Members Present:
Roger Fitzpatrick (UT), chair; Daphne Bernard (DC); Mike Bertagnolli (MT); Jim Bracewell (GA); Becky Deschamps (MT); Randy Forbes (KS); Maria Marzella Mantione (NY); John Marraffa (NY); Brenda McCrady (AR); Rich Palombo (NJ); Suzette Tijerina (TX); Stu Williams (MN).

Others Present:
Caroline Juran, Executive Committee liaison; Carmen Catizone; Maria Incrocci; Eileen Lewalski; Maureen Schanck; William Finnerty; Romy Schafer, NABP staff.

Introduction:
The Task Force met on December 13-14, 2016, at the DoubleTree by Hilton O’Hare Rosemont in Rosemont, IL. This task force was established in response to the results of the 2014 NABP Pharmacy Practice Analysis Survey, which provided strong evidence that pharmacist communication skills are of paramount importance for safe and effective practice, and that entry-level pharmacists deficient in communication skills could place the public health at risk.

Review of the Task Force Charge:
Task force members reviewed their charge and accepted it as follows:

1. Review the present status of pharmacy competency assessment as it relates to pharmacists’ communication skills.
2. Discuss the concept of a pharmacist integrated communication skills examination (PICSE).

Recommendation 1: NABP and the State Boards of Pharmacy Should Collaborate With ACPE, AACP, and Other Stakeholders to Encourage Standardization of Pharmacy School Curriculums.

The task force recommends that NABP and the state boards of pharmacy collaborate with the Accreditation Council for Pharmacy Education (ACPE), American Association of Colleges of Pharmacy (AACP), and other stakeholders to encourage standardization within the pharmacy school curriculum and review how the standards for accreditation concerning communication skills, specifically the ACPE Accreditation Standards and Key Elements for the Professional
Program in Pharmacy Leading to the Doctor of Pharmacy Degree (Standards 2016), are being implemented by the schools and colleges of pharmacy.

**Background:**

The task force members reviewed information collected from the 2014 NABP Pharmacy Practice Analysis Survey (see Appendix). Of particular significance was that pharmacists reported communication skills as being significantly important in pharmacy practice and a skill set that is frequently used. The discussion also included the current gap that exists, based on analysis findings released by the NABP Advisory Committee on Examinations (ACE), with current pharmacist candidates’ competency assessment measures for written and oral communication skills predicated on a multiple-choice examination process.

NABP recognizes that ACPE and AACP are stakeholders in this issue and that both organizations acknowledge the importance of pharmacists’ communication skills for patient-centered care in an evolving pharmacy profession. *Standards 2016* and the AACP Center for the Advancement of Pharmacy Education (CAPE) Educational Outcomes 2013 were both referenced during the task force discussions. ACPE incorporates effective verbal and nonverbal communication when interacting with individuals, groups, and organizations as a key element to “Standard 3: Approach to Practice and Care,” which ACPE deems “essential to the contemporary practice of pharmacy in a healthcare environment that demands interprofessional collaboration and professional accountability for holistic patient well-being.” Furthermore, the CAPE Educational Outcomes initiative, which delineates what AACP expects students should be capable of doing upon graduation from a doctor of pharmacy program, includes effective verbal and nonverbal communication as part of the domain of “Approach to Practice and Care.”

Members pondered why, if communication skills are being taught, patients are not being counseled appropriately to convey key instructions. Pharmacists are also failing to catch dispensing errors that they would likely discover if they took the initiative to counsel. Although the task force members acknowledged that pharmacist work conditions may not always be conducive to patient counseling, they recognized that, as the profession evolves, pharmacists will be responsible for more meaningful communication with patients and members of their health care team. Because patient-centered care is grounded on good communication skills, boards of pharmacy may wish to consider the necessity to assess and validate this skill in the interest of public welfare and protection.

**Recommendation 2: NABP Should Consider the Feasibility of Developing a Pharmacist Integrated Communication Skills Exam and Incorporating It Into Competency Assessment of Pharmacist Candidates.**

The task force recommends that NABP consider the feasibility of developing a PICSE and incorporating it into the competency assessment of pharmacist candidates based on the recognized importance of effective communication skills in pharmacy practice as identified in the 2014 NABP Pharmacy Practice Analysis Survey, the ACE findings of the difficulty in assessing
communication skills using the current examinations, and the CAPE Outcomes and Standards 2016.

