The use of weekly “pulse checks” in a professional development course for quality improvement
Bethany Anne Von Hoff, Kristin K. Janke, Paul L. Ranelli, Julie K. Johnson
University of Minnesota

Background
Becoming a Pharmacist (BAP) is a new three week intensive introductory course for first year students in the Doctor of Pharmacy (PharmD) program at the University of Minnesota. BAP is the first in a sequence of courses designed for student pharmacist professional development. In addition BAP introduces students to the breadth and depth of the curriculum through introductions to Curricular Domains, the building blocks of the curriculum.

Course Goals:
• Prepare students to master the curricular domains in order to be successful in the professional PharmD program
• Establish the foundation upon which a responsible professional engaged in life long learning is developed
• Develop an understanding of the contemporary practice of pharmacy.

This course relies heavily on non-traditional delivery of course material which requires a distinct method for measuring student engagement and learning in the classroom. Faculty worried that engagement could not be sustained over the three week intensive course. Table 1 highlights a few of the unique course activities utilized in BAP.

Table 1 highlights a few of the unique course activities utilized in BAP.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning occurs on a variety of dimensions.</td>
<td>We are interested in the degree to which the X week of Becoming a Pharmacist influenced those learning dimensions for you. During Week X of Becoming a Pharmacist, I...</td>
</tr>
<tr>
<td>• Open ended feedback collected by the prompts</td>
<td>Comments/Suggestions</td>
</tr>
<tr>
<td>• Comments/Suggestions</td>
<td>During Week X of Becoming a Pharmacist, the most important thing I learned was...</td>
</tr>
<tr>
<td>• I am most curious in learning more about...</td>
<td></td>
</tr>
<tr>
<td>• Results analyzed using descriptive statistics and Friedman’s test in SPSS for Macintosh version 23.0.</td>
<td>(International Business Machines Corp., Armonk, NY).</td>
</tr>
</tbody>
</table>

Methods
• Emailed weekly “pulse checks” to students, designed to assess student engagement and self-reported learning;
• 15 item instrument created using Qualtrics web-based survey platform (Qualtrics Labs Inc., Provo, UT)

• student engagement items: attention, contributions and involvement based on previously work from O’Malley, et al.
• 6 student learning items based on six dimensions of Fink’s taxonomy of significant learning
• 1 = strongly agree, 5 or 6 = strongly disagree

• Instrument was sent through university e-mail to all students at the end of each week.
• Sample prompts:
  • Learning occurs on a variety of dimensions. We are interested in the degree to which the X week of Becoming a Pharmacist influenced those learning dimensions for you. During Week X of Becoming a Pharmacist, I...
  • Learned About Myself and Others (Explored the personal and social implications of the subjects studied)
  • Began to Care More or Differently About the Subjects (Developed new feelings, certain interests have emerged and various values have become important)
  • Learned More About How to Learn (Becoming a better student, inquiring about a subject, being a self-directed learner)

• Open ended feedback collected by the prompts

• Comments/Suggestions

• During Week X of Becoming a Pharmacist, the most important thing I learned was...

• I am most curious in learning more about...

• Results analyzed using descriptive statistics and Friedman’s test in SPSS for Macintosh version 23.0. (International Business Machines Corp., Armonk, NY).

Results
• Response rates: 88-94% over the three weeks (N=167)
• No significant differences in “I contributed meaningfully to the course” (80%-week 1, 85%-week 2, and 79%-week 3, p=0.11).
• On average, there was stronger agreement on ratings for Learned More About Myself and Others (mean= 1.68) and Began to Care More or Differently About the Subjects (mean=2.15) than Learned More About How to Learn (mean=2.51).

Discussion
The “pulse checks” identified no change in meaningful contributions across all three weeks of the course, suggesting that engagement through meaningful contribution can be sustained in this intensive course style.

The responses from the “pulse checks” resulted in immediate class changes such as the course website being updated to be more student friendly, and longer term changes such as reorganizing the activities into weekly themes and addressing areas of lower self reported learning, such as learning how to learn.

Implications
Once the instrument is created, it required little time management by faculty or course staff to run and administer. It can be used over multiple years to gauge trends, while still addressing immediate needs of that offering week to week.

