Quantitative and Qualitative Outcomes of the Health Mentors Program

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Second Annual InterProfessional Care for the 21st Century

March 13, 2010
Health Mentors Program

• A required experience for all first year medical, nursing, occupational therapy, pharmacy, physical therapy, and couple and family therapy students

• Longitudinal curriculum of 4 modules completed over 2 years in teams:
  – Comprehensive Life and Health History
  – Preparing an Interprofessional Wellness Plan
  – Patient Safety and Reducing Medical Errors
  – Appropriate Use of Drugs, Herbals, and Vitamins

• Teams that include:
  – 3-5 students from 3-4 professions
  – Health Mentor, an adult volunteer who has one or more chronic conditions or disabilities
Program Goals

• Students will understand and value the roles and contributions of various members of the interprofessional healthcare team.

• Students will understand the perspective of the patient and value patient-centered care.
## Who are Our Students?

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Medicine</th>
<th>Nursing</th>
<th>Physical Therapy</th>
<th>Occupational Therapy</th>
<th>Pharmacy</th>
<th>C &amp; FT</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009 - 11</td>
<td>257</td>
<td>133</td>
<td>47</td>
<td>68</td>
<td>60</td>
<td>12</td>
<td>577</td>
</tr>
<tr>
<td>2008 – 10</td>
<td>261</td>
<td>122</td>
<td>46</td>
<td>65</td>
<td>71</td>
<td>11</td>
<td>576</td>
</tr>
<tr>
<td>2007 – 09</td>
<td>258</td>
<td>106</td>
<td>39</td>
<td>43</td>
<td>-</td>
<td>-</td>
<td>446</td>
</tr>
<tr>
<td>Total</td>
<td>776</td>
<td>361</td>
<td>132</td>
<td>176</td>
<td>131</td>
<td>23</td>
<td>1599</td>
</tr>
</tbody>
</table>
Evaluation - Quantitative

• **Readiness for Interprofessional Learning Scale**  
  (Parsell G and Bligh J)

• **Interdisciplinary Education Perception Scale**  
  (Luecht RM, Madsen MK, Taugher MP, Peterson BJ)

• **Perception of Health Scale**  
  (Diamond et al)

• **Jefferson Attitudes toward Chronic Illness Care survey**  
  (Veloski et al)
Evaluation - Qualitative

• **Focus groups** – (Giordano)

• **Reflection papers** – (Collins et al)

• **Course Evaluations**

• **Interviews with Health Mentors** – (planning phase)
Student Attitudes Toward IPE
IPE Tools to Measure Attitudes

• Readiness for Interprofessional Learning Scale (RIPLS)
  – Three subscales
    • Teamwork and collaboration: willingness to share knowledge
    • Professional identity: importance to establish a professional identity
    • Roles and responsibilities: attitude that some roles should be subservient to others

• Interdisciplinary Education Perception Scale (IEPS)
  – Four subscales
    • Perceived competence and autonomy of those in my profession
    • Perception of need for cooperation with other professions
    • Perception of actual cooperation with other professions
    • Willingness to understand the value of other professions

• Both scales:
  – Demonstrate adequate reliability and validity
  – Are five point scales from strongly disagree(1) to strongly agree(5)
## Comparison of the Professions in IPE Readiness

<table>
<thead>
<tr>
<th>Factor</th>
<th>Medicine</th>
<th>Nursing</th>
<th>Occupational Therapy</th>
<th>Pharmacy</th>
<th>Physical Therapy</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teamwork &amp; collaboration</strong></td>
<td>Pre 4.21</td>
<td>Pre 4.28</td>
<td>Pre 4.47</td>
<td>Pre 4.44</td>
<td>Pre 4.32</td>
<td>Pre 4.29</td>
</tr>
<tr>
<td></td>
<td>Post 3.79*</td>
<td>Post 3.95*</td>
<td>Post 4.14*</td>
<td>Post 4.28</td>
<td>Post 3.89*</td>
<td>Post 3.93*</td>
</tr>
<tr>
<td><strong>Professional identity</strong></td>
<td>Pre 3.88</td>
<td>Pre 4.01</td>
<td>Pre 4.24</td>
<td>Pre 4.21</td>
<td>Pre 4.05</td>
<td>Pre 4.00</td>
</tr>
<tr>
<td></td>
<td>Post 3.42*</td>
<td>Post 3.64*</td>
<td>Post 3.82*</td>
<td>Post 3.99*</td>
<td>Post 3.68*</td>
<td>Post 3.60*</td>
</tr>
<tr>
<td><strong>Roles and responsibilities</strong></td>
<td>Pre 3.19</td>
<td>Pre 3.66</td>
<td>Pre 3.90</td>
<td>Pre 3.52</td>
<td>Pre 3.80</td>
<td>Pre 3.46</td>
</tr>
<tr>
<td></td>
<td>Post 3.20</td>
<td>Post 3.78</td>
<td>Post 3.95</td>
<td>Post 3.43</td>
<td>Post 3.95</td>
<td>Post 3.49</td>
</tr>
</tbody>
</table>