Background:
During the robust task force discussions, members discussed how developing good communication skills is part of current pharmacy school education; however, they acknowledged that there is a wide variation in how each school incorporates this into the curriculum and how it is assessed. This variation among the schools and lack of standardization brings about the need for a valid means to assess communication competence. The task force also discussed the difference between communication competence and “soft” skills. The task force recognized that pharmacist competence should be defined and measured and assessed against a passing standard specific to pharmacy practice and patient care. State boards of pharmacy may wish to validate not only knowledge, but also skills, by means of a communication skills exam developed by NABP.

The task force members agreed that waiting to test for competence in communication skills after pharmacy school graduation is too late. Members envisioned NABP working with ACPE and AACP to standardize the education of communication skills development and to create a progression model like in the current United States medical school system, whereby medical students cannot progress to clinical clerkship without passing some standardized assessment of communication skills. In research conducted by Urteaga et al, an objective structured clinical examination (OSCE) was administered to pharmacy students as part of their second-, third-, and fourth-year required pharmacy school education. The researchers concluded that such an exam “provides a strong comparison of the clinical and communication skills of . . . pharmacy students at different stages of the curriculum.” The researchers further concluded that “[t]he results of the OSCE can be used to evaluate curriculum and potentially modify it.” OSCE-type examinations are routinely administered to pharmacy candidates in the Canadian provinces as a measure for licensure qualification. The task force members resolved to have NABP study whether a PICSE would be beneficial for evaluating US pharmacist candidates, as the OSCE is in Canada.

Reference:
Appendix

NAPLEX Pharmacy Practice Survey Outcomes

Summary Report

National Association of Boards of Pharmacy
NAPLEX Pharmacy Practice Survey Outcomes Summary Report

National Association of Boards of Pharmacy
1600 Feehanville Drive
Mount Prospect, IL 60056
USA
847/391-4406
www.nabp.pharmacy

Carmen A. Catizone, MS, RPh, DPh
Executive Director/Secretary

NABP Mission Statement

NABP is the independent, international, and impartial Association that assists its member boards and jurisdictions for the purpose of protecting the public health.

NABP Vision Statement

Innovating and collaborating today for a safer public health tomorrow.

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Introduction

The North American Pharmacy Licensure Examination® (NAPLEX®) is a licensing examination designed to provide regulatory bodies (boards of pharmacy) with information in support of licensing decisions. The role of regulatory bodies is to protect the health and welfare of the public by assessing the competence of candidates to function safely as entry-level pharmacists. To make assumptions about candidate performance on the job in relation to their ability to pass the examination, it is critical that the examination focus on the tasks that are required of entry-level practitioners. The most important knowledge, skills, and tasks required for safe and effective practice must carry the greatest weight in the examination. The Standards for Educational and Psychological Testing (American Educational Research Association, American Psychological Association, and National Council on Measurement in Education, 2014) states:

“Test design generally starts with an adequate definition of the occupation or specialty, so that persons can be clearly identified as engaging in the activity. Then the nature and requirements of the occupation, in its current form, are delineated. To identify the knowledge and skills necessary for competent practice, it is important to complete an analysis of the actual work performed and then document the tasks and responsibilities that are essential to the occupation or profession of interest. A wide variety of empirical approaches may be used, including the critical incident technique, job task analysis, training needs assessments, or practice studies and surveys of practicing professionals” (page 175).

Survey Purpose

The purpose of the study was to assess the relative importance of those aspects of entry-level pharmacy practice that have important consequences for the protection of the health and welfare of the public.

