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| **Title of Symposium** (Sentence case) Digital Health, Health Literacy and Wellbeing |
| **Maximum 2500 characters (including spaces but excluding title)**  **General Objective**  Digital health is often associated with big data and genetics. However, at the heart of the digital health revolution there are people. To ensure that no one is left behind, these people need to have the capabilities to ensure equity of access, understanding, and appraisal of the health information presented to them in a digital way, and to act to change or maintain health in everyday life. This “digital health literacy” requires interventions to increase communities' access to online information and the use of digital tools for health. As researchers and designers of health interventions, we need to understand what these capabilities imply across cultures and generations. The presentations in this symposium will discuss a series of innovative studies across multiple countries, continents, cultures, and ages with global participants. Each presentation demonstrates a different technological solution focussing on education, life-long learning, co-creating of technological interventions, and increasing understanding of what, and how, people interact and use technology to stay informed and connected, promote health and wellbeing, and self-manage their long term conditions.  **Proposed format of the session**  Five individual studies will be presented in a way that involves a series of activities requiring audience participation, either through the use of the technology discussed in the presentation, posing of questions, and receiving questions, or by interacting live online with people with long term conditions from across the globe. The session will conclude with an audience activity bringing together the 5 presentations themes in a task applying the content to the participants own cultural and country context with regard to policy, education, and practice. Additionally, the audience will be asked to think about how the digital health revolution fits with the interaction of place, planet, and machine to ensure achievement of the sustainable development goals and health for all. The presentations will be in English, but the presenters can speak multiple languages, enabling interpretation for French and mandarin speakers.  **Conference theme and/or subthemes addressed**  Planetary health, Health Equity, lifelong learning, build accountable governments and ensure justice and access to technology as a human right. |

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| **Title of Presentation 1** (Sentence case) Evaluating an Online Course to improve the Digital Health Literacy of Diabetic Patients |
| **Maximum 2500 characters (including spaces but excluding title)**  **General Objective**  The wide availability of web-based health information combined with the digitization of health care creates opportunities for citizens and patients to be better informed and involved in self-managing their health. To benefit from this opportunity, however, people need to have sufficient digital health literacy (DHL), i.e., the competence to access, understand, evaluate and apply internet-based health information. To address this challenge, the IC-Health project funded under the EU H2020 Programme developed a series of Massive Open Online Courses (MOOCS) to help improve the DHL of Europeans. As part of this project, MOOCs were developed to increase the DHL of diabetic patients.  The current presentation concerns the development and evaluation of MOOCs specifically designed to enhance the digital health literacy of diabetic patients. Five sets of MOOCs were developed in a co-creation approach involving diabetic patients and health professionals in Spain, Sweden, Denmark, Italy and Belgium. Patients and professionals participated in their development through meetings and interactions on an online forum. The resulting MOOCs were then tested in patient groups and fine-tuned on the basis of their comments and suggestions. The MOOCs developed in each of the countries differ in content and presentation, but have the same 4 course structure representing the four dimensions of DHL (accessing, understanding, appraising and applying internet-based health information). For each course, guidance and examples are provided on how to find health information online, use search engines, assess the reliability of websites, etc.  The final versions of the MOOCs were tested in a sample of diabetic patients in Belgium and Spain by assessing their satisfaction with the courses as well as DHL before and after taking the course using validated Digital Health questionnaires. The results demonstrate to what extent the IC-Health project helps to strengthen the competences of diabetic patients to access, understand and use accurate and reliable online information to make well-informed health decisions.  **Proposed format of the session**  The purpose and design of IC-Health project and the co-creational development of the MOOCs for diabetic patients will be presented, followed by an online demonstration of the MOOC. The possibility to apply the MOOC in different cultural contexts will be discussed with the audience.  **Conference theme and/or subthemes addressed**  Health Equity, lifelong learning, access to technology as a human right |