Results reflect high readiness scores, however decreases found for all factors except Roles and Responsibilities. Medical students scored the lowest on all three factors.

* = sig at the .05 level.
Readiness Summary

• All professions rated the need for teamwork & collaboration very highly.
• Professional identity scores fall in the middle suggesting that students are not confident in knowing/understanding their role(s).
• The low scores on the Roles & responsibility factor, suggest a lack of understanding of their own and other roles.
• Total scores results suggest a high level of readiness for IPE.
Comparison of the Professions in Attitudes Towards IPE

<table>
<thead>
<tr>
<th>Factor</th>
<th>Medicine</th>
<th>Nursing</th>
<th>Occupational Therapy</th>
<th>Pharmacy</th>
<th>Physical Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competence and Autonomy</td>
<td>Pre 4.20 Post 4.11*</td>
<td>Pre 3.83 Post 3.75</td>
<td>Pre 4.00 Post 3.87*</td>
<td>Pre 4.11 Post 4.03</td>
<td>Pre 4.11 Post 4.22</td>
</tr>
<tr>
<td>Perceived Need to Cooperate</td>
<td>Pre 4.42 Post 4.31*</td>
<td>Pre 4.28 Post 4.11*</td>
<td>Pre 4.29 Post 4.10*</td>
<td>Pre 4.44 Post 4.11</td>
<td>Pre 4.49 Post 4.31</td>
</tr>
<tr>
<td>Perceived Actual Cooperation</td>
<td>Pre 3.72 Post 3.70</td>
<td>Pre 4.06 Post 4.04</td>
<td>Pre 4.33 Post 4.31</td>
<td>Pre 4.22 Post 4.23</td>
<td>Pre 4.26 Post 4.31</td>
</tr>
</tbody>
</table>

1=strongly disagree 3=neutral 5=strongly agree
* significance at .05 level
Attitude Change Summary

- **Competence and autonomy** total scores significantly decreased from baseline to end of year one
  - Medicine scored the highest and nursing scored the lowest on this factor.
- **Perceived need for cooperation** total scores significantly decreased from baseline to end of year one
- **Perceived actual need for cooperation** total scores did not significantly change over time
- **Understanding others’ value** total scores **significantly increased** from baseline to end of year one
- However, a 4.00 score indicates student attitudes reported fairly positive attitudes at both points (4=agree).
Faculty Attitudes Toward IPE
## Faculty Readiness Data

<table>
<thead>
<tr>
<th></th>
<th>Pharmacy</th>
<th>Nursing</th>
<th>Occupational Therapy</th>
<th>Physical Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teamwork &amp; Collaboration</td>
<td>4.66</td>
<td>4.52</td>
<td>4.60</td>
<td>4.44</td>
</tr>
<tr>
<td>Professional Identity</td>
<td>4.14</td>
<td>4.20</td>
<td>4.50</td>
<td>3.68</td>
</tr>
<tr>
<td>Roles &amp; Responsibilities</td>
<td>3.67</td>
<td>3.30</td>
<td>3.82</td>
<td>3.50</td>
</tr>
<tr>
<td>Total RIPLS</td>
<td>4.50</td>
<td>4.20</td>
<td>4.42</td>
<td>4.20</td>
</tr>
</tbody>
</table>
Readiness Summary

• Faculty readiness data similar to students, although higher in most cases.
• Highest scores in teamwork & collaboration.
• Not surprisingly, professional identity scores significantly higher than students.
• Roles & responsibility scores similar, but overall higher than students.
• Overall high scores suggest a high level of readiness for IPE.
## Overall Scores on IEPS for JCHP and JMC Faculty