Methodology

Developing Competency Statements

The National Association of Boards of Pharmacy® (NABP®) convened a panel of pharmacist regulators, practitioners, academicians, and representatives from the Accreditation Council for Pharmacy Education (ACPE) and American Association of Colleges of Pharmacy (AACP) to conduct a critical review of the current competency statements. Staff assembled a comprehensive review of the literature addressing pharmacy practice, which included the Center for Advancement of Pharmacy Education Educational Outcomes, ACPE Standards, the Joint Commission of Pharmacy Practitioners (JCPP) report: An Action Plan for the Implementation of the JCPP Future Vision of Pharmacy Practice, the American Pharmacists Association: Principles of Practice for Pharmaceutical Care, and several other manuscripts published in the literature. The panel reviewed the documents and current NAPLEX
competency statements and began an iterative process to evaluate their relevancy and appropriateness to pharmacist practice. The revised competency statements were sent to review by the full NAPLEX Review Committee in January 2014. The committee made additional (minor) changes and submitted the draft statements to the NABP Advisory Committee on Examinations (ACE). After review, ACE made a recommendation to the NABP Executive Committee to use the draft statements to construct a survey that would be used for the 2014 National Survey of Practitioners. See Exhibits 1 and 2 for the revised competency statements and Parts II and III of the survey.

NABP launched the NAPLEX Pharmacy Practice Survey in April 2014. The survey instrument collected measures of importance and frequency reflective of the breadth of knowledge, skills, abilities, and tasks encountered in the practice of pharmacy. The survey outcomes directly influence the NAPLEX competency statements as well as the distribution of content within the examination.

Response data gathered by SurveyMonkey indicate that just over 10,000 surveys were started, with 4,733 completed (48% of the surveys started were completed). The number of completed surveys represents a 60% increase over the previous NAPLEX Pharmacy Practice Survey that was disseminated in 2009.

Demographic Summary (Part I of the Survey Instrument)

Overall, the respondents appear to be a robust sample of practitioners who provided a broad range of perspectives. The following tables represent some of the more relevant and interesting demographics collected.

Table 1: Pharmacy Degree (500 individuals selected both bachelor’s and doctor of pharmacy degrees)

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor’s degree: BS, BPharm, or equivalent</td>
<td>56.9%</td>
<td>2,674</td>
</tr>
<tr>
<td>Doctor of Pharmacy degree: PharmD, DPh, PD, or equivalent</td>
<td>52.6%</td>
<td>2,471</td>
</tr>
<tr>
<td>Master’s degree: MS or equivalent</td>
<td>6.0%</td>
<td>284</td>
</tr>
<tr>
<td>Doctorate degree: PhD</td>
<td>1.9%</td>
<td>87</td>
</tr>
<tr>
<td><strong>answered question</strong></td>
<td><strong>4,702</strong></td>
<td></td>
</tr>
</tbody>
</table>
Table 2: Gender

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>56.7%</td>
<td>2,630</td>
</tr>
<tr>
<td>Male</td>
<td>43.3%</td>
<td>2,012</td>
</tr>
</tbody>
</table>

answered question 4,642

Table 3: Ethnicity

<table>
<thead>
<tr>
<th>Race/Ethnicity (Choose one)</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian or Alaskan native</td>
<td>0.8%</td>
<td>38</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>11.0%</td>
<td>504</td>
</tr>
<tr>
<td>Black</td>
<td>4.4%</td>
<td>203</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2.8%</td>
<td>129</td>
</tr>
<tr>
<td>White</td>
<td>79.0%</td>
<td>3,618</td>
</tr>
<tr>
<td>Other, please specify</td>
<td>1.9%</td>
<td>88</td>
</tr>
</tbody>
</table>

answered question 4,580

Table 4: Area(s) of Practice

<table>
<thead>
<tr>
<th>Employment environment/area of practice? (Check all that apply)</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community</td>
<td>47.6%</td>
<td>2,236</td>
</tr>
<tr>
<td>Health systems (hospital, short/long term care, etc)</td>
<td>50.8%</td>
<td>2,387</td>
</tr>
<tr>
<td>HMO</td>
<td>3.2%</td>
<td>149</td>
</tr>
<tr>
<td>Mail service</td>
<td>2.9%</td>
<td>135</td>
</tr>
<tr>
<td>Academia</td>
<td>8.8%</td>
<td>413</td>
</tr>
<tr>
<td>Home health care</td>
<td>2.9%</td>
<td>135</td>
</tr>
<tr>
<td>Regulatory</td>
<td>2.2%</td>
<td>103</td>
</tr>
<tr>
<td>Professional association/administration</td>
<td>2.6%</td>
<td>122</td>
</tr>
</tbody>
</table>

answered question 4,702
Table 5: Type of Practice

Which of the following best describes your primary practice responsibilities? (Choose one):