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| **Title of Presentation 2** (Sentence case) New insight on caregiver support: A feasibility study of e-painting mobile app |
| **Maximum 2500 characters (including spaces but excluding title)**  **General Objective**  Caregivers of persons with dementia (CGPWD) experienced stress and anxiety due to caregiving. With the influence of Chinese culture, CGPWD do not actively seek help. A mobile app was specifically designed for Chinese CGPWD. The objectives of the study were to investigate 1) the preferred features of the app; 2) the feasibility and acceptability of this app in Chinese community.  **Methods.** This is a mixed-method study with qualitative and quantitative components. Focus group interviews were made to collect caregivers’ views on preferred features of the app and their comments after use. Patient Health Questionnaire-9 (PHQ-9), Zarit Burden Interview – short form (Chinese version) (ZBI) and self-rated health were measured before and after the intervention.  **Results.** CGPWD suggested the app to the following features: sharing of paintings, chat, public announcement and emotion assessment. Majority of the CGPWD found the app user-friendly and they were satisfied with the experience of sharing the paintings. However, most of the CGPWD could not participate in drawing as frequent as we recommended. ‘Lack of time’ and ‘I am not good at drawing’ were the key reasons for not using the app. There was a significant increase in ZBI total score (mean difference, m.d. (SD) = 3.64 (5.25), *p* = 0.004) after the use of the app for eight weeks. No significant change in PHQ-9 and self-rated health was observed after using the app.  **Discussion.** This e-painting app was developed with the stakeholders, addressing the CGPWD’s needs and cultural impacts on behavior. The development of the app intended to develop CGPWD’s health literacy by providing a platform for self-assessing emotional level and encouraging decision to alleviate stress through e-painting. The use of the app was feasible. Although the CGPWD reported the increased burden over time, their depressive symptoms were not exaggerated. The app seemed to become a platform for alleviating stress in some ways. Further investigation is needed to assess which features of this app best provide emotional support to the CGPWD.  **Proposed format of the session**  This session will start with a live demonstration of the e-painting app, follow by a 12-minute presentation. Then the audience will be invited to ask questions and make comments.  **Conference theme and/or subthemes addressed**  Cultural issues in health care, health equity across life course, empowered caregivers as lifelong learners |

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| **Title of Presentation 3** (Sentence case) Can people equitably engage in digital health? The development of a new measure and potential applications |
| **Maximum 2500 characters (including spaces but excluding title)**  **General Objective**  There is enormous potential for enthusiastic health professionals and health promoters to inadvertently generate and promulgate a digital divide where the well-resourced and well-educated members of society gain access to services and people without such empowerment are left behind. It is critical that we consider the digital context and the attributes of current and future users such that current and future digital services are provided equitability and people with a very wide range of digital health literacy capability can full participate in society. This paper outlines new tools and processes that have the potential to mitigate the digital divide that is increasingly evidence in many regions of the world.  This paper introduces a new questionnaire, the eHLQ (e-Health Literacy Questionnaire) developed using a validity-driven approach, simultaneously created in both Danish and English, and validity tested in diverse populations. Given that e-health literacy is only part of the picture of the determinants of participation in digital services, we expanded the e-health literacy construct to include deeper elements of empowerment and self-management skills. We therefore explored the potential contribution of other relevant tools already in wide use and with extensive evidence of psychometric robustness: the Health Education Impact Questionnaire (heiQ) and the Health Literacy Questionnaire (HLQ). These three tools were co-administered to 305 citizens with a recent cancer diagnosis referred to rehabilitation in a setting with pending introduction of various technologies. Using confirmatory factor analysis, convergent and discriminant validity analysis and exploratory factor analysis we developed The Readiness and enablement index for Health technology (ReadHy) tool.  The ReadHy creates health technology readiness profiles of potential users of health technologies and digital health services. Combinations of the scales can be included in the e-Ophelia (OPtimise HEalth LIteracy and Access) process to assist practitioners and governments to understand community digital health literacy needs and strengths, and codesign novel digital health Apps and/or implementation strategies. The application of this approach in 1000 population-based community members drawn from diverse rural and low socioeconomic settings will be discussed.  **Proposed format of the session**  The study will be briefly presented including tool demonstration, after which the audience will be engaged in a discussion regarding how this approach may be examined in their country/culture  **Conference theme and/or subthemes addressed**  Ensure health equity throughout the life course, making each member of society an empowered lifelong learner |

