



STATE OF ILLINOIS

OFFICE OF THE AUDITOR GENERAL

PROGRAM AUDIT

APPROPRIATIONS FROM THE
GENERAL PROFESSIONS DEDICATED FUND
FOR PHARMACY PROGRAMS
AT STATE UNIVERSITIES

DECEMBER 2015

WILLIAM G. HOLLAND

AUDITOR GENERAL

SPRINGFIELD OFFICE:
ILES PARK PLAZA
740 EAST ASH • 62703-3154
PHONE: 217/782-6046
FAX: 217/785-8222 • TTY: 888/261-2887
FRAUD HOTLINE: 1-855-217-1895



CHICAGO OFFICE:
MICHAEL A. BILANDIC BLDG. • SUITE S-900
160 NORTH LASALLE • 60601-3103
PHONE: 312/814-4000
FAX: 312/814-4006
FRAUD HOTLINE: 1-855-217-1895

OFFICE OF THE AUDITOR GENERAL
WILLIAM G. HOLLAND

*To the Legislative Audit Commission, the Speaker
and Minority Leader of the House of
Representatives, the President and Minority Leader
of the Senate, the members of the General
Assembly, and the Governor:*

This is our report of the Appropriations from the General Professions Dedicated Fund for Pharmacy Programs at State Universities. The audit was conducted pursuant to House Resolution Number 204, which was adopted on April 29, 2015.

The audit was conducted in accordance with generally accepted government auditing standards and the audit standards promulgated by the Office of the Auditor General at 74 Ill. Adm. Code 420.310.

The report for this audit is transmitted in conformance with Section 3-14 of the Illinois State Auditing Act.

A handwritten signature in blue ink, appearing to read "William G. Holland", with a long, sweeping flourish extending upwards and to the right.

WILLIAM G. HOLLAND
Auditor General

Springfield, Illinois
December 2015



STATE OF ILLINOIS
**OFFICE OF THE
 AUDITOR GENERAL**

William G. Holland, Auditor General

SUMMARY REPORT DIGEST

**APPROPRIATIONS FROM THE GENERAL PROFESSIONS DEDICATED FUND
 FOR PHARMACY PROGRAMS AT STATE UNIVERSITIES**

PROGRAM AUDIT

Release Date: December 2015

SYNOPSIS

House Resolution Number 204 directed the Office of the Auditor General to conduct a program audit of appropriations from the General Professions Dedicated Fund for costs associated with pharmacy practice education and training at Chicago State University (CSU), Southern Illinois University Edwardsville (SIUE), and the University of Illinois at Chicago (UIC). Specifically, the resolution asked about the **purposes** for which the appropriations were used in fiscal years 2012, 2013, and 2014, and whether each university has performed any **study or analysis** of the need for pharmacists.

Illinois has three public universities that offer a pharmacy education program. They received a combined total of approximately \$2 million per year from the General Professions Dedicated Fund (GPD Fund) in fiscal years 2012, 2013, and 2014.

SIUE and UIC mainly used the appropriations for pharmacy program salaries. CSU used the appropriations for pharmacy program salaries in fiscal year 2013 and for pharmacy program operations in fiscal years 2012 and 2014.

We requested any studies that the universities had performed of the need for pharmacists. The universities said they had performed the following studies or analyses:

- CSU’s analysis, conducted in April 2015, reported that its pharmacy program helps to meet the needs that their research found, namely that over one-third of pharmacists were age 55 and will be retiring, the racial diversity of licensed pharmacists does not represent the U.S. population, and there was a need for pharmacists in underserved areas.
- SIU said the need for a pharmacy program was identified by a consultant in 2000. Up to 25 percent of its pharmacy graduates from each class reside in rural counties in Illinois and are licensed as pharmacists.
- UIC’s analysis, submitted in July 2015, reported that it created a concentration in rural pharmacy services because the demand for pharmacists is often high in rural communities where access to medical services may be limited.

ANNUAL APPROPRIATIONS Pharmacy Programs (GPD Fund)	
Fiscal Years 2012-2014	
Chicago State University	\$307,000
Southern Illinois University	\$1,250,000
University of Illinois	\$500,000
Total	\$2,057,000
Source: University data and Illinois Appropriations.	

INTRODUCTION

House Resolution Number 204 directed the Office of the Auditor General to conduct a program audit of appropriations from the General Professions Dedicated Fund for costs associated with pharmacy practice education and training at Chicago State University, Southern Illinois University, and the University of Illinois. Specifically, the resolution asked about the **purposes** for which the appropriations were used in fiscal years 2012, 2013, and 2014; and whether each university has performed any **study or analysis** of the need for pharmacists. (Report page 1)

BACKGROUND

The United States had over 290,000 pharmacists in 2014, including over 11,000 pharmacists in Illinois, according to recent data by the U.S. Bureau of Labor Statistics. Their average salary was approximately \$118,000 per year nationally and \$116,000 in Illinois.

Pharmacists generally dispense medication, counsel patients on the use of prescription and over-the-counter medication, advise patients about general health topics, and bill insurance. The number of pharmacists in the United States has been increasing with a larger number of universities offering pharmacy programs.

The University of Illinois noted that about 17 percent of the U.S. population lives in rural communities, which tend to have lower income per capita, have an older population, and be more dispersed. (pp. 3-4)

PHARMACY EDUCATION AT UNIVERSITIES

Three Illinois public universities have a pharmacy education program. They received special appropriations from the General Professions Dedicated Fund (GPD Fund) during the audit period of fiscal years 2012–2014: Chicago State University (CSU), Southern Illinois University Edwardsville (SIUE), and the University of Illinois at Chicago (UIC). Report Appendix E has more information on the pharmacy programs of these universities, including their tuition, selection criteria, faculty, etc.

Authority

The practice of pharmacy is governed by the Illinois Pharmacy Practice Act (225 ILCS 85/1). The three public universities established new pharmacy programs within the last 10 years:

IN-STATE TUITION & FEES			
Fiscal Year 2014			
Pharmacy Program			
	<u>Tuition</u>	<u>Fees</u>	<u>Total</u>
CSU	\$23,037	\$2,815	\$25,852
SIUE	\$22,764	\$2,233	\$24,997
UIC	\$23,628	\$3,814	\$27,442

Source: University data.

YEAR PHARMACY PROGRAM STARTED

	<u>Year Started</u>	<u>Graduation</u>
CSU	2008	2012
SIUE	2005	2009
UIC*	2010	2014

* UIC has been offering pharmacy education since 1859 but added a rural pharmacy concentration (RPHARM) in 2010.

Source: University data.

- CSU began its pharmacy classes in 2008 and the program was accredited in 2012.
- SIUE began its pharmacy classes in 2005 and the program was accredited in 2009.
- UIC has had a pharmacy program in Chicago since 1859 but began offering a rural pharmacy program in Rockford in 2010. The UIC Doctor of Pharmacy (PharmD) program has been accredited since 1980–1981 and the Rockford campus is part of the university’s pharmacy program. Prior to 1980, UIC offered a Bachelor of Science degree and all graduates were Registered Pharmacists.

Appropriations

State appropriations to these three universities for their pharmacy programs totaled just over \$2 million in each year during the audit period of fiscal years 2012–2014. Each university said that these appropriations were used for the pharmacy program and their elimination would be a significant loss:

- CSU said these funds are needed to ensure that students have comprehensive electronic library and information resources, pharmacy practice experiential education networks enabling them to be educated as members of interprofessional health care teams, current laboratory resources, etc.
- SIUE said the elimination of these funds for pharmacy would have a devastating impact on its ability to continue educational operations as this money supports 17 faculty and staff members.
- UIC said that without these funds, the pharmacy program in Rockford would experience a significant loss of educational programming, with the possibility of severe cuts to the rural pharmacy programs.

Enrollment

During the audit period of fiscal years 2012–2014, CSU reported it had about 350 students while SIUE reported its enrollment was approximately 325 students. UIC had nearly three times the number of students in its pharmacy program at 945 in fiscal year 2014, including 23 students at its rural pharmacy program in Rockford. The universities reported that their pharmacy program graduation rates were 90 percent or higher during the audit period.

PHARMACY PROGRAMS ENROLLMENT

	<u>FY12</u>	<u>FY13</u>	<u>FY14</u>
CSU	344	358	360
SIUE	324	325	324
UIC	863	926	945

Source: University data.

Jobs Found

CSU and SIUE reported that 88 percent of their graduates found jobs in pharmacy during fiscal year 2014. For the remaining 12 percent, SIUE reported that *“It is important to note that the 12% who continued their education did so as pharmacy residents in a manner analogous to medical residents. As residents, they were in fact employed as pharmacists.”*

UIC reported that 84 percent of its graduates found jobs in pharmacy, which included 30 percent who continued their education through residencies. UIC said that *“Residencies are postgraduate training programs where the residents are performing as licensed practitioners while at the same time accelerating their skills and competence beyond entry-level pharmacy experience.”*

- **Jobs in Illinois.** CSU and SIUE reported that approximately two-thirds of the graduates found jobs in Illinois during fiscal years 2012–2014. UIC did not have jobs data for fiscal years 2012 or 2013 but reported that 57 percent of its graduates who did not continue their education through residencies found jobs in Illinois in fiscal year 2014.
- **Rural Jobs.** CSU estimated that about 3 percent of its graduates found jobs in rural areas while SIUE stated between 20 percent and 25 percent of its graduates found jobs in rural areas during fiscal years 2012–2014. UIC did not have data for fiscal years 2012 or 2013 but reported that 80 percent (4 of 5) of its rural pharmacy graduates (RPHARM) found rural jobs in fiscal year 2014.

Need for Pharmacists

We asked universities if they expect a shortage or surplus of pharmacists in the next 10 to 15 years. The three universities indicated that they expected some shortage of pharmacists in the future.

- CSU expects a shortage of pharmacists in Illinois.
- SIUE said there will be a small shortage of pharmacists in the future, considering that the Bureau of Labor Statistics handbook indicates that *“employment of pharmacists is projected to grow 14 percent from 2012 to 2022, about as fast as the average for all occupations. Increased demand for prescription medications will lead to more demand for pharmaceutical services.”*
- UIC said there has been a significant change in healthcare delivery and healthcare reimbursement as a result of the Affordable Care Act that continues to evolve and that *“the research we have evaluated*

does indicate that there continues to be a significant shortage of pharmacists in rural areas all across the state of Illinois. The research also has alluded to a significant shortage of pharmacists in underserved areas within urban areas of Illinois. Based on this information, we continue to believe there will be shortages of pharmacists across the entire State of Illinois, whether it be in rural areas or underserved urban areas.” (pp. 4-9)

EXPENDITURES

The first determination of House Resolution Number 204 asked for the purpose for which the universities spent their appropriations from the GPD Fund. The three public universities that offer a pharmacy education program received approximately \$2 million per year from the GPD Fund in fiscal years 2012, 2013, and 2014:

• Chicago State University	\$307,000
• Southern Illinois University Edwardsville	\$1,250,000
• University of Illinois at Chicago	<u>\$500,000</u>
	\$2,057,000

SIUE and UIC mainly used the appropriations for pharmacy program salaries. CSU used the appropriations for pharmacy program salaries in fiscal year 2013 and for operations of the pharmacy program in fiscal years 2012 and 2014. (pp. 13-25)

STUDY ON NEED FOR PHARMACISTS

The second determination of House Resolution Number 204 asked whether each university had performed any study or analysis of the need for pharmacists, in particular in rural areas. The universities said they had performed studies/analyses which they provided:

- CSU’s analysis, conducted in April 2015, reported that its pharmacy program helps to meet the needs that their research found, namely that over one-third of pharmacists were age 55 and will be retiring, the racial diversity of licensed pharmacists does not represent the U.S. population, and there was a need for pharmacists in underserved areas.
- SIU said the need for a pharmacy program was identified by a consultant in 2000. Data on its pharmacy graduates shows that 20 to 25 percent reside in rural counties in Illinois.

EXPENDITURES
Fiscal Years 2012 – 2014
The universities used their appropriations from the GPD Fund mainly for the following types of expenditures for their pharmacy programs:
• CSU Operations & Salaries
• SIUE Salaries
• UIC Salaries
Source: University data.

- UIC’s analysis, submitted in July 2015, reported that it created a concentration in rural pharmacy services because the demand for pharmacists is often high in rural communities where access to medical services may be limited.

In September 2015 we asked the universities for the reason they had established a pharmacy program. The universities provided their original supporting documentation for establishing their pharmacy/rural pharmacy programs which showed the following:

- CSU completed an educational survey for the federal government which stated that minorities have limited access to pharmacy education and that enrollment of African-Americans in Midwestern pharmacy schools was only three percent in 2003.
- SIUE retained a consultant to evaluate the need for a new pharmacy program; he reported in 2000 that there was a need for pharmacists in Illinois as well as an adequate pool of applicants.
- UIC provided its Request for a New Unit of Instruction to the Illinois Board of Higher Education which indicated there was a national shortage and maldistribution of pharmacists and rural communities were served by fewer health care professionals per capita. (pp. 27-38)

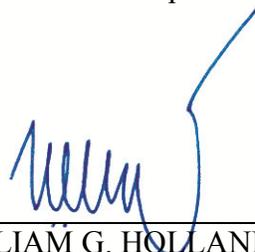
ANALYSIS ON NEED FOR PHARMACISTS

- **CSU** – Racial diversity of pharmacists does not represent the U.S. population.
- **SIU** – Up to 25% of pharmacy graduates work in rural communities.
- **UIC** – Demand for pharmacists is higher in rural communities.

Source: University data.

CONCLUSION

A draft of this audit report was provided to Chicago State University, Southern Illinois University, and the University of Illinois for their review; any responses received are reproduced in Appendix F of the report (see page 77).



