

Report of the Special Session on Women 2015

Empowering Women in eHealth and Telemedicine through Education

Presented by the Women Observatory for eHealth (WeObservatory) and the ISfTeH Working Group on Women (WoW)

With support from Connecting Nurses, Connecting Midwives and Sanofi



After the Women Special Session with speakers and supporters (left to right):
Y. Kwankam, P. Sigam, V. Thouvenot, L. Lhotska, E. Muntanola, D. Jaravin, A. Odole, F. Marlow, M. Mars



The Stand at Medetel: Doina Jaravin, Dr.Thouvenot, Eleonora Muntañola Thornberg (CASA), and Fiona Marlow (CloudBabies)

Prepared by V. Thouvenot and L. Perez-Chavolla

May 2015

Introduction

For the third year running, the Women Observatory for eHealth (WeObservatory) and the ISfTeH Working Group on Women (WoW) organized the Special Session on Women at Med-e-Tel, with support from Connecting Nurses, Connecting Midwives and Sanofi.

Prominently this year, the Journal of the International Society for Telemedicine and eHealth (JISfTeH) published a Special Theme issue on “Women in eHealth”, which includes four Guest Editorials—one of them from the World Health Organization (WHO)—, one Invited Commentary and six original articles covering the issues on Women, Health and ICTs. The online publication is available here: <http://journals.ukzn.ac.za/index.php/JISfTeH>. Paper copies are available upon request¹.

This year’s Special Session explored education challenges along the WeHealth dimensions (women as beneficiaries, health professionals, IT professionals, leaders), as well as along different ages of life: girls, adolescents, adult, elderly. Introductory remarks were provided by Veronique Thouvenot, Head of the Women Observatory for eHealth (WeObservatory) at the Foundation Millennia2025. WoW and its partners presented on the support they provide to the resolution of challenges, identifying roles, models, registries, materials, courses and best practices in eHealth and telemedicine education. Presentations on Innovation and Research completed the session.

The session was attended by Yunkap Kwankam, Executive Director of ISfTeH; Regina Ungerer, World Health Organization, Geneva, Switzerland; Anna E. Schmaus-Klughammer of ISfTeH Working Group on Women (WoW), and, as in previous years, a group of active participants. The session included presentations from Mexico, Australia, the Czech Republic and Nigeria.

Funds were provided by the Foundation Millennia2025 and SANOFI, with in kind support by ISfTeH.

Summary of the presentations²

Three presentations covered various aspects of education on eHealth and telemedicine in diverse contexts. They addressed the needs of women along the cardinal pillars of the theme:

- Women as Beneficiaries of Telemedicine and eHealth services
- Women as Health Professionals and Providers of health services leveraging Telemedicine and eHealth
- Women as Educators and Mentors in Telemedicine and eHealth
- Women as Developers of Telemedicine and eHealth systems and Apps
- Women as Leaders in the Telemedicine and eHealth space
- Women as Media Professionals

These pillars were identified in the “Women and eHealth Study 2010 – 2012”, conducted at the Millennia2025 Foundation (Belgium) and Union University (USA), which was updated this year with the “New Trends 2015” report⁴.

¹ Contact: Veronique Thouvenot at thouvenot.veronique@millennia2025-foundation.org

² See: http://www.medetel.eu/index.php?rub=educational_program&page=program#Thu

⁴ See: http://www.millennia2015.org/Women_and_eHealth

All presentations provided innovative approaches on education in diverse contexts, seeking to overcome common barriers identified in the “Women and eHealth Study 2010 – 2012”, such as limited access to educational materials in local languages, cost, local capacity building and mentoring, as well as long term sustainability. In this context, ICT is used to expand the reach of education on health information and knowledge to remote and under-served locations and communities. Given that reaching women and empowering health professionals remain immense challenges, the use of Massive Open Online Courses (MOOCs), Mentoring and an example of a new semi-online course provided interesting solutions.

