**Table S3** Original actions list

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| 1. Protected time  |
| 2. On-line training tools  |
| 3. Mashup environments (play park)  |
| 4. Proper career structure  |
| 5. Introduction to computer resources available for their use  |
| 6. Tools to query computer resources  |
| 7. Case studies of activities important to their role  |
| 8. Discussion to typical performance measures for evaluating their work  |
| 9. How to find and use appropriate resources for their work  |
| 10. Creation and use of registries  |
| 11. Privacy and security issues  |
| 12. Improve confidence in use of systems  |
| 13. Enable users to see links between software they make use of at work and in private life to help increase confidence (e.g. Facebook, online banking)  |
| 14. Help understanding of the data story - see the workflow of using HIT and how HIT can make a difference to treatments and outcomes  |
| 15. Case studies of activities important to their role, to understand issues that can be caused when data is not captured and shared effectively - incorrect treatment, issues with follow on care, issues with planning for future needs  |
| 16. An eHealth strategy with actions  |
| 17. Guarantee the governance for HIT education actions  |
| 18. A HIT curricula for education on vocational and academic level as well as in house training  |
| 19. Ensuring the competences for educators, train the trainer  |
| 20. Learning arrangements - facilities, methods, equipment  |
| 21. Develop competences using continuing education and case studies related to ethical, legal, societal impact issues of health IT  |
| 22. Develop competences using continuing education and case studies related the value of health information: semantics, interoperability, reuse  |
| 23. Develop competences using continuing education and case studies related issues related to information management and process reengineering  |
| 24. Include mandatory education during the pre-grad course of all eHealth professionals about: electronic health record and safety, continuity of care; importance of documentation; importance of shared vocabularies; decision support; health information sharing and privacy  |
| 25. Build graduate education dedicated to health workers in the field of biomedical informatics  |
| 26. Build post-graduate course in the field of biomedical informatics  |
| 27. Help working at recognizing biomedical informatics as a specialty  |
| 28. Formative training and continuing education on effectively read and write from the electronic health record for patient care and other clinical activities  |
| 29. Formative training and continuing education on use and guide implementation of clinical decision support  |
| 30. Formative training and continuing education on provide care using population health management approaches  |
| 31. Formative training and continuing education on patient’s privacy and security protection  |
| 32. Formative training and continuing education on using information technology to improve patient safety  |
| 33. Formative training and continuing education on engage in quality measurement selection and improvement  |
| 34. Formative training and continuing education on use health information exchange (HIE) to identify and access patient information across clinical settings  |
| 35. Formative training and continuing education on engage patients to improve their health and care delivery though personal health records and patient portals  |
| 36. Formative training and continuing education on maintain professionalism through use of information technology tools  |
| 37. Formative training and continuing education on telemedicine and refer those for whom it is necessary  |
| 38. Formative training and continuing education on apply personalized/precision medicine  |
| 39. Formative training and continuing education on participate in practice-based clinical and translational research  |
| 40. Skills needs analysis of jobs/responsibilities  |
| 41. Skills audit of staff  |
| 42. Creation of competence framework, analyze skills needed  |
| 43. Appropriate education and training  |
| 44. Investment in new technology  |
| 45. Reward and recognition for good performance  |
| 46. Ensure access to computers, tablets in workplace  |
| 47. Carry out regular audit / evaluate of skills of existing and new staff, reward and recognition for good performance  |
| 48. Analyze skills needed - produce checklists  |
| 49. Involve medical librarians, senior managers; professional bodies; educators  |
| 50. Set up coordinating body  |
| 51. Provide appropriate training - both face to face classes and online  |
| 52. Evaluate training  |
| 53. Think about needs of staff who work in the community - not office based  |
| 54. Identify barriers  |
| 55. Liaise with staff  |
| 56. Include the technology in the education of the health care staff. Like clinical education with technical education in practical process  |
| 57. Create awareness of the importance of data quality.  |
| 58. Create awareness of the importance of continuity of care data.  |
| 59. Teach procedures to collect and quality check patient-provided data.  |
| 60. Install procedures that respect the fact that the patient’s own the data and act accordingly.  |
| 61. Further education - train the trainers  |
| 62. Clear identification of IT competences needed at international level, to allow recognition of competences beyond frontiers, creation of competence framework  |
| 63. Definition of IT skill training programs by regional/national authorities  |