WILLIAM G. HOLLAND
Auditor General

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This audit was conducted by the staff of the Office of the Auditor General.

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Chapter 1

Introduction

The House of Representatives adopted House Resolution Number 204 on April 29, 2015 directing the Office of the Auditor General to conduct a program audit of appropriations from the General Professions Dedicated Fund for costs associated with the development, support, or administration of pharmacy practice education and training at Chicago State University, Southern Illinois University, and the University of Illinois for fiscal years 2012, 2013, and 2014:

- the **purposes** for which the appropriations were used; and
- whether each university has performed any **study or analysis** of the need for pharmacists in the labor market and, in particular, in rural areas and whether that study or analysis demonstrates how the university’s program meets any identified need.

REPORT CONCLUSIONS

Illinois has three public universities that offer a pharmacy education program. They received a combined total of approximately \$2 million per year from the General Professions Dedicated Fund (GPD Fund, also called Fund #22) in fiscal years 2012, 2013, and 2014, as shown in Exhibit 1-1:

- Chicago State University (CSU)
\$307,000;
- Southern Illinois University Edwardsville (SIUE) \$1,250,000; and
- University of Illinois at Chicago (UIC)
\$500,000.

The fiscal year 2015 appropriations to each university from the GPD Fund were identical to the above amounts. This funding started in fiscal year 2009 at which time it was double the amount shown above: CSU received \$614,000, SIU received \$2.5 million, and UIC received \$1 million.

Exhibit 1-1	
ANNUAL APPROPRIATIONS	
Pharmacy Programs	
Fiscal Years 2012-2014	
Chicago State University	\$307,000
Southern Illinois University	\$1,250,000
University of Illinois.....	\$500,000
Total	\$2,057,000
Source: University data and Illinois Appropriations.	

The enrollment at these three universities' pharmacy programs totaled between 324 students and 945 students during fiscal year 2014 (Exhibit 1-2).

Exhibit 1-2 PHARMACY PROGRAMS ENROLLMENT			
	FY12	FY13	FY14
CSU	344	358	360
SIUE	324	325	324
UIC	863	926	945
Source: University data.			

Expenditures

The first determination of House Resolution Number 204 asked for the purpose for which universities spent their appropriations from the GPD Fund. SIUE and UIC mainly used the appropriations for pharmacy program salaries. CSU used the appropriations for pharmacy program salaries in fiscal year 2013 and for operations of the pharmacy program in fiscal years 2012 and 2014.

Study or Analysis on the Need for Pharmacists

The second determination of House Resolution Number 204 asked whether each university had performed any study or analysis of the need for pharmacists, in particular in rural areas. We requested any such studies that the universities had performed; Chicago State University, Southern Illinois University, and the University of Illinois said they had performed the following studies/analyses:

- CSU’s analysis, conducted in April 2015, reported that its pharmacy program helps to meet the needs that their research found, namely that over one-third of pharmacists were age 55 and will be retiring, the racial diversity of licensed pharmacists does not represent the U.S. population, there was a need for pharmacists in underserved areas, and segregated neighborhoods had less access to prescriptions.
- SIU said the need for a pharmacy program was identified by its consultant in 2000. In addition, it uses pharmacy graduate data by county which shows that 20 to 25 percent of its graduates from each class reside in rural counties in Illinois, are licensed as pharmacists, and are plotted by SIUE on a map of Illinois by county. *“These pharmacists are in rural communities because there is employment in these communities.”*
- UIC’s analysis, submitted in July 2015, reported that it created a concentration in rural pharmacy services because the demand for pharmacists is often high in rural communities where access to medical services may be limited; in addition, there was a national shortage and maldistribution of pharmacists.

In September 2015 we sent universities a Data Collection Instrument (DCI) which also asked for the reason they had established a pharmacy program, along with any supporting documentation. The universities provided their supporting documentation for establishing their pharmacy/rural pharmacy programs which showed the following:

- CSU completed an educational survey for the federal government which stated that minorities have limited access to pharmacy education and that enrollment of African-Americans in Midwestern pharmacy schools was only three percent in 2003. CSU could offer learning experiences to overcome barriers that underrepresented minorities face.
- SIUE retained a consultant to evaluate the need for a new pharmacy program; he reported in 2000 that there was a need for pharmacists in Illinois as well as an adequate pool of applicants.
- UIC provided its Request for a New Unit of Instruction to the Illinois Board of Higher Education. It indicated there was a national shortage and maldistribution of pharmacists and rural communities were served by fewer health care professionals per capita. Nearly 50 million Americans live in rural communities which had about half the number of health care professionals as urban or suburban areas.

BACKGROUND

The United States had over 290,000 pharmacists in 2014, including over 11,000 pharmacists in Illinois, according to recent data by the U.S. Bureau of Labor Statistics. Their average salary was approximately \$118,000 per year nationally and \$116,000 in Illinois.

Pharmacists generally dispense medication, counsel patients on the use of prescription and over-the-counter medication, advise patients about general health topics, and bill insurance. The number of pharmacists in the United States has been increasing with a larger number of universities offering pharmacy programs.

The University of Illinois noted that about 17 percent of the U.S. population lives in rural communities, which tend to have lower income per capita, have an older population, and be more dispersed.

Rural communities in the United States are served by fewer health care professionals per capita. Rural communities have about half the number of health care professionals compared to urban or suburban areas. Further, 49 million Americans (about 17% of the total population) live in rural communities. However, this population is spread over approximately 4/5th of the American landmass. Accessing healthcare services in rural communities can be difficult at best and the resulting presence of significant rural health disparities is well documented in the literature.

There are 102 counties in Illinois. Of these, six are urban or suburban. There are an additional thirteen counties that contain significant regional cities (e.g., Urbana, Rockford and Peoria). However, that leaves 83 counties in Illinois that could be classified as rural. Approximately 1.7 million Illinois residents live in rural communities. Rural counties in Illinois have higher per capita concentrations of older individuals than urban or suburban counties. These individuals can be

separated from pharmacy services by significant distances and generally have less access to pharmacy services than their urban counterparts. Incomes in rural areas of Illinois are lower on a per capita basis than urban or suburban areas. The combination of age, distance and economics makes it clear that providing pharmacy services in rural communities is especially challenging. To ensure the successful provision of pharmacy services to individuals in rural communities, new pharmacists must be equipped to face these challenges.

The National Rural Health Association's Issue Paper (May 2005) said that like other rural health care providers, pharmacists who wish to set up in small towns and countryside face the obstacles that come from remoteness, isolation, and a higher percentage of lower income clientele; fewer pharmacists may want to work there, especially since some rural pharmacists may be required to work longer hours as fewer pharmacists are available. Smaller rural providers also may be unable to offer competing salaries and benefits. Newly graduated pharmacists may be reluctant to take a pharmacy position in a small rural hospital where they may need to engage in administrative duties as well.

The State of Illinois requires practicing pharmacists to be licensed, which requires applicants to possess a pharmacy degree, have experience under a licensed pharmacist, and pass an exam. There are six schools in Illinois that offered pharmacy programs; their in-state tuition and fees are shown below:

1. **Chicago State University** – Tuition & Fees (FY2014): \$25,852.
2. **Midwestern University** (Downers Grove) – Tuition & Fees (2015-2016): \$40,703.
3. **Roosevelt University** (Chicago) – Tuition & Fees (2015-2016): \$48,475.
4. **Rosalind Franklin University of Medicine and Science** (North Chicago) – Tuition & Fees (2014-2015): \$33,139.
5. **Southern Illinois University** (Edwardsville) – Tuition & Fees (FY2014): \$24,997.
6. **University of Illinois** (Chicago) – Tuition & Fees (FY2014): \$27,442.

PHARMACY EDUCATION AT PUBLIC UNIVERSITIES

Three Illinois public universities have a pharmacy education program and received special appropriations from the General Professions Dedicated Fund (GPD Fund) during the audit period of fiscal years 2012–2014: Chicago State University, Southern Illinois University, and the University of Illinois.

Universities were asked to provide basic information about their pharmacy program in a Data Collection Instrument (DCI) we sent to them in September 2015; their responses are summarized below and include the number of faculty and staff employed by the pharmacy program, the number of students enrolled in the program, the number who graduated from the program, and the number who found jobs in Illinois (also see universities' responses to our DCI in Appendix E).

UIC offers the PharmD, or Doctor of Pharmacy, which is a professional degree program. It also offers a Master of Science program which grants a Master's degree, along with a Doctor of Philosophy, which grants a Doctorate degree.

Authority

The practice of pharmacy is governed by the Illinois Pharmacy Practice Act (225 ILCS 85/1). The universities established new pharmacy programs within the last 10 years, as shown in Exhibit 1-3:

- CSU began its pharmacy classes in 2008 and the program was accredited in 2012.
- SIUE began its pharmacy classes in 2005 and the program was accredited in 2009.
- The University of Illinois has had a pharmacy program in Chicago since its inception in 1859 but began offering a rural pharmacy program in Rockford in 2010. While the UIC College of Pharmacy has been training pharmacists since 1859, the UIC Doctor of Pharmacy (PharmD) program has been accredited since 1980–1981 and the Rockford campus is part of the university's pharmacy program. Prior to 1980, UIC offered a Bachelor of Science degree and all the graduates were RPhs (Registered Pharmacists).

**Exhibit 1-3
YEAR PHARMACY PROGRAM STARTED**

	<u>Year Started</u>	<u>Graduation</u>
CSU	2008	2012
SIUE	2005	2009
UIC*	2010	2014

* UIC has been offering pharmacy education since 1859 but added a rural pharmacy concentration (RPHARM) in 2010.

Source: University data.

Operations

The universities reported that the pharmacy programs are operated under university policies and the universities measure how well the program performs, such as graduation rates, rates for passing the license exam the first time, and achieving program goals and objectives. The programs prepare reports which assess student demographics and applications, and perform comparisons with peer institutions. (See Appendix E, Questions #6, 9)

Appropriations

The three universities received State appropriations for their pharmacy programs that totaled just over \$2 million in each year during the audit period of fiscal years 2012–2014: CSU received \$307,000 per year, SIUE received \$1.25 million per year, and UIC received \$500,000 per year. (Appendix E, Question #11)

Each university said that these appropriations were used for the pharmacy program and noted that their elimination would be a significant loss:

- CSU said these funds are needed to ensure that students have comprehensive electronic library and information resources, pharmacy practice experiential education networks enabling them to be educated as members of interprofessional health care teams, current laboratory resources, etc.
- SIUE said the elimination of these funds for pharmacy would have a devastating impact on its ability to continue educational operations as this money supports 17 faculty and staff members.
- UIC said that without these funds, the pharmacy program in Rockford would experience a significant loss of educational programming, with the possibility of severe cuts to the rural pharmacy programs.

Tuition

The in-state tuition and fees paid by pharmacy students at these three public universities were approximately \$25,850 at CSU, \$25,000 at SIUE, and \$27,450 at UIC in fiscal year 2014 (Exhibit 1-4). Tuition and fees increased \$1,500 to \$2,000 at these universities since fiscal year 2012. (Appendix E, Question #17)

Exhibit 1-4 IN-STATE TUITION AND FEES Fiscal Year 2014			
Pharmacy Program			
	Tuition	Fees	Total
CSU	\$23,037	\$2,815	\$25,852
SIUE	\$22,764	\$2,233	\$24,997
UIC	\$23,628	\$3,814	\$27,442
Source: University data.			

Selection Criteria

Universities’ criteria for selecting students for the pharmacy program included undergraduate course work, grade point average (GPA), Pharmacy College Admissions Test (PCAT) score, interview, letters of recommendation, writing sample, military service, and interest in working in rural areas among other factors. (Appendix E, Question #10)

The University of Illinois’ pharmacy program (PharmD) has a subset for rural pharmacy known as RPHARM. UIC said that *“The screening process for applicants to our RPHARM concentration includes a definition of rural whereby their hometown has a population of less than 25,000. This is a guide and only one portion of the review process. RPHARM applicants are reviewed on a case by case basis for students who plan to practice in rural communities after graduation, regardless of hometown. In targeting underserved areas where we are training our graduates to practice, we use the U.S. Department of Health and Human Services Health Resources and Service Administration (HRSA) Medically Underserved Areas/Populations (MUA/P) and Health Professional Shortage Areas (HPSAs) designation.”*

Enrollment

During the audit period of fiscal years 2012–2014, CSU reported it had about 350 students while SIUE reported its enrollment was approximately 325 students (Exhibit 1-

5). UIC had nearly three times the number of students in its pharmacy program at 945, in fiscal year 2014, although the number of students at its rural pharmacy program in Rockford was 23. The universities reported that their pharmacy program graduation rates were 90 percent or higher during the audit period. (Appendix E, Questions #18 and 19)

Exhibit 1-5 PHARMACY PROGRAMS ENROLLMENT			
	FY 2012	FY 2013	FY 2014
Chicago State University	344	358	360
Southern Illinois University Edwardsville	324	325	324
University of Illinois	863	926	945
UIC offers its PharmD program at both its Chicago and Rockford campuses. The PharmD, or Doctor of Pharmacy, is a professional degree. At the Rockford campus (only), the pharmacy program also has a subset known as a <u>rural</u> pharmacy program, or RPHARM. In addition, UIC College of Pharmacy offers a Master's of Science and a Doctor of Philosophy degree, as shown below:			
1. PharmD	737	784	812
RPHARM (subset of PharmD)	15	20	23
2. Master of Science	17	30	13
3. Doctor of Philosophy	109	112	120
Source: University data.			

