

## Supplementary Material

Best practices for health informatician involvement in interprofessional teams were in part drawn from recent experiences with an interprofessional education course at Indiana University Purdue University – Indianapolis (IUPUI). In Spring 2017, the authors participated in the fifth installment of the course, during which three health informatics doctoral students (authors S. B., J.P., and S.H.P.V.) worked in teams with students in nursing, medicine, art and design, and engineering to propose solutions for the opioid crisis. Author R.J.H. coconstructed and coached teams for the course for four semesters. Below, the Spring 2017 course is described.

<b>Course overview</b>	<ul style="list-style-type: none"> <li>• IPE course (1–3 credit h) offered at IUPUI; taught twice per year since 2015</li> <li>• Course led and developed by faculty in the School of Nursing with coinstruction and input from Schools of Art &amp; Design, Engineering &amp; Technology, Informatics and Computing, Liberal Arts, and Medicine</li> <li>• Supported by the Indiana University Center for Interprofessional Health Education and Practice, guest faculty, and community stakeholders</li> </ul>
<b>Course format</b>	<ul style="list-style-type: none"> <li>• Students from multiple graduate/professional degree programs assigned to interprofessional teams propose solutions to a complex health-related problem over an 8-wk period</li> <li>• Each semester a new problem or “Healthcare Revolution Challenge” is presented, e.g., medication self-management, communicating cancer screening, injection safety, and opioid crisis</li> <li>• Challenges are proposed and judged by community sponsors, e.g., Eskenazi Health, Red Cross, Veterans Health Administration, World Health Organization, and local entrepreneurs</li> </ul>
<b>Course learning objectives and activities</b>	<ul style="list-style-type: none"> <li>• Analyze a provided problem or opportunity (Challenge) and propose solutions as an active and contributing member of a self-managed team</li> <li>• Construct a well-supported plan of action demonstrating integration and application of discipline-specific knowledge</li> <li>• Convincingly present and argue the feasibility and applicability of the team’s proposed solution before a panel of judges, including faculty, subject matter experts, and community stakeholders</li> <li>• Create and assemble a series of learning artifacts that reveal the role of collaboration in innovation and solution building, and that illustrate the individual development of collaboration skills</li> <li>• Create and assemble a series of learning artifacts that reveal team-leadership skills in managing team meetings and in facilitating team interactions</li> <li>• Integrate learning from selected topical on-campus learning modules with didactic coursework</li> </ul>
<b>Spring 2017 Health Care Revolution Challenge</b>	<ul style="list-style-type: none"> <li>• Develop solutions to curtail the opioid epidemic affecting Indiana</li> <li>• Sponsors: Eskenazi Health (large safety net health system) and the Indianapolis Patient Safety Coalition</li> <li>• Professions represented on interprofessional teams: <ul style="list-style-type: none"> <li>Health Informatics (0–1 member per team, all doctoral students)</li> <li>Nursing (5 members per team, DNP students)</li> <li>Medicine (0–1 member per team, medical students)</li> <li>Biomedical engineering (0–1 member per team, Master’s students)</li> <li>Art and design (0–1 member per team, Master of Fine Arts students)</li> </ul> </li> </ul>
<b>Spring 2017 HI student involvement and examples of HI competencies used<sup>a</sup></b>	<ul style="list-style-type: none"> <li>• Three HI graduate students distributed among three teams: <ul style="list-style-type: none"> <li>◦ Team A: developed an informatics solution (predictive modeling)</li> <li>◦ Team B: developed a noninformatics solution (comprehensive prenatal education), but discussed a mobile health (mHealth) informatics solution</li> <li>◦ Team C: developed noninformatics solution (motivational interviewing), did not discuss informatics solutions</li> </ul> </li> <li>• Examples of HI competencies used: <ul style="list-style-type: none"> <li>◦ <i>Fundamental Scientific Skills</i>: problem analysis, stakeholder interviews, quantitative data analysis, literature review and analysis, solution development, presentation, and collaborative work</li> <li>◦ <i>Scope and Breadth of Biomedical Informatics</i>: assessed biological and social effects of opioid addiction on specific populations (e.g., pregnant women), identified risk factors for opioid addiction</li> <li>◦ <i>Theory and Methodology</i>: predictive modeling for risk analysis, analysis and redesign of clinical workflow, design principles</li> <li>◦ <i>Technological Approach</i>: decision support for referrals and prescribing, interface design, patient-facing mHealth options</li> <li>◦ <i>Human and Social Context</i>: considerations for technology implementation and use, understanding patient care, analyzing social challenges for addicted population</li> </ul> </li> </ul>

Abbreviations: DNP, doctorate of nursing practice; HI, health informatics; IPE, interprofessional education.

<sup>a</sup>Based on Kulikowski CA, Shortliffe EH, Currie LM, et al. AMIA Board white paper: definition of biomedical informatics and specification of core competencies for graduate education in the discipline. *J Am Med Inform Assoc* 2012;19(6):931–938.