

UW-Madison School of Pharmacy 2007-2008 Assessment Report

I. Overview of Assessment in the School of Pharmacy

Assessment is a School-wide responsibility in the School of Pharmacy, with administration, faculty and students throughout the School engaged in the gathering, dissemination, and use of assessment information. We identify three different levels on which assessment activity:

1. Student-level assessment focuses on student learning outcomes in the context of specific courses or learning experiences.
2. Academic program assessment addresses performance of courses and of the overall curriculum.
3. Programmatic assessment addresses effectiveness of the School as a whole and/or of units within the School in fulfilling their stated missions.

Each level of assessment involves multiple persons and groups within the School. These groups and the roles played by each are presented in Table 1. During 2007-08, significant efforts were made to strengthen and expand the School's assessment activities. There are two important changes from previous years.

First, a free-standing Assessment Committee was created. Previously, the School's Educational Policy and Planning (EPP) Committee held responsibility for both curriculum and assessment activities. In Fall 2007, these responsibilities were formally divided into two separate committees (Curriculum and Assessment) to facilitate expanded activity and provide clearer roles for each. The Assessment Committee was designed to provide linkage to all major School constituencies. Committee members (and assessment-related responsibilities they represent) include: the Academic Planning Council (general oversight), Curriculum Committee (student learning outcome assessment), Experiential Education Program (clinical performance assessment), Dean's Advisory Council (programmatic assessment), Office of Instructional & Information Technology (data gathering and processing), and Student & Academic Affairs Office (data gathering, analysis and reporting). Each of the School's academic divisions is represented on the Committee; this is to facilitate information-sharing and encourage their roles in assessment and improvement efforts. Three students serve on the Committee to provide user perspectives. Finally, a School alumnus who is a clinical instructor and recently served on our Admissions Committee provides an external perspective.

Second, a Director of Assessment has been hired. Successful implementation of the School's assessment plans requires converting large amounts of data gathered through ongoing assessment activities into information that is usable – and used – by faculty, staff and administration throughout the School. To provide increased emphasis and continuity in our assessment efforts, we have hired a Director of Assessment to join the Student and Academic Affairs Office. Assessment Committee members played active roles in identifying the need for and in recruiting this new staff member.

II. Student-level and Curricular Assessment Activities

Tables 2 and 3 provide overviews of assessment-related activities in the School of Pharmacy. Table 2 uses the standard reporting grid to identify Academic Program and Student Outcomes assessment for each academic program within the School. Table 3 provides more detailed information regarding Doctor of Pharmacy (PharmD) program assessment. Comparable documents will be developed for other academic programs within the School.

Information is presented on a program-by-program basis. Several additional details provide context for this report. 1) Many assessment activities were related to formal reviews of academic programs in the School. 2) Only major assessment activities are described. Smaller-scale (e.g., course-specific) efforts are not included. 3) Some activities relate to more than one program. This is indicated, as appropriate.

A. Doctor of Pharmacy (PharmD) Program

As Tables 2 and 3 indicate, the Doctor of Pharmacy Program is the focus of numerous assessment activities. Highlights of these activities in 2007-08 are as follows.

1. Program Accreditation

In June 2006, the School of Pharmacy's Doctor of Pharmacy (PharmD) program was granted continued accreditation by the Accreditation Council for Pharmacy Education (ACPE). Accreditation was granted for a full six-year accreditation cycle, until June 30, 2012. As a follow up to this review, in November 2007, the School submitted an Interim Report that addressed recommendations made by ACPE. Among these recommendations is "continued development and implementation of the School's assessment plans, including advancing the model of assessment to incorporate course level assessments."

2. National Licensing Examination Pass Rates

Graduates of the School of Pharmacy professional (PharmD) program seeking professional licensure in Wisconsin must complete national pharmacy board examinations and state licensure testing. Graduates' performance on these exams is a key direct measure of program outcomes that we continue to monitor. The North American Pharmacists Licensure Examination (NAPLEX) is used for licensure in all states in the U.S. The Multistate Pharmacy Jurisprudence Exam (MPJE) is a state-specific exam that combines elements of federal and Wisconsin pharmacy law.

Table 4 provides comparison of UW-Madison School of Pharmacy graduates pass rates for each of these exams with national passing rates. Historically, University of Wisconsin-Madison School of Pharmacy graduates have been very successful on these examinations. This trend continues with UW graduates generally having passing rates above national rates and peer institutions. Aggregating results for the years 2002-2006, UW-Madison graduates' pass rates have ranked #5 on NAPLEX and #6 on MPJE out of the 89 schools and colleges of pharmacy in the U.S.