Faculty should consider the use of frequent, informal evaluative tools to gauge student engagement and learning outcomes to adjust course material and delivery, especially in new courses or courses with non-traditional structures.

References

The use of weekly “pulse checks” in a professional development course for quality improvement
Bethany Anne Von Hoff, Kristin K. Janke, Paul L. Ranelli, Julie K. Johnson
University of Minnesota

Background
Becoming a Pharmacist (BAP) is a new three week intensive introductory course for first year students in the Doctor of Pharmacy (PharmD) program at the University of Minnesota. BAP is the first in a sequence of courses designed for student pharmacist professional development. In addition BAP introduces students to the breadth and depth of the curriculum through introductions to Curricular Domains, the building blocks of the curriculum.

Course Goals:
• Prepare students to master the curricular domains in order to be successful in the professional PharmD program
• Establish the foundation upon which a responsible professional engaged in life long learning is developed
• Develop an understanding of the contemporary practice of pharmacy.

This course relies heavily on non-traditional delivery of course material which requires a distinct method for measuring student engagement and learning in the classroom. Faculty worried that engagement could not be sustained over the three week intensive course. Table 1 highlights a few of the unique course activities utilized in BAP.

Table 1 highlights a few of the unique course activities utilized in BAP.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Sample</th>
</tr>
</thead>
</table>
| Learning occurs on a variety of dimensions. | We are interested in the degree to which the X week of Becoming a Pharmacist influenced those learning dimensions for you. During Week X of Becoming a Pharmacist, I...
| • Open ended feedback collected by the prompts | Comments/Suggestions |
| • Comments/Suggestions | During Week X of Becoming a Pharmacist, the most important thing I learned was...
| • I am most curious in learning more about... | |
| • Results analyzed using descriptive statistics and Friedman’s test in SPSS for Macintosh version 23.0. | (International Business Machines Corp., Armonk, NY).

Methods
• Emailed weekly “pulse checks” to students, designed to assess student engagement and self-reported learning;
• 15 item instrument created using Qualtrics web-based survey platform (Qualtrics Labs Inc., Provo, UT)

• student engagement items: attention, contributions and involvement based on previously work from O’Malley, et al.
• 6 student learning items based on six dimensions of Fink’s taxonomy of significant learning
• 1 = strongly agree, 5 or 6 = strongly disagree

• Instrument was sent through university e-mail to all students at the end of each week.
• Sample prompts:
  • Learning occurs on a variety of dimensions. We are interested in the degree to which the X week of Becoming a Pharmacist influenced those learning dimensions for you. During Week X of Becoming a Pharmacist, I...
  • Learned About Myself and Others (Explored the personal and social implications of the subjects studied)
  • Began to Care More or Differently About the Subjects (Developed new feelings, certain interests have emerged and various values have become important)
  • Learned More About How to Learn (Becoming a better student, inquiring about a subject, being a self-directed learner)

• Open ended feedback collected by the prompts

• Comments/Suggestions

• During Week X of Becoming a Pharmacist, the most important thing I learned was...

• I am most curious in learning more about...

• Results analyzed using descriptive statistics and Friedman’s test in SPSS for Macintosh version 23.0. (International Business Machines Corp., Armonk, NY).

Results
• Response rates: 88-94% over the three weeks (N=167)
• No significant differences in “I contributed meaningfully to the course” (80%-week 1, 85%-week 2, and 79%-week 3, p=0.11).
• On average, there was stronger agreement on ratings for Learned More About Myself and Others (mean= 1.68) and Began to Care More or Differently About the Subjects (mean=2.15) than Learned More About How to Learn (mean=2.51).

Discussion
The “pulse checks” identified no change in meaningful contributions across all three weeks of the course, suggesting that engagement through meaningful contribution can be sustained in this intensive course style.

The responses from the “pulse checks” resulted in immediate class changes such as the course website being updated to be more student friendly, and longer term changes such as reorganizing the activities into weekly themes and addressing areas of lower self reported learning, such as learning how to learn.

Implications
Once the instrument is created, it required little time management by faculty or course staff to run and administer. It can be used over multiple years to gauge trends, while still addressing immediate needs of that offering week to week.

Faculty should consider the use of frequent, informal evaluative tools to gauge student engagement and learning outcomes to adjust course material and delivery, especially in new courses or courses with non-traditional structures.

References