1. MOOCs

Targets:

- Women as Health Professionals and Providers of health services leveraging Telemedicine and eHealth
- Women as Educators and Mentors in Telemedicine and eHealth
- Women as Developers of Telemedicine and eHealth systems and Apps
- Women as Leaders in the Telemedicine and eHealth space

In order to expand education and learning, the Intelligence MOOCs Commons for Women and eHealth of the WeObservatory (WeMOOCs) provides an annual selection of free Massive Open Online Courses (MOOCs) in English, French and Spanish, developed by the most famous universities and academics. The MOOCs included in the WeMOOCs are scanned and selected by specialized advisors and members of the Foundation, and cover three of the six UN official languages.

In 2014, the advisors identified and selected 72 MOOCs in English, and a handful of courses in the other two languages, covering various topics of interest to women, such as nutrition, nanotechnologies, diabetes, epidemics, AIDS, and nursing.

In 2015, the number of selected courses increased to a total of 340, of which 276 were in English, 28 in French and 36 in Spanish. The courses were selected from 21 different MOOC platforms and are being imparted by diverse institutions from 18 countries in America (6), Europe (8), Asia (2), the Middle East (1), and Oceania (1).

It is interesting to note that none of platforms searched in 2014 and 2015 offers so far a MOOC on Women and eHealth, covering the three areas of interest of women, health and ICT. To support the development of a future MOOC on Women and eHealth, the Foundation Millennia2025 will launch a new Intelligence Platform, powered by PROMIS®, in the frame of the European Commission Grand Coalition for Digital Jobs and the "eSkills for Jobs 2015" programme⁵.

In July 2015, the platform will offer a set of online learning modules on ICTs for Midwifery in Spanish, developed jointly with CASA, Mexico⁶.

Through the WeMOOCs, the WeObservatory and its partners, seek to improve women’s access to education and training in eHealth and telemedicine.

2. Mentoring

Targets:

- Women as Educators and Mentors in Telemedicine and eHealth

Girls engage in IT for multiple reasons, but only few of them get adequate jobs and recognition of their capabilities in these fields. Lenka Lhotska, from the Czech Technical University (Prague, Czech

⁵ See: http://www.millennia2015.org/Millennia2025_Intelligence_Platform

⁶ See: <http://www.millennia2015.org/casa>

Republic) highlighted how mentoring young university students in the IT and engineering fields can help empower women in eHealth and telemedicine.

Mentoring is a process of continuous and dynamic feedback between two individuals to establish a relationship through which one person shares knowledge, skills, information, and perspective to foster the personal and professional growth of the other. This implies a relationship different from that of supervision, which is usually pre-established and does not necessarily lead to the personal growth of the individual. Mentoring is quite frequently used within an institution to help new members of staff. It is interesting that active and successful mentoring programs can be found in life sciences, but not so frequently in engineering or strongly interdisciplinary areas, in particular on the edge of engineering and medicine or biology. Mentoring programs can be based on different models of interaction. Some forms could be better adjusted for newcomers, some for more experienced employees. A peer group, collaborative mentoring model, founded on principles of adult education, is a good example of the latter mentoring form⁷.

To support mentoring activities on Women and eHealth, the WeObservatory is currently developing WeMentors⁸, with 8 International WeMentors and 15 local WeMentors in 12 countries.

3. *Semi-online course*

Targets:

- Women as Health Professionals and Providers of health services leveraging Telemedicine and eHealth

CASA, Mexico's first government accredited professional midwifery school, is investing in the development of online courses, based on an assessment of its alumni (111 midwives) and current students, as well as students in other functioning midwifery schools in Mexico and Guatemala. The assessment found that, although the midwifery students are sophisticated users of social media, these young women tend not to be digitally competent and remain unaware of the value of telemedicine and e/mobile health can provide to their practice. CASA considers evidence-based practice and research cornerstones of a professional midwife; the effectiveness of this of this small but growing cadre of evidence-based health practitioners is supported by the improvement achieved in the health indicators of mothers and babies attended to by CASA graduates in various settings. Another group that can benefit from online courses in midwifery and ICT are Mexico's university trained, licensed obstetrical nurses or LEOs.