3. Surveys of and Exit Interviews with Graduating PharmD Students

In Spring 2008, an online exit survey was conducted with all members of the PharmD Class of 2008. As part of our ongoing assessment program, this is our eighth year of such data gathering. Respondents provided self-assessments regarding a series of core pharmacy practice competencies that are goals the PharmD program. Other items addressed satisfaction with the curriculum; evaluation of student services and School climate; encouragement of professional and civic engagement; and post-graduation employment plans. New accreditation standards for the PharmD program establish a uniform set of surveys that all schools and colleges of pharmacy are required to administer to their PharmD graduates. We are using a controlled transition process for these surveys so that we do not interrupt gathering of trend data assessing effects of curricular revisions that have been implemented over the past several years.

As in previous years, a random sample of the graduating class was selected to participate in exit

interviews. This process provides a flexible mechanism for gathering more in-depth, qualitative information about areas where students and faculty share concerns. Following the process was put into place several years ago to decide on focal areas for these interviews, the Educational Policy and Planning Committee reviewed and discussed results of Spring 2007 assessment surveys. Areas that received low or inconsistent assessments were identified and prioritized. Focal topics in 2008 addressed: 1) Introductory and Advanced Pharmacy Practice Experiences (IPPEs and APPEs), 2) feedback students have received regarding their performance, and 3) working with diverse patient populations. Exit interviews questions then were written to address these topics. Of the 25 graduates invited to participate, 19 actually completed interviews.

4. Collaboration with Big-10 Schools/Colleges of Pharmacy

With support from our respective Deans, the associate/assistant deans who oversee assessment activities in the seven school/colleges of pharmacy in the Big-10 have begun to meet twice each year and have monthly conference calls to discuss assessment goals and activities. Because our schools/colleges form a natural peer group, we are beginning to explore the possibility of benchmarking across our institutions.

B. B.S. Pharmacology and Toxicology Program

The School offers one undergraduate degree, the B.S. Pharmacology and Toxicology (Pharm-Tox). Taught chiefly by faculty of the School's Pharmaceutical Sciences division, this degree provides academic background for careers in the pharmaceutical industry, in government agencies, or as preparation for graduate or professional study. Admission to the program is competitive and requires two years of preparatory coursework. Following admission, students enroll in a 4-semester sequence of core courses (e.g., pharmacology, toxicology, drug delivery, laboratory techniques) and electives.

In Spring 2008, the Pharm-Tox curriculum was revised to address several areas where student learning was found to need improvement. Changes included several course substitutions and reordering of courses. These changes are in effect for students entering the program in Fall 2008.

Since the program's inception, each Pharm-Tox student is required to complete a laboratory-based Independent Study research project with a member of the program faculty. This requirement continues. The research project is presented during the senior seminar required in the final semester of the program and provides direct assessment of student learning outcomes.

Student outcomes were indirectly assessed in Spring 2008 via an online survey of enrolled students. This is the fourth consecutive year for this survey to be completed. Results from these surveys will be used in the 10-year review of the Pharm-Tox program.

C. Graduate Programs

The School of Pharmacy offers graduate programs in three different areas. Professor Chuck Lauhon, Assistant Dean for Graduate Studies, had responsibility for general oversight of all graduate programs. Program faculty members provide oversight of enrolled students and of operations in the respective program.

1. M.S./Ph.D. Programs in Pharmaceutical Sciences and in Social and Administrative Sciences

The Pharmaceutical Sciences division offers the M.S. and Ph.D. degrees and uses the general processes in drug development – drug discovery, drug action, and drug delivery – as a unifying

rubric. The Social and Administrative Sciences (SAS) division also offers the M.S. and Ph.D. degrees. Most students' programs draw on traditional social science disciplines (e.g., economics, sociology, psychology); concentrations in continuing education in pharmacy and in history of pharmacy also are possible.

Assessment activities in the Pharmaceutical Sciences and the Social and Administrative Sciences graduate programs parallel one another. Three types of direct assessment are conducted: 1) completion and defense of an M.S. thesis or a Ph.D. dissertation, 2) written and oral preliminary examinations for all Ph.D. students, and 3) annual review of each student's progress by program faculty. Planned indirect assessments will include student and alumni surveys that are being developed as part of the 10-year reviews for these programs that began in 2006-07 and will be completed in 2007-08.

