athens, Greece</i>
G.02	Frugal innovation for the first world: Forward-thinking solutions to healthcare often begin in reverse <i>Rahul Rekhi, Oxford University, United Kingdom</i>
G.03	Brazil: Research, development and innovation activity on medical devices <i>Paulo Henrique Dantas Antonino, Kellen Santos Rezende, Naira Valente Mayrink Bisinoti, Eduardo Jorge Valadares Oliveira, Leonardo Batista Paiva, Carlos Augusto Grabois Gadelha, Ministry of Health, Brazil</i>
G.05	In vitro diagnostics for low and middle-resource settings: Demanding innovation for affordability and cost-effectiveness <i>Kie Bong Nahm, Parag M Bhurchandi, Sang Yeol Park, Republic of Korea</i>
G.06	Medical devices for non-communicable diseases: Opportunities for innovation <i>Amir Sabet Sarvestani, Kathleen H Sienko, University of Michigan, United States of America</i>
G.07	Open-source medical device compendium for global health <i>Amir Sabet Sarvestani, Kathleen H Sienko, University of Michigan ; Lonny Grafman, Humboldt State University, United States of America</i>
G.08	Innovative materials and technologies in orthopedics <i>Serian Doma, Bedriye Akdemir, Funda Özdilic, Osman Nacar, Ismet Köksal, Saim Kerman, Turkish Medicine and Medical Devices Agency, Turkey</i>
G.09	R&D and innovation in medical technologies in Lebanon <i>Sandy Rihana, Biomedical Engineering Department, Holy Spirit University, Lebanon</i>
G.10	Brazilian industrial complex and innovation in health: Basic production process inducing technological development <i>Marcio Jose Batista Cardoso, Marco Aurelio de Carvalho Nascimento, Paulo Henrique Dantas Antonino, Eduardo Jorge Valadares Oliveira, Carlos Augusto Grabois Gadelha, Ministry of Health, Brazil</i>
G.11	Improving access to medical devices in low-resource settings through local production and technology transfer: WHO 2013 survey results <i>Peng Si, World Health Organization (WHO) &amp; Nanyang Technological University, Singapore ; James Abbas, WHO &amp; Arizona State University, United States of America ; Mladen Poluta, WHO &amp; University of Cape Town, South Africa ; Amir Sabet Sarvastani, WHO &amp; University of Michigan, United States of America, Adriana Velazquez-Berumen, WHO, Switzerland</i>

## H. Innovative health technologies

H.01	Wearable smart hand sanitizer for health care professionals Neeraj Kumar, Aanan Khurma, <i>Stanford India Biodesign, India</i>
H.02	Way-finding electronic bracelet, vision enabled waist-belt and mobility cane for visually impaired people in low resource settings Manjunatha Mahadevappa, Shripad Bhatlawande, Jayanta Mukherjee, <i>Indian Institute of Technology, Kharagpur, India</i>
H.03	Hand-held diagnostic ultrasound system to be used by general practitioners in routine medical examinations John Makinnon, Rodrigo Maureira, Vader Johnson, Javier Moya, <i>Chile</i> ; Manuel Duarte, Nicolas Beltran, Carlos Conca, <i>Facultad de Ingenieria, Universidad de Chile</i>
H.04	A low-cost, low-power syringe pump for the delivery of magnesium sulfate to pre-eclamptic women  Kelley Maynard, Kevin Jackson, Jinwoo Peter Jung, Glenn Fiedler, Lemuel Soh, Pablo Henning, Rebecca Richards-Kortum, Z Maria Oden, <i>Rice University, United States of America</i> ; Rohith R. Malya, AD Noland, <i>University of Texas Medical School at Houston, United States of America</i>
H.06	An electrical impedance based neonatal respiration monitor for pneumonia detection Khondkar Siddique-e Rabbani, Shahnaj Parvin, Imtiaz Ahamad Khan, Muhammad Abdul Kadir, <i>Department of Biomedical Physics &amp; Technology, University of Dhaka, Bangladesh</i>
H.07	A smartphone-based mobile multi-modal optical imaging platform for cervical cancer screening David Levitz, Ariel Beery, Amit Safir, <i>Israel</i>
H.08	Lab made mobile is an accurate and affordable mobile based urinalysis as well as blood glucose measurement system Aman Midha, Abhishek Sen, Yogesh Patil, <i>India</i>
H.09	Digital tomosynthesis of the chest: serial radiographic response in patients with pulmonary tuberculosis John Sabol, <i>United States of America</i> ; Hyesun Hwang, Myung Jin Chung, Won-Jung Koh, Kyeongman Jeon, Kyung Soo Lee, <i>Department of Radiology and Center for Imaging Science, Samsung Medical Center, Sungkyunkwan University School of Medicine, Korea</i>
H.10	The design of a traditional adult male circumcision device Amir Sabet Sarvestani, Kathleen H Sienko, <i>University of Michigan, United States of America</i>
H.11	Non-invasive hemoglobin screening for diagnosis and monitoring of anemia Laurent Choppe, <i>on behalf of Lior Mayaan, OrSense Ltd, Israel</i>
H.12	Design of mobile wireless sensors in amputee screening via cellular network Maria Regina Justina Esguerra Estuar, Nadia Leetian, <i>Ateneo de Manila University, Philippines</i> ; Josephine R. Bundoc, <i>Physicians for Peace, Philippines</i>
H.13	The opportunity of mobile device enabled vital signs monitoring in resource-constrained settings and the importance of signal quality indices for successful implementation in novel healthcare delivery scenarios, using the example of a mHealth perinatal monitoring concept  Lisa Stroux, Gari Clifford, <i>University of Oxford, United Kingdom</i>
H.15	Role of textiles in implantable medical devices Grace Annapoorani, <i>Bharathiar University, Coimbatore, Tamil Nadu, India</i>

H.16	German healthcare stakeholders perspectives regarding the value of a diagnostic device for heart failure: First results of a multi-criteria decision analysis (MCDA) Philip Wahlster, <i>University of Erlangen-Nuremberg, Germany</i> ; Mireille Goetghebeur, <i>Department of Health Administration, University of Montreal, Canada</i> ; Sandra Schaller, Christine Kriza, Charlotte Niederländer, Peter Kolominsky-Rabas, <i>Interdisciplinary Centre for Health Technology Assessment and Public Health, University of Erlangen-Nuremberg, National Cluster of Excellence Medical Technologies, Medical Valley EMN, Germany</i>
H.19	Maker for MNCH: A model for locally made medical devices in Kenya Edwin Mbugua Maina, <i>Concern Worldwide, Kenya</i> ; John Odero Ong'Ech, <i>Kenyatta National Hospital, Kenya</i> ; Kamau Gachigi, <i>University Of Nairobi, Kenya</i> ; Natasha Kanagat, <i>John Snow Inc, Center For Health Information, United States of America</i>
H.20	Assistive device to facilitate NG tube insertion Agyeya Dwivedi, <i>Stanford India Biodesign, India</i> ; Himanshu Gupta, Medha Tyagi, Neha Shetty, <i>All India Institute of Medical Sciences, India</i>
H.24	Low cost near infrared measurement of subcutaneous fat for newborn malnutrition Alistair Mcewan, <i>The University of Sydney, Australia</i> ; C Rosiak, P Jones, F Mustafa, S Bian, <i>School of Electrical and Information Engineering, The University of Sydney, Australia</i> ; G Garguilo, <i>Bioelectronics Neuroscience Lab, The University of Western Sydney, Australia</i> ; H Jeffery, <i>School of Public Health, The University of Sydney, Australia</i>
H.25	Lift laparoscopic surgeries: A boon to the rural surgeons Gnanaraj Jesudian, <i>Samiti for Education, Environment, Health and Social Action, India</i>
H.26	New device for cleft care Chinmay Deodhar, <i>India</i> ; Juliet Porch, <i>China</i> ; Rasika Deshpande, Gaurav Deshpande, Hiteswar Sarma, Alexander Campbell, <i>Operation Smile, India</i>
H.27	Friendly reactor ozone generator (FROG) for decontamination of water in unassisted communities living in remote regions of the globe Renato Zângaro, Amaro Carvalho, Henrique Cunha Alves, Leandro Procopio Lima, Carlos Jose Kozusny-Andreani, Dora Ines Schmidt, Erik Marcelo Marrone, <i>Center of Innovation, Technology and Education (CITE), Camilo Castelo Branco University (UNICASTELO), São José dos Campos, Brazil</i>
H.28	Brazilian industrial and innovation complex in health: Non-invasive intracranial pressure measurement methods S Mascarenhas, G H F Vilela, B Cabella, A C Cardim, C Wang, L Gomiero, M Vicentini, <i>University of São Paulo, Brazil</i> ; Y M Mascarenhas, P R Mascarenhas, <i>Brazil</i> ; D Cardim, <i>Federal University of São Carlos, Brazil</i> ; M R Signori, P H D Antonino, E J V Oliveira, C A G Gadelha, <i>Ministry of Health Brazil</i>
H.29	Mobile-connected Doppler analyzer for fetal health evaluation in low-resource settings Jeremy Wallis, <i>Council for Scientific and Industrial Research, South Africa</i> ; Rita van Rooyen, <i>mHealth Inc., United States of America</i> ; Josef Mufenda, <i>Stellenbosch University, South Africa</i>
H.30	Postpartum uterus model Ingrid Lærdal, Ida Neuman, <i>Norway</i>
H.31	Innovative health technologies: Infant radiant warmer Ashish Gupta, <i>India</i>
H.31A	Innovative health technologies: LED phototherapy for neonatal jaundice Ashish Gupta, <i>India</i>
H.32	Improving access for maternal and infant health through the use of compact portable ultrasound

	Gisela Abbam, <i>United Kingdom</i> ; Janeen Uzzell, <i>Africa</i>
H.33	Tissue generator based on combined physical factors: Clinical effectiveness study in painful shoulder Maria Teresa Arista Rivera, <i>Hospital Nacional Dos de Mayo, Peru</i>
H.34	Advanced brain-computer interfaces for patients suffering from Amyotrophic Lateral Sclerosis Ruxandra Iancu Ferfoggia, Anne-Chantal Héritier Barras, Dan Adler, Fabien Albert, Robert Leeb, Luca Tonin, José del R. Millán, Jean-Paul Janssens, <i>Geneva University Hospitals and Ecole Polytechnique Federale de Lausanne, Switzerland</i>
H.35	Basic health for all Jose Carlos Lapenna, <i>Brazil</i>
H.36	The MRI cleaner Guillaume Metenier, Pascal Challande, Maria Vargas, <i>Hôpitaux universitaires de Genève (HUG), Switzerland</i>
H.37	Low cost pen-mounted CCTV camera N Kasthuri and Ganga, <i>India</i> ; V Srinivasan, <i>Aravind Eye Hospital, India</i>
H.38	The Polypropylene Technology: An appropriate response to enable access to mobility devices Olivier Chappuis, <i>Switzerland</i>
H.39	Oxygen concentrator-driven baby bubble CPAP Robert Neighbour, <i>United Kingdom</i>
H.40	GNU Health: interfacing and interoperability Luis Falcon, <i>GNU Solidario, Spain</i>
H.41	A Universal Anaesthesia Machine: General anaesthesia for austere environments Paul Fenton, <i>United States of America</i>
H.42	Devices for the delivery of heat-stable dry powder oxytocin formulations by oral inhalation Oliver Hartley, K Fabio, K Curley, J Guarneri, B Adamo, B Laurenzi, M Grant, K Kraft, A Leone-Bay, <i>MannKind Corporation, United States of America</i> ; R Offord, <i>Mintaka Foundation for Medical Research, Switzerland</i>
H.43	Modulated Electro-Hyperthermia: Improving cancer treatments in low resource settings Carrie A Strauss, <i>South Africa</i>