<table>
<thead>
<tr>
<th>IEPS Factor</th>
<th>JMC Faculty</th>
<th>JCHP Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Competence and Autonomy</strong></td>
<td>4.00</td>
<td>3.97</td>
</tr>
<tr>
<td><strong>Need to Cooperate</strong></td>
<td>4.42</td>
<td>4.40</td>
</tr>
<tr>
<td><strong>Actual Cooperation</strong></td>
<td>3.90</td>
<td>4.16</td>
</tr>
<tr>
<td><strong>Understanding the Value of Others</strong></td>
<td>3.46</td>
<td>3.29</td>
</tr>
<tr>
<td><strong>Overall Attitude Score</strong></td>
<td>3.93</td>
<td>3.96</td>
</tr>
</tbody>
</table>
Attitude Summary

- Physical therapy faculty scored highest on all factors and on total score.
- There are some differences between student and faculty attitudes. However, all attitudes are positive.
- Physical therapy and nursing faculty show more positive attitudes than their students on most factors.
- All disciplines - faculty and students - scored lowest in understanding the value of others.
Other Student Measures

Perceptions of Health
Jefferson Attitudes toward Chronic Illness Care Survey
Perceptions of Health Overview

- Survey of their health beliefs completed by 314 patients.
- All students completed survey as they thought patients would complete it at beginning and end of Year 1.
- Posttest scores of students in all programs in most cases moved closer to patients’ scores.
Attitudes Towards Chronic Illness Overview

• Survey of medicine and nursing students found relatively negative attitudes toward care of chronic illness at matriculation and at graduation.

• Nursing students tend to have higher attitudes, but no significant difference between professions.

• Pre-posttests of medical students in the Health Mentors Program found significant increase in positive attitudes (40%-60%)

• Pre-posttests of nursing students in the Health Mentors Program found decline in number with positive attitudes (59%-54%)
Qualitative Evaluation
Focus Group: Demographics

Group 1 February 2009 (n=10)
- The mean age was 26
- 7 females and 3 males
- 8 Pharmacy students
- 2 Physical Therapy students

Group 2 March 2009 (n=12)
- The mean age was 24
- 8 females and 4 males
- 7 medicine students
- 2 pharmacy students
- 1 nursing, 1 Occupational therapy, 1 Physical therapy
Conclusions: Attitudes Were Mixed

Highlights:

• Students like the idea of IPE and see that it will help them in the future.
• Students liked meeting their mentor and other students in other disciplines.
• Students enjoyed learning about the roles of others as a result of this program, however they are still unclear of what their own role is.

Challenges:

• Students feel some of the assignments are more like ‘busy work’ and they are unclear of goals and relevance.
• Students find scheduling time to meet and travel a challenge.
Reflection Papers

Prompt 2007-2008:

In the health mentor program, the mentor is the teacher. Please describe the impact your mentor has had on your education as a future health care provider.
Reflection Paper Results

60 papers reviewed and coded using Nvivo® before no new themes emerged.

Seven main themes:
1. Ability to see patient-mentor as person/individual,
2. Increased positive attitudes toward chronic conditions,
3. Increased positive attitudes toward elderly and aging,
4. Broader understanding of the role of the health care provider,
5. Increased understanding of the importance of health care provider-patient communication,
6. Importance of patient-centered care,
7. Deeper understanding of the healthcare system.
Reflection Papers

Prompt 2008-2009:

Please name and describe the two most important attributes of a successful interprofessional healthcare team.
Reflection Paper Results

54 papers coded before saturation was reached.

Five main themes:

1. **Communication** - open, clear expression of thoughts, feelings, ideas, and findings in an effective manner with other team members, the patient, and the patient’s family

2. **Efficiency** - maximizing use of time to ensure productivity and complete tasks as a team

3. **Flexibility** - willingness to compromise and adjust the plan to meet a common goal

4. **Role Differentiation** - recognition that each member brings unique skills, knowledge, and expertise to the group

5. **Teamwork** - team functions as a collaborative unit with all members contributing
Next Steps of Health Mentor Program Evaluation

• Continue assessment of existing curriculum
• Evaluate impact on Health Mentors
  – Interviews, focus groups
• Continue to develop a model to assess patient outcomes related to IPE
• Assess the long term impact on practice outcomes and practice choices by students
Thank you!

Jefferson Center for InterProfessional Education

www.jeffline.jefferson.edu/jcipe