2. M.S. Pharmacy Program

The Master of Science in Pharmacy is a terminal Master's degree that emphasizes hospital pharmacy management. The program is offered in coordination with the UW Hospital and Clinics as a two-year combined residency and academic degree program (i.e., Pharmacy Practice Management/M.S.).

The M.S. Pharmacy program is accredited by the American Society of Health-system Pharmacists (ASHP) as a Specialized Residency, with the most recent review occurring in 2004. Extensive assessment activity is required as part of the residency accreditation process. Beginning prior to entering the program and repeated at 2-month intervals, student learning and competencies are monitored throughout a student's enrollment in the program. Each student is required to complete a Pharmacy Practice project, providing a capstone assessment.

D. Assessment of Teaching

Assessment of teaching complements assessment of learning. Peer evaluation of teaching provides direct assessment of instructor and course performance. The School's online Instructional Evaluation System, developed with funding provided by the University Assessment Council, provides each course coordinator with the ability to tailor course, instructor and teaching assistant evaluations for his/her course to address questions of specific interest. Course coordinators and instructors are able to access evaluation results via a web interface that facilitates tracking of performance and progress. Feedback about this system continues to guide revision of instructional evaluation construction, administration and processing.

III. Programmatic Assessment

On July 1, 2007, *Standards 2007*, the new accreditation standards for all schools and colleges of pharmacy in the U.S., went into effect. These standards amplify the already strong emphasis on assessment of student learning outcomes found in previous standards. New requirements regarding School-level assessment and evaluation have been established in Standard No. 3: Evaluation of Achievement of Mission and Goals. This standard requires the school to have "an evaluation plan, based on assessment measures, that allows for a determination of the degree to which the mission and goals have been achieved." This substantially expands assessment activities beyond student outcomes, to include research, service and professional practice activities that collectively form the mission of the School of Pharmacy.

In 2007-08, discussion was initiated with the associate and assistant deans in the School to identify mission-focused outcomes that they see as significant indicators of performance within specific areas of the School's mission. Efforts to convert this into a process that is meaningful and manageable will continue in 2008-09.

IV. Activities for 2008-09

- A. Doctor of Pharmacy Curriculum Revision.** In 2006-07, we initiated review of the PharmD curriculum. Work on this continued during 2007-08. We are addressing 1) areas we identified in our most recent self-study as needing improvement, 2) feedback provided by our accrediting agency, ACPE, as part of the program accreditation process, and 3) new accreditation standards (*Standards 2007*). Work on the curriculum revision is expected to be completed during 2008-09. As that approached closure, revision of the assessment plan for the PharmD program will be developed to link to the revised curriculum.
- B. Collaboration with Big-10 Schools/Colleges of Pharmacy.** Responding to new accreditation standards in the area of experiential education, deans of the Big-10 schools/colleges of pharmacy have given a specific charge to those directing assessment and experiential education activities in their respective schools/colleges. The charge is to identify student learning outcomes for newly-expanded Introductory Pharmacy Practice Experiences (IPPEs) and to define levels of achievement expected for students in the first, second and third years of the professional curriculum, with the goal of establishing benchmarks for program performance. This work will be ongoing in 2008-09.
- C. Assessment Plans.** Charges to the Assessment Committee for 2008-09 include drafting/revising various assessment plans. In conjunction with members of the Dean's Advisory Council, the Committee will develop a plan to evaluate the School's mission effectiveness (programmatic assessment). The existing plan for assessing student learning outcomes for the PharmD program will be revised to incorporate requirements established in *Standards 2007*. Similar assessment plans for the BS in Pharmacology and Toxicology Program and for the graduate programs will be developed as part of the program reviews that will be completed in 2008-09.
- D. Monitoring the Instructional Evaluation System.** With successful implementation of our online course and instructor evaluation system, the Assessment Committee will continue to monitor the system's use, solicit feedback regarding implementation, facilitate instructor use of this system, and promote curricular improvements based on evaluation results.
- E. Completion of Program Reviews.** During 2007-08, progress was made on 10-year reviews of the School's three graduate programs as well as the B.S. Pharmacology and Toxicology program. The written report for the PhD program in Pharmaceutical Sciences has been completed and others are in process. The review process is expected to conclude with a site visit by a committee composed of external members (selected by the SOP) and internal members (appointed by the Graduate School); this is anticipated during 2008-09.