| 64. Use of MOOC as powerful tool to elaborate high added value training courses available everywhere  |
| 65. Inclusion of healthcare professionals in the development process of the ICT-solutions, in order to make the solutions relevant and useful (e.g. usability testing)  |
| 66. Teaching and training at all levels in education and in professional practice. 67. Development of ICT-subjects in the health professional education programs.  |
| 68. Exposure of relevant ICT solutions and medical technologies, investment in new technology  |
| 69. To develop plan how to support availability of ICT in broad community of healthcare workers (e.g. general practitioners in remote area, deficit of computers, bad access to internet)  |
| 70. To support education of healthcare workers about ICT technologies in healthcare by the courses covering real needs for each discipline on vocational and academic level  |
| 71. Realistic competence in computational thinking and software engineering among (select) healthcare workers will be a main driving force. In the same way that health/medicine is now based on natural sciences, it now has to include computational sciences.  |
| 72. Specifically: Personal skills, People skills, Workplace skills and Applied Knowledge skills  |
| 73. Training for systems in use. Knowledge about work analysis, workflow and information use.  |
| 74. Record-keeping and documentation  |
| 75. Training of generic IT skills for all professionals.  |
| 76. Training of role specific IT skills for different professional groups.  |
| 77. Training of organization-specific system skills and information security practices for different professional groups.  |
| 78. Training of generic principles of good practice and responsibilities of health information processing, including code of ethics and information security as tools and warranties of professionals.  |
| 79. Training on rights of patients / customers in relation to health data and IT.  |
| 80. Training and capability development of key users and managers for the development of processes and activities supported by IT solutions.  |
| 81. Searching for information.  |
| 82. Evaluating the quality of found information  |
| 83. Take courses involving information technology and computer science practice in the field  |
| 84. Integrate health IT in curricula of the existing healthcare field (e.g. medical studies, nursing study)  |
| 85. Offer dedicated courses for health IT workers on health IT  |
| 86. Offer qualification procedures such as "specialist in health informatics" for a medical doctor or nurses, by developing standardized courses and offering certified academic degrees or titles that can be obtained  |
| 87. Develop curricula recommendations for health IT skills for health workers  |
| 88. Raise awareness of the importance of the quality and integrity of data recorded in ICT systems  |
| 89. Education and training on practical topics to promote privacy and data protection friendly practices  |
| 90. Listen to the real needs of the different stakeholders in the healthcare sector to develop useful and friendly systems  |
| 91. Education and training on the responsible use ITC systems to avoid security and privacy breaches  |
| 92. To give incentives for training in important IT skills (e.g. security).  |
| 93. To include in any IT deployment plan measures to train the workforce. |
| 94. To increase research in user acceptance of IT for healthcare workers.  |
| 95. To define minimal usability requirements that any software for healthcare workers has to fulfil (e.g. extensive usability testing with healthcare workers prior deployment).  |
| 96. Usability testing of software for healthcare workers need to be done by regular workers and not geeks  |
| 97. Need to be precise to what information is important for healthcare workers, what is out there? How is it used?  |
| 98. Be consistent over a longer period of time, not too much information each time just enough to keep up interest. Regularity for example once a week/month so healthcare workers can integrate into their schedule time to educate themselves regarding IT. Consistency of information/education is important.  |
| 99. When looking to the future healthcare workers it is crucial to implement IT into the curriculum where healthcare workers are being educated. Connect/integrate it within other courses in the curriculum.  |
| 100. Solidarity principle as not to hunt people once they are trained  |
| 101. Joined Funding for generic training programs  |
| 102. Increase training and expertise at high school and university level  |
| 103. Set up platform to blend theoretical and practical experience  |
| 104. Include acquiring of IT skills in existing healthcare training programs  |
| 105. Develop post-grad IT skills courses  |
| 106. Enable healthcare workers to develop, train and maintain IT skills  |
| 107. The first question to ask which professional group will be addressed and what roles they will fulfill.  |
| 108. The most important issue for healthcare workers is to know how their work will change as a result of HIT and how it will be supported by HIT.  |
| 109. Clinical informatics needs to be included in the professional studies  |
| 110. The Universities should have teaching positions in this area. It should focus on tools for representing and navigating in medical information, IT as tool to enable organizational and professional changes, the impact of technology on clinical practice, decision making etc. |