## I. Medical imaging

I.02 Knowledge extraction of thoracic radiology reports using statistical natural language processing

Leandro Zerbinatti, Lincoln de Assis Moura Jr, *Universidade de São Paulo, Brazil*

I.03 Increasing access to diagnostic imaging in developing countries: The Asha Jyoti mobile clinic

Nandish Shah, Kathryn Everton, Anna Starikovskiy Nordvig, Bianca Nguyen, Daniel Mollura, *RAD-AID International, United States of America* ; Niranjana Khandelwal, *Postgraduate Institute of Medical Education and Research in Chandigarh, India*

I.04 The IOMP used equipment donation program

Mohammed Kazmain Zaidi, *Idaho State University, United States of America*

I.05 Acquisition of four digital imaging devices in Benin: Weaknesses of the project and a proposed solution

Maliki Seidou Adjaratou, Pascal Soroheye, *Ministry of Health, Benin* ; Marcelin Oyedokoun, *National University Hospital, Benin*

I.06 Medical devices for screening and diagnosis

Tekin Kaya, Isbara Alp Sezen, Hüseyin Altug, Osman Nacar, Ismet Köksal, Ali Sait Septioglu, *Turkish Medicine and Medical Devices Agency, Turkey*

## J. Policies for medical devices

J.01 Brazilian industrial and innovation complex in health: Product development partnerships (PDP) to guarantee access to health technologies in Brazil

Valeria Monteiro do Nascimento, Paulo Henrique Dantas Antonino, Eduardo Jorge Valadares Oliveira, Carlos Augusto Graboys Gadelha, *Ministry of Health, Brazil*

J.02 Brazilian industrial and innovation complex in health: Access to health technology, offsets, procurement and delivery in radiotherapy

Silvia do Amaral Pereira, Paulo Henrique Dantas Antonino, Eduardo Jorge Valadares Oliveira, Carlos Augusto Graboys Gadelha, *Ministry of Health, Brazil*

J.03 Brazilian industrial and innovation complex in health: Strengthening the local industry using the government purchasing power

Marcos Salomão, Paulo Henrique Dantas Antonino, Eduardo Jorge Valadares Oliveira, Carlos Augusto Graboys Gadelha, *Ministry of Health, Brazil*

J.04 Clinical engineering experience in the National Cancer Institute

Sandra Luz Rocha Nava, Abelardo Meneses Garcia, Angel Herrera Gomez, Patricia Volkow Fernandez, Yolanda Villaseñor Navarro, *Instituto Nacional De Cancerologia, Mexico*

J.05 Brazilian industrial complex and innovation in health: PAHO/WHO technical cooperation with the Ministry of Health of Brazil in the context of the WHA 60.29 resolution

Flavia Poppe, Christophe Rerat, *Pan American Health Organization, Brazil* ; Paulo Henrique Dantas Antonino, Eduardo Jorge Valadares Oliveira, Carlos Augusto Graboys Gadelha, *Ministry of Health, Brazil*

## K. Regulation of medical devices

- |      |   |
|------|---|
| K.02 | Good distribution practices for medical devices in Singapore<br>Jia Ying Agnes Goh, <i>Health Sciences Authority, Singapore</i>   |
| K.03 | On regulatory policies for medical devices in low-resource countries<br>Khondkar Siddique-e Rabbani, <i>University of Dhaka, Bangladesh</i>   |
| K.05 | Consumer health market demands balance and granularity in regulation policy<br>Prof Daidi Zhong, <i>Chongqing University, China</i> ; Xiaolian Duan, <i>Chongqing Academy of Science and Technology, China</i> ; Michael Kirwan, <i>IEEE, United States of America</i>  |
| K.06 | Regulations of medical devices in Turkey<br>Abdullah Ozdemir, <i>Turkish Medicines and Medical Devices Agency</i> ; Olgun Sener, <i>Department of Health Technology Assessment, General Directorate of Health Research, Ministry of Health, Turkey</i>  |
| K.07 | Metrology in post market medical devices<br>Diego Schirmer Spall, Renato Garcia Ojeda, <i>Biomedical Engineering Institute, Brazil</i>  |
| K.08 | Medical device clinical investigations and performance evaluation studies in Turkey<br>Asim Hocaoglu, Ahmet Gökhan Demir, Cihad Göker, Osman Nacar, Ismet Koksall, Ali Sait Septioglu, <i>Turkish Medicine and Medical Devices Agency, Turkey</i>   |
| K.09 | Turkish National Medical Device Database (TITUBB)<br>Mehmet Erden, Funda Özdiler, Esra Demir, Osman Nacar, Ismet Koksall, Ercan Simsek, <i>Turkish Medicine and Medical Devices Agency, Turkey</i>  |
| K.10 | Notified bodies designated in the scope of 93/42/EEC in Turkey<br>Gorkey Turgut, <i>Turkey</i> ; Gulsen Haciomeroglu, Serian Doma, Tekin Kaya, Erkan Isat, Muzaffer Balac, Memnune Bosgelmez, Ismet Koksall, Osman Nacar, Ercan Simsek, <i>Turkish Medicine and Medical Devices Agency, Turkey</i>  |
| K.11 | Arthroplasty registry and tracking system (ARTS) in Turkey<br>Serian Doma, Ismet Köksall, Osman Nacar, Saim Kerman, <i>Turkish Medicine and Medical Devices Agency, Turkey</i>  |
| K.12 | Worldwide Arthroplasty Registry System (ARS) applications and outcomes<br>Serian Doma, Senay Sat, Ismet Köksall, Osman Nacar, Saim Kerman, <i>Turkish Medicine and Medical Devices Agency, Turkey</i>   |
| K.13 | For the standardization of measures performed with IVDs, the need for laboratory accreditation<br>Semra Koyunoglu, Osman Nacar, Ismet Köksall, Saim Kerman, <i>Turkish Medicine and Medical Devices Agency, Turkey</i>  |
| K.15 | Brazilian industrial and innovation complex in health: improve domestic standards and harmonize international medical device standards<br>Marcos Roberto Signori, Marco Aurelio de Carvalho Nascimento, Paulo Henrique Dantas Antonino, Eduardo Jorge Valadares Oliveira, Carlos Augusto Grabois Gadelha, <i>Ministry of Health, Brazil</i> |

## L. World Health Organization medical device projects

L.01	Compendium of innovative health technologies for low-resource settings Jennifer Barragan, Heike Hufnagel, Adriana Velazquez Berumen, <i>World Health Organization, Switzerland</i>
L.02	Global medical device pricing survey Olumurejiwa Fatunde, Adriana Velazquez Berumen, <i>World Health Organization, Switzerland</i>
L.03	Global Atlas of Medical Devices 2013 Ricardo X. Martinez, Adriana Velazquez Berumen, <i>World Health Organization, Switzerland</i>
L.04	MEDEVIS: WHO Medical Device Information System  Heike Hufnagel, Yukiko Nakatani, Laura Alejandra Velez Ruiz-Gaitan, Adriana Velazquez Berumen, <i>World Health Organization, Switzerland</i> ; Mladen Poluta, <i>University of Cape Town, South Africa</i> ; Hans-Peter Dauben, <i>German Institute of Medical Documentation and Information, Germany</i>
L.05	H4 Interagency List of Medical Devices for Essential Interventions (ILMDEI) for Reproductive, Maternal, Newborn and Childhood Health (RMNCH) Laura Alejandra Velez Ruiz-Gaitan, Yukiko Nakatani, Adriana Velazquez Berumen, <i>World Health Organization, Switzerland</i>
L.06	Priority medical devices for Noncommunicable Diseases (NCDs) and Ageing Population Yukiko Nakatani, Adriana Velazquez Berumen, <i>World Health Organization, Switzerland</i>
L.07	National Regulatory Authority (NRA) assessment tool for medical devices Yukiko Nakatani, Adriana Velazquez Berumen, <i>World Health Organization, Switzerland</i>
L.08	WHO Global Biomedical Engineering Education and Professional Database Jennifer Barragan, Adriana Velazquez Berumen, <i>World Health Organization, Switzerland</i>
L.09	United Nations Commission on Life-Saving Commodities Yukiko Nakatani, Laura Alejandra Velez Ruiz-Gaitan, Jennifer Barragan, Adriana Velazquez Berumen, <i>World Health Organization, Switzerland</i>
L.10	WHO technical specifications for medical devices Adriana Velazquez Berumen, Laura Alejandra Velez Ruiz Gaitan, Yukiko Nakatani, <i>World Health Organization, Switzerland</i> ; Andrew Gammie, <i>United Kingdom</i> ; Mladen Poluta, <i>South Africa</i> ; Peng Si, <i>China</i> ; Roberto Ayala, <i>Mexico</i> ; Niranjan Khambete, <i>India</i> ; James Abbas, <i>United States of America</i> ; Tom Nakazaki, <i>Japan</i> ; Nicolas Pallikarakis, <i>Greece</i> ; Didier Vallens, <i>France</i> ; Kamel Abdul Rahim, <i>Jordan</i> ; Firas Mustafa Abu-Dalou, <i>Jordan</i>

Film viewing - Saturday 22<sup>nd</sup> November 2013

17:00-18:00

Salle 2

**eHealth**

Le Web VSSM software for vaccine management

Ramzi Ouhichi, *World Health Organization, Tunisia*

Transforming the smartphone into an integrated medical device

Phillip Olla, *Mobile Diagnostic Services, United States of America*

**WHO Compendium of innovative health technologies 2013**

A mail-order-pharmacy to improve the access to drugs in developing countries

Farell Folly, *Morocco*; Thierry Edoh, *Germany*

Enabling wider access to accurate hearing screening

Michael Melvill, *m2Health, South Africa*

Dry blood spot screening

Jordi Martí Gascón, *DBS Screening, Spain*

Low cost, durable sleep apnea treatment which does not require electricity

Noel Lindsay, *United States of America*

Bedside newborn phototherapy

Timothy Prester, *Design that Matters, United States of America*

Hollow mattress

Iffat Rahman, *Centre for the Rehabilitation of the Paralysed, Bangladesh*

**Assistive devices**

A low cost mechanical prosthetic hand

Khondkar Siddique-e Rabbani, *University of Dhaka, Bangladesh*

**Clinical Engineering**

Training project for clinical engineers in developing countries

Yoichi Sugiura, *Japan Association for Clinical Engineering, Japan*

**Infrastructure**

Protegemed – An alternative to reduce electric microshock risk during surgery

Schardong Spalding Luiz Eduardo, *Universidade de Passo Fundo e Hospital São Vicente de Paulo, Brazil*