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct patient care</td>
<td>65.0%</td>
<td>3,056</td>
</tr>
<tr>
<td>Indirect patient care</td>
<td>21.0%</td>
<td>986</td>
</tr>
<tr>
<td>Pharmacy administration/regulation</td>
<td>14.0%</td>
<td>660</td>
</tr>
</tbody>
</table>

answered question 4,702

Table 6: Geographic Distribution per NABP Districts

<table>
<thead>
<tr>
<th>NABP District</th>
<th>Sample</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>409</td>
<td>5.6%</td>
</tr>
<tr>
<td>2</td>
<td>1,389</td>
<td>18.9%</td>
</tr>
<tr>
<td>3</td>
<td>1,420</td>
<td>19.3%</td>
</tr>
<tr>
<td>4</td>
<td>1,093</td>
<td>14.9%</td>
</tr>
<tr>
<td>5</td>
<td>416</td>
<td>5.7%</td>
</tr>
<tr>
<td>6</td>
<td>929</td>
<td>12.6%</td>
</tr>
<tr>
<td>7</td>
<td>448</td>
<td>6.1%</td>
</tr>
<tr>
<td>8</td>
<td>1,241</td>
<td>16.9%</td>
</tr>
<tr>
<td>Total</td>
<td>7,345</td>
<td>100%</td>
</tr>
</tbody>
</table>

Analysis Summary

NABP conducted a Rasch rating scale analysis to transform the categorical ratings to a linear scale so that the competencies could be evaluated from a hierarchical perspective. Each category (importance and frequency) was analyzed separately to obtain independent measures for each competency statement on the two scales.

The competency and frequency measures were transformed into percentage weights (Wang 2002) to obtain a preliminary view of how the examination content might be distributed using the survey outcomes. Table 7, on the next page, shows possible content allocations from the survey outcomes. There was good alignment among the measures of importance and frequency, indicating a relationship between the importance of tasks that pharmacists perform and how often those tasks are encountered in practice.
Table 7: **Content Allocation**

<table>
<thead>
<tr>
<th>Domain</th>
<th>Importance</th>
<th>Overall Content Distribution Areas 1&amp;2</th>
<th>Frequency</th>
<th>Overall Content Distribution Areas 1&amp;2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.0</td>
<td>19%</td>
<td>17%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2.0</td>
<td>25%</td>
<td>20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3.0</td>
<td>6%</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4.0</td>
<td>3%</td>
<td>3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5.0</td>
<td>14%</td>
<td>67%</td>
<td>15%</td>
<td>60%</td>
</tr>
<tr>
<td>2.1.0</td>
<td>13%</td>
<td></td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>2.2.0</td>
<td>13%</td>
<td></td>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>2.3.0</td>
<td>7%</td>
<td>33%</td>
<td>7%</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 8, on the next page, shows the “top 10” sub-competency areas among the 47 tertiary-level areas surveyed in relation to importance and frequency ratings. Eight of the top 10 areas in each of the rating categories were common to both importance and frequency ratings. The mean rating (importance on a 4-point scale and frequency on a 5-point scale) is also provided.
Table 8: “Top 10” tertiary content areas by ratings on importance and frequency