The 100-hours initial semi-online course was designed to include two face-to-face sessions, and was composed of 7 modules: (1) Introduction, highlighting the need of knowing the cultural context and the ways in which especially women learn online; (2) midwifery skills and the background of Mexican midwifery; (3) ICT use in healthcare; (4) midwifery online tutoring; (5) clinical (midwifery) tutoring methods or preceptorships; (6) human rights and a gender-centered approach to midwifery; and (7) the use of ICT in maternal health and midwifery. The pilot semi-online course lasted 4.5 months and was attended by 12 health professionals (obstetricians, homeopathic physicians, perinatal nurses, professional midwives, general practice doctors and obstetrical nurses). It was imparted from September to December 2014, and finished with success in January 2015. Close to 85% of the students are still intimately involved in the project and a number of them will be asked to participate as paid staff as this project grows.

⁷ Mentoring Young Scientists and Engineers in Interdisciplinary Domains, Lenka Lhotska, Czech Technical University in Prague, Czech Republic. Abstract available at:

http://www.medetel.eu/index.php?rub=educational_program&page=program#Thu

⁸ See: <http://www.millennia2015.org/WeMentors>

Innovation and Research in education are also of concern in the area of Women and eHealth.

4. *Innovation: Cloud Babies*

Targets:

- Women as Beneficiaries of Telemedicine and eHealth services
- Women as Health Professionals and Providers of health services leveraging Telemedicine and eHealth
- Women as Developers of Telemedicine and eHealth systems and Apps

In Australia, the mortality rate is 6-10,0000, but women in rural and remote areas and indigenous women suffer 3 times that mortality. In Timor Leste, where 75% of women live in areas with limited access to trained health professionals or hospitals, the rate is 300-100,000, 50 times greater than Australia (WHO2013). In both contexts, the use of an inexpensive mobile device to facilitate the remote recognition of risk factors early, thus allowing time to intervene and provide the emergency care needed, would save the lives of women and their babies. A key tool to assist obstetricians and midwives in their clinical decision-making is the diagnostic information obtained through sonography devices, such as stethoscopes, fetoscopes, Doppler and ultrasound.

Cloud Babies has developed and validated a design for an inexpensive stethoscope (ca. \$10 cost) that connects through the headphone jack of a mobile phone. The diagnostic information captured and converted to digital form through a transducer can be sent over regular mobile networks. This diagnostic system allows a health worker with a patient to maintain communication in real time with an expert and be guided as to placement of the scope to capture the diagnostic information. The expert, able to hear and interpret the information, can then make a diagnosis based on accurate information.

The device was presented to the participants and experts, raising great interest for its potential use in other contexts and in countries facing similar challenges.

This initiative was selected at the WeObservatory for a one-year collaboration to expand its reach to multiple Millennia2025 communities and partners⁹.

5. *Research and Education: Telehealth in Nigeria*

Targets:

- Women as Health Professionals and Providers of health services leveraging Telemedicine and eHealth
- Women as Educators and Mentors in Telemedicine and eHealth
- Women as Leaders in the Telemedicine and eHealth space

A preliminary review of literature on the scientific evidence of telehealth in Nigeria—including 64 articles in English, from which 17 were selected for this review, together with 11 additional relevant studies from Google Scholar—found that 93% of the articles reviewed identified the potentials and need for telehealth in Nigeria. Nearly 61% support the use of mobile phones technology for health information, surveillance and services, with only 25% focusing on evidence for its effectiveness on outcomes of care in some clinical conditions. Eleven per cent of the studies provide information on the use of internet-based telemedicine. Some of the findings (32.1%) from the reviewed studies highlight challenges and implementation issues of telehealth uptake in Nigeria.

⁹ See: <http://www.millennia2015.org/cloud>

It appears there are few published studies on the implementation of telehealth in Nigeria, compared to the overwhelming evidence of its implementation and uptake in the developed world. The need for promotion of educational and awareness programmes at all tiers of healthcare delivery, inadequate healthcare infrastructure and lack of qualified and trained healthcare professionals in Nigeria are identified challenges that need to be vigorously addressed for telehealth to become a full-fledged reality in that country.

