Application of NABP’s Pharmacy Curriculum Outcomes Assessment (PCOA) Tool in a Global Assessment Process at Creighton University

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Pharmacy Program Assessment Plan

- Curriculum
- Educational Outcomes
- Learning Objectives

Assessment Instruments
- Semester Cycle
  - (A)
  - (B)
  - (C)
  - (D)
  - (E)
  - (F)
  - (G)
- 1-Year Cycle
  - (H)
  - (I)
  - (J)
  - (K)
  - (L)
- 3-5 Year Cycle
  - (M)
  - (N)

Implement Changes & Amendments
- Objectives
- Outcomes
- Curriculum

Analysis & Evaluation
- Objectives Met?
- Outcomes Met?
- Map Outcome
  - With any Deficiency to Course(s) in Curriculum
- Map Objective
  - Deficiency to Outcome

Semester Cycle
- (A) Student Evaluation of Didactic Course
- (B) Student Evaluation of Rotation
- (C) Didactic Course Grades
- (D) Rotation Performance Grades Assessments
- (E) Embedded Course Assessments - Objectives
- (F) Embedded Course Assessments - Ed. Outcomes
- (G) OSCEs

1-Year Cycle
- (H) PreNAPLEX results
- (I) PCOA
- (J) OASA (LASSI, Learning Styles etc.) & Any Annualized Semester Specific Surveys
- (K) Graduate Surveys
- (L) NAPLEX & MPJE results

3-5 Year Cycle
- (M) Alumni Survey
- (N) Preceptor Survey
Status of PCOA in Curriculum Assessment Plan

- 2009 – 2012
  - Individual student’s self assessment
- 2012 – Future
  - Pharmacy Assessment Committee’s Intent
    - Determine Value
    - Best Applications?
      - Curricular performance
      - Verification of pathway parity
      - Prediction of successful program completion
Templates for Analysis

• Individual student performance
  – Comparisons

• Individual student’s progression
  – Predictive value

• Pathway Parity
  – Review of subtopics
## PCOA Content Area vs. NAPLEX Area

<table>
<thead>
<tr>
<th>PCOA</th>
<th>P3 Ind CU</th>
<th>P3 Nation</th>
<th>% Diff</th>
<th>NAPLEX</th>
<th>Individual</th>
<th>National</th>
<th>% Diff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Biomedical</td>
<td>459</td>
<td>337</td>
<td>30.7%</td>
<td>Total</td>
<td>121</td>
<td>103</td>
<td>16.1%</td>
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<tr>
<td>Pharmaceutical</td>
<td>420</td>
<td>339</td>
<td>21%</td>
<td>Area 1</td>
<td>15</td>
<td>12.63</td>
<td>17%</td>
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<tr>
<td>Social/Behavioral Administrative</td>
<td>453</td>
<td>341</td>
<td>28%</td>
<td>Area 2</td>
<td>13</td>
<td>12.51</td>
<td>4%</td>
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<tr>
<td>Clinical</td>
<td>501</td>
<td>356</td>
<td>34%</td>
<td>Area 3</td>
<td>13</td>
<td>12.84</td>
<td>1%</td>
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<tr>
<td>Total Exam</td>
<td>456</td>
<td>344</td>
<td>28%</td>
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</tbody>
</table>

**NAPLEX**

1 - Pharmacotherapy /Tx Outcomes
2 - Preparation/Dispensing Medications
3 - Health Care Information /Public Health
## Performance Comparisons – PCOA (Multiple) vs NAPLEX

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
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<tbody>
<tr>
<td>Student 1</td>
<td>404</td>
<td>370</td>
<td>-34</td>
<td>116</td>
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<tr>
<td>Student 2</td>
<td>455</td>
<td>485</td>
<td>+30</td>
<td>124</td>
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<tr>
<td>Student 3</td>
<td>444</td>
<td>422</td>
<td>-22</td>
<td>120</td>
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<tr>
<td>Student 4</td>
<td>422</td>
<td>419</td>
<td>-3</td>
<td>111</td>
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<tr>
<td>Student 5</td>
<td>382</td>
<td>383</td>
<td>+1</td>
<td>128</td>
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<tr>
<td>Average</td>
<td>421</td>
<td>416</td>
<td>-5</td>
<td>120</td>
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</table>
## Pathway Comparisons
### P3 Campus/Distance 2010

<table>
<thead>
<tr>
<th>Clinical Sciences</th>
<th>Yr 3 (% ile)</th>
<th>19 Campus</th>
<th>52 Distance</th>
<th>Difference</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacy Practice and Pharmacist-Provided Care</td>
<td>79</td>
<td>78</td>
<td>1</td>
<td>70</td>
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<tr>
<td>Medication Dispensing and Distribution Systems</td>
<td>85</td>
<td>86</td>
<td>-1</td>
<td>71</td>
<td></td>
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<tr>
<td>Pharmacotherapy - Practice Guidelines and Clinical Trials</td>
<td>57</td>
<td>67</td>
<td>-10</td>
<td>56</td>
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<tr>
<td>Pharmacotherapy - Health Promotion/Disease Prevention</td>
<td>82</td>
<td>76</td>
<td>6</td>
<td>75</td>
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<tr>
<td>Pharmacotherapy - Pharmaceutical Care</td>
<td>66</td>
<td>66</td>
<td>0</td>
<td>60</td>
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</tr>
<tr>
<td>Pharmacist-provided care for Special Populations</td>
<td>60</td>
<td>62</td>
<td>-2</td>
<td>50</td>
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<tr>
<td>Drug Information</td>
<td>80</td>
<td>78</td>
<td>2</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>Medication Safety</td>
<td>97</td>
<td>97</td>
<td>0</td>
<td>88</td>
<td></td>
</tr>
<tr>
<td>Literature Evaluation and Research Design</td>
<td>67</td>
<td>66</td>
<td>1</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>Patient Assessment Laboratory</td>
<td>95</td>
<td>95</td>
<td>0</td>
<td>83</td>
<td></td>
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</table>
Assessment Committee
PCOA Considerations

• Cost
• Predictive value
• Appropriate and effective timing
  – Multiple years
  – What curricular year?
• Identification of curricular strengths and weaknesses
  – CQI
• Monitor effects of curricular change