Match Summary

Name of Match:	**E-Mental Health**
Location of Match:	University of British Columbia (UBC), Vancouver, Canada

1. Brief summary of the outcomes of your match

   Participants from private and public institutions, industry and research and development agreed on the critical importance of web based services for the future of health care. Although the development is in its early stages, new apps, software tools and documentation systems are launched. Most are single area solutions but some are proving an increasing functionality already and could contribute to the paradigm shift. Physical healthcare clinics will continue to play a central role but independent web platforms as well as virtual mental health clinics will take over important functions, contribute to capacity building and better quality of care. System needs must be recognized and solutions should be based on health outcomes. You can only change what you are measuring.
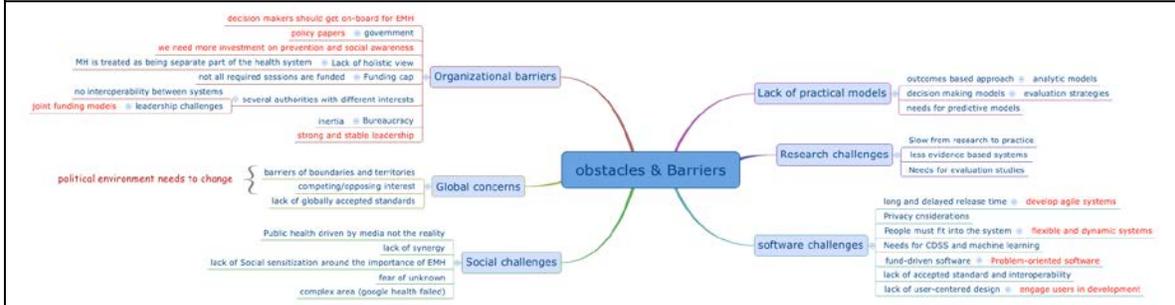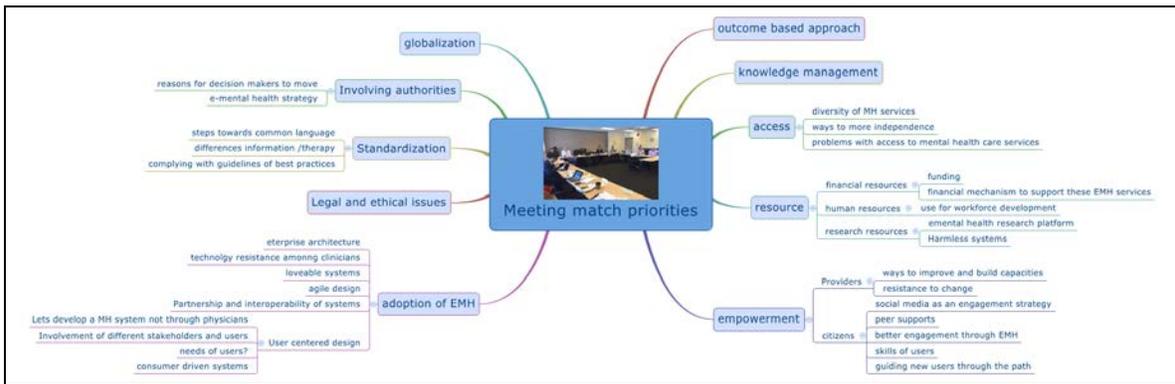
   In order to address these challenges we had discussions on e-mental health priorities and created a list of them. We also had a discussion on the necessity of a paradigm shift in mental health care and settings of modern care and generalizability of a Canadian-based model to other parts of the world. We also discussed an e-mental health framework, which has been adopted by various policy makers in New Zealand and the applicability of that framework to other settings. There were also some presentations on international trends toward providing e-mental health services and different strategies to engage and empower patients and individuals including peer support and game-inspired development. Participants also discussed obstacles and barriers for developing e-mental health platforms. A coordinated care model for implementing e-mental health services for refugee camps was also developed as part of the group work.

2. Resources used in your match

   During our meeting match we used presentations, demonstrations of web-based solutions/tools, and interactive case studies building flowcharts and mind maps. We also had an interactive session with another match group in Washington using videoconferencing equipment and Adobe Connect software.

3. Brief description of how your match has accelerated change towards mental health, well-being and inclusion

   Traditional mental health services are not easy to access and despite all shortages in face-to-face professional mental care the demand is increasing. E-mental health can fill part of this gap. E-mental health services specially if provided via mobile platforms can be easily accessible and cheap. However, there are different challenges to develop, maintain and utilize such systems. Using brainstorming technique, match participants highlighted some of the most important priorities and also challenges in developing and providing e-mental health services. A mind map was created for each (Please see attached mind maps). The list of priorities highlights areas in which we have to invest in order to meet the increasing demand. The list of challenges shows important barriers and concerns that we should address prior to development of these applications. Therefore, this meeting could guide us through better decision making for providing e-mental health services for the public. The topic also included prioritization of primary care over secondary and tertiary by creating apps that can increase general awareness of mental health and provide education for the public.