**2nd Global Forum on Medical Devices  
Exhibitor list**

**UN Agencies**

PAHO / World Health Organization  
 United Nations Population Fund  
 World Health Organization

**Civil society/NGO**

Africa Health Research Organization  
 Design that Matters  
 D-REV  
 HUMATEM  
 Jhpiego\*  
 Medical Mission institute - The Advisory Group for International Health  
 Medisend International  
 RTI International\*  
 Tropical Health and Education Trust (THET)

**Academia**

Addis Ababa University, HSC, Tikur Anbesa Specialized Hospital  
 Ateneo de Manila University  
 Brigham and Women's Hospital  
 Center for Preventive Medical Science, Chiba University\*  
 Royal College of Art  
 Stanford India Biodesign  
 Swiss Federal Institute of Technology in Lausanne  
 University Ssociety for Natural and Sport Sciences, Budapest, Hungary  
 University of Huddersfield

**Government**

Department of Health Service, Teku, Kathmandu  
 Ministère de la santé et de la lutte contre le sida, République de Côte d'Ivoire\*  
 Ministério da Saúde Brasil  
 Ministry of Public Health and Population, Yemen\*

**Professional Associations, Health Facilities and Others**

International Organization for Medical Physics  
 Palm Beach Home Care Nursing Inc  
 Sohum Innovation Lab

\* Brochure only

**2<sup>nd</sup> WHO Global Forum on Medical Devices  
Workshop Programme (as of 18 November 2013)**

Friday 22 November							
Time	Plenary / Welcome / Logistics						
	Salle 1	Salle 1B	Salle 3	Salle 2	Salle 5/6	Salle 4	Salle 15
	<b>WHO/UN Tools to Improve Healthcare Delivery</b>	<b>Health Technology Assessment</b>	<b>Nomenclature, Standards and Regulations</b>	<b>Health Tech Management / Clinical Engineering</b>	<b>Medical Imaging and Radiation Safety</b>	<b>Innovation</b>	<b>Reproductive, Maternal, Newborn and Child Health</b>
09:15-10:00	Supporting integrated national strategic health planning, costing and health impact analysis: the OneHealth Tool (UNAIDS, UNDP, WHO, WB, UNFPA, UNICEF, the Futures Institute)	Creating synergies between national HTA and regional HTA agencies and hospitals in the assessment of medical devices (HTAI)	GMDN - a requirement for Unique Device Identification (GMDN Agency)	Healthcare Technology Management (HTM): ACCE advanced clinical engineering workshops (ACCE)	Role of medical physics in promoting radiation safety culture in health care (IOMP)	Innovation Sandbox Workshop: engaging medtech entrepreneurs to improve health in low- and middle-income countries through the power of co-creation (CAMTech, Mass. General Hospital)	MANDATE: priority setting for medical devices to reduce maternal, fetal and neonatal mortality (RTI International)
10:00-10:45	Service Availability and Readiness Assessment (SARA) tool for health system planning and management (WHO)		<b>Health break</b>	<b>Health break</b>	<b>Health break</b>		<b>Health break</b>
10:45-11:10	<b>Health break</b>		Partnership on regulatory harmonization (AHWP, APEC)	Improving data quality and technology management with mobile devices (Health Partners International)	Medical imaging education in developing countries (ISR, WFUMB, ISRR)		Medical device introduction: adding the Non-pneumatic Anti Shock Garment (NASG) for obstetric haemorrhage to programs and policies (UCSF)
11:10-12:00	Crucial role of medical devices in emergency & essential surgical care (WHO)						
12:00-13:30	Lunch / WHO visit						
	<b>WHO/UN Tools to Improve Healthcare Delivery</b>	<b>Health Technology Assessment</b>	<b>Nomenclature, Standards and Regulations</b>	<b>Health Tech Management / Clinical Engineering</b>	<b>Biomedical Engineering</b>	<b>Innovation</b>	<b>Approaches to Improving Healthcare Delivery</b>
13:30-14:20	Kits for humanitarian health response (WHO/UNFPA/UNICEF)	How to set up an HTA agency (INAHTA)	International standards – state of play and future trends in the medical domain (DITTA)	Computerized Maintenance Management Systems (CMMS): essential features and pitfalls to avoid (ACCE)	Human resources for medical devices: the role of the Biomedical Engineer (WHO)	Training for local innovation of affordable and appropriate medical devices in developing countries: learning from the Stanford India Biodesign Experience (All India Inst. of Medical Sciences)	Améliorer les pratiques des projets d'appui à l'équipement médical intégrant des dons (Improving practices in medical equipment support projects which include donations) (HUMATEM)
14:30-15:20			Medical software – regulatory and legal trends (DITTA)	WHO template for technical specifications of medical equipment (WHO)	How to define the basic academic curriculum to train clinical engineers (CED/IFMBE)		<i>* in French and English, not translated *</i>
15:20-16:00	Health break						
16:00-16:50	Interagency list of medical devices for reproductive, maternal, newborn and child health (WHO/UNFPA/UNICEF)	Information retrieval for HTA (NOKC)	National Regulatory Assessment tool (WHO)	A new generation web-based medical technology management system (INBIT, U. Patras)	Harmonization of biomedical engineering education: status and challenges (IFMBE)	Local production of medical devices in Africa: characterizing the landscape and assessing feasibility (WHO)	A tool for prevention and early diagnosis of neuro-degenerative diseases (Intl. U. of Japan)
17:00-17:50	WHO Medical Device Information System (WHO)		Digital hospital 21st century: you certainly can't manage it if you don't understand it [YCCMIYDU] (CHIRP)	Medical equipment donations: a toolkit for UK – developing country partnerships (THET)	Enhancing biomedical engineering education through innovation experiences (Nat. Univ. of Singapore)	Optimizing the WHO Compendium of Innovative Health Technologies for Low-Resource Settings (WHO)	Disaster preparedness for health technology managers (IUPESM)

## 2<sup>nd</sup> WHO Global Forum on Medical Devices Workshop Tracks and Topics

### WHO/UN Tools to Improve Healthcare Delivery

#### Supporting integrated national strategic health planning, costing and health impact analysis: the OneHealth Tool

Ms Karin Stenberg, World Health Organization (WHO)

#### Service Availability and Readiness Assessment (SARA) tool for health system planning and management

Dr Kavitha Viswanathan, World Health Organization

#### Crucial role of medical devices in emergency & essential surgical care

Dr Meena Cherian, World Health Organization

#### Kits for humanitarian health response

Dr Lisa Thomas, World Health Organization

#### Interagency list of medical devices for reproductive, maternal, newborn and child health

Ms Laura Alejandra Velez Ruiz Gaitan, WHO Medical Devices Unit

#### WHO medical device information system

Ms Laura Alejandra Velez Ruiz Gaitan, WHO Medical Devices Unit

### Health Technology Assessment

#### Creating synergies between national HTA and regional HTA agencies and hospitals in the assessment of medical devices

Prof Americo Cicchetti, Health Technology Assessment International (Italy)

#### How to set up an HTA agency

Mr Sumeet Singh, International Network of Agencies for Health Technology Assessment (Canada)

#### Information retrieval for HTA

Ms Sari Susanna Ormstad, Norwegian Knowledge Centre for the Health Services (Norway)

### Nomenclature, Standards and Regulations

#### GMDN - A Requirement for Unique Device Identification

Mr Mark Wasmuth, Global Medical Device Nomenclature Agency (UK)

#### Partnership on regulatory harmonization

Dr Li Tao, Asian Harmonization Working Party (China)

#### International standards – state of play and future trends in the medical domain

Ms Nicole Denjoy, DITTA (Belgium)

#### Medical software – regulatory and legal trends

Ms Nicole Denjoy, DITTA (Belgium)

#### National Regulatory Assessment Tool

Dr Yukiko Nakatani, WHO Medical Devices Unit

#### Digital hospital 21st century: you certainly can't manage it if you don't understand it (YCCMIYDUI)

Mr Thomas Judd, Center for Healthcare Information Policy and Research (USA)

### Health Tech Management / Clinical Engineering

#### Healthcare Technology Management (HTM): ACCE advanced clinical engineering workshops

Mr Antonio Hernandez, American College of Clinical Engineering(USA)

#### Improving data quality and technology management with mobile devices

Mr Robert Parsons, Health Partners International (UK)

#### Computerized Maintenance Management Systems (CMMS): essential features and pitfalls to avoid

Mr William Gentles, American College of Clinical Engineering (Canada)

#### WHO template for technical specifications of medical equipment

Ms Laura Alejandra Velez Ruiz Gaitan, WHO Medical Devices Unit

#### A new generation web-based medical technology management system

Dr Kallirroi Stavrianou, INBIT (Greece)

#### Medical equipment donations: a toolkit for UK – developing country partnerships

### **Medical Imaging and Radiation Safety**

#### **Role of medical physics in promoting radiation safety culture in health care**

Dr Maria del Rosario Perez, World Health Organization

#### **Medical imaging education in developing countries**

Dr Jan Labuscagne, International Society of Radiology

### **Biomedical Engineering**

#### **Human resources for medical devices: the role of the Biomedical Engineer**

Ms Adriana Velazquez-Berumen, WHO Medical Devices Unit

#### **How to define the basic academic curriculum to train clinical engineers**

Prof Saide Calil, Clinical Engineering Division/ International Federation for Medical and Biological Engineering (Brazil)

#### **Harmonization of biomedical engineering education: status and challenges**

Prof Ratko Magjarevic, International Federation for Medical and Biological Engineering, IFMBE (Croatia)

#### **Enhancing biomedical engineering education through innovation experiences**

Prof James Goh, National University of Singapore (Singapore)

### **Innovation**

#### **Innovation Sandbox Workshop: engaging medtech entrepreneurs to improve health in low- and middle-income countries through the power of co-creation**

Ms Aya Caldwell, CAMTech, Massachusetts General Hospital (USA)

#### **Training for local innovation of affordable and appropriate medical devices in developing countries: learning from the Stanford India Biodesign experience**

Dr Balram Bhargava, Stanford-India Biodesign, (India)

#### **Local production of medical devices in Africa: characterizing the landscape and assessing feasibility**

Mr Mladen Poluta, WHO Medical Devices Unit

#### **Optimizing the WHO Compendium of Innovative Health Technologies for Low-Resource Settings**

Ms Jennifer Barragan, WHO Medical Devices Unit

### **Reproductive, Maternal, Newborn and Child Health**

#### **MANDATE: priority setting for medical devices to reduce maternal, fetal and neonatal mortality**

Dr Doris Rouse, RTI International (USA)