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| **Title of Presentation 4** (Sentence case) Digital solutions for health promotion for people with Type 2 Diabetes - using motivational Short-Message-Service (SMS) for empowerment for healthy lifestyle and self-care in a community setting |
| Diabetes is a chronic, complex disease requiring daily and constant self-care for preventing severe complications. About 50% of people with diabetes do not adopt lifestyle changes and self-care practices as recommended by their care providers. Recently, studies show use of short message service (SMS) is an effective and acceptable tool for empowerment of people with chronic disease.  **The objective** was to examine the acceptability of a digital tool, its use in motivating people with diabetes to adopt health behaviors and to learn of the association with behavioral and clinical outcome measures related to diabetes, in a universal health care system.  **Methods**: People with diabetes Type 2 treated in a community clinic (n=140) were randomly allocated to an intervention or comparison group. A bank of 150 text messages was developed promoting relevant health behaviors (nutrition, physical activity, smoking cessation, footcare, medication adherence, medical follow-up). The content was based on the Stages of Change model (Procheska, DiClementi): precontemplation, contemplation, preparation, action and maintenance. The SMSs were sent daily for first 3 months, and every 2 days in the following 3 months, adapted to individual health behavior and normal use of SMS. Follow-up by the community primary care team continued throughout the study period for both groups. Results were measured with respect to background characteristics: age, gender, education level, religiousness, SES and health literacy.  **The findings** showed that participation in the intervention was significantly associated with better controlled diabetes, measured through Hemoglobin A1c levels, 6 months after the study began (p<.009). Educational status was highly associated with this outcome (p=.022), as was gender (women improved more than men) (p=.017). Self-assessed health also improved as did perception of barriers to self-care and improved health behavior. Personalized text messages can be an acceptable, effective and efficient digital tool as an adjunct intervention to help people with diabetes to help manage their health.    **Proposed format of the session**  The study will be briefly presented including tool demonstration, after which the audience will be engaged in a discussion regarding how this approach may be examined in their country/culture.  **Conference theme and/or subthemes addressed**  Ensure health equity throughout the life course, making each member of society an empowered lifelong learner |

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| **Title of Presentation 5** (Sentence case) The importance of positive health assets from participation in 3D social virtual world communities to self-management of long term conditions in the physical world. |
| **Maximum 2500 characters (including spaces but excluding title)**  **General Objective**  The objective of this presentation will be to discuss the findings of a research project which was completed in the 3D social virtual world (VW) Second Life. Users of 3D social virtual worlds can participate in a range of activities such as working, playing, education, building friendships, dancing, and creating places and artefacts within the VW; where they interact with global citizens.  Methods: In-depth longitudinal case studies (3 months) with multiple methods – interviews, social network analysis, and diaries with images, were undertaken with four people with Long Term Health Conditions, and two interview-based focus groups (10 people), ages 18 – 76, during December 2013 - July 2015. Findings included how freely available online 3D social virtual worlds accessed by creating a virtual representation of self (avatar) can give access to a range of activities and positive health assets for people with long term health conditions and disabilities. Connecting and interacting with different places, people (avatars), and environments within the VW led to multiple psychosocial health benefits positively influencing their ability to live and cope with their long term conditions in the physical world.  The findings from this study make an important contribution to understanding how people living with long term health conditions can use 3D virtual worlds to engage with place and people to maintain and protect their physical and psychological wellbeing in the physical world. This will be of interest to practitioners who wish to maximise opportunities for people to access digital platforms to help self-manage and live and cope with their long term condition.  **Proposed format of the session**  The session will discuss the findings of the research study and speak live to a panel of people with long term conditions/disability via the 3D social virtual world about how participating in the virtual world influences their ability to live and copy with their long term condition. The audience will be able to ask questions to the panel.  **Conference theme and/or subthemes addressed**  Health equity,lifelong learning, justice and access to technology as a human right – access to positive health assets which may not be available in the physical world due to constraints of long term conditions or disability can offer people choice, enabling them to connect with people and place, be educated, or contribute to communities and build social capital. |