Meeting match priorities (mind map)

- globalization
- outcome based approach
- knowledge management
- Involving authorities
  - reasons for decision makers to move
  - e-mental health strategy
- access
  - diversity of MH services
  - ways to more independence
  - problems with access to mental health care services
- Standardization
  - steps towards common language
  - differences information /therapy
  - complying with guidelines of best practices
- Legal and ethical issues
- resource
  - financial resources
    - funding
    - financial mechanism to support these EMH services
  - human resources — use for workforce development
  - research resources — emental health research platform
    - Harmless systems
- adoption of EMH
  - enterprise architecture
  - technology resistance among clinicians
  - loveable systems
  - agile design
  - Partnership and interoperability of systems
  - Lets develop a MH system not through physicians
  - Involvement of different stakeholders and users
  - User centered design
    - needs of users?
    - consumer driven systems
- empowerment
  - Providers
    - ways to improve and build capacities
    - resistance to change
    - social media as an engagement strategy
    - peer supports
  - citizens
    - better engagement through EMH
    - skills of users
    - guiding new users through the path

obstacles & Barriers (mind map)

- Organizational barriers
  - decision makers should get on-board for EMH
  - policy papers — government
  - we need more investment on prevention and social awareness
  - MH is treated as being separate part of the health system — Lack of holistic view
  - not all required sessions are funded — Funding cap
  - no interoperability between systems
  - joint funding models — leadership challenges — several authorities with different interests
  - inertia — Bureaucracy
  - strong and stable leadership
- Global concerns
  - political environment needs to change
  - barriers of boundaries and territories
  - competing/opposing interest
  - lack of globally accepted standards
- Social challenges
  - Public health driven by media not the reality
  - lack of synergy
  - lack of Social sensitization around the importance of EMH
  - fear of unknown
  - complex area (google health failed)
- Lack of practical models
  - outcomes based approach — analytic models
  - decision making models — evaluation strategies
  - needs for predictive models
- Research challenges
  - Slow from research to practice
  - less evidence based systems
  - Neecs for evaluation studies
- software challenges
  - long and delayed release time — develop agile systems
  - Privacy cnsiderations
  - People must fit into the system — flexible and dynamic systems
  - Needs for CDSS and machine learning
  - fund-driven software — Problems-oriented software
  - lack of accepted standard and interoperability
  - lack of user-centered design — engage users in development!

4- Brief description of how your match has built leadership for the future

E-health has created lots of opportunities for quality improvement of healthcare systems especially in the field of mental health. However, these technologies are changing the traditional healthcare delivery system. A paradigm shift needs to happen in the leadership's vision too. New technologies are not limited to physical borders and many healthcare organizations can provide or receive services from each other despite physical separation. Physicians from one continent may provide services for patients in another continent. This requires standardization of care provision in different parts of the world and vision change among local healthcare leaders. In such a continuum patients have to take more responsibility and authority over their own health. Leaders must encourage patient empowerment and incentivize wider use of personal health records and interoperability between EMR, HER and e-mental health systems. Governments should have a holistic view and treat e-mental health as part of an integrated care plan. Service providers can be distributed but the efforts should be effectively coordinated to result in healthcare quality improvement. Local and federal governments should introduce policy papers that incorporate essential needs for global use of e-mental health services. Leadership should also invest in preventive care and social awareness as part of the paradigm shift.

As an example of the abovementioned issues we had an important discussion in our match on how to help refugees that are fleeing from different parts of the world especially the Middle East using e-mental health portals and mobile applications. The final outcome was a coordinated care model where different resources were coordinated by an organization but several local and international organizations, in addition to local community professionals, could be involved in service provision. This example provides a leadership model for future e-mental health services. The initial model was developed through group work and was further completed through brainstorming.

Refugee camp case study (mind map)

- assumptions
  - refugees have good access to smart phones
  - Basic needs are met
    - sanitary
    - clean water
    - electricity
    - antibiotics
  - basic internet access
- Patient portal should be created
  - 24/7 services should be provided
  - e prescription
  - setup a summary e-health record for them
  - tele-mental health services
  - coordinates
- coordinated care model
  - supervise
  - One organization coordinates all activities
    - Red cross
    - NGOs
    - local authorities
    - Donors
    - Volunteer organizations
    - Many duplications may occur
  - coordinates
- Resources
  - use global and local volunteers
  - prioritizing local expertise for development
  - use technology champions as advocates
  - use local developers to train local care providers
  - ask local care providers to recommend the app
- challenges
  - who will own the data/information
  - financial issues — developement
  - bureocracy — maintenance
- Fund raising mechanisms
  - NGOs
  - International organizations (unicef, UN, WHO, …)
  - Resource mobilization — cut budget from other activities and put into healthcare