#### **Medical device introduction: adding the Non-pneumatic Anti Shock Garment (NASG) for obstetric haemorrhage to programs and policies**

Ms Elizabeth Andrea Butrick, Safe Motherhood Program, Univ. of California, San Francisco (USA)

### **Approaches to Improving Healthcare Delivery**

#### **Améliorer les pratiques des projets d'appui à l'équipement médical intégrant des dons**

#### **(Improving practices in medical equipment support projects which include donations)**

Ms Cathy Blanc-Gonnet, Humatem (France)

#### **A tool for prevention and early diagnosis of neuro-degenerative diseases**

Mr Ludovico Ciferri, International University of Japan / Istituto Superiore Mario Boella (Japan)

#### **Disaster preparedness for health technology managers**

Dr Yadin David, International Union for Physical and Engineering Sciences in Medicine / Health Technology Task Group (HTTG) (USA)

## WHO/UN Tools to Improve Healthcare Delivery

### **Supporting integrated national strategic health planning, costing and health impact analysis: the OneHealth Tool**

Time: 09:15-10:00, Friday 22 November 2013  
Organizers: UNAIDS, UNDP, WHO, WB, UNFPA, UNICEF, the Futures Institute  
Ms Karin Stenberg, WHO ([stenbergk@who.int](mailto:stenbergk@who.int))

The OneHealth tool is the first of its kind and was developed as a multi-agency initiative with widespread international support. It is a software application developed to support countries in estimating the resource requirements for a comprehensive and integrated national health strategic plan. The tool allows users to project health sector needs for years into the future, plan budgets, plan for specific numbers of health care providers, plan the quantity and unit costs of pharmaceuticals that will be needed, identify where bottlenecks are likely to occur in the projection and planning, and assess the likely health impact (mortality and morbidity) that the planned provision of health interventions will result in. This workshop will provide key information on how to initiate and operate this tool.

### **Service Availability and Readiness Assessment (SARA) tool for health system planning and management**

Time: 10:00-10:45, Friday 22 November 2013  
Organizers: WHO/UN  
Dr Kavitha Viswanathan, WHO ([viswanathanka@who.int](mailto:viswanathanka@who.int))

The Service Availability and Readiness Assessment (SARA) is a health facility assessment tool designed to assess and monitor the service availability and readiness of the health sector and to generate evidence to support the planning and managing of a health system. SARA is designed as a systematic survey to generate a set of tracer indicators of service availability and readiness. This workshop will present the overview of this tool and as well as a few country reports.

[Back](#)

## Crucial role of medical devices in emergency & essential surgical care

Time: 11.10-12.00, Friday 22 November 2013

Organizers: [WHO Global Initiative for Emergency and Essential Surgical Care](#)

Dr Meena Cherian, WHO ([cherianm@who.int](mailto:cherianm@who.int))

Expert members of the WHO Global Initiative for Emergency & Essential Surgical Care will be part of the workshop.

Emergency and Essential Surgical Care (EESC) cuts across several disease-specific programs such as maternal and child health, HIV, and non-communicable disease (e.g. injuries, cancer, diabetes, and neglected tropical disease). Timely access to life-saving medical devices is crucial for delivering surgical services, with the ultimate goals of reaching MDGs and strengthening health systems. This workshop will inform participants on the applicability of the WHO Integrated Management for Emergency & Essential Surgical care (IMEESC) toolkit for challenges in access to medical devices, evidence-based planning to address gaps, and guidance on anesthesia infrastructure, supplies, and life-saving basic equipment to deliver the Primary Surgical Care Package in resource-constrained settings.

[Back](#)

## Kits for humanitarian health response

Time: 13:30-15:20, Friday 22 November 2013

Organizers: WHO/UNFPA/UNICEF

Dr Lisa Thomas, WHO ([thomasl@who.int](mailto:thomasl@who.int))

Ms Wilma Doedens, UNFPA

Representatives of humanitarian agencies will sit on a panel during the workshop.

This workshop will raise awareness and share information on the use of kitted medical commodities to increase access to priority health interventions/services in humanitarian settings. Representatives of humanitarian organizations and UN agencies will use recent disasters – such as Typhoon Haiyan in the Philippines – to discuss unique challenges and innovative approaches.

[Back](#)

## **Interagency list of medical devices for reproductive, maternal, newborn and child health**

Time: 16.00-16.50, Friday 22 November 2013  
Organizers: WHO/UN  
Ms Laura Alejandra Velez Ruiz Gaitan, WHO ([velezuizgaitanla@who.int](mailto:velezuizgaitanla@who.int))

The H4+ Interagency List of Medical Devices for Essential Interventions for RMNCH is a tool to support planning in the health sector for the selection, quality assurance, and procurement of medical devices to implement the Reproductive, Maternal, Newborn and Childhood Health (RMNCH) interventions. The objective of this list is to propose an international consensus on rational selection of essential medical devices for reproductive health according to their public health relevance on the basis of evidence regarding, efficacy, safety and cost effectiveness.

Since June 2012, UNICEF, UNFPA and WHO have been working together on the development of this Interagency list. The objective of this workshop is to share the experience, from an interagency perspective, of having an international consensus on a medical devices list, to discuss the application of the list at country level and to agree on future work needed to complement the work already done.

[Back](#)

## **WHO Medical Device Information System**

Time: 17:00-17:50, Friday 22 November 2013  
Organizers: [WHO Medical Devices Unit](#)  
Ms Laura Alejandra Velez Ruiz Gaitan, WHO ([velezuizgaitanla@who.int](mailto:velezuizgaitanla@who.int))

The Medical Device Information System (MEDEVIS) is a project directed at addressing the WHA resolution on health technology—specifically paragraph 2.6, which requests the establishment and regular update of an evidence- and web-based health technology database to serve as a clearinghouse which will provide guidance on appropriate medical devices according to level of care, setting, environment, and intended health intervention, tailored to the specific needs of the country or region. The WHO Medical Devices Unit has developed a prototype of a database of medical devices to meet these needs.

Many challenges have appeared as result of this exercise, including questions about a global nomenclature, regulation and evaluation of technologies. WHO is compiling the information and seeking feedback on the structure and logistics of filling and updating the proposed system.

This workshop aims to discuss the development of MEDEVIS: who are the users, what are the useful and applicable variables, and what would be an efficient process for updating and corroborating information. We also welcome the opportunity for workshop participants to share examples of using a database on medical devices at the country level.

[Back](#)



### **Creating synergies among national and regional HTA agencies and hospitals in the assessment of medical devices**

Time: 09:15-12:00, Friday 22 November 2013

Organizers: [Health Technology Assessment international \(HTAi\)](#)

Prof Americo Cicchetti, Catholic Univ. of Sacred Heart ([americo69@me.com](mailto:americo69@me.com))

Dr Iñaki Gutiérrez Ibarluzea, OSTEBA/HTAi, Spain

Dr Carole Longson, NICE/HTAi

The level of value produced by the adoption and use of medical devices is strictly dependent on the organizational context where the healthcare process is occurring. Professional competencies, clinical procedures, managerial solutions and other medical technologies interact with medical devices to produce outcomes. Under these conditions, the assessment of medical devices should be completed using evidence collected in the specific hospital context. The decentralization process occurring in the HTA movement is an emerging phenomenon in many countries. Hospitals and other HCOs are facing increasing pressure in relation to financial equilibrium, and they are more and more interested in rational decision-making processes in order to select and adopt new health technologies (HTs). However, local HTA units often coexist with regional and national processes in the same system. In order to avoid duplication of work, as well as to have a comprehensive pipeline of assessed HTs, it is crucial to find avenues for collaboration and to look for a win-win strategy.

[Back](#)



## How to set up an HTA agency

Time: 13:30-15:20, Friday 22 November 2013

Organizers: [INAHTA](#)

Mr Sumeet Singh, CADTH

Mr Héctor Eduardo Castro Jaramillo, IETS

Ms Jani Mueller, CMeRC

Dr Iñaki Gutierrez Ibarluzea, OSTEBA

The broad framework of HTA lends itself to wider applications of evidence-based decision making, resulting in overall system benefits. Using HTA will not only yield important information to address deficiencies in different health systems but will also encompass a wider understanding of overall impact, prompting comprehensive policy considerations and further deliberations and research. However, institutionalization of the HTA programs varies from country to country. For example, a HTA program in a high-income country could provide evidence for appropriateness of expenditures, value for money through improved health outcomes and thereby best return on investment. On the other hand, in low and middle income countries, using HTA could be a possibility to ensure provision of effective and efficient care in a resource-poor setting.

Conducting HTA requires specialized skills which vary from country to country and also within a single country. It also requires a multi-disciplinary team of experts. A multi-disciplinary HTA agency always provides competitive advantage by creating an environment where experts from various fields can work together. INAHTA, which currently has members across all continents, has used certain criteria to formally recognize HTA agencies. This provides some form of a standard for establishing and maintaining a HTA agency.

This workshop will focus on the criteria used by INAHTA for recognition of an HTA agency and take a stepwise approach to guide the participants through a process of establishing HTA agencies in their own setting. HTA agencies from 4 different countries and from different backgrounds will share their perspectives on setting up an agency. Two of the agencies have been in existence for a number of years and are well established, while the other two agencies are new. These agencies will share their experiences with establishing an HTA agency and maintaining their affiliation with INAHTA.

[Back](#)

## Information retrieval for HTA

Time: 16:00-17:50, Friday 22 November 2013

Organizers: [Norwegian Knowledge Centre for the Health Services](#) (NOKC)

Ms Sari Susanna Ormstad, NOKC ([sor@nokc.no](mailto:sor@nokc.no))

Health care decisions should be based on the best available evidence. To provide decision-makers with an unbiased evidence base, HTA agencies need to have skills in searching and familiarity with the various aspects of information retrieval for HTA. In addition, it is important for agencies to facilitate services, resources, and processes that are needed for information retrieval for HTA. This workshop will alert participants to key issues regarding literature searching for HTA, as well as to services, resources and competencies that are needed for information retrieval for HTA. The workshop will focus on important aspects such as scoping and developing the research question, sources to search, how to design search strategies, reference management, and documenting and reporting the search process.

[Back](#)

## Nomenclature, Standards and Regulations

### **GMDN - a requirement for Unique Device Identification**

Time: 9:15-10:45, Friday 22 November 2013

Organizers: [GMDN Agency](#)

Mr Mark Wasmuth, GMDN Agency ([mark.wasmuth@gmdnagency.org](mailto:mark.wasmuth@gmdnagency.org))

The GMDN Agency is responsible for the Global Medical Device Nomenclature (GMDN), the international standard for medical device naming specified by ISO 15225. This workshop is intended to raise awareness of the need for international harmonisation of medical device naming to support the efficient exchange of information between manufacturers, regulators and users of devices. The GMDN is used by over 65 countries to support medical device regulation and is fully endorsed by the International Medical Device Regulator Forum (IMDRF). Following a recommendation by the IMDRF, the GMDN has been nominated as the generic naming descriptor and one of the essential data elements needed to implement Unique Device Identification (UDI). This workshop will explain the features and benefits of the GMDN and its relationship to UDI. Examples of the use of UDI will be presented. Opportunities will be available for the audience to ask questions on access and implementation of the GMDN.