<table>
<thead>
<tr>
<th>Competency</th>
<th>Area</th>
<th>Importance Mean rating on a 4-point scale</th>
<th>Competency</th>
<th>Area</th>
<th>Frequency Mean rating on a 5-point scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2.7</td>
<td>Drug interactions</td>
<td>3.64</td>
<td>1.2.1</td>
<td>Specific uses and indications for drugs</td>
<td>4.27</td>
</tr>
<tr>
<td>1.2.1</td>
<td>Specific uses and indications for drugs</td>
<td>3.62</td>
<td>1.2.7</td>
<td>Drug interactions</td>
<td>4.18</td>
</tr>
<tr>
<td>1.2.9</td>
<td>Allergies</td>
<td>3.61</td>
<td>1.2.8</td>
<td>Contraindications, warnings, and precautions</td>
<td>4.05</td>
</tr>
<tr>
<td>1.2.8</td>
<td>Contraindications, warnings, and precautions</td>
<td>3.55</td>
<td>1.2.9</td>
<td>Allergies</td>
<td>4.03</td>
</tr>
<tr>
<td>1.3.2</td>
<td>Safety of therapy</td>
<td>3.52</td>
<td>1.2.6</td>
<td>The presence of pharmacotherapeutic duplications and/or omissions</td>
<td>4.00</td>
</tr>
<tr>
<td>1.2.6</td>
<td>The presence of pharmacotherapeutic duplications and/or omissions</td>
<td>3.49</td>
<td>1.2.4</td>
<td>Pharmacologic classes and characteristics of drugs</td>
<td>3.94</td>
</tr>
<tr>
<td>1.4.1</td>
<td>Communication: Patient and/or patient’s agent</td>
<td>3.44</td>
<td>1.3.2</td>
<td>Safety of therapy</td>
<td>3.86</td>
</tr>
<tr>
<td>2.2.1</td>
<td>Techniques, procedures, and equipment for drug preparation, compounding, and administration of sterile products</td>
<td>3.36</td>
<td>2.3.1</td>
<td>Appropriate packaging, labeling, storage, handling, and disposal of medications</td>
<td>3.86</td>
</tr>
<tr>
<td>1.2.10</td>
<td>Adverse effects and drug-induced illness</td>
<td>3.36</td>
<td>1.4.1</td>
<td>Communication: Patient and/or patient’s agent</td>
<td>3.83</td>
</tr>
<tr>
<td>1.4.2</td>
<td>Communication: Interdisciplinary health care providers</td>
<td>3.35</td>
<td>1.4.2</td>
<td>Communication: Interdisciplinary health care providers</td>
<td>3.82</td>
</tr>
</tbody>
</table>
Summary

The boards of pharmacy and schools and colleges of pharmacy were notified of the impending changes to the NAPLEX in November 2014. The new NAPLEX test specifications and passing standard were implemented in November 2015, and the number of questions in the NAPLEX increased from 185 to 250 in November 2016. Further analysis of the practice analysis survey, NAPLEX content and test specifications, test design and assembly, and administrative processes resulted in the recommendation to increase the depth and breadth of the content tested on the NAPLEX, which resulted in the longer examination.
Exhibit 1: Revised Competency Statements

1. **AREA 1  Ensure Safe and Effective Pharmacotherapy and Health Outcomes**

   1.1.0 **Obtain, Interpret, Assess, and/or Evaluate:**

      1.1.1 Information from patient interview
      1.1.2 Patient medical records
      1.1.3 Results from instruments and screening strategies used to assess patients
      1.1.4 Laboratory and diagnostic findings
      1.1.5 Signs and symptoms associated with diseases and medical conditions
      1.1.6 Patients’ need for medical referral
      1.1.7 Risk factors relevant to the prevention of a disease or medical condition and the maintenance of wellness
      1.1.8 Information from interdisciplinary health care providers

   1.2.0 **Develop and Implement Individualized Treatment Plans, Taking into Consideration:**

      1.2.1 Specific uses and indications and dosing for drugs
      1.2.2 Purported uses and indications for dietary supplements and complementary and alternative medicine
      1.2.3 Lifestyle and self-care therapy
      1.2.4 Pharmacologic classes and characteristics of drugs
      1.2.5 Actions and mechanisms of actions of drugs
      1.2.6 The presence of pharmacotherapeutic duplications and/or omissions
      1.2.7 Drug interactions
      1.2.8 Contraindications, warnings, and precautions
      1.2.9 Allergies
      1.2.10 Adverse effects and drug-induced illness
      1.2.11 Pharmacodynamic, pharmacokinetic, and pharmacogenomic principles
      1.2.12 Pharmacokinetic data to determine equivalence among drug products
      1.2.13 Pharmacoeconomic factors
      1.2.14 Routes and methods of administration, dosage forms, and delivery systems