Discussion

Participants in the Special Session raised the issue of the lack of MOOCs in other languages and evaluation methods on the attendance. It was observed that inscription to and participation in MOOCs remain a challenge to health professionals who must combine them with long working days. Still students tend to express more interest in taking MOOCs than professionals do.

The participants proposed additional resources and connections for mentoring activities, such as the IEEE Star Programme, EU Scientix Network, and the Women and Science National Center. They also expressed concern about the selection process for Mentors, suggesting to define better the qualifications and professional experience required for their selection. It was noted that most Mentors are volunteers.

What strategies work best for professional online courses? It is hard and stressing to work with computers. Students appreciate having modules that include videos and cartoons.

The University of Porto is involved in Digital Stethoscopes and initiatives in Brazil exist, but without the use of mobiles. The transmission of sounds can happen in real-time and deferred. Patenting, intellectual property and industrial development remain of concern for the future. More attention and connections are needed to expand access to low cost devices in hard to reach communities.

Based on the research conducted in Nigeria, the participants commented on the need for healthcare professionals who are qualified and trained in telehealth, as well as on the need for financial support.

Discussions and informal meetings with participants and organizations continued after the session, in particular with exhibitors¹⁰, specialists of patenting and industrial property, mobile solutions developers and EPPOSI¹¹.

Conclusion

The Women Session at Med-e-Tel 2015 offered a dynamic opportunity to share expertise and field experiences on education, addressing women's health needs. Further contacts and actions are planned to ensure the development of a dedicated MOOC on Women and eHealth in 2016 – 2017, expand mentoring and online courses, as well as innovation and research. The WoW wishes to expand its members and activities in 2015 with the support of its partners and the ISfTeH. New members are welcome to register.

Follow the WeObservatory News on the WeOBLOG: www.weobservatory.com

Partners of the Women Session are warmly thanked for their continuous support and the beautiful stand at the exposition, displaying innovative eHealth solutions developed at Sanofi. Congratulations

¹⁰ See: <http://www.medetel.eu/index.php?rub=exhibitor&page=info>

¹¹ See: <http://epposi.org/>

to the team who staffed the stand, Doyna Zharavina, Eleonora Muntanola and Fiona Marlow, for their assistance during the three days of the event.



Women Observatory for eHealth Stand

Meetings at Med-e-Tel 2015



Discussing further development of CloudBabies with Fiona Marlow and Dr.med. Andy Fischer from Medgate



With our partners of the Diplomatic Council



Meeting with innovative mobile applications, P. Sigam, WoundDesk



Meeting with the editors of JISfTeH



Meeting with CASA, Eleonora Muntanola



ISfTeH WoW Annual Meeting 2015

Programme

11:00-13:00

Empowering Women in eHealth and Telemedicine through Education

Chair: Veronique Thouvenot, WeObservatory & Millennia2025 Foundation

The Women Observatory for eHealth (WeObservatory) Develops an Intelligence MOOCs Commons for Women and eHealth

Veronique Thouvenot, Lilia Perez-Chavolla
Millennia2025 Foundation, Belgium
ICT Applications Consultant, USA

Mentoring Young Scientists and Engineers in Interdisciplinary Domains

Lenka Lhotska
Czech Technical University in Prague, Czech Republic

Improved Midwifery Education with Digital Competences for Mexican and Latin American Indigenous

Nadine Goodman, Eleonora Muntañola Thornberg
Centro para los Adolescentes de San Miguel de Allende, Mexico
Centro para los Adolescentes de San Miguel de Allende, Spain

Where There is no Hospital: Mobile Sonography Devices to Reduce Maternal and Foetal Mortality and Morbidity

Fiona Marlow, Kylie Ward
Club Bubb t/a Cloud Babies, Australia
Kylie Ward Enterprises, Australia

Telehealth in Nigeria (Mirage or Reality): A Review of Literature

Adesola Odole
Dept. of Physiotherapy, College of Medicine, University of Ibadan, Nigeria

Contacts

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Links

Foundation Millennia2025: http://www.millennia2015.org/millennia2025_foundation
WeObservatory: <http://www.millennia2015.org/WeObservatory>
ISfTeH Working Group on Women: <http://wow.isfteh.org/>