[Back](#)

## Partnership on regulatory harmonization

Time: 11:10-12:00, Friday 22 November 2013  
Organizers: APEC, AHWP and Department of Commerce, USA  
Dr Li Tao, AHWP ([Ltao@its.jnj.com](mailto:Ltao@its.jnj.com))  
Mr Jeff Gren, Department of Commerce, USA

For many developing countries, access to safe, affordable, quality medical devices is challenging. However, partnerships with developed regulatory jurisdictions, cooperation with regulator consortia, support from the medical device industry, harmonization of regulatory standards, and approaches with international best practices make it possible for patients to access these products. Recent examples illustrate the value of such partnerships to regulatory harmonization. The Association of Southeast Asian Nations (ASEAN) established ASEAN Economic Community with the target of a single market by 2015. The 10 member states have agreed to and are pursuing harmonization of medical device regulations and a common technical document. The approach is a common Medical Device Directive (AMDD), which is scheduled to take effect in 2015.

The 10 ASEAN Member States are each at different stages in the development of a medical devices regulatory regime. In an effort to help ASEAN Member States benefit from countries with experience in medical device regulation (both pre- and post-market), a US government and industry 2013 pilot program has been launched, in cooperation with the ACCSQ MDPWG, involving U.S. and Australia alumni regulators and industry regulatory experts, providing training focused on helping the 10 ASEAN Member States to prepare for the ASEAN MDD. APEC, AHC and AHW also worked together to organize a series of workshops to sharing experiences of implementation of GHTF guidance in priority areas. For example - clinical evidence, nomenclature and UDI, combination products, etc. are all areas that were considered in the workshops. Regulators and industry experts from US, Japan, Canada, etc. shared their experience with implementing GHTF guidance into their national regulatory system. These activities are part of the strategy and contribute to the goal of regulatory convergence by 2020 set by APEC and AHWP. Most of the work thus far still occurs on an ad hoc basis, and a more systematic approach is needed. More investment and collaboration is required from all stakeholders including WHO, international and regional organizations, government and industry.

[Back](#)

## **International standards – state of play and future trends in the medical domain**

Time: 13:30-14:20, Friday 22 November 2013

Organizers: [DITTA](#)

Ms Nicole Denjoy ([denjoy@cocir.org](mailto:denjoy@cocir.org))

International standards are everywhere. They are key in global trade and interoperability of all sorts of products and services, from battery-operated cameras to software systems to air transport. It is for a good reason that the WTO requires its members to base their technical regulation as much as possible on international standards. Standards, however, go well beyond usage in regulatory areas. In the healthcare domain, international standards also provide the best guarantee for equal levels of safety and performance of medical devices. International standards, developed by experts from the key stakeholders and kept up to date by periodic revisions, provide the world with a common set of safety and performance requirements. Uptake and recognition of these standards in national regulations give the best guarantee for availability and access to innovative and safe technology for the best possible health outcome at lowest cost.

The goal is to build awareness by providing an overview of what has been done for the past 10 years and what is in preparation on standards to come in the healthcare domain. It will also be a great opportunity to build awareness of all the various international standards that exist (e.g. ISO, IEC, DICOM, HL7), and how these are concretely used in support of regulatory framework but also in the non-regulated domain. This workshop will give an overview of the hot topics in medical standardization, with a view on safety and performance of devices as well as on data exchange, data security and privacy aspects in medical informatics, which are crucial in the emerging field of e-health.

[Back](#)

## Medical software – regulatory and legal trends

Time: 14:30-15:20, Friday 22 November 2013

Organizers: [DITTA](#)

Ms Nicole Denjoy ([denjoy@cocir.org](mailto:denjoy@cocir.org))

Today's healthcare solutions are increasingly more integrated but become also quite complex, as those systems are combinations of various elements developed by several suppliers. The healthcare domain is highly regulated. However, more and more unregulated elements are being combined with medical technologies. Medical software is regulated differently in various regions of the world, creating unfair competition and uncertainty with regards to roles and responsibilities of key players (doctors, patients, insurers, healthcare providers). Although there are some regulatory obligations in some geographies on Medical Apps, the various organizations bringing integrated care solutions are not necessarily aware of their obligations.

This workshop will provide clarity and build awareness of the regulatory framework for Medical Apps and other stand-alone software and will also identify the supporting standards to build an efficient regulatory framework: what regulation is applicable to which software, and how compliance with that regulation can be achieved. It will then be an opportunity to learn more on the latest updates on current medical software regulations & international comparison, international and EU standards supporting regulations, and practical examples on complying with regulations.

[Back](#)

## National Regulatory Assessment tool

Time: 16:00-16:50, Friday 22 November 2013

Organizers: [WHO Medical Devices Unit](#)

Dr Yukiko Nakatani, WHO ([nakataniy@who.int](mailto:nakataniy@who.int))

The National Regulatory Authority (NRA) assessment tool has been developed as a part of WHO's medical product regulatory activities to ensure access to medical products of assured efficacy, safety, and quality for all. The NRA assessment system being used for vaccines and medicines areas (developed in the 1990s) is significantly more advanced than that for medical devices, which was pioneered in 2003. WHO is currently faced with the challenge of revising the NRA assessment tool for medical devices in harmonization with the tool for vaccines and medicines.

This workshop aims to demonstrate how to use the WHO-supported NRA assessment system and tool for vaccines as an example, and to discuss the specific NRA assessment indicators required for medical devices as well as the feasibility of the tool for medical devices in various countries.

[Back](#)

## **Digital hospital 21st century: you certainly can't manage it if you don't understand it (YCCMIYDUI)**

Time: 17:00-17:50, Friday 22 November 2013

Organizers: [Center for Healthcare Information Policy and Research \(CHIRP\)](#)

Onsite: Mr Tom Judd, MS, CCE, CPHQ, CPHIMS, Kaiser Permanente (USA)  
([tom.judd@kp.org](mailto:tom.judd@kp.org))

Contributing remotely:

Elliot Sloane, PhD, CCE, President - Center for Healthcare Information Policy and Research, USA

Joe Welsh, JD, MPH, CEO - Collegiate Consortium for Workforce and Economic Development, USA

Paul Sherman, President - Sherman Engineering, President Elect - ACCE, USA

e-Health is here to stay! EMR/EHR/HIE, mHealth/uHealth/pHealth/BYOD all have a good value proposition --- and ROI -- for healthcare delivery organizations. No technology is risk-free, and these new technologies bring novel safety, security, and reliability issues very much like "classical" medical devices. The Digital hospital of the Future will manage these elements well, presuming "connected patients."

However, several challenges exist. EMR software/systems and mobile health technologies can harm patients by errors/failures in diagnosis, therapy, or both, and most countries are working on standards, testing, disclosure, and certification approaches to improve product interoperability, regulatory and product certification frameworks viable and suitable for these new modalities, and user and management training and methodologies to support life-cycle ownership issues.

Engineering skill-sets will be critical for success! Health leaders are considering now how clinical engineers (CEs) can help. CEs play important roles in lifecycle management and integration of these new technologies, but most of their training is informal. CEs can do a better job as leaders, policy developers, and managers only if they have more complete training and understanding, which includes current standards-related training, product applications-level training (EMR/EHR/HIE, ICT), contemporary SW/system SDLC competency, as well as project management and System of Systems Engineering training. This workshop will demonstrate the CE Role through national and global case studies of the USA (Meaningful Use, IHE, FDA, ONC/TJC), Saudi Arabia, Colombia, and Macedonia.

[Back](#)

### Healthcare Technology Management (HTM): ACCE advanced clinical engineering workshops

Time: 9:15-10:45, Friday 22 November 2013  
Organizers: [American College of Clinical Engineering \(ACCE\)](#)  
Mr Antonio Hernandez ([hernandezantonio@comcast.net](mailto:hernandezantonio@comcast.net))  
Mr Thomas Judd, Kaiser Permanente Clinical Technology  
Mr Tobey Clark, University of Vermont & Healthcare Technology Foundation  
Mr Mario Castaneda, Healthitek, Inc. and  
Former National Director, Clinical Technology Kaiser Permanente  
Also Contributing: Mr Binseng Wang, Dr Elliot Sloane, Dr Fred Hosea

Over 50 Advanced Clinical Engineering Workshops (ACEWs) have occurred over the past 20 years in 29 countries with over 4000 attendees. The focus of the ACEWs in primarily low-resource countries has been on building HTM capacity. The 72 American College of Clinical Engineering (ACCE) faculty presenters have interacted with participants during ACEWs, health system stakeholders pre and post, and worked on independent projects to improve HTM worldwide. This pre-conference workshop will provide concise background on these ACEWs and focus on the most recent programs. Each of these ACEWs was developed to focus on country needs and requests by partners and stakeholders in government, academic, healthcare system and private sectors. The value of these events is shown by actions taken to improve health based on technological solutions and management of the technology to enhance safety, reduce costs and enrich quality.

[Back](#)

## Improving data quality and technology management with mobile devices

Time: 11:10-12:00, Friday 22 November 2013

Organizers: [Health Partners International](#)

Mr Robert Parsons ([rparsons@healthpartners-int.co.uk](mailto:rparsons@healthpartners-int.co.uk))

The first part of this workshop will provide a review of the evolution of inventory and management systems. We review the purpose of inventory management in the context of patient safety and as a part of the overall system of healthcare involving people, knowledge, equipment and resources. We then review stages in the evolution of inventory input systems, exploring issues of accuracy, comprehensiveness, timeliness, reliability and usability for management and maintenance purposes. Finally, we review a typology of input and communication systems, considering tools, format of data, and repository types.

In the second part of the workshop participants will consider the current situation, where budgets remain tight but connectivity is steadily increasing. This affords opportunities to leverage increased mobility of both platforms and data to improve accuracy, reliability and usability of data. Both software and hardware are evolving towards mobility and reach and towards device simplicity. The movement towards tablet computing has enabled a significant development in human computer interaction (HCI) which makes data collection much more effective. We review mhealth and mhelp data on data collection tools. We then demonstrate in real time a mobile platform configured for use with the Planning and Management of Assets in Health Services (PLAMAHS) programme, showing how data collection can be immediate, flexible and multi-format (using smartphones and both Apple and Android devices). We consider how data can more effectively become knowledge, and how trustworthy data can contribute to patient safety and better outcomes by focusing technicians' work more effectively and releasing clinicians to concentrate on clinical care. Finally we consider issues of management, and how improving inventory data can increase effectiveness of management within the overall health system.