Personnel

During fiscal years 2012–2014, the pharmacy program at CSU employed approximately 30 faculty and 15 staff. SIUE employed approximately 40 faculty and 8 staff during this same time period. UIC employed approximately 90 faculty and 250 staff in fiscal years 2012 and 2013. In fiscal year 2014, UIC recategorized its personnel which increased its faculty to 245 and decreased staff to just over 150. UIC said that:

The faculty appointments of Clinical Faculty, Clinical Instructor, Assistant, Associate and Full Professors were restructured in December, 2013. These positions always held faculty responsibilities, however because some of the individuals worked in non-academic units (i.e. pharmacy clinics, hospital) historical internal processes prevented these individuals from being appointed as faculty. The campus process was to appoint clinical faculty/clinical pharmacists as staff coupled with a separate 0 FTE faculty appointment. Restructuring these positions more clearly aligned the appointments with the teaching and faculty responsibilities. (Appendix E, Question #20)

Jobs Found

CSU and SIUE reported that 88 percent of their graduates found jobs in pharmacy during fiscal year 2014 (Exhibit 1-6). The remaining graduates continued their education. For example, SIUE stated that *“It is important to note that the 12 percent who continued their education did so as pharmacy residents in a manner analogous to medical residents. As residents, they were in fact employed as pharmacists. This is likely the case for CSU and UIC as well.”*

UIC reported that 84 percent of its graduates found jobs in pharmacy, with 30 percent of them also continuing their education through residencies. UIC said that *“Residencies are postgraduate training programs where the residents are performing as licensed practitioners while at the same time accelerating their skills and competence beyond entry-level pharmacy experience.”* UIC did not have employment data for the remaining 15 percent of graduates in fiscal year 2014. (Appendix E, Question #21)

- Jobs in Illinois.** CSU and SIUE reported that approximately two-thirds of the graduates found jobs in Illinois during fiscal years 2012–2014. UIC did not have jobs data for fiscal years 2012 or 2013 but reported that 57 percent of its graduates (who did not continue their education through residencies) found jobs in Illinois in fiscal year 2014. (Appendix E, Question #22)
- Rural Jobs.** CSU estimated that about 3 percent of its graduates found jobs in rural areas while SIUE stated between 20 percent and 25 percent of its students found jobs in rural areas during fiscal years 2012–2014. UIC did not have data for fiscal years 2012 or 2013 but reported that 80 percent (4 of 5) of its rural pharmacy graduates found rural jobs in FY 2014. (Appendix E, Question #23)

Exhibit 1-6 JOBS FOUND Fiscal Year 2014			
Question	CSU	SIUE	UIC
Jobs Found			
• Pharmacy Jobs: ¹	88%	88%	54%
• Other Jobs:	0%	0%	0%
• Continued Education: ¹	13%	12%	30%
• Other – e.g., unknown:	0%	0%	15%
Total: ²	100%	100%	100%
Illinois Jobs. Found pharmacy jobs in Illinois.	68%	66%	57% ³
Rural Jobs. Found pharmacy jobs in rural areas.	3% ⁴	20%	Total: 4% ⁵
Notes:			
¹ Students who continued their education worked as pharmacy residents and may be added to those who had jobs to determine the total jobs (e.g., UIC 54% + 30% = 84% were working).			
² Totals may not add due to rounding.			
³ Based on alumni response to UIC’s survey.			
⁴ CSU estimate.			
⁵ 4 of 5 RPHARM graduates at Rockford (or 80%) found rural jobs.			
Source: University data.			

Exhibit 1-7 shows the number of pharmacy graduates that found jobs in Illinois and in rural areas during fiscal years 2012 – 2014.

Exhibit 1-7 NUMBER OF JOBS FOUND BY PHARMACY GRADUATES				
University	Job Location	FY 2012	FY 2013	FY 2014
Chicago State University	Illinois Jobs	50	63	60
	Rural Jobs	Estimated at 3%	Estimated at 3%	Estimated at 3%
Southern Illinois University	Illinois Jobs	50	53	51
	Rural Jobs	18	17	16
University of Illinois	Illinois Jobs	Not Available	Not Available	72
	Rural Jobs	Not Available	Not Available	5
Source: University data.				

Reason for Establishing Program

Before the pharmacy program was established, CSU, SIUE, and UIC had each researched the need for a pharmacy program. CSU completed an educational survey for former U.S. Rep. Jesse Jackson, Jr. and federal agencies which stated that underrepresented minorities have limited access to pharmacy education and that in 2003 the enrollment of African-Americans in Midwestern pharmacy schools was only three percent. CSU indicated it could offer learning experiences to enable students to flourish academically and overcome barriers that underrepresented minorities face.

SIUE retained a consultant to evaluate the need for a new pharmacy program. He reported in 2000 that SIUE had the basic infrastructure and leadership and there was a need for pharmacists in Illinois, along with an adequate pool of applicants.

UIC provided its Request for a New Unit of Instruction to the Illinois Board of Higher Education. It indicated there was a national shortage and maldistribution of pharmacists and rural communities were served by fewer health care professions per capita. Nearly 50 million Americans live in rural communities which had about half the number of health care professionals as urban or suburban areas. Hosting students at UIC's Rockford campus would build upon the strength of the regional campus of the College of Medicine with its focus on rural medicine. Therefore, UIC established a rural pharmacy program (RPHARM) in Rockford to prepare pharmacy students to practice in rural Illinois. (Appendix E, Questions #27, 28)

Need for Pharmacists

We asked universities if they expect a shortage or surplus of pharmacists in the next 10 to 15 years (Appendix E, Question #29). The three universities indicated that they expected some shortage of pharmacists in the future.

- CSU expects a shortage of pharmacists in Illinois.
- SIUE said there will be a small shortage of pharmacists in the future, considering that the Bureau of Labor Statistics handbook indicates that *“employment of pharmacists is projected to grow 14 percent from 2012 to 2022, about as fast as the average for all occupations. Increased demand for prescription medications will lead to more demand for pharmaceutical services.”*
- UIC said there has been a significant change in healthcare delivery and healthcare reimbursement as a result of the Affordable Care Act that continues to evolve and that *“the research we have evaluated does indicate that there continues to be a significant shortage of pharmacists in rural areas all across the state of Illinois. The research also has alluded to a significant shortage of pharmacists in underserved areas within urban areas of Illinois. Based on this information, we continue to believe there will be shortages of pharmacists across the entire State of Illinois, whether it be in rural areas or underserved urban areas.”*

SCOPE AND METHODOLOGY

This management audit was conducted in accordance with generally accepted government auditing standards and the audit standards promulgated by the Office of the Auditor General at 74 Ill. Adm. Code 420.310.

Audit standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The objectives for this audit were specified by House Resolution Number 204, which called for a program audit of three Illinois public universities with a pharmacy program, namely Chicago State University (CSU), Southern Illinois University (SIU or SIUE for Edwardsville campus), and the University of Illinois (U of I or UIC for the Chicago campus where the pharmacy program is headquartered). The Resolution asked the following (see Appendix A):

- The purposes for which the General Professions Dedicated Fund appropriations were used for fiscal years 2012 to 2014; and
- Whether each university has performed any study or analysis of the need for pharmacists in the labor market and, in particular, in rural areas and whether that study or analysis demonstrates how the university's program meets any identified need.

Work for this audit was conducted from summer 2015 through fall of 2015 and focused on fiscal years 2012 - 2014. We gathered information using the following methods:

- Reviewed statutes, administrative rules, agency policies, and procedures, including the Comptroller's Statewide Accounting Management System (SAMS) manual.
- Interviewed university employees with knowledge and information about the pharmacy program.
- Reviewed applicable internal controls and assessed the risk related to the audit's objectives. A formal risk assessment was conducted and any significant weaknesses found are presented in the report.
- Our financial/compliance and information systems auditors have audited these universities during the audit period (FY 2012–2014). We reviewed and used their audit reports to avoid duplication of efforts.

- Sent universities a Data Collection Instrument to collect data and documents regarding their pharmacy programs, internal reports, and information about their internal control (see Chapter 1 for results).
- Reviewed university expenditures from the General Professions Dedicated Fund (Fund # 22) and sought information and supporting documentation as necessary (see Chapter 2 for results).
- Reviewed the studies/analyses conducted by the universities regarding the need for pharmacists, particularly in rural areas (see Chapter 3 for results).

An exit conference was held with the University of Illinois at Chicago on November 18, 2015 which included the following individuals from UIC: Dale Rush, Associate Dean for Administrative Affairs; Bernadette Rossmore, Coordinator of Business and Financial Services; Margaret Delaney, Assistant Dean, Budget and Financial Affairs; and Marissa King, Assistant Director, Budget and Resource Planning. The Office of the Auditor General was represented by Ameen Dada, Audit Manager; Teresa DeStasio, Audit Supervisor; and Angela Coleman, Staff Auditor.

Southern Illinois University requested some changes to the draft report, which were addressed by auditors, but did not request a formal exit conference. Chicago State University did not request an exit conference nor did it respond to the draft report that was provided.

REPORT ORGANIZATION

This audit report contains the following chapters that provide information about the pharmacy program and address the specific determinations in the Audit Resolution:

- Chapter 2: Pharmacy Program Expenditures.
- Chapter 3: Universities' Studies on the Need for Pharmacists.

The report's appendices include each university's study on the need for pharmacists (in Appendices B, C, and D) along with a summary of their responses to our Data Collection Instrument in Appendix E. Appendix F contains the universities' written responses to this audit.

Chapter 2

Pharmacy Program

Expenditures

CHAPTER CONCLUSIONS

House Resolution Number 204 asked for the purposes that universities spent their appropriations on from the General Professions Dedicated Fund (GPD Fund). The three Illinois public universities that received appropriations from the GPD Fund used the money mainly for personal services, or salaries for faculty and staff of the pharmacy programs.

- SIUE and UIC spent nearly their entire appropriations for pharmacy program salaries in fiscal years 2012–2014.
- CSU spent its appropriations for pharmacy program salaries in fiscal year 2013; in the other two fiscal years (FY 2012 and FY 2014) it used the appropriations for the operations of the pharmacy program.

APPROPRIATIONS

The House of Representatives adopted Resolution Number 204 directing us to audit appropriations from the General Professions Dedicated Fund for costs associated with the pharmacy program to determine the purposes for which the appropriations were used. During fiscal years 2012, 2013, and 2014 the universities were appropriated over \$2 million from this GPD Fund in each of the fiscal years:

HOUSE RESOLUTION #204

Determine the purposes for which appropriations from the General Professions Dedicated Fund were used by the pharmacy education programs in Fiscal Years 2012, 2013, and 2014 by Chicago State University, Southern Illinois University, and the University of Illinois.

• Chicago State University (CSU).....	\$307,000
• Southern Illinois University Edwardsville (SIUE)	\$1,250,000
• University of Illinois at Chicago (UIC)	\$500,000
Total	\$2,057,000

The fiscal year 2015 appropriations for each university from the GPD Fund were identical to the above amounts. This funding started in fiscal year 2009 at which time it

was double the amount shown above: CSU received \$614,000, SIUE received \$2.5 million, and UIC received \$1 million.

The GPD Fund receives revenue from various fees (e.g., licenses, renewals, and other general fees like restoration of a license, replacement certificates, wall certificates (68 Ill. Adm. Code 1210.237)) that are paid by general professions, such as athletic agents, barbers, cosmetologists, electrologists, funeral directors, geologists, interior designers, locksmiths, psychologists, private detectives, roofers, etc. They paid the following amounts into the GPD Fund according to the Illinois Department of Financial and Professional Regulation (Exhibit 2-1):

- Fiscal year 2012: \$15.3 million;
- Fiscal year 2013: \$12.4 million; and
- Fiscal year 2014: \$14.0 million.

Several agencies are authorized to spend from this fund and their expenditures are shown in Exhibit 2-2.