Submitted by:

Jeanine Mount, PhD, RPh

Associate Dean for Academic Affairs

Table 1: Overview of Assessment Roles¹ in the School of Pharmacy

	Oversee	Plan/Coordinate	Implement	Review/Follow-up
Student-level Assessment	Assessment Cmte In collaboration with the Experiential Learning Program (ELP) Cmte and Quality Review Council	Course Faculty Student & Academic Affairs (SAA) Staff (co-curricular) Assisted by the Assessment Cmte	Course Faculty (curricular) Student & Academic Affairs (SAA) Staff (co-curricular) Assisted by the Director of Assessment	Individual Faculty Division Chairs Faculty Mentoring Cmtes Faculty Activities Review Cmte
Curricular Assessment	Assessment Cmte Academic Planning Council In collaboration with the Experiential Learning Program (ELP) Cmte and Quality Review Council	Assessment Cmte In collaboration with the Curriculum Cmte and the Experiential Learning Program Cmte Assisted by the Director of Assessment and SAA Assessment Team	Director of Assessment SAA Assessment Team Experiential Learning Program Cmte	Assessment Cmte Curriculum Cmte Academic Planning Council Division Chairs Graduate Studies Cmte Experiential Learning Program Cmte
Programmatic Assessment	Dean, Associate Deans, Assistant Deans, Division Chairs	Assessment Cmte Assisted by the Associate Deans, Assistant Deans and Division Chairs	Director of Assessment SAA Assessment Team Associate Deans, Assistant Deans, Division Chairs	Dean, Associate Deans, Assistant Deans, Division Chairs Assessment Cmte

¹Group(s) with primary responsibility appear in **bold**.

Table 2: Academic Program and Student Outcomes Assessment Activity, 2007-08

Major/Academic Program		Level	Has Assessment Plan	Direct Indicators/Measures								Indirect Indicators/Measures					
				National Exams	Local Exams	Capstone Course(s)	Embedded Testing	Student Portfolios	Thesis or Dissertation	Pre-Test/Post-Test	Other Milestone Evaluation	Student Surveys	Exit Surveys	Alumni Surveys	Employer Surveys	External Surveys	Other Indirect Measures
756	Pharmacy (Pharm D)	Professional	Yes	1,2 (A)	3 (A)	4 (A)	—	5 (*)	—	—	6 (A)	7,8 (3),(A)	9 (A)	10 (3)	11 (A)	—	12,13 (6),(A)
750	Pharmacology and Toxicology	Bachelors	No	—	—	14 (A)	—	—	—	—	—	15 (3)	16 (A)	17 (*)	—	—	—
744	Pharmaceutical Sciences	Graduate	No	—	—	—	—	—	18	—	19,20 (A),(A)	21 (*)	—	22 (*)	—	—	—
912	Social and Administrative Sciences in Pharmacy	Graduate	No	—	—	—	—	—	18	—	19,20 (A),(A)	21 (*)	—	22 (*)	—	—	—
G756	Masters in Pharmacy	Graduate	Yes	—	—	—	—	—	23	—	19 (2 mo)	—	24 (A)	25 (5)	—	—	12 (6)

Key:

- 1 Multistate Pharmacy Jurisprudence Examination (MPJE)
- 2 North American Pharmacist Licensure Examination (NAPLEX)
- 3 Patient Consultation Examination
- 4 Advanced Pharmacy Practice Experiences (APPEs)
- 5 Electronic Portfolios
- 6 Objective Standardized Clinical Examination (OSCEs)
- 7 Current PharmD Students Survey
- 8 Clerkship Evaluations
- 9 New PharmD Graduates Survey and Exit Interviews
- 10 Recent PharmD Alumni Survey
- 11 Clinical Instructors/Employers Survey
- 12 Accreditation Review
- 13 Clerkship Forums

- 14 Independent Study/Senior Seminar
- 15 Current Pharmacology -Toxicology Students Surveys
- 16 Pharmacology-Toxicology Student Exit Interviews
- 17 Pharmacology-Toxicology Alumni Survey
- 18 Thesis/Dissertation
- 19 Progress Reviews
- 20 Preliminary Examinations
- 21 Current Graduate Students Survey
- 22 Graduate Alumni Survey
- 23 Pharmacy Practice Project
- 24 MS Pharmacy Exit Survey
- 25 MS Pharmacy Alumni Survey

Schedule notes: **Bold** = completed in 2007-08 (2 mo) = every 2 months (A) = annual (3) = every 3 years (5) = every 5 years (6) = every 6 years (*) = planning in process