   1.3.0 **Assess and Modify Individualized Treatment Plans Considering:**

      1.3.1 Therapeutic goals and outcomes
      1.3.2 Safety of therapy
      1.3.3 Efficacy of therapy
      1.3.4 Medication non-adherence or misuse
1.4.0 Techniques for Effective Communication/Documentation of the Development, Implementation, and Assessment of Individualized Treatment Plans to:

1.4.1 Patients and/or patients’ agents
1.4.2 Interdisciplinary health care providers

1.5.0 Advocate Individual and Population-Based Health and Safety, Considering:

1.5.1 Best practices, scientific literature evaluation, and health-related resources
1.5.2 Quality improvement strategies in medication-use systems
1.5.3 Processes, evaluation of, and responses regarding medication errors
1.5.4 Role of automated systems and technology in medication distribution processes
1.5.5 Emergency preparedness protocols
2. AREA 2 - Safe and Accurate Preparation, Compounding, Dispensing, and Administration of Medications and Provision of Health Care Products

2.1.0 Employ Various Techniques to Calculate:

2.1.1 Patients’ nutritional needs and the content of nutrient sources
2.1.2 Drug concentrations, ratio strengths, and/or extent of ionization
2.1.3 Quantities of medication to be compounded, dispensed, or administered
2.1.4 Quantities of ingredients needed to compound preparations
2.1.5 Rates of administration

2.2.0 Compound Sterile and Non-sterile Products, Considering:

2.2.1 Techniques, procedures, and equipment for drug preparation, compounding, and administration of sterile products
2.2.2 Techniques, procedures, and equipment for drug preparation, compounding, and administration of non-sterile products
2.2.3 Physicochemical properties of active and inactive ingredients
2.2.4 Identifying the presence of, and the cause of product incompatibilities or degradation and methods for achieving stability
2.2.5 Physicochemical properties of drugs that affect solubility and stability

2.3.0 Review, Dispense, and Administer Drugs and Drug Products Considering:

2.3.1 Packaging, labeling, storage, handling, and disposal of medications
2.3.2 Commercial availability, identification, and ingredients of prescription and non-prescription drugs
2.3.3 Physical attributes of drug products
2.3.4 Specific instructions and techniques for administration
Exhibit 2: Survey Statements

PART II

Read the following descriptions of job-related skills and tasks associated with the practice of pharmacy. Please provide two sets of ratings: the level of IMPORTANCE for pharmacist proficiency when engaging in the task, AND the FREQUENCY that you encounter or use the knowledge and skills when performing the task. When considering IMPORTANCE, think about how serious the consequences would be if a pharmacist was not proficient or skilled in the area. Please notice the difference in the scales below:

IMPORTANCE for SAFE and EFFECTIVE PRACTICE

1 MINIMALLY important in practice (e.g. would not affect public safety)
2 MODERATELY important in practice (e.g. likely to hinder therapeutic progress or may compromise public safety)
3 HIGHLY important in practice (e.g. likely to worsen therapeutic progress or compromise public safety)
4 CRITICALLY important in practice (e.g. life threatening or will endanger public safety)

FREQUENCY of TASK or USE of KNOWLEDGE and SKILLS

0 NEVER – not encountered or no experience in this area
1 RARELY – weekly or less
2 OCCASIONALLY – daily or a few times per week
3 OFTEN – hourly
4 VERY OFTEN – several times per hour

1. Consider a Pharmacist engaged in an EVALUATION process prior to the development of an individualized treatment plan when rating the following:

___Information from patient interviews
___Information from medical records
___The instruments and screening strategies used to assess patients
___Laboratory and diagnostic findings
___Knowledge of the signs, symptoms, and causes associated with diseases and medical conditions
___The need for medical referral
___Risk factors relevant to the prevention of disease or medical conditions and the maintenance of wellness
___Information from interdisciplinary healthcare providers
2. Consider a Pharmacist engaged in the DEVELOPMENT of an individualized treatment plan when rating the following:

___Specific uses and indications for drugs
___Purposed uses and indications for dietary supplements and complementary and alternative medicine
___Opportunities for lifestyle and self-care therapy
___Pharmacologic classes and characteristics of drugs
___Actions and mechanisms of actions of drugs
___The presence of pharmacotherapeutic duplications and/or omissions
___Drug interactions
___Contraindications, warnings, and precautions
___Allergies
___Adverse effects and drug-induced illness
___Pharmacodynamic, pharmacokinetic, and pharmacogenomic principles to develop appropriate drug dosing regimens
___Pharmacokinetic data to determine equivalence among drug products
___Pharmacoeconomic factors
___Appropriate routes of administration, dosage forms, and delivery systems

3. Consider the Pharmacist engaged in ASSESSMENT when rating the following:

___Therapeutic goals and outcomes
___Safety of therapy
___Efficacy of therapy
___Medication non-adherence or misuse

4. Consider the Pharmacist’s ability to COMMUNICATE when rating the following:

___Patient and/or patient’s agent
___Interdisciplinary healthcare providers

5. Consider the Pharmacist’s role in the ADVOCACY of individual- and population-based health and safety when rating the following:

___Best practices, scientific literature, and health-related resources
___Quality-improvement strategies in medication-use systems
___Process, evaluation, and response regarding medication errors
___Role of automated systems and technology in medication-distribution processes
___Emergency preparedness protocol
6. Consider accuracy and precision when a pharmacist is engaged in performing CALCULATIONS when rating the following:

___ Nutritional needs and the caloric content of nutrient sources  
___ Drug concentrations, ratio strengths, and/or extent of ionization  
___ Quantity of medication to be compounded, dispensed, or administered  
___ Quantity of ingredients needed to compound the proper amount of the preparation  
___ Rates of administration

7. Consider the knowledge and skills a pharmacist is engaged in during COMPOUNDING when rating the following:

___ Techniques, procedures, and equipment for drug preparation, compounding, and administration of sterile products  
___ Techniques, procedures, and equipment for drug preparation, compounding, and administration of non-sterile products  
___ Physicochemical properties of a preparation’s active and inactive ingredients  
___ Presence and the cause of product incompatibility or degradation and methods for achieving stability  
___ Physiochemical properties of drugs that affect solubility and stability

8. Consider the Pharmacist’s REVIEW, DISPENSING, and ADMINISTRATION of drugs when rating the following:

___ Appropriate packaging, labeling, storage, handling, and disposal of medications  
___ Commercial availability, identification, and ingredients of prescription and non-prescription drugs  
___ Characteristic physical attributes of drug products
PART III

1. Please provide any knowledge and/or skills utilized in the practice of pharmacy that were not represented in this survey.
2. What areas do you believe are emerging or becoming more relevant to practice?
3. Please provide any additional comments regarding the content of this survey.
Glossary of Terms

Advisory Committee on Examinations (ACE)

An appointed National Association of Boards of Pharmacy® (NABP®) committee charged with regular review and policies of all NABP examination programs. The committee of board of pharmacy affiliates, pharmacy program academicians, and representatives of exam review committees report and make recommendations regarding the examination programs to the NABP Executive Committee.

Competency statements

Statements of skills and abilities required of entry-level pharmacists as measured on the North American Pharmacist Licensure Examination® (NAPLEX®)

Curricular survey

The curricular survey is administered at least every five years to inform NABP on current topics necessary for the entry-level pharmacist.

Domain survey analysis

The analysis of the curricular survey performed to provide NABP with the necessary statistical data to provide information to the governing bodies to establish a test blueprint for the NAPLEX.

Executive Committee

The governing body of NABP

North American Pharmacist Licensure Examination (NAPLEX)

The NAPLEX, or North American Pharmacist Licensure Examination, measures a candidate’s knowledge of the practice of pharmacy. It is just one component of the licensure process and is used by the boards of pharmacy as part of their assessment of a candidate’s competence to practice as a pharmacist.

NAPLEX Review Committee

The NAPLEX Review Committee is an appointed NABP committee overseeing the NAPLEX program. NAPLEX Review Committee members are subject matter experts in the overarching content domain expected of an entry-level pharmacist. Committee members provide input and insight to the program along with facilitating at item writing workshops and reviewing items to be included in the exams as well as the approval of all examination forms.