Exhibit 2-1			
REVENUES DEPOSITED INTO THE GENERAL PROFESSIONS DEDICATED FUND (Fund #22)			
Fiscal Years 2012 – 2014			
Profession	FY 2012	FY 2013	FY 2014
Acupuncture	\$68,032.94	\$369,495.39	\$59,195.52
Athlete Agent	\$12,750.00	\$7,520.00	\$22,565.04
Athletic Training	\$358,218.00	\$65,082.89	\$391,821.48
Auctioneer	\$60,523.20	\$619,243.84	\$65,473.07
Barber	\$147,953.03	\$184,283.81	\$150,194.99
Canine	\$0.00	\$5,425.00	\$6,350.00
Collection Agency	\$785,987.24	\$201,474.53	\$133,477.55
Cosmetology	\$3,726,775.25	\$844,201.88	\$3,858,061.99
Detection of Deception	\$1,305.01	\$18,655.01	\$2,580.01
Dietetics and Nutrition	\$343,538.29	\$33,289.17	\$371,469.31
Electrology	\$24,945.84	\$4,115.42	\$18,993.51
Employee Registration	\$2,874,828.23	\$928,586.39	\$791,424.81
Environmental Health	\$72,336.27	\$4,752.43	\$73,185.00
Esthetics	\$287,254.42	\$52,082.64	\$331,674.84
Euthanasia	\$29,860.24	\$6,500.52	\$30,906.66
Fingerprint Vendor	\$1,700.00	\$59,150.00	\$92,730.00
Firearm	\$153,874.35	\$220,214.51	\$213,634.34
Funeral Directing and Embalming	\$60,171.58	\$345,842.85	\$119,177.70
Genetic Counselor	\$4,430.51	\$19,615.00	\$7,125.37
Geology	\$10,391.55	\$137,334.51	\$8,178.86
Hair Braider	\$9,770.00	\$20,731.23	\$983.66
Home Medical Equipment Services Provider	\$282,115.12	\$53,500.51	\$34,385.67
Interior Design	\$57,384.20	\$36,303.61	\$52,610.77
Landscape Architecture	\$36,465.26	\$27,147.19	\$35,378.66
Limited Liability Company	\$27,590.00	\$31,660.00	\$33,635.00
Locksmith	\$56,662.18	\$23,877.08	\$254,236.38
Mail Order Ophthalmic Provider	\$10,000.00	\$14,000.00	\$13,000.00
Marriage and Family Therapy	\$14,577.91	\$100,175.86	\$22,300.83
Massage Therapy	\$340,690.39	\$1,978,162.77	\$303,146.65
Medical Corporation	\$128,832.48	\$126,576.83	\$122,885.64
Nail Technology	\$53,560.25	\$557,730.81	\$46,151.17
Nephropathy	\$2,793.23	\$48,583.57	\$2,511.71
Nursing Home Administration	\$254,917.44	\$46,869.27	\$255,603.90
Occupational Therapy	\$306,003.01	\$47,991.75	\$331,577.45
Orthotics, Prosthetics, Pedorthics	\$126,071.86	\$18,841.89	\$129,262.71
Perfusionist	\$53,760.00	\$3,246.57	\$52,557.66
Physical Therapy	\$396,958.46	\$826,830.10	\$425,362.63
Private Alarm	\$247,152.36	\$399,245.50	\$454,447.94
Private Detective	\$258,165.98	\$60,999.16	\$545,205.42
Private Security	\$195,799.21	\$62,951.33	\$312,473.93
Professional Counseling	\$275,052.33	\$1,437,936.75	\$322,311.73
Professional Service Corporation	\$161,255.18	\$162,921.36	\$161,371.35
Psychology	\$38,593.91	\$788,064.10	\$56,123.90
Respiratory Care	\$745,432.75	\$49,451.69	\$760,306.14
Roofing	\$174,131.20	\$434,552.68	\$198,655.11
Sex Offender Provider	\$0.00	\$0.00	\$41,250.00
Shorthand Reporting	\$4,205.33	\$82,320.23	\$4,741.05
Social Work	\$1,011,191.95	\$152,846.79	\$1,093,542.96
Speech-Language Pathology & Audiology	\$930,663.92	\$145,898.88	\$1,023,724.18
Surgical Assistant	\$45,135.89	\$6,778.32	\$58,730.85
Veterinary Medicine	\$65,029.87	\$566,843.42	\$67,274.64
Total	\$15,334,837.62	\$12,439,905.04	\$13,963,969.74

Source: Illinois Department of Financial and Professional Regulation.

Exhibit 2-2 EXPENDITURES FROM THE GENERAL PROFESSIONS DEDICATED FUND (Fund #22) Fiscal Years 2012 – 2014				
Fiscal Year	Agency	Appropriation	Expenditure	Unexpended Balance
FY 2012	DFPR	\$4,953,400.00	\$4,258,919.81	\$694,480.19
	Court of Claims	\$11,853.00	\$11,851.27	\$1.73
	CSU	\$307,000.00	\$307,000.00	\$0.00
	U of I	\$500,000.00	\$500,000.00	\$0.00
	SIU	\$1,250,000.00	\$1,250,000.00	\$0.00
	Total		\$7,022,253.00	\$6,327,771.08
FY 2013	DFPR	\$4,991,300.00	\$4,264,752.40	\$726,547.60
	Court of Claims	0.00	0.00	\$0.00
	CSU	\$307,000.00	\$307,000.00	\$0.00
	U of I	\$500,000.00	\$500,000.00	\$0.00
	SIU	\$1,250,000.00	\$1,250,000.00	\$0.00
	Total		\$7,048,300.00	\$6,321,752.40
FY 2014	DFPR	\$6,049,000.00	\$4,024,544.42	\$2,024,455.58
	Court of Claims	\$243.00	\$242.44	\$0.56
	CSU	\$307,000.00	\$307,000.00	\$0.00
	U of I	\$500,000.00	\$500,000.00	\$0.00
	SIU	\$1,250,000.00	\$1,250,000.00	\$0.00
	Total		\$8,106,243.00	\$6,081,786.86

Source: Illinois Comptroller.

Illinois State Pharmacy Disciplinary Fund

Pharmacists do not pay fees into the General Professions Dedicated Fund (Fund #22); they pay into the Illinois State Pharmacy Disciplinary Fund (Fund #57). In fiscal year 2014, the total revenue received into the Illinois State Pharmacy Disciplinary Fund (225 ILCS 85/27(D)) was over \$4.75 million, as shown below in Exhibit 2-3.

Exhibit 2-3 REVENUES DEPOSITED INTO THE ILLINOIS STATE PHARMACY DISCIPLINARY FUND (Fund #57) Fiscal Years 2012 – 2014			
Source	2012	2013	2014
Fines, Penalty or Violations	\$151,505.01	\$170,613.66	\$98,798.02
Original and Renewal License	\$4,452,681.85	\$1,907,071.47	\$4,658,435.31
Reimbursement/Jury Duty and Recoveries	\$11,412.63	\$12,922.59	\$15,093.52
Prior Year Refund	\$7,325.00	\$0.00	\$0.00
Total	\$4,622,924.49	\$2,090,607.72	\$4,772,326.85

Source: Illinois Department of Financial and Professional Regulation.

Funds to Universities

The General Assembly appropriated funds to the universities under the appropriation code 1900, which is titled “Lump Sums and Other Purposes” and described as “Any valid expenditure object” according to the Comptroller’s Statewide Accounting Management System (SAMS) manual. Therefore, these funds can be used for any pharmacy program expenditure.

- CSU used all the appropriations from the GPD Fund for personal services in fiscal year 2013 and used the funds for other operational expenditures of the pharmacy program in fiscal years 2012 and 2014.
- SIUE and UIC used nearly all the funds in the three fiscal years (FY2012–2014) for personal services.

The three universities provided supporting documentation for their expenditures from the GPD Fund during fiscal years 2012–2014.

EXPENDITURES FROM GENERAL PROFESSIONS DEDICATED FUND

The three universities used their appropriations mainly for personal services, or salaries for faculty and staff of the pharmacy programs, with SIUE and UIC using nearly all the appropriations from all three years (FY2012–2014) for pharmacy program salaries.

Chicago State University

During fiscal years 2012–2014, the General Assembly appropriated \$307,000 to Chicago State University each year from the GPD Fund for its pharmacy program. CSU used the funds in fiscal year 2012 and 2014 for various operational expenses while in fiscal year 2013 it used the money for salaries of pharmacy program employees, as shown in Exhibit 2-4 below.

Exhibit 2-4 Chicago State University PHARMACY COLLEGE EXPENDITURES General Professions Dedicated Fund (Fund #22) Fiscal Years 2012 – 2014				
Object Code	Description of Expenditure	FY 2012	FY 2013	FY 2014
1120	Regular Positions	\$0.00	\$307,000.00	\$0.00
1230	In House Repair and Maintenance	\$767.05	\$0.00	\$0.00
1234	Rental, Machinery & Mechanical Equipment	\$250.00	\$0.00	\$0.00
1239	Rental NEC	\$85.00	\$0.00	\$0.00
1245	Professional/Artistic Services NEC	\$21,845.00	\$0.00	\$58,692.72
1261	Postage & Postal Charges	\$1,864.19	\$0.00	\$0.00
1272	Non-employee Travel-Vendor Payment	\$276.00	\$0.00	\$0.00
1273	Advertising	\$350.00	\$0.00	\$1,060.00
1274	REG/CONF Exp, Vendor Payments	\$2,340.00	\$0.00	\$315.00
1275	Subscription/Information Service	\$48.98	\$0.00	\$0.00
1277	Association Dues	\$51,283.00	\$0.00	\$0.00
1278	Interviewee Expenses	\$92.20	\$0.00	\$0.00
1280	Copying/Photo/Printing Services	\$600.00	\$0.00	\$15,081.92
1281	Interviewee Expenses Vendor Payments	\$180.00	\$0.00	\$0.00
1284	Computer Software	\$183.00	\$0.00	\$8,992.99
1286	Travel-Non/State Employees	\$666.02	\$0.00	\$0.00
1289	Contractual Services, NEC	\$6,234.50	\$0.00	\$810.00
1291	In-State Travel, Employee Reimbursement	\$448.44	\$0.00	\$610.72
1292	Out-of-State Travel, Employees	\$3,757.00	\$0.00	\$0.00
1294	Out-of-State Travel, Vendors	\$7,154.53	\$0.00	\$0.00
1304	Office & Library Supplies	\$6,863.74	\$0.00	\$25,122.15
1308	Educational & Instructional Supplies	\$7,421.00	\$0.00	\$26,787.79
1350	Medical & Laboratory Supplies	\$0.00	\$0.00	\$1,126.78
1370	Wearing Apparel	\$157.83	\$0.00	\$0.00
1393	University Central Supply Services	\$839.34	\$0.00	\$2,724.98
1394	Office Equipment Less than \$100	\$406.10	\$0.00	\$0.00
1398	Equipment NEC Not Over \$100	\$12,745.11	\$0.00	\$1,525.88
1399	Commodities, NEC	\$941.21	\$0.00	\$47,158.25
1510	Office Furniture & Equipment	\$15,567.06	\$0.00	\$7,443.00
1515	EDP Equipment	\$1,549.00	\$0.00	\$52,016.14
1550	Scientific Instruments	\$162,084.70	\$0.00	\$16,057.68
6625	Remodeling and Renovation	\$0.00	\$0.00	\$41,474.00
Total		\$307,000.00	\$307,000.00	\$307,000.00
Notes:				
NEC = Not Elsewhere Classified				
Source: Chicago State University.				

CSU’s expenditures from the GPD Fund totaled \$307,000 in **fiscal year 2012** and were used for operations associated with its pharmacy program. Some of the larger expenditures are shown below (with the SAMS manual detail object code):

- 1245 – Professional/Artistic Services\$21,845
 - Four-day Pharmacy Board Review (\$14,000). Two instructors for Pharmacy Licensing Review (e.g., pharmacotherapy of select common chronic conditions, calculations, acute conditions and OTC topics).

- Live Text, Inc. (\$6,645). This vendor houses student pharmacist assessment data, student learning portfolios, and other college curriculum/assessment data. A license for all incoming first year students is purchased prior to their fall matriculation and students use the service while enrolled in the program.
- Consulting (\$1,200). Facilitate a four-hour workshop for fourth year students to include professional growth, personal and professional goal and timeline setting, and completion of personal analysis.

1277 – Association Dues\$51,283

- American Association of Colleges of Pharmacy (\$24,000) and Accreditation Council for Pharmacy (\$26,935), both for dues.

1510 – Office Furniture and Equipment\$15,567

- Office Furniture (\$13,670). Most purchases included conference tables, corner table, reception seating, and labor charges.
- Partial payment toward copier (over \$1,500).

1550 – Scientific Equipment.....\$162,085

- Laboratory equipment (\$162,085) that included items such as a dual probe set, column oven, analytical pump, 10A and 20A UV detectors, 10A valve release, FRC kit with rack and 0.5 ml tubes, and an M generator.

CSU’s expenditures in **fiscal year 2013** from the GPD Fund were for salaries of its pharmacy program employees. Exhibit 2-5 below provides more details and shows the annual salaries, along with the amount and percent paid from the GPD Fund:

Exhibit 2-5 CSU PHARMACY COLLEGE SALARIES General Professions Dedicated Fund (Fund #22) Fiscal Year 2013			
Description	Annual Salary	Paid From GPD Fund	% Paid From GPD Fund ¹
Dean College of Pharmacy	\$207,096.00	\$51,774.00	25%
Academic Chairperson	\$64,500.00	\$32,250.00	50%
Professor	\$104,748.55	\$27,333.10	26%
Professor	\$102,182.98	\$26,441.62	26%
Associate Professor	\$93,992.37	\$24,378.78	26%
Associate Professor	\$90,104.73	\$22,546.50	25%
Associate Professor	\$90,104.73	\$22,546.50	25%
Assistant Professor	\$89,005.00	\$16,167.50	18%
Associate Professor	\$111,442.00	\$15,264.00	14%
Assistant Professor	\$88,500.00	\$14,250.00	16%
Assistant Professor	\$83,502.00	\$13,917.00	17%
Associate Dean College of Pharmacy	\$153,828.00	\$12,090.50	8%
Research Lab Tech Specialist	\$46,356.00	\$11,589.00	25%
Lab Support Specialist	\$37,596.00	\$9,399.00	25%
Office Administrator	\$32,441.50	\$7,052.50	22%
Total	\$1,395,399.86	\$307,000.00	22%
Notes: ¹ Percentages rounded.			
Source: Chicago State University.			

CSU’s expenditures from the GPD Fund totaled \$307,000 in **fiscal year 2014** and were used for operations associated with its pharmacy program. Some of the larger expenditures are shown below (with the SAMS manual detail object code):

- 1245 – Professional/Artistic Services\$58,693
 - Four-day Pharmacy Board Review (\$17,100) to include pharmacotherapy of select common chronic conditions, calculations, acute conditions and OTC topics.
 - Design/Graphics (\$4,500). Computer generated renderings. Three at \$1,500 each.
 - Consulting (\$2,000). Facilitate a four-hour workshop for fourth year students to include professional growth, personal and professional goal and timeline setting, and completion of personal analysis.
 - Additional vendors provided proofreading, editing, and design work (\$15,737) for newsletters, the annual report, alumni events, fundraising, marketing communications, health fair flyer, etc.
 - University of Chicago Medical Center (\$19,356). Instructional services for preparation and delivery of therapeutics course material, prep and delivery, clinical instruction of students in campus workshops, labs, and seminars and clinical preceptorship of students.

- 1304 – Office & Library Supplies\$25,122
 - Office supplies from two vendors totaled (\$25,122).