Table 3: Core Assessment Activities for the Doctor of Pharmacy (PharmD) Program

ACTIVITY	WHAT ASSESSED	WHO/ ASSESSED	WHEN
Capstone Evaluation			
• Objective Structured Clinical Exams (OSCEs)	Students' clinical skills and professionalism	2 nd , 3 rd , and 4 th year PharmD students (all)	1 or 2 times annually
• Communication practical exam	Students' patient consultation skills	3 rd year PharmD students (all)	Annually
• Advanced practice clerkships	Students' clinical skills and professionalism	4 th year PharmD students (all)	Each 7 or 8 week rotation
National Testing & Standards			
• North American Pharmacist Licensure Examination (NAPLEX)	Graduates' knowledge, judgment, and skills required as an entry-level pharmacist	Graduates seeking licensure	Following graduation
• Multistate Pharmacy Jurisprudence Exam (MPJE)	Graduates' knowledge of federal- and state-specific laws	Graduates seeking licensure	Following graduation
• Wisconsin patient consultation exam	Graduates' patient consultation skills	Graduates seeking licensure	Following graduation
• Program self-study and re-accreditation review	Curriculum, students, faculty, facilities, etc.	Students, faculty/staff and School	Regular 6-year cycle
Other Measures			
• Student/graduate surveys: 3 versions	<u>Core content:</u> Self-assessment of 11 competency areas; satisfaction (overall and specific program areas); School climate; pre-pharmacy curriculum.		
– New Graduate Survey	– Core + career employment plans	4 th year PharmD students (all)	Annually in April/May
– Current Student Survey	– Core	1 st , 2 nd and 3 rd year PharmD students (all)	Every 3 years
– Alumni Survey:	– Core + career/employment information	Alumni from past 6 years (sample)	Every 3 years
• Instructional evaluations		Enrolled students (all)	Each semester
• Academic Progress case analysis	Students' curricular progression and professionalism and factors affecting each	PharmD students (all)	Annually
• Graduation and attrition rates	Students' program completion	PharmD students (all)	Annually
• Grade point averages and trends	Students' course performance	PharmD students (all)	Annually
• Advanced Practice Clerkship Site Evaluation	Clerkship sites and preceptors	4 th year PharmD students (all)	Each 7 or 8 week rotation
• New Graduate Exit Interviews	Special topics (varying over time)	4 th year PharmD students (sample)	Annually
• Clinical Instructor Survey	Students' clinical skills; Clerkship program	Advanced practice clerkship instructors	Annually
• Clinical Instructor Forums	Special topics (varying over time)	Advanced practice clerkship instructors	Annually

Table 4: Pharmacist Licensing Examination Pass Rates, 2002-2008

Year	North American Pharmacist Licensure Examination (NAPLEX)			Multistate Pharmacy Jurisprudence Examination (MPJE)		
	UW-Madison SOP Graduates	Peer Group ¹ (n=11)	All ACPE-accredited Schools/Colleges of Pharmacy (n=90)	UW-Madison SOP Graduates	Peer Group ² (n=10)	All ACPE-accredited Schools/Colleges of Pharmacy ³ (n=74)
2002	100.0%	97.8%	95.5%	95.6%	92.4%	88.2%
2003	100.0%	98.0%	95.1%	98.9%	89.3%	85.1%
2004	99.3%	98.8%	96.6%	94.2%	91.8%	87.1%
2005 ⁴	98.2%	96.4%	91.3%	96.2%	93.2%	88.6%
2006	98.3%	96.4%	94.2%	96.3%	92.1%	88.8%
2007 ⁵	99.3%	98.0%	95.6%	98.3%	96.9%	95.3%
2008	100.0%	98.2%	97.0%	96.0%	96.8%	94.6%
7-year average	99.3%	97.7%	95.0%	96.5%	93.2%	89.7%

¹ Peer group members: Illinois at Chicago, Iowa, Michigan, Minnesota, Purdue, Ohio State, California-San Francisco, North Carolina at Chapel Hill, Texas at Austin, and Washington.

² Peer group members: Illinois at Chicago, Iowa, Michigan, Minnesota, Purdue, Ohio State, North Carolina at Chapel Hill, Texas at Austin, and Washington.

³ Includes all schools/colleges of pharmacy in states where the MPJE is administered.

⁴ For 2005, NAPLEX results include both old and new NAPLEX blueprint and passing standards; new blueprint and standards used in 2006 and following years.

⁵ For 2007 and after, MPJE results include only first-time examination results.