Evaluating a Multidisciplinary Approach to Teaching Mobile Healthcare

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INTRODUCTION

- Mobile healthcare is improving access and quality of healthcare while reducing costs and increasing the mobility of patients and providers.
- Innovations are created by technical experts without adequate knowledge of the interplay between various mobile health agencies.
- Improvement of communication and collaboration between mobile health leaders necessitates a multidisciplinary approach to education.
- This study evaluates a didactic course dedicated to teaching mobile healthcare and telemedicine to graduate students in a multidisciplinary format.

THE COURSE

- 45 hours of class
- 30 lectures covering major topics in policy, regulation, business, research, funding, application design
- 25 guest speakers from private and federal agencies
  - QualComm, Mhealth Alliance
  - Care Innovations, DataDyne
  - WellDoc Communications, USAID
  - BeClose, NIH
  - Infield Health, US Department of State
  - West Wireless Health Institute, Department of Health and Human Services
  - American Telemedicine Association, DC 311
- 33 graduate students from various disciplines, institutions and occupations
- 6 multidisciplinary groups developing innovative telehealth solutions

THE STUDY

OBJECTIVE

- To measure the impact of the multidisciplinary lectures and multidisciplinary groups on each student’s growth in knowledge and level of communication in other professional areas.

METHODS

- Surveys administered to evaluate the impact of each lecture on students’ growth in knowledge and level of communication
- Self-assessment of based on current field of study or employment
- Evaluation using a 6-point Likert scale, excellent (1) to poor (6)

RESULTS

Student Evaluation of Increased Understanding of Mobile Healthcare

- Students with knowledge of the lecture content gave an excellent rating of 1.61
- Students without knowledge of lecture content gave a very good rating of 2.38

Student Evaluation of Increased Ability to Communicate about Mobile Health

- Students with knowledge of the lecture content gave an excellent rating of 1.72
- Students without knowledge of lecture content gave a very good rating of 2.77

Student Evaluation based on Subject

- Individual subject ratings consistent with each other except for research design
- Research design rated good in both increased understanding and communication by students with background knowledge (2.13, 2.24) and students without (2.96, 3.08)

CONCLUSION

- The multidisciplinary format to teaching mobile healthcare appears to have a positive increase in student understanding and ability to communicate in associated fields.
- The impact of growth in knowledge was apparent for students with and without background knowledge regardless of content area.
- These results support the use of multidisciplinary education in fields such as mobile healthcare that require collaboration from various professions.
- Future studies will consider the long-term benefit and alternative modalities of integrative teaching methods.

Academic Concentration of Graduate Students

- Public Health and Policy: 30%
- Epidemiology and Biostatistics: 17%
- Business Administration: 7%
- Global Health: 7%
- Medicine: 23%
- Health Services Administration: 7%
- Nursing: 7%