- 1308 – Educational & Instructional Supplies\$26,788
 - Exams (\$4,950).
 - Purchases included Dietary Supplements Compendium – 2 volume set, supplement books, plus other books (\$2,252).
 - Purchases included Handbook of Pharmacy Practices, Pediatric and Neonatal Dos (books), Handbook of Injectable Drugs, and other books (\$2,871).
 - Additional vendors included Amazon, Pharmaceutical Press, and Sigma Assessment Systems primarily for pharmaceutical related books.

- 1399 – Commodities\$47,158
 - Promotional products (\$18,772).
 - Commodities (\$27,878) such as cleaners, towels, office supplies, multiple cases of colored paper, toner, monitor, wireless presenters, etc.
 - Large vendors included Business Essentials, Office Max, and CDW Government Supplies.

- 1515 – EDP Equipment\$52,016
 - Dell Computer Corporation (\$52,016) for laptop and desktop computers.

- 6625 – Remodeling and Renovation.....\$41,474
 - Wiring and other electrical repairs (\$41,474).

Southern Illinois University

During fiscal years 2012–2014, the General Assembly appropriated Southern Illinois University \$1,250,000 each year from the GPD Fund for its pharmacy program. The funds were mostly used to pay for salaries of its pharmacy program employees (i.e., Detail Object Code 1120 Regular Positions), as shown in Exhibit 2-6 below.

Exhibit 2-6 Southern Illinois University PHARMACY SCHOOL EXPENDITURES General Professions Dedicated Fund (Fund #22) Fiscal Years 2012 – 2014				
Object Code	Description of Expenditure	FY 2012	FY 2013	FY 2014
1120	Regular Positions	\$1,247,782.62	\$1,210,329.71	\$1,141,222.39
1248	Building and Ground Maintenance	\$0.00	\$39,670.29	\$108,777.61
1599	Equipment, NEC	\$2,217.38	\$0.00	\$0.00
Total		\$1,250,000.00	\$1,250,000.00	\$1,250,000.00
Notes: NEC = Not Elsewhere Classified				
Source: Comptroller’s Monthly Reports (Object Expense/Expenditures by Quarter Report (FY12-14 Final Lapse Period) for Agency Code 664 (SIU).				

Other than paying pharmacy program employees’ salaries, SIUE used some of the funds for building and ground maintenance for the pharmacy school:

1248 – Building and Ground Maintenance (FY13)\$39,670

- Annual payment for janitorial, electrical, and water utility charges, ground maintenance, snow clearing, capital maintenance and other building maintenance costs for the 200 University Park Drive building (where the pharmacy program is located). For FY13, the entire invoice was \$163,894.

1248 – Building and Ground Maintenance (FY14)\$108,778

- The School of Pharmacy partially defrayed the cost of maintaining space for its use. These costs included portions of janitorial, electrical and water utility charges, grounds maintenance, snow clearing, capital maintenance and other building maintenance costs at the 200 University Park Drive building (where the pharmacy program is located). For FY14 this amounted to \$169,630.

Exhibits 2-7 to 2-9 detail the annual salaries of the SIUE pharmacy program employees for **fiscal years 2012, 2013, and 2014**, along with the amount and percent paid from the GPD Fund:

Exhibit 2-7 SIUE PHARMACY SCHOOL SALARIES General Professions Dedicated Fund (Fund #22) Fiscal Year 2012			
Description	Annual Salary	Paid From GPD Fund	% Paid From GPD Fund ²
Chair	\$160,656.89	\$156,940.56	98%
Director	\$130,586.69	\$127,565.95	98%
Professor, Clinical	\$120,806.32	\$118,011.82	98%
Associate Professor	\$112,421.89	\$109,821.34	98%
Associate Professor	\$107,624.48	\$105,134.90	98%
Assistant Professor	\$102,524.35	\$100,152.75	98%
Assistant Professor	\$97,942.60	\$95,676.98	98%
Assistant Professor	\$94,455.18	\$92,051.91	97%
Director	\$66,224.63	\$64,692.72	98%
Bus/Admin Associate	\$58,164.30	\$56,818.84	98%
Assistant Professor	\$93,657.90	\$45,571.70	49%
Academic Adviser	\$44,322.60	\$44,109.58	100%
Office Support	\$29,300.70	\$28,624.19	98%
Office Support	\$27,259.46	\$26,672.88	98%
Office Support	\$28,044.25	\$26,291.86	94%
Associate Professor	\$24,224.20	\$24,224.20	100%
Director	\$64,732.56	\$16,587.07	26%
Office Support	\$29,140.80	\$7,117.91	24%
Faculty Overload	\$1,715.46	\$1,715.46	100%
Total	\$1,393,805.26	\$1,247,782.62 ¹	90%
Notes:			
¹ The remaining \$2,217.38 from the GPD Fund was used for digital sign equipment.			
² Percentages rounded.			
Source: Southern Illinois University Edwardsville.			

Exhibit 2-8 SIUE PHARMACY SCHOOL SALARIES General Professions Dedicated Fund (Fund #22) Fiscal Year 2013			
Description	Annual Salary	Paid From GPD Fund	% Paid From GPD Fund ²
Chair	\$160,911.13	\$160,911.13	100%
Director	\$130,793.33	\$130,793.33	100%
Professor, Clinical	\$120,997.47	\$120,997.47	100%
Associate Professor	\$119,217.88	\$119,217.88	100%
Associate Professor	\$112,599.84	\$112,599.84	100%
Associate Professor	\$107,794.80	\$107,794.80	100%
Associate Professor	\$98,097.60	\$98,097.60	100%
Associate Professor	\$95,134.00	\$95,134.00	100%
Director	\$66,310.07	\$66,310.07	100%
Bus/Admin Associate	\$58,239.33	\$58,239.33	100%
Associate Professor	\$94,632.59	\$51,919.90	55%
Office Support	\$30,928.90	\$30,928.86	100%
Office Support	\$29,629.70	\$29,629.10	100%
Adviser, Academic	\$15,216.35	\$15,216.35	100%
Faculty Overload	\$10,665.05	\$10,665.05	100%
Research Assistant	\$12,428.00	\$1,875.00	15%
Total	\$1,263,596.04	\$1,210,329.71 ¹	96%
Notes:			
¹ The remaining \$39,670.29 from the GPD Fund was used for building and ground maintenance.			
² Percentages rounded.			
Source: Southern Illinois University Edwardsville.			

Exhibit 2-9 SIUE PHARMACY SCHOOL SALARIES General Professions Dedicated Fund (Fund #22) Fiscal Year 2014			
Description	Annual Salary	Paid From GPD Fund	% Paid From GPD Fund ²
Chair	\$164,209.88	\$164,209.88	100%
Director	\$133,474.55	\$133,474.55	100%
Associate Professor	\$121,661.77	\$121,661.77	100%
Associate Professor	\$110,344.27	\$110,344.27	100%
Associate Professor	\$110,004.51	\$110,004.51	100%
Professor	\$126,337.01	\$126,337.01	100%
Professor, Clinical	\$123,477.85	\$123,477.85	100%
Associate Professor	\$106,551.71	\$69,266.67	65%
Director	\$67,636.31	\$67,636.31	100%
Bus/Admin Associate	\$59,404.10	\$59,404.10	100%
Office Support	\$30,661.02	\$30,661.02	100%
Office Support	\$35,764.75	\$14,093.75	39%
Faculty Overload	\$9,973.62	\$9,973.62	100%
Research Assistant	\$677.08	\$677.08	100%
Total	\$1,200,178.43	\$1,141,222.39	95%
Notes:			
¹ The remaining \$108,777.61 from the GPD Fund was used for building and ground maintenance.			
² Percentages rounded.			
Source: Southern Illinois University Edwardsville.			

University of Illinois

During fiscal years 2012–2014, the General Assembly appropriated \$500,000 to the University of Illinois each year from the GPD Fund for its pharmacy program. The money was primarily used to pay for the salaries of its pharmacy program employees at the Rockford campus (i.e., Detail Object Code 1120 Regular Positions), as shown in Exhibit 2-10 below.

Exhibit 2-10 University of Illinois PHARMACY COLLEGE EXPENDITURES General Professions Dedicated Fund (Fund #22) Fiscal Years 2012 – 2014				
Object Code	Description of Expenditure	FY 2012	FY 2013	FY 2014
1120	Regular Positions	\$499,893.86	\$499,615.52	\$500,000.00
1225	Repair & Maintenance of EDP Equipment	\$62.00	\$0.00	\$0.00
1304	Office & Library Supplies	\$24.25	\$384.48	\$0.00
1398	Equipment NEC ¹ Not Over \$100	\$19.89	\$0.00	\$0.00
Total		\$500,000.00	\$500,000.00	\$500,000.00
Notes:				
¹ NEC = Not Elsewhere Classified Source: Comptroller's Monthly Reports (Object Expense/Expenditures by Quarter Report (FY12-14 Final Lapse Period) for Agency Code 676 (U of I)).				

Exhibits 2-11 to 2-13 below show the annual salaries of the UIC pharmacy program employees for **fiscal years 2012, 2013, and 2014**, along with the amount and percent paid from the GPD Fund:

Exhibit 2-11 UIC PHARMACY COLLEGE SALARIES General Professions Dedicated Fund (Fund #22) Fiscal Year 2012			
Description	Annual Salary	Paid From GPD Fund	% Paid From GPD Fund ²
Vice Dean for Rockford Programs Salary Costs	\$183,675.02	\$126,175.04	69%
Director, Rockford Experiential Education Salary Costs	\$111,750.04	\$98,875.04	88%
Pharmacy Lab Instruction Coordinator Salary Costs	\$66,421.85	\$58,296.84	88%
Rockford Business Manager Salary Costs	\$55,531.22	\$48,781.22	88%
Assistant to the Vice Dean Salary Costs	\$49,362.76	\$41,479.99	84%
Administrative Assistant, Experiential Education Salary Costs	\$37,862.89	\$32,641.09	86%
Rockford P2 Class Coordinator Salary Costs	\$38,264.46	\$28,333.30	74%
Director, Rockford Student Affairs Salary Costs	\$36,106.80	\$27,981.79	77%
Rockford P1 Class Coordinator Salary Costs	\$26,250.00	\$26,250.00	100%
Director, Rockford Student Affairs Salary Costs	\$11,079.56	\$11,079.56	100%
Total	\$616,304.60	\$499,893.87¹	81%
Notes:			
¹ The remaining \$106.13 from the GPD Fund was used for office operating expenses and supplies. ² Percentages rounded.			
Source: University of Illinois at Chicago.			

Exhibit 2-12 UIC PHARMACY COLLEGE SALARIES General Professions Dedicated Fund (Fund #22) Fiscal Year 2013			
Description	Annual Salary	Paid From GPD Fund	% Paid From GPD Fund ²
Vice Dean for Rockford Programs	\$186,981.69	\$147,061.09	79%
Director, Rockford Experiential Education	\$114,748.82	\$114,748.82	100%
Rockford Business Manager	\$59,349.70	\$59,349.70	100%
Pharmacy Lab Instruction Coordinator	\$67,656.04	\$53,633.08	79%
Assistant to the Vice Dean Costs	\$51,362.93	\$51,362.93	100%
Administrative Assistant, Experiential Education	\$38,371.23	\$38,371.23	100%
Director, Rockford Student Affairs	\$64,871.08	\$13,541.68	21%
Director, Computer Services (Rockford)	\$73,887.53	\$6,188.44	8%
Rockford P3 Class Coordinator	\$34,155.53	\$5,666.67	17%
Rockford P1 Class Coordinator	\$32,156.20	\$5,250.00	16%
Computer Specialist (Rockford)	\$53,002.73	\$4,441.88	8%
Total	\$776,543.48	\$499,615.52 ¹	64%
Notes:			
¹ The remaining \$384.48 from the GPD Fund was used for office operating expenses and supplies.			
² Percentages rounded.			
Source: University of Illinois at Chicago.			

Exhibit 2-13 UIC PHARMACY COLLEGE SALARIES General Professions Dedicated Fund (Fund #22) Fiscal Year 2014			
Description	Annual Salary	Paid From GPD Fund	% Paid From GPD Fund ¹
Vice Dean for Rockford Programs	\$192,381.12	\$152,301.79	79%
Director, Rockford Experiential Education	\$118,262.11	\$118,262.11	100%
Rockford Business Manager	\$68,869.02	\$68,869.02	100%
Pharmacy Lab Instruction Coordinator	\$69,727.55	\$61,098.03	88%
Administrative Assistant, Experiential Education	\$39,282.56	\$38,978.06	99%
Assistant to the Vice Dean	\$33,627.08	\$33,627.08	100%
Assistant to the Vice Dean	\$21,284.74	\$21,284.74	100%
Director, Rockford Student Affairs	\$66,835.26	\$5,579.17	8%
Total	\$610,269.44	\$500,000.00	82%
Notes:			
¹ Percentages rounded.			
Source: University of Illinois at Chicago.			

Chapter 3

Universities' Studies on the Need for Pharmacists

CHAPTER CONCLUSIONS

The second determination of House Resolution Number 204 asked whether each university had performed any study or analysis of the need for pharmacists, in particular in rural areas. We requested any such studies that the universities had performed; Chicago State University, Southern Illinois University, and the University of Illinois said they had performed the following studies/analyses:

- CSU's analysis, conducted in April 2015, reported that its pharmacy program helps to meet the needs that were found, namely that over one-third of pharmacists were age 55 and will be retiring, the racial diversity of licensed pharmacists does not represent the U.S. population, there was a need for pharmacists in underserved areas, and segregated neighborhoods had less access to prescriptions.
- SIU said the need for a pharmacy program was identified by its consultant in 2000. In addition, it uses pharmacy graduate data by county which shows that 20 to 25 percent of its graduates from each class reside in rural counties in Illinois, are licensed as pharmacists, and are plotted by SIUE on a map of Illinois by county. *"These pharmacists are in rural communities because there is employment in these communities."*
- UIC's analysis, submitted in July 2015, reported that it created a concentration in rural pharmacy services because the demand for pharmacists is often high in rural communities where access to medical services may be limited; in addition, there was a national shortage and maldistribution of pharmacists.

In September 2015 we sent universities a Data Collection Instrument (DCI) to gather information about their pharmacy programs and asked for the reason they had established a pharmacy program, along with any supporting documentation. The universities provided their supporting documentation for establishing their pharmacy/rural pharmacy programs which showed the following:

- CSU completed an educational survey for the federal government which stated that underrepresented minorities have limited access to pharmacy education and that enrollment of African-Americans in Midwestern pharmacy schools was only

three percent in 2003. It also said CSU could offer learning experiences to overcome barriers that underrepresented minorities face.

- SIUE retained a consultant to evaluate the need for a new pharmacy program; he reported in 2000 that there was a need for pharmacists in Illinois as well as an adequate pool of applicants.
- UIC provided its Request for a New Unit of Instruction to the Illinois Board of Higher Education. It indicated there was a national shortage and maldistribution of pharmacists and rural communities were served by fewer health care professions per capita. Nearly 50 million Americans live in rural communities which had about half the number of health care professionals as urban or suburban areas.

STUDIES ON NEED FOR PHARMACISTS

House Resolution Number 204 asked whether each university has performed any study or analysis of the need for pharmacists in the labor market and, in particular, in rural areas and whether it demonstrates how the university’s program meets any identified need.

HOUSE RESOLUTION #204

Has each university performed any study or analysis of the need for pharmacists, particularly in rural areas, and whether that study or analysis demonstrates how the university’s program meets any needs identified?

We asked the universities for any studies or analyses they had performed. The universities said they had conducted a study or analysis which they provided:

Chicago State University

Chicago State University provided an analysis dated April 2015 that was titled “Response Report to the Illinois General Assembly, House Resolution HR0204, Pharmacist Workforce Statistics and Characteristics” (see Appendix B). CSU indicated the following:

- The analysis noted that 37 percent of practicing pharmacists are age 55 or older. *“As a result, these pharmacists will begin to retire in large numbers.”*
- The racial diversity of licensed pharmacists in the United States does not represent the racial diversity of the U.S. population. *“In 2014, 85.1% of pharmacists were white. Pharmacists from combined Native American, Hispanic, and related populations represented 4.1%. The proportion of African American pharmacists has remained between 2-2.3% over a 14-year period. The College’s mission helps to address these workforce disparities as it currently is recognized as having the 10th highest underrepresented minority student enrollment among 130 colleges/schools of*

pharmacy nationally and the highest enrollment of that demographic within the State of Illinois.”

- CSU stated that its pharmacy program addresses the need for pharmacists in underserved areas. A community classified as having an Index of Medical Underservice (IMU) of 62 or less qualifies as a Medically Underserved Area. In Illinois, 79 of 102 counties have medically underserved areas. The CSU College of Pharmacy is located in an area where the IMU is 16. CSU students complete training and community service in pharmacies within metropolitan Chicago communities where the IMU score ranges between 0-20.
- CSU noted that the areas that lack pharmacies are more common in segregated black and Hispanic communities, particularly those that were classified as low-income and medically underserved areas. *“Consistent with its mission, the College has been successful in incorporating student pharmacists and college faculty members into community health centers located in Medically Underserved Areas.”*
- An evaluation done by the college showed that 59 percent of graduates were practicing in urban areas (50,000 or more) while the remaining graduates were in communities with less than 50,000 residents.
- Approximately two-thirds of its graduates’ primary work sites were in underrepresented minority communities.

Southern Illinois University Edwardsville

Southern Illinois University Edwardsville said the need for a pharmacy program was identified by its consultant in 2000.

- SIUE said it uses data on pharmacy graduates which shows that 20 to 25 percent of its graduates from each class reside in rural counties in Illinois, are licensed as pharmacists, and are plotted by SIUE on a map of Illinois by county.
- SIU noted that these pharmacists are in rural communities because there is employment in these communities.

University of Illinois at Chicago

The University of Illinois at Chicago provided its July 2015 analysis titled “House Resolution #204 Audit Response, University of Illinois at Chicago” (see Appendix D). The study reported the following results:

- UIC created a rural pharmacy program in Rockford due to a national shortage and maldistribution of pharmacists. The overall shortage has been somewhat alleviated over the past several years.

- The demand for pharmacists is often high in rural communities where access to medical services may be limited. Based on data and analysis, the College of Pharmacy created a concentration in rural pharmacy services, also known as the Rural Pharmacy Education Program (RPHARM), as an option within the Doctor of Pharmacy degree program.
- The students who are drawn to the Rockford campus, and the RPHARM program in particular, tend to be from rural areas of the State.
- The rural shortage is evidenced by the fact that salaries offered to pharmacists in rural areas are higher than in the urban areas while the cost of living is lower in rural areas.
- There are currently 143 students enrolled in the Doctor of Pharmacy program on the Rockford campus, including 22 in the rural pharmacy program.

REASON FOR ESTABLISHING THE PHARMACY PROGRAM

In September 2015, we sent universities a Data Collection Instrument to gather information about their pharmacy programs and asked for their reason for establishing a pharmacy program, along with any supporting documentation. The universities provided their supporting documentation for creating their pharmacy/rural pharmacy programs.

Chicago State University

CSU provided a copy of a document titled *Labor, HHS, Education and Related Agencies Subcommittee Questionnaire To Establish the Chicago State University College of Pharmacy* that was addressed to former U.S. Rep. Jesse Jackson, Jr.

This document stated that a pharmacy program at CSU would help minority populations:

Underrepresented minorities have had limited access to pharmacy education. As a result, less than 10% of enrolled pharmacy students are Black or African-American and less than 4% are Hispanic or Latino. In addition, 5.4% and 2.6% of all full-time faculty in the 82 U.S. pharmacy schools are Black or Hispanic, respectively.

In 2003, the enrollment of African-Americans in the eighteen existing midwestern colleges/schools of pharmacy was only 3.1%. This number compares unfavorably to the national average of 9.9%.

To address the aforementioned problem, Chicago State University (CSU) is seeking to establish a college of pharmacy. Underrepresented minorities will find Chicago State

**Office of the Auditor General
DATA COLLECTION INSTRUMENT
QUESTIONS
September 2015**

27. ANALYSIS. What was your university's reason for establishing the pharmacy/rural pharmacy program?

28. SUPPORT. Did your university research the need for a new pharmacy/rural pharmacy program before it was established and collect any documents (e.g., surveys, analysis, or assessments) which showed a need existed for a new pharmacy program?

University's educational environment to be culturally and economically diverse. The faculty at CSU is dedicated, caring and culturally diverse. CSU's mission to provide such an environment, which will offer learning experiences that enable students to flourish academically and personally, will help to overcome the barrier underrepresented minorities face in pharmacy education. Additionally, the College of Pharmacy will recruit both students and faculty utilizing methods that have proven to be successful for the University. For example, the College of Pharmacy will:

- recruit most of its students from the pool of pre-professional students currently attending CSU (95% African-American);
- recruit students and faculty from institutions with historically high percentages of underrepresented minority students; and
- promote pharmacy education and create a summer enrichment program for middle and high school students within underrepresented communities.

CSU indicated it could offer learning experiences to enable students to flourish academically and overcome barriers that underrepresented minorities face. The document concluded by noting that when established, *"CSU will be the only predominately African-American university in the Midwest with a pharmacy program."*

Southern Illinois University

SIUE retained a consultant to undertake a feasibility analysis and submit recommendations regarding the prospects of developing a School of Pharmacy. The consultant reported in 2000 that SIUE had the basic infrastructure and leadership and there was a need for pharmacists in Illinois, along with an adequate pool of applicants. The consultant's report reported the following:

- SIU's mission defines health sciences education as a focus and a School of Pharmacy would be congruent with this mission.
- The Edwardsville campus provides dental medicine and nursing education and has the infrastructure, culture, and leadership to develop a new School of Pharmacy.
- Leadership at regional pharmacy programs in Chicago and St. Louis report a large, unserved applicant pool and a shortage of pharmacists.
- Pharmacy graduates have numerous employment opportunities within the region, often being employed before graduation.

The consultant also noted that SIUE *"had the resources in place to support a new pharmacy school; however, adequate facilities have not yet been identified. Careful consideration of potential sites for clinical education is a priority."* He recommended that SIUE target enrollment for 75 students per class and employ 40 pharmacy faculty members.

University of Illinois

UIC provided its Request for a New Unit of Instruction to the Illinois Board of Higher Education. It indicated there was a national shortage and maldistribution of pharmacists and rural communities were served by fewer health care professions per capita. Nearly 50 million Americans live in rural communities which had about half the number of health care professionals as urban or suburban areas. UIC said the rural pharmacy program (RPHARM) was established to prepare pharmacy students to practice in rural Illinois areas which are served by fewer health care professionals per capita.

- The rural pharmacy program (RPHARM) was established to prepare pharmacy students to practice in rural Illinois. *“Rural communities in the United States are served by fewer health care professionals per capita. Rural communities have about half the number of health care professionals compared to urban or suburban areas. Further, 49 million Americans (about 17% of the total population) live in rural communities. However, this population is spread over approximately 4/5th of the American landmass. Accessing healthcare services in rural communities can be difficult at best and the resulting presence of significant rural health disparities is well documented in the literature. There are 102 counties in Illinois. Of these, six are urban or suburban. There are an additional thirteen counties that contain significant regional cities (e.g., Urbana, Rockford and Peoria). However, that leaves 83 counties in Illinois that could be classified as rural. Approximately 1.7 million Illinois residents live in rural communities. Rural counties in Illinois have higher per capita concentrations of older individuals than urban or suburban counties. These individuals can be separated from pharmacy services by significant distances and generally have less access to pharmacy services than their urban counterparts.”*
- Incomes in rural areas of Illinois are lower on a per capita basis than urban or suburban areas. *“The combination of age, distance and economics makes it clear that providing pharmacy services in rural communities is especially challenging. To ensure the successful provision of pharmacy services to individuals in rural communities, new pharmacists must be equipped to face these challenges.”*

COUNTIES WHERE PHARMACY ALUMNI WORK

Two of the three universities had information on where their alumni work – Southern Illinois University and the University of Illinois. Chicago State University said its survey of graduates does not ask where its graduates are working. Below are maps which show the counties where their pharmacy graduates were working. In addition, Exhibit 3-4 combines the graduates of SIUE and UIC to show the counties where their graduates were working.

CENSUS BUREAU

The Census Bureau identifies two types of urban areas:

- Urbanized Areas (UAs) of 50,000 or more people;
- Urban Clusters (UCs) of at least 2,500 and less than 50,000 people.

“Rural” encompasses all population, housing, and territory not included within an urban area.

Southern Illinois University

Southern Illinois University Edwardsville said that since 2009, when the inaugural class graduated, its School of Pharmacy has informally monitored where graduates practice. The map below depicts the number of SIUE School of Pharmacy graduates by Illinois County and distinguishes between rural and metropolitan counties.

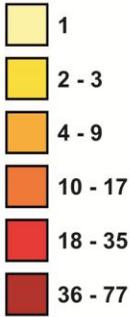
For the purposes of its reporting, SIU identified rural counties “. . . using a 2013 county classification from the Illinois Department of Public Health (IDPH), Center for Rural Health. In the IDPH report, rural was specifically defined as a county not part of a metropolitan statistical area an (MSA), as defined by the U.S. Census Bureau; or a county that is part of an MSA but has a population less than 60,000. This definition was delineated on the map which differentiated Illinois counties by rural or urban classification”

Exhibit 3-1, along with the map on the next page in Exhibit 3-2, shows in **blue** that 72 of SIUE’s 288 pharmacy graduates/alumni during 2009-2014 (or 25%) were working in rural counties.

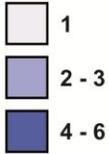
Counties	Graduates
1. Adams	3
2. Bond	1
3. Carroll	1
4. Champaign	9
5. Christian	1
6. Clark	2
7. Clinton	2
8. Coles	1
9. Cook	15
10. Cook/DuPage	3
11. Crawford	3
12. Douglas	1
13. DuPage	1
14. Edgar	1
15. Effingham	4
16. Franklin	6
17. Fulton	1
18. Gallatin	2
19. Grundy/Kendall	1
20. Hamilton	1
21. Hancock	2
22. Henry	2
23. Jackson	2
24. Jasper	2
25. Jefferson	1
26. Jefferson/Kendall	2
27. Jersey	2
28. Johnson	2
29. LaSalle	1
30. Lawrence	1
31. Livingston	2
32. Logan	1
33. Macon	3
34. Macoupin	2
35. Madison	69
36. Marion	2
37. Massac	2
38. McHenry	1
39. McLean	13
40. Monroe	5
41. Montgomery	1
42. Morgan	2
43. Moultrie	1
44. Peoria	7
45. Perry	1
46. Piatt	1
47. Pike	1
48. Randolph	4
49. Richland	1
50. Rock Island	1
51. Saline	2
52. Sangamon	35
53. St. Clair	25
54. St. Clair/Madison	8
55. Tazewell	7
56. Union	1
57. Wayne	2
58. Whiteside	1
59. Will	2
60. Williamson	4
61. Winnebago	3
62. Woodford	2
Total	288
Note: Blue shading represents rural counties. Source: Southern Illinois University Edwardsville.	

Exhibit 3-2 SIUE PHARMACY GRADUATES BY COUNTY 2009-2014

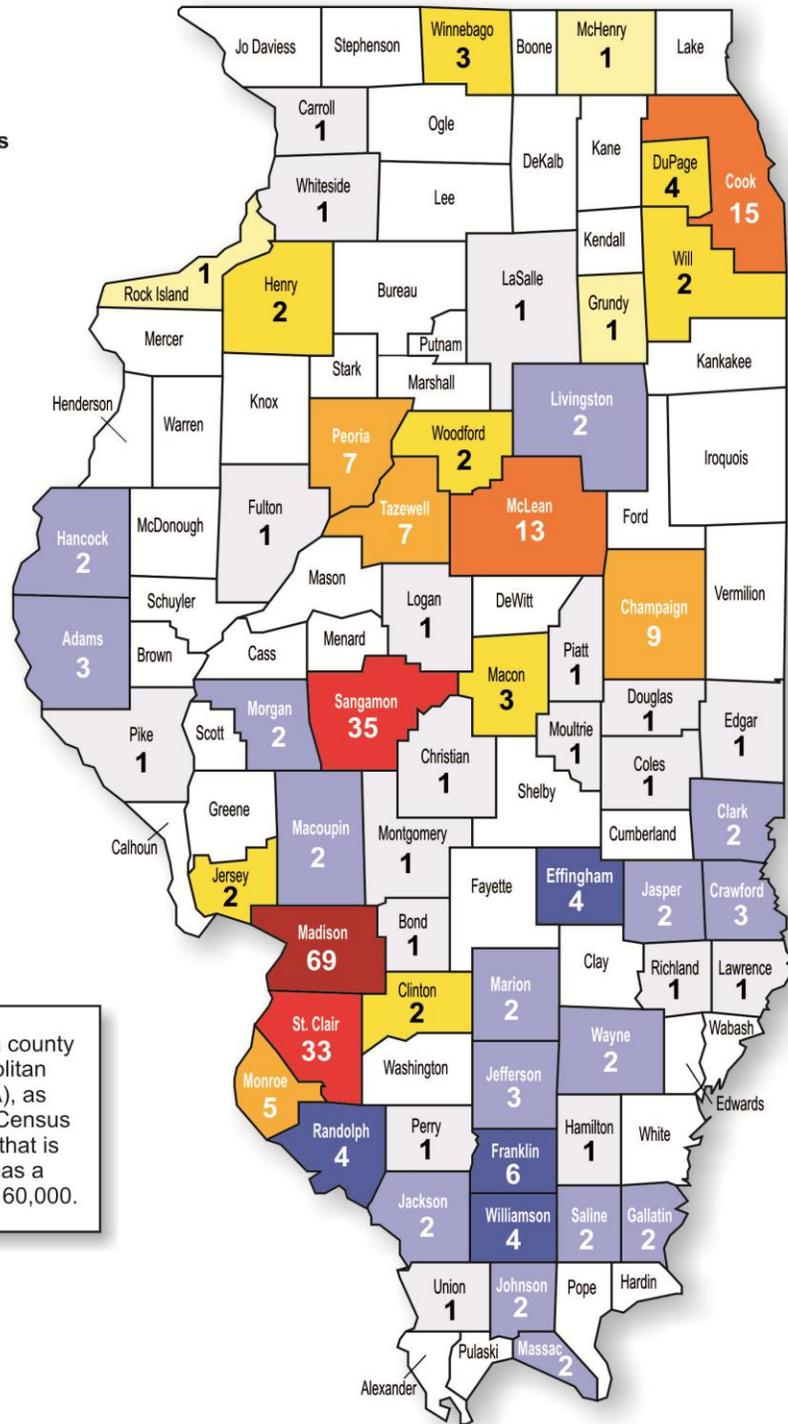
Metropolitan Counties



Rural Counties



Rural is defined as a county not part of a metropolitan statistical area (MSA), as defined by the U.S. Census Bureau; or a county that is part of an MSA but has a population less than 60,000.

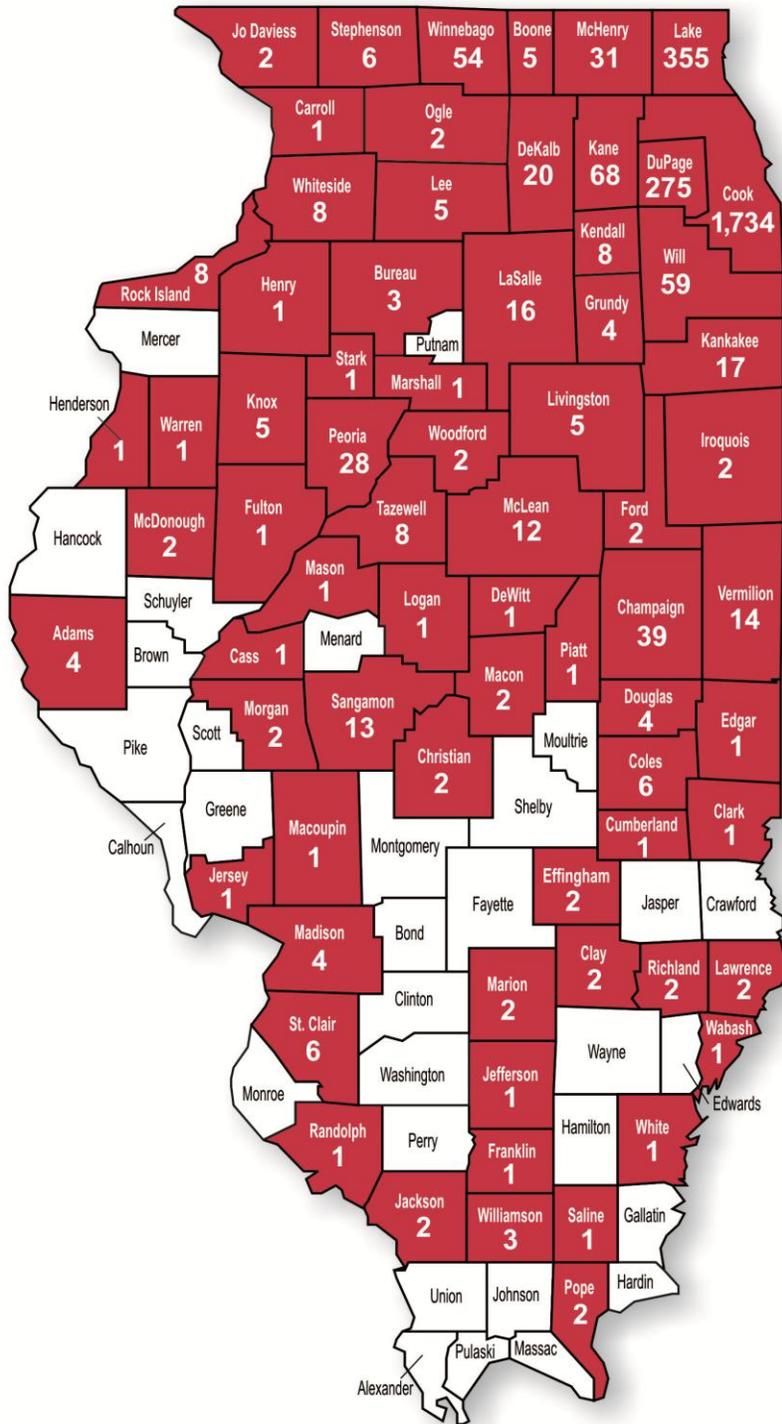


Source: Southern Illinois University Edwardsville.

University of Illinois

The University of Illinois provided a map showing where its pharmacy program alumni are currently working in Illinois, by county, through September 2015. UIC started its rural pharmacy program recently in 2010 and its first class graduated in 2014. The map of where its pharmacy program graduates are working is shown below in Exhibit 3-3:

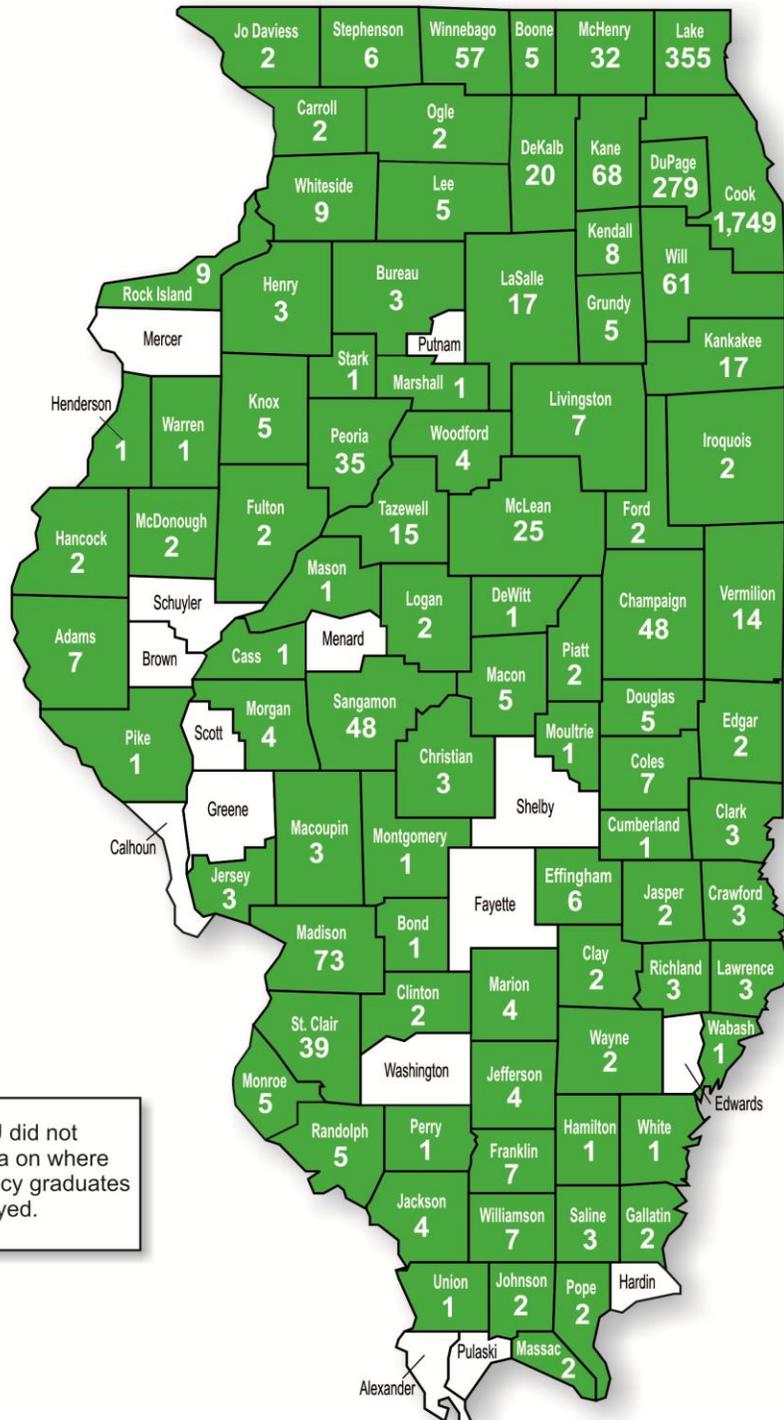
**Exhibit 3-3
UIC COLLEGE OF PHARMACY GRADUATES BY COUNTY
September 2015**



Source: University of Illinois at Chicago.

Exhibit 3-4 below combines the number of pharmacy graduates from SIUE and UIC and shows the counties where their graduates were working. CSU did not collect information on where its graduates are working.

**Exhibit 3-4
COUNTIES WITH GRADUATES FROM SIUE AND UIC
WORKING AS PHARMACISTS**



Note: CSU did not collect data on where its pharmacy graduates are employed.

Source: Southern Illinois University Edwardsville and University of Illinois at Chicago.

Appendix A
HOUSE RESOLUTION NUMBER 204

STATE OF ILLINOIS
HOUSE OF REPRESENTATIVES
99TH GENERAL ASSEMBLY

HOUSE RESOLUTION No. 0204

OFFERED BY REPRESENTATIVES KELLY BURKE-KENNETH DUNKIN

RESOLVED, BY THE HOUSE OF REPRESENTATIVES OF THE NINETY-NINTH GENERAL ASSEMBLY OF THE STATE OF ILLINOIS, that the Auditor General is directed to conduct a program audit of appropriations from the General Professions Dedicated Fund for Fiscal Years 2012, 2013, and 2014 for costs associated with the development, support, or administration of pharmacy practice education and training at Chicago State University, the University of Illinois, and Southern Illinois University; and be it further

RESOLVED, That the audit include, but not be limited to, the following determinations:

- (1) the purposes for which the appropriations were used; and
- (2) whether each university has performed any study or analysis of the need for pharmacists in the labor market and, in particular, in rural areas and whether that study or analysis demonstrates how the university's program meets any identified need; and be it further

RESOLVED, That Chicago State University, Southern Illinois University, the University of Illinois, the Board of Higher Education, and any other entity having information relevant to this audit cooperate fully and promptly with the Auditor General's office in the conduct of this audit; and be it further

RESOLVED, That the Auditor General commence this audit as soon as possible and report his findings and recommendations upon completion in accordance with the provisions of Section 3-14 of the Illinois State Auditing Act; and be it further

RESOLVED, That suitable copies of this resolution be delivered to the Auditor General, the Board of Higher Education, and the Board of Trustees of Chicago State University, the University of Illinois, and Southern Illinois University.

Timothy D. Mapes
TIMOTHY D. MAPES
CLERK OF THE HOUSE



Michael J. Madigan
MICHAEL J. MADIGAN
SPEAKER OF THE HOUSE

Appendix B
CHICAGO STATE UNIVERSITY
Analysis of the Need for Pharmacists

**Chicago State University College of Pharmacy
Response Report to the Illinois General Assembly
House Resolution HR0204
April 2015**

Pharmacist Workforce Statistics and Characteristics

The mission of the Chicago State University College of Pharmacy (CSU-COP) focuses on the development of student and faculty scholars who will impact the health care needs of people in the region, state and nation. The College's mission also emphasizes the transformation of students, from diverse backgrounds, into practitioners who are committed to providing culturally competent and humanistic health care service with an emphasis on the reduction of health care disparities.

Periodic analysis of the current and future labor markets for pharmacists include those conducted by the Bureau of Labor Statistics within the U.S. Department of Labor and the Midwest Pharmacy Workforce Research Consortium, which is located at the University of Minnesota. The data obtained from these and other validated national research sources enables the College to develop recruitment, curricular, and programmatic strategies aligned with local, state and national workforce trends. Access to this valuable data also reduces the significant expense of undertaking potentially redundant college-based research projects aimed at the identification of similar information.

The profession of pharmacy is experiencing dynamic times as a health profession. A recently released pharmacist workforce study reported that over 37% of currently practicing pharmacists are of age of 55 or older.¹ As a result, these pharmacists will begin to retire in large numbers. As a result of this and related trends, the profession will need to continue building capacity for contributing to the U.S. health care system. The deployment of this capacity must also meet the requirements of changing health care service models that are prominent in federal and state health care reform initiatives. The current curricula of colleges/schools of pharmacy, including at the CSU-COP, are focused on these key trends.²

The racial diversity of licensed pharmacists in the United States continues to not represent the racial diversity of the U.S. population. In 2014, 85.1% of pharmacists were white. Pharmacists from combined Native American, Hispanic, and related populations represented 4.1%. The proportion of African American pharmacists has remained between 2-2.3% over a 14-year period. The College's mission helps to address these workforce disparities as it currently is recognized as having the 10th highest underrepresented minority student enrollment among 130 colleges/schools of pharmacy nationally and the highest enrollment of that demographic within the State of Illinois.³

Sources:

¹ 2014 National Pharmacist Workforce Survey. Midwest Pharmacy Workforce Research Consortium. Minneapolis, MN. April 2015.

² *U.S. Department of Labor Bureau of Labor Statistics*

<http://www.bls.gov/oes/current/oes291051.htm#st> (accessed 4/21/15)

³ *American Association of Colleges of Pharmacy 2013 Institutional Research*

Another critical consideration for pharmacy education pertains to addressing area health care needs related to medically underserved areas/populations. The federal index of Medical Underservice (IMU) scale is from 0-100, where 0 represents completely underserved and 100 represents best served or least underserved. A community classified as having an IMU of 62.0 or less qualifies for designation as a Medically Underserved Area (MUA). In the State of Illinois, access to health care is a serious issue. Seventy-nine of 102 Illinois counties include areas designated as medically underserved.⁴ The College of Pharmacy is located and educates its student pharmacists in the Roseland/Pullman/Burnside community where the current IMU score is 16. Throughout their 4 years of enrollment, the majority of the College's students completes experiential training and engages in health care-related community service endeavors in pharmacy practice settings within metropolitan Chicago communities where the IMU score ranges between 0-20.

⁴ *Source: U.S. Department of Health and Human Services* <http://hpsafind.hrsa.gov/> (accessed 4/21/15)

The segregation of residential neighborhoods by race or ethnicity has also been shown to affect access to prescription medications within a community.⁵ Pharmacy deserts (i.e., low-access neighborhoods), are more common in segregated black and Hispanic communities than in other communities, particularly those that were classified as low-income and federally designated Medically Underserved Areas. Consistent with its mission, the College has been successful in incorporating student pharmacists and college faculty members into community health centers located in Medically Underserved Areas (e.g., Access Community Health Network, CommunityHealth, etc.) to help address and reduce these disparities.

⁵ *Source: Qato DM, Daviglus ML, Wilder J, Lee T, Qato D, Lambert B. Pharmacy deserts are prevalent in Chicago's predominantly minority communities, raising medication access concerns. Health Aff. 33(11); 2014:1958-65.*

The College recently conducted an evaluation of its alumni to determine the success of its mission in the area of providing health care services to patients located in urban and/or rural communities with an emphasis on those serving underrepresented minority or medically underserved populations. Results from the analysis were indicative of the following:

Fifty-nine percent of graduates were practicing in community, hospital, or ambulatory care pharmacy settings located with urban communities (50,000 residents or greater), thirty-eight percent in urbanized communities (2,500 to 49,999 residents), and three percent in rural communities (<2,500 residents). Of these pharmacists, sixty-eight percent also indicated that their primary work sites were located in communities with populations

reflective of higher (>20%) underrepresented minority constituent demographics. These results, in addition to other related evaluations, help to validate the College's successful achievement of its mission.

The College is pleased to share the results of its analyses with members of the Illinois General Assembly. We look forward to expanding upon our successes while continuing to positively impact the overall health of Illinois citizens and providing a high-quality, affordable pharmacy education to our students.

Miriam A. Mobley Smith, PharmD, FASHP
Dean and Professor
Chicago State University College of Pharmacy

Appendix C
SOUTHERN ILLINOIS UNIVERSITY
Analysis of the Need for Pharmacists

**Report on Southern Illinois University
Edwardsville (SIUE)**

SCHOOL OF PHARMACY

**Alumni Licensed to Practice Pharmacy in
Illinois**

Introduction and Procedure:

- Since 2009, when the inaugural class graduated, the SIUE School of Pharmacy has informally monitored where graduates will be practicing by asking them during the pre-commencement week where they intend to work. Additionally, SIU has had discussions with prospective employers during our Health Careers Fair every November about the job market.
- The Illinois Department of Financial and Professional Regulation maintains a database of all pharmacists licensed in Illinois by county of residence.
- For the purposes of this report we [SIU] looked up licensure information of SIUE School of Pharmacy alumni from 2009-2014.
- The map below depicts the number of SIUE School of Pharmacy graduates by Illinois county. The counties are identified by different colors to differentiate between rural and metropolitan. *“Rural is defined as a county not part of a metropolitan statistical area (MSA), as defined by the U.S. Census Bureau; or a county that is part of a MSA but has a population less than 60,000.”*
- The neighboring table provides a count of SIUE School of Pharmacy graduates by county and was used to create the map on the next page.

SIUE School of Pharmacy Alumni Licensed to Practice in Illinois By County 2009 – 2014	
COUNTY	GRADUATES
1. Adams	3
2. Bond	1
3. Carroll	1
4. Champaign	9
5. Christian	1
6. Clark	2
7. Clinton	2
8. Coles	1
9. Cook	15
10. Cook/DuPage	3
11. Crawford	3
12. Douglas	1
13. DuPage	1
14. Edgar	1
15. Effingham	4
16. Franklin	6
17. Fulton	1
18. Gallatin	2
19. Grundy/Kendall	1
20. Hamilton	1
21. Hancock	2
22. Henry	2
23. Jackson	2
24. Jasper	2
25. Jefferson	1
26. Jefferson/Kendall	2
27. Jersey	2
28. Johnson	2
29. LaSalle	1
30. Lawrence	1
31. Livingston	2
32. Logan	1
33. Macon	3
34. Macoupin	2
35. Madison	69
36. Marion	2
37. Massac	2
38. McHenry	1
39. McLean	13
40. Monroe	5
41. Montgomery	1
42. Morgan	2
43. Moultrie	1
44. Peoria	7
45. Perry	1
46. Piatt	1
47. Pike	1
48. Randolph	4
49. Richland	1
50. Rock Island	1
51. Saline	2
52. Sangamon	35
53. St. Clair	25
54. St. Clair/Madison	8
55. Tazewell	7
56. Union	1
57. Wayne	2
58. Whiteside	1
59. Will	2
60. Williamson	4
61. Winnebago	3
62. Woodford	2
TOTAL	288

Source: Southern Illinois University at Edwardsville.

Appendix D
UNIVERSITY OF ILLINOIS
Analysis of the Need for Pharmacists

**House Resolution #204 Audit Response
University of Illinois at Chicago
July 2015**

Background

The University of Illinois College of Pharmacy is the flagship College of Pharmacy in the State of Illinois and the oldest academic unit of the University of Illinois. Since its inception in 1859, the College has set the national standard for excellence in pharmaceutical research, education, and clinical practice and has historically been among the top ten Colleges of Pharmacy in the United States. The College's vision is to be a global leader in improving human health and benefiting society through pharmaceutical education, research, service and entrepreneurial activity. The College has always been at the forefront of the ever-changing world of Pharmacy and has operated with an unwavering commitment to serving the pharmacy needs of underserved communities of Illinois, including those in the inner city of Chicago and rural portions of Illinois. The University of Illinois College of Pharmacy made the decision to expand its professional PharmD degree program to Rockford, Illinois in 2006 and admitted the first class of students in fall 2010. Since FY 2009, the University of Illinois has been receiving appropriated funds from the General Professions Dedicated Fund for costs associated with the development, support, and administration of the pharmacy program in Rockford.

The decision to expand the pharmacy program to Rockford was in response to a national shortage and maldistribution of pharmacists. The overall shortage has been somewhat alleviated over the past several years; however, the maldistribution still exists in certain urban and rural areas of the state. A study published last year found that 12.1% of the independently owned rural pharmacies in the country closed between March 2003 and December 2013 (Ullrich & Mueller, 2014). The State of Illinois, in particular, had 25 rural communities that either lost their only pharmacy or went from more than one pharmacy down to only one over this time period. Many rural pharmacies close due to the difficulty of recruiting new pharmacists to these rural communities (Todd, Westfall, Doucette, Ullrich, & Mueller, 2013). From the inception of the PharmD program in Rockford to the present, the College of Pharmacy has monitored workforce data to evaluate and improve its pharmacy programs. In a variety of settings, which have included meetings with the administrative officers of the College and meetings with students, workforce development data has been discussed and shared as the College continuously evaluates everything from its admissions practices to content for the academic curriculum to experiential and residency opportunities for the students. In response to House Resolution #204, this document outlines the key data points and reports utilized by the University of Illinois College of Pharmacy in the school's ongoing and continuous study and assessment of the need for pharmacists in the labor market, particularly in rural areas, and how the Rockford program helps meet these needs.

Rural Pharmacy Focus

Demand for pharmacists is often high in rural communities where access to medical services may be limited. Based on data and analysis, the College of Pharmacy created a concentration in rural pharmacy services, also known as the Rural Pharmacy Education Program (RPHARM) as an option within the Doctor of Pharmacy degree program. The goal of the RPHARM program is to educate students about the unique challenges and opportunities present in rural communities and to prepare them to practice pharmacy in a patient-centered and interprofessional manner. In fact, as part of a collaboration between the Colleges of Pharmacy and Medicine in Rockford, the RPHARM concentration is part of the collaborative Rural Health Professions Program of the University of Illinois Rockford and seeks to prepare pharmacy students from the State of Illinois who will, after graduation, locate and practice in rural Illinois. The Rural Health Professions (RHP) Program is the healthcare education component of the National Center for Rural Health Professions, which promotes the health of rural communities through partnerships in education, service, research and policy. It is an interdisciplinary curriculum that currently trains both pharmacy (RPHARM) and medical (RMED) students for practice in rural communities. As one of our first graduates stated, “I have a passion for small, tight-knit communities. I believe the RPHARM Program offered to Rockford students will greatly prepare me to work effectively in this type of community that I love. This program is one of a kind and at this point [in time], it cannot be found anywhere else in the nation.” The students who are drawn to our Rockford campus, and our RPHARM program in particular, tend to be from rural areas of the state (see Appendix A).

Labor Market Analysis

The College has analyzed recent workforce data from the Illinois Department of Employment Security regarding the anticipated number of annual new job openings for pharmacists in rural counties. Their report predicts 343 annual pharmacist job openings per year through 2022 (Illinois Department of Employment Security, 2012), and an analysis by UIC College of Pharmacy faculty finds that 75 of these 343 openings will be in rural counties. Additionally, the rural shortage is evidenced by fact that salaries offered to pharmacists to practice in rural areas of the state are higher than in the urban areas while the cost of living is lower (Glasmeier, 2015). The May 2014 Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates (see Appendix B) indicate that the annual mean wage for Pharmacists in the Chicago-Joliet-Naperville, IL metropolitan division is \$114,840, compared with the areas of Danville and Kankakee-Bradley, IL with annual mean wages above \$117,000, and Peoria, Rockford, Springfield, and Decatur, IL, all of which have an annual mean wage above \$120,000 (United States Department of Labor, Bureau of Labor Statistics, 2014). Since opening in the fall semester of 2010 to help address this shortage, the College of Pharmacy in Rockford graduated two cohorts of students totaling 87 new PharmDs, of which 15 enrolled in the RPHARM concentration. Many of these graduates are currently practicing in rural areas throughout the state, including Centralia, Freeport, Galesburg, Gibson City, Oregon, Pontiac, Sterling, Dixon, Bloomington, and Spring Valley, IL (see Appendix C).

Economic and Public Health Impact to Illinois

The College's presence in the Rockford area has a positive economic impact on the region and the state. There are currently 143 students enrolled in the Doctor of Pharmacy program on the Rockford campus and 6 students enrolled in PhD programs. Twenty-two of the current PharmD students are also in the RPHARM program. The College employs 41 people to support the academic, clinical, and research missions. This includes 11 clinical pharmacists who practice in area hospitals and clinics and provide hands on training to our future pharmacists. The jobs created in the Rockford area are an important asset for the local economy. In addition, the relationship with Rockford University, a local private liberal arts school, provides an opportunity for which the