[Back](#)

## Computerized Maintenance Management Systems (CMMS): essential features and pitfalls to avoid

Time: 13:30-14:20, Friday 22 November 2013

Organizers: [American College of Clinical Engineering \(ACCE\)](#)

Mr William Gentles, ACCE ([billgentles@sympatico.ca](mailto:billgentles@sympatico.ca))

The management of an inventory of medical devices in a large hospital or healthcare system is a challenging responsibility that can be facilitated by the use of a software program commonly called a Computerized Maintenance Management System or CMMS. The most basic feature of a CMMS is the inventory of medical devices in the organization. Only after the inventory of assets has been captured in an electronic form, is it possible to gain an understanding of the state of the assets, and where the greatest needs for replacement of worn out assets are.

This workshop will give an overview of the essential features of such systems in small and large organizations, with an emphasis on low-resource settings. Some of the many pitfalls and hidden costs that can be encountered when implementing a CMMS will be discussed. The session will end with an open discussion of audience experiences with implementing CMMS. Topics to be covered in the workshop will include: why a CMMS is a useful tool, why we cannot just use a paper system to do the same job, a list of the essential (and some optional) features of a CMMS, the importance of backups, how to choose a CMMS that fits your needs, and pitfalls to avoid.

[Back](#)



## **WHO template for technical specifications of medical equipment**

Time: 14:30-15:20, Friday 22 November 2013

Organizers: [WHO Medical Devices Unit](#)

Ms Laura Alejandra Velez Ruiz Gaitan, WHO ([velezruizgaitanla@who.int](mailto:velezruizgaitanla@who.int))

In developing countries there is a significant need for counseling regarding minimum specifications and requirements that should be considered before starting a process of purchase or donation of medical devices. Having this type of specification allows for improved access to medical devices of high quality, safety and efficacy, and adequate planning for the financial, human, and legal resources, among others, to be considered in the implementation, functioning and decommissioning of the devices.

Since early 2011, WHO, in collaboration with a working group of experts, has been developing a global template that applies to all types of medical devices. We have started a pilot to develop 70 specifications for different kind of devices. This pilot test involves the participation of WHO collaborating centers and trade associations.

The objective of this workshop is to share and provide feedback regarding the content, process and application of technical specifications at the country level. We will also share the experience of developing technical specifications in the UN.

[Back](#)

## **A new generation web-based medical technology management system**

Time: 16:00-16:50, Friday 22 November 2013  
Organizers: [Institute of Biomedical Technology – INBIT](#)  
Dr Kallirroï Stavrianou, Institute of Biomedical Technology ([roy@inbit.gr](mailto:roy@inbit.gr))  
Prof Nicolas Pallikarakis, Institute of Biomedical Technology  
Dr Zhivko Bliznakov, University of Patras  
Mr Panagiotis Malataras, Institute of Biomedical Technology  
Mr Andreas Serafetinidis, Institute of Biomedical Technology  
Mr Efmorfia Adamidi, University of Patras

Healthcare delivery today is entirely technology-oriented, and medical equipment plays a major role in improving the quality of patient care. However, the increased number of medical devices (MDs) installed in hospitals leads to a number of problems associated with their proper management. In such an environment, with strong demands for health services of high standards and minimized cost, the rational management of medical equipment becomes particularly crucial. The Clinical Engineering Departments (CEDs) need to implement comprehensive Medical Technology Management programs, which should be able to address complex and multidimensional tasks requiring special expertise and dedicated tools in order to achieve the best results. This workshop presents a new generation of medical technology management software system, developed to assist the CED, with emphasis on safety, efficiency and effectiveness in medical technology in use. It is based on more than 20 years of experience in this field and is a re-engineering result of a previously successful management system in order to meet the new demands in the domain and take advantage of new ICT means. The system provides capabilities to monitor and follow all the procedures related to the medical equipment life-cycle and to collect, store, retrieve and analyze the relevant data. It gives the ability to assess the overall condition of MDs and facilitate the decision-making process towards the improvement of medical equipment management. The system is multilingual, web-based, and explores the latest technology in the field of web development and services. It offers 24/7 access to the MDs data, from any desktop, notebook, tablet PC or even a smart phone, connected to the Internet. It is designed to respond to the new trends and increased demands in the changing healthcare environment worldwide, and assist the CEDs in the broader role they are expected to play.

[Back](#)

## Medical equipment donations: a toolkit for UK – developing country partnerships

Time: 17:00-17:50, Friday 22 November 2013  
Organizers: [Tropical Health and Education Trust – THET](#)  
Ms Shauna Mullally, THET ([shaunamullally@gmail.com](mailto:shaunamullally@gmail.com))  
Mr Andrew Jones, Head of Partnerships, THET  
Ms Maggie Collins, Communications Coordinator, THET  
Mr Timur Bekir, Communications Officer, THET

The Tropical Health and Education Trust (THET) is a UK-based specialist global health organization that educates trains and supports health workers in low-resource settings through partnerships. A significant number of the approximately 200 partnerships supported by THET include medical equipment donations from the UK to the developing country partner, in order to support the training or clinical goals of the partnership. To encourage good practice, THET has produced a toolkit for good medical equipment donation practices. Based on the WHO's 'Medical device donations: considerations for solicitation and provision' guidance document, the toolkit provides practical UK-specific guidance to partnerships to assist them in evaluating whether or not to donate, and how to do so effectively if they decide to donate. It also includes case studies from both UK and developing country partner perspectives, and links to other resources. The toolkit's content covers each stage of the equipment donation process, including an initial needs and capacity assessment and project plan. It also covers how to source the equipment, store and pack it, verify its quality and safety, ship and receive it, put it into service, use and maintain it. Finally, it provides guidance on evaluating and learning from the donation. This workshop will serve as a forum in which to share the toolkit. We will cover each stage of the donation process, presenting cases studies of both successes and lessons learned. Finally, we will conclude with an examination of how the partnership model itself can foster good donation practices.

[Back](#)

### Role of medical physics in promoting radiation safety culture in health care

Time: 9:15-10:45, Friday 22 November 2013

Organizers: [WHO Global Initiative on Radiation Safety in Health Care Settings](#)

[International Organization for Medical Physics \(IOMP\)](#)

Dr Maria del Rosario Perez, WHO ([perezm@who.int](mailto:perezm@who.int))

Dr Kin-Yin Cheung, IOMP

Mr Pablo Jimenez, PAHO/WHO

Mr Madan Rehani, IOMP

Dr Slavik Tabakov, IOMP

Mr Fridtjof Nüsslin, IOMP

Prof Habib Zaidi, IOMP

Medical physicists (MPs) play a crucial role in promoting and implementing radiation safety culture, as the product of individual and group values, attitudes, perceptions, goals, patterns of behaviour and practices that determine the commitment and proficiency of a healthcare institution on radiation safety management. Most medical physicists are skilled in managing safety and appropriate utilization of radiological devices for diagnosis and therapy. Radiation safety culture in health care is embedded in the broader concept of patient safety and is going beyond good medical practice. Establishing a radiation safety culture must start from the top of the organization. However, the dimensions and promotion of the culture will rely on all the relevant stakeholders involved in provision of the service, including directors, administrators, physicians, technical staff, support staff, patients and families. MPs train staff on radiation safety, implement QA and radiation safety programmes, advise medical staff on patient dose reduction through dose optimization in clinical procedures, and ensure all practices and procedures involving radiation comply with national legislative requirements and international guidelines and standards. They should support the framework for organizations to be accountable for continually improving service quality and for ensuring the safeguard of high standards by creating an environment that fosters excellence in clinical care. This includes comparing quality & safety performance to benchmarks and aspiring to move beyond those benchmarks in order to achieve the highest attainable levels. MPs are key players in radiation protection education & training and continuous learning of health professionals which, together with team working and effective communication, are key components of a safety culture programme. MPs provide technical assistance to analyze root causes of radiological incidents, their failure mode and their consequences, to move from “error reports” to “safety learning reporting systems”.

[Back](#)

## Medical imaging education in developing countries

Time: 11:10-12:00, Friday 22 November 2013

Organizers: [International Society of Radiology \(ISR\)](#)  
[World Federation for Ultrasound in Medicine and Biology \(WFUMB\)](#)  
[International Society of Radiographers & Radiological Technologists \(ISRRT\)](#)  
Dr Jan Labuscagne (ISR) ([jlabuscagne@isradiology.org](mailto:jlabuscagne@isradiology.org))  
Dr Dieter Nuernberg (WFUMB)  
Mr Stewart Whitney (ISRRT)

### Introduction

Medical Imaging plays a central role in patient care in all parts of the developed world. This is also the case in big cities of the developing world, but not so in the rural areas. There exists a shortage of equipment, as well as technologists to operate the equipment.

Equipment can be readily sourced, provided the budget is available. Technologists then need to be trained to operate the equipment and perform the Imaging studies.

But having the ability to perform Imaging studies is not enough; these studies need to be interpreted to be of benefit. This is traditionally the role of the Radiologist. There is however a great shortage of trained Radiologists in most developing countries, and those that are available, are usually concentrated in the big cities.

It follows that other medical staff also need to be trained to do first line interpretation of basic Imaging studies. These can be doctors, X-ray technologists, or nurses.

### Aims

1. To inform participants about the various international organizations' programs and material for training.
2. To gather information by participants about specific needs.
3. To discuss proposals for possible programs to be proposed to the WHO.

### Format

1. Three presentations will outline the various international organizations' current programs and material for education.
2. This will be followed by opportunity for participants to give information about their situations and needs.
3. Discussion about possible actions.

[Back](#)

## Biomedical engineering

### Human resources for medical devices: the role of the Biomedical Engineer

Time: 13:30-14:20, Friday 22 November 2013

Organizers: [WHO Medical Devices Unit](#)

Ms Adriana Velazquez Berumen, WHO ([velazquezberumena@who.int](mailto:velazquezberumena@who.int))

WHO is currently leading a global effort to draft a publication on the role of the biomedical engineer as part of the WHO Medical Device Technical Series. In this workshop, the current contents of the book will be discussed and debated with the goal of producing an effective and useful publication. The authors of each chapter will present their section of the book, after which participants will discuss and make suggestions for improvement.

[Back](#)

### How to define the basic academic curriculum to train clinical engineers

Time: 14:30-15:20, Friday 22 November 2013

Organizers: [CED/IFMBE](#)

Prof Saide Calil, State University of Campinas ([calil@ceb.unicamp.br](mailto:calil@ceb.unicamp.br))

Contrary to several other well-established engineering professions (civil engineering, mechanical engineering, etc.), there is no unique model for clinical engineering. Countries adopt different models and, as a consequence, different duties for this profession. Also, teaching units adapt their training courses according to the human resources available for teaching. Therefore, one of the main challenges for teaching units to train Clinical Engineers, according to the needs of their national health system, is the definition of the basic academic curriculum. What is the necessary core of competencies that is expected from a Clinical Engineer to perform his/her basic duties? How to define such core? How to define the disciplines to be offered and encompass the defined core? How to find out the requirements of Hospitals, Industries and Government (National and Regional) and so define the general needs of the health system? How to define the time for each discipline? It is the intention here to describe a method to establish the minimum core of competencies for Clinical Engineering. We will then consider the new trends of Clinical Engineering that may be added to the long established Maintenance Management knowledge such as cost control, risk management, training programs and information technology. Finally, it will present how clinical engineering must adapt to the new trends of the healthcare system regarding system integration, usability and human factor engineering.

[Back](#)

## Harmonization of biomedical engineering education: status and challenges

Time: 16:00-16:50, Friday 22 November 2013  
Organizers: [IFMBE](#)  
Prof Ratko Magjarevic, IFMBE ([ratko.magjarevic@fer.hr](mailto:ratko.magjarevic@fer.hr))  
Prof Herbert Voigt, Boston University  
Prof James Goh, National University of Singapore  
Mr Mario Fojas Secca, the New University of Lisboa  
Ms Martha Zequera, Pontificia Universidad Javeriana, Bogota

Biomedical Engineering education programs are present at a large number of universities all over the world. The health care systems around the world need a large number of professionals with engineering education to support medical technology. In a world of growing incidence of chronic disease and ageing population, there is a constant need for innovation in health care technologies and for new solutions which meet the requirements for continuous monitoring, support or care. According to the data from the Labor Organization in the U.S., biomedical engineering jobs have the largest growth at the engineering labor market with 72% of growth rate from 2008-2018. The number of patents in European Union is the highest in biomedical technology. Is that enough to ensure availability of health care for everybody all over the globe? How can biomedical engineering curricula be adopted to the new needs and expectations of the future? Presenters of the workshop will address these items and try to propose solutions for appropriate biomedical engineering education programs of the future.

[Back](#)

## Enhancing biomedical engineering education through innovation experiences

Time: 17:00-17:50, Friday 22 November 2013  
Organizers: [Department of Biomedical Engineering, National University of Singapore](#)  
Prof James Goh, National University of Singapore ([biegohj@nus.edu.sg](mailto:biegohj@nus.edu.sg))

The aim of Biomedical Engineering undergraduate degree programs is to produce engineers with a strong foundation in engineering sciences that is relevant to the biomedical field, such that they are able to contribute to the biomedical industry through innovation, enterprise and leadership. The NUS educational program in Biomedical Engineering is characterized by a strong emphasis on scientific and engineering fundamentals and a high degree of flexibility which can provide a wide diversity of educational experiences. We have created opportunities for students to have cross-discipline exchanges with staff and students from Biological Sciences to broaden their understanding and knowledge, consequently stimulating them to think about engineering principles in biological systems. We have also incorporated in our BME Design modules with requirement for innovations; as such, students are encouraged to interact with clinicians to uncover unmet clinical needs. To further enrich our students' "real world" learning experience, we have developed a number of enhancement programs, such as the Industrial Attachment Program, Vacation Internship Program and Technopreneurship & Incubation Program. In the face of globalization, cross-cultural communication is becoming more and more important. Therefore, we have Special Programs like the NUS Overseas Colleges which allows students to work with a company overseas for up to one year. By providing graduates with a combination of broad-based fundamentals and specialized knowledge, our Biomedical Engineering program strives to graduate versatile biomedical engineers who would be best positioned to innovate and lead, and contribute to the delivery of better healthcare technology.

[Back](#)

### **Innovation Sandbox Workshop: engaging medtech entrepreneurs to improve health in low- and middle-income countries through the power of co-creation**

Time: 9:15-12:00, Friday 22 November 2013  
Organizers: [CAMTech, Massachusetts General Hospital \(MGH\)](#)  
Ms Aya Caldwell, MGH ([acaldwell1@partners.org](mailto:acaldwell1@partners.org))  
Dr Data Santorino, CAMTech MUST  
A panel of experts will lead the workshop.

CAMTech brings together interdisciplinary teams to mitigate technology and market risks, and ultimately deliver quality medical technologies to LMICs. CAMTech's approach is co-creation across disciplines (engineering, medicine and business), sectors and geographies, with end-user input continuously influencing medical technology innovation. Few entrepreneurs are prepared to successfully navigate the complex path from new idea to large-scale commercialization of a product in LMICs. Different disciplines and sectors generally work in isolation in the technology development process. This reinforces major barriers to bringing products to market.

Our workshop will offer a unique opportunity to address these barriers by convening groups from diverse disciplines to provide feedback on technologies, which will then be applicable broadly to other entrepreneurs in the medtech sector. CAMTech will identify three to five entrepreneurs from its existing network. Each entrepreneur will present his/her technologies, partnering plans and business plans to the participants. CAMTech will ensure that the entrepreneurs represent a unique perspective of the medtech product development process such as incorporating entrepreneurs from distinct regions (e.g. Southeast Asia, sub-Saharan Africa, OECD) and developing diverse products (e.g. mHealth, devices). The participants will then provide real-time feedback on what is necessary to ensure that the product scales to its intended user to ensure wide-scale public health impact.

CAMTech will write a white paper after the workshop. The white paper will coalesce the discussions from the workshop to provide a framework for other entrepreneurs in the medtech sector. By providing forums that bring together these experts across disciplines and providing targeted feedback, the end-result can be transformative.

[Back](#)



## **Training for local innovation of affordable and appropriate medical devices in developing countries: learning from the Stanford India Biodesign experience**

Time: 13:30-15:20, Friday 22 November 2013

Organizers: [Stanford-India Biodesign, All India Institute of Medical Sciences \(AIMS\)](#)

Dr Balram Bhargava, SIB/AIMS ([balrambhargava@yahoo.com](mailto:balrambhargava@yahoo.com))

Dr Avijit Bansal, SIB Alumnus Fellow, Co-founder - Windmill Health Technologies

Dr Aanan Khurma, Consultant - Stanford India Biodesign

Dr Ayesha Chaudhry, SIB Alumnus Fellow, Co-founder - Windmill Health Technologies

Developing countries import 80-90% of their medical devices from high income countries. These devices are often unaffordable and not suited for use in resource-constrained settings. Also, low income settings have specific needs and constraints – with which developed country innovators are not conversant. Dismal health conditions along with rapidly growing healthcare markets, industry and academia therefore present an unprecedented need and opportunity for “Local innovation of appropriate and affordable medical devices in the developing world.”

Stanford Biodesign has evolved and pioneered a process for innovation of affordable medical devices and a methodology for training professionals from diverse disciplines in the innovation process. In 2008, All India Institute of Medical Sciences, Indian Institute of Technology and Stanford Biodesign came together under the Stanford India Biodesign (SIB) program with a mandate to enhance the med-tech innovation ecosystem and to train the next generation of med-tech innovators. Since then several doctors, engineers, designers and scientists have trained at the program, inventing 21 devices (1 commercialized) and founding 5 start-up companies. Being the country’s flagship program, we have accumulated valuable experience in training as well as ecosystem building activities.

This workshop will educate potential innovators about the fundamentals and philosophy of local innovation of affordable medical devices. It will also educate policymakers from low-income countries about the working of a successful innovation process and program. The session will feature takeaways from the SIB experience, an overview of how to set up a working unit and raise funds as part of the biodesign process, and hands-on working-learning sessions covering need identification, invention, and implementation.

[Back](#)

## **Local production of medical devices in Africa: characterizing the landscape and assessing feasibility**

Time: 16:00-16:50, Friday 22 November 2013  
Organizers: [WHO Medical Devices Unit](#)  
Mr Mladen Poluta, WHO, University of Capetown ([mladen.poluta@uct.ac.za](mailto:mladen.poluta@uct.ac.za))  
Mr Amir Sabet Sarvestani, WHO, University of Michigan  
Mr Peng Si, WHO, Nanyang Technological University  
Prof James Abbas, WHO, Arizona State University

"Improving access to medical devices through local production and technology transfer" is part of an EU-funded project at WHO now in the second phase of its execution. The project aligns with the mandate given to WHO by the World Health Assembly in 2007 to evaluate and enhance access to appropriate medical devices, especially in low-resource settings. This workshop, hosted by WHO's Medical Devices Unit, will include a brief review of Phase II outcomes of the medical devices component of the Local Production and Technology Transfer project, namely findings from a global survey of access to medical devices, and evaluation of a feasibility tool for local production of medical devices that was tested in four sub-Saharan African countries (Ethiopia, Nigeria, South Africa, and Tanzania). In this workshop, participants will be engaged in a targeted discussion around barriers to local innovation and production of medical devices, especially in sub-Saharan Africa, thereby contributing to potential solutions and recommendations that will inform the next stages of the project.

[Back](#)

## **Optimizing the WHO Compendium of Innovative Health Technologies for Low-Resource Settings**

Time: 17:00-17:50, Friday 22 November 2013  
Organizers: [WHO Medical Devices Unit](#)  
Ms Jennifer Barragan, WHO ([barraganj@who.int](mailto:barraganj@who.int))  
Dr Heike Hufnagel, WHO

The goal of the WHO Compendium of Innovative Health Technologies for Low-Resource Settings is to increase awareness of the devices featured but to also ultimately improve access to those devices. This workshop will discuss the issues surrounding the annual call for technologies, the method of evaluation of the submissions, and the dissemination of the publication. Furthermore, the workshop will address how to improve the publication's utility. It will be an open discussion moderated by WHO staff.

[Back](#)

### **MANDATE: Priority setting for medical devices to reduce maternal, fetal and neonatal mortality**

Time: 9:15-10:45, Friday 22 November 2013  
Organizers: [RTI International](#)  
Dr Doris Rouse, RTI International ([rouse@rti.org](mailto:rouse@rti.org))  
Dr Elizabeth McClure, RTI International  
Ms Bonnie Jones, RTI International  
Dr Robert Goldenberg, Columbia University Medical Center

This workshop will provide training on the use of MANDATE, a decision support tool that can assess the comparative impact of various interventions on maternal, fetal or neonatal mortality in low-resource settings. Effective allocation of limited resources to reduce maternal, fetal and newborn mortality requires an informed decision process. Funded by the Bill & Melinda Gates Foundation, MANDATE is a decision support tool for evaluating where and how to allocate resources for technology development options and other interventions to have the greatest impact on pregnancy-related mortality. Specifically, MANDATE enables a user to assess the impact of technology options, interventions or packages to identify technologies (preventatives, diagnostics, therapeutics) with the greatest potential impact for reducing mortality, impact on mother, fetus and newborn mortality, impact in different settings (hospitals, clinics, and homes), and comparative scenarios to determine relative magnitude of impact.

MANDATE is available to the public at: <http://mnhtech.org>. MANDATE has assisted public and private sector users in answering questions regarding technology development options for reducing maternal, fetal and neonatal mortality. For example: Companies, NGOs and Universities: What new or improved technologies should we develop to have the greatest impact? Foundations, National and Multi-national Funding Agencies: Where should we invest our funds for developing new technologies, buying current technologies or training birth attendants/health personnel to have the greatest impact? Ministries of Health in-country: What are the technologies or training where we should invest our funds to have the greatest impact? In this workshop we will provide participants with an overview of the framework for MANDATE and instruct them on its use by running the model with workshop participants to develop case studies. Following the workshop, participants will be able to use MANDATE independently to obtain a quantitative assessment of where innovation might have the greatest potential to reduce maternal, fetal and neonatal mortality.

[Back](#)

## **Medical device introduction: adding the Non-pneumatic Anti Shock Garment (NASG) for obstetric haemorrhage to programs and policies**

Time: 11:10-12:00, Friday 22 November 2013  
Organizers: [Safe Motherhood Program, UCSF](#)  
Ms Elizabeth Andrea Butrick, Safe Motherhood Program, Univ. of California, San Francisco (UCSF) ([ebutrick@globalhealth.ucsf.edu](mailto:ebutrick@globalhealth.ucsf.edu))  
Ms Suellen Miller, UCSF  
Ms Katie Giessler, UCSF  
Ms Keely Bisch, UCSF

Obstetric hemorrhage, including postpartum hemorrhage, remains the leading killer of childbearing women. New medical devices, including the Non-pneumatic Anti-Shock Garment (NASG), have recently been added to the WHO guidelines for the management of postpartum hemorrhage and retained placenta. However, policy makers and implementers need guidance to turn recommendations into practice at the country level. The Safe Motherhood Program of the University of California, San Francisco pioneered research in the NASG and has conducted research or provided technical assistance to implementation efforts in over a dozen countries. Drawing on this experience, we will lead an interactive workshop for Ministers of Health, Maternal Health Directors, Policy Makers and Program Managers on how to incorporate the NASG, into existing care for obstetric hemorrhage. This workshop will lead participants through an activity to assess whether and where the NASG could be introduced to a maternal health system as a priority, life-saving intervention. We will then share additional insight from our NASG implementation experiences to demonstrate how to integrate the NASG into existing systems and enhance scale-up and dissemination. Finally, we will introduce participants to our online NASG Toolkit of resources they can use to support the introduction/implementation process.

[Back](#)

### Améliorer les pratiques des projets d'appui à l'équipement médical intégrant des dons (Improving practices in medical equipment support projects which include donations)

*\*In French and English, not translated \**

Time: 13:30-15:20, Friday 22 November 2013

Organizers: [HUMATEM](#)

Ms Cathy Blanc-Gonnet, HUMATEM ([cathy.blancgonnet@humatem.org](mailto:cathy.blancgonnet@humatem.org))

Ms Aurélie Jeandron, HUMATEM, Ms Barbara Comte, HUMATEM, Mr Maurice Page, HUMATEM

**Les projets d'appui à l'équipement médical et les dons d'équipements médicaux qui les caractérisent** ont encore toute leur place dans un contexte où les structures de santé des pays en développement manquent globalement d'équipements médicaux et de ressources financières à consacrer aux investissements. Cependant, le volume important de dispositifs médicaux non fonctionnels présents dans les structures de santé, dont la majorité provient de dons, appelle à s'interroger sur l'efficacité de l'aide apportée par les acteurs du Nord

Pour améliorer la qualité de ces dons et projets, il semble indispensable d'intervenir sur trois axes principaux:

- **Ajouter de la qualité et de la responsabilité dans les projets** : sensibiliser les donateurs à « mieux donner » (équipements opérationnels, non obsolètes). Les acteurs de coopération internationale devraient, quant à eux, suivre une méthodologie de projet structurée depuis le diagnostic jusqu'à l'évaluation. Quand cela est possible, ils devraient s'approvisionner en matériel sur le marché local (pour favoriser l'économie locale) et/ou privilégier l'acquisition de technologies adaptées (robustes, rentables, faciles à utiliser et à maintenir).
- **Optimiser la qualité « technique » des dons** : Il faudrait inciter les acteurs de coopération internationale à faire appel à des professionnels biomédicaux (internes ou externes) pour valider les capacités locales (compétences médicales et biomédicales, infrastructure, ressources financières...) et pour vérifier la performance des équipements médicaux avant envoi.
- **Promouvoir et défendre les intérêts des professions biomédicales** dans les pays en développement où elles sont encore sous-représentées et insuffisamment reconnues. Il faudrait notamment aider les personnels biomédicaux à obtenir les moyens nécessaires à l'exercice de leurs fonctions (formation ; équipements de contrôle, mesure et essai ; accès aux TIC ; budget) et à se fédérer au sein d'associations professionnelles.

Depuis 14 ans, la problématique des dons de matériel médical est au cœur des activités d'Humatem qui s'est donné comme objectif d'améliorer les pratiques. Au cours de cet atelier pré-conférence, seront présentés des services ainsi que des outils méthodologiques et de sensibilisation développés par Humatem et par l'OMS, sur le thème des dons de dispositifs médicaux. Puis, il sera proposé aux participants de prendre part à un exercice de brainstorming pour envisager de nouvelles voies à suivre ou à explorer plus largement dans ce domaine. Enfin, ils seront invités à visionner le film documentaire de 35 minutes « Equipés pour soigner – une enquête sur le don de matériel médical » (2012) et à en débattre.

**Medical equipment support projects and donations of medical equipment** have a real role to play since healthcare facilities in developing countries are lacking medical equipment and financial resources to invest. However, the responsibility of northern countries should be questioned regarding the efficacy of the aid they provide in view of the quantities of non-operational devices existing in healthcare facilities, with the majority being donations.

To improve the quality of these donations and projects, three major axes have to be strengthened among northern stakeholders' practices:

- **Add quality and responsibility to the projects**: donors should be sensitized to “better donate” (operational, not obsolete equipment). International cooperation stakeholders should follow a structured project methodology from preliminary assessment to evaluation. Whenever possible, they should consider procuring equipment locally (to support local economy) and/or prioritizing purchase of appropriate technologies (robust, cost-effective, easy-to-use, easy-to-maintain).
- **Optimize the “technical” quality of the donations**: international cooperation stakeholders should be encouraged to call upon biomedical skills (internally, externally) to validate local capacities (medical and biomedical competencies, infrastructure, financial resources...) and check medical equipment performance before sending it.
- **Promoting and advocating for biomedical professions in developing countries** where they are under-represented and insufficiently acknowledged. In particular, biomedical staff should be supported to obtain appropriate resources to work (training, premises, test and measurement tools, access to ICTs, budget) and to organise themselves in professional associations.

For over 14 years the issue of medical device donations has been at the heart of Humatem's activities which has set a target to improve practices. During this preconference workshop, some available services and methodological or awareness-raising aids developed by Humatem and WHO in the field of medical device donations will be presented. Then, participants will be asked to take part in a brainstorming exercise to imagine new paths which should be followed or wider explored in this area. Finally, they will be invited to watch the 35 minutes documentary film « Equipped for health – an investigation into medical device donation » (2012) and to debate on it.

## **A tool for prevention and early diagnosis of neuro-degenerative diseases**

Time: 16:00-16:50, Friday 22 November 2013  
Organizers: [International University of Japan/ Istituto Superiore Mario Boella](#)  
Mr Ludovico Ciferri, International University of Japan/ISMB ([lciferri@iuj.ac.jp](mailto:lciferri@iuj.ac.jp))  
Dr Emiliano Albanese, Université de Geneve  
Dr Paolo Ariano, Istituto italiano di tecnologia  
Dr Federico Cabitza, Università di Milano---Bicocca  
Dr Rainer Wieching, University of Siegen  
Mr Masahito Kawamori, NTT Labs-ITU (contributing remotely, TBC)  
Prof Ryuta Kawashima, Tohoku University (contributing remotely, TBC)

Increases in life expectancy and reduction of communicable diseases are resulting in an unprecedented epidemic of chronic diseases. Amongst these, demographic projections show that the prevalence of dementia and that of its main cause, Alzheimer's disease (AD), are expected to steeply increase in the near future. Early diagnosis is key, and many factors may be needed to develop prediction platforms. This workshop will introduce some studies presented in a positioning paper awarded the "Best paper award" at the 2013 International Conference on Multimedia, Information Technology and its Applications (MITA) on the requirements of multimedia data monitoring of neural and cognitive anomalies. The aim of the session is to discuss in an interdisciplinary perspective, including social sciences, engineering, medical science and nursing, the feasibility of a predictive platform for neuro-degenerative syndromes like dementia, especially of early signs of the disease with high positive predictive validity. We will illustrate preliminary findings of studies that investigated the characteristics of a multimedia data-monitoring platform, which includes mechanisms for analyzing established symptoms and traits (i.e., gait changes, sleep and speech disorder, etc.) for early detection of dementia and AD. Examples of practical implementation using smart phones and IPTV will be provided, describing how existing e-health devices and systems can be combined to improve early detection and diagnosis, and enhance healthcare of dementia. The rationale is twofold: first, to elaborate on risk profiles and develop risk scores for dementia and AD, enhancing early diagnosis and improving the quality and reducing the costs of health care; second, to flag up those at risk, who may be amenable of specific preventive strategies, encompassing physical (physical functioning and lifestyle) and mental (monitoring, cognitive training) interventions.

[Back](#)

## Disaster preparedness for health technology managers

Time: 17:00-17:50, Friday 22 November 2013  
Organizers: [International Union for Physical and Engineering Sciences in Medicine \(IUPESM\)](#)  
[/ Health Technology Task Group \(HTTG\)](#)  
Dr Yadin David, IUPESM/HTTG ([David@BiomedEng.com](mailto:David@BiomedEng.com))  
Dr Cari Borrás, IUPESM/HTTG  
Dr Fred Hosea, Kaiser Permanente

Jurisdictions of all sizes, from tribal to national governments and global institutions, are concerned about saving life, protecting property, and preserving the economic base of the community and the environment. When disaster strikes, those who have emergency plans and practice them routinely will be in a better position to help the community. The burden is magnified when it comes to protecting the lives of patients and the staff who take care of them due to the critical dependency of the hospital community on its technology and the increased demand for medical services during disasters. The three stages; those of pre-disaster, the disaster response and the disaster recovery must include specific strategies for protecting systems and devices, especially those that are critical to life and those that present unique hazards like radiation devices and radioactive materials. Healthcare professionals need plans, management tools, and training to help them deal with man-made or natural disasters in the most effective and safe way possible. The understanding of system (including IT networks) and device vulnerability is critical, especially in the case where radiation and contamination containment are necessary. Backup support prioritization and strengthening the resilience of the technology prior to and during disasters are all crucial for the hospital mission. The role of the clinical engineering and medical physicist's community is highly important. This workshop will provide participants with knowledge on the variety of vulnerabilities faced by hospitals exposed to earthquakes, flooding, and high-winds risks, as well as the best ways to mitigate the risk of damage and disruption of hospital operations caused by these events. The information will be presented by experts from the clinical engineering and medical physicist's communities and will offer solutions that can improve the safety of hospitals in disaster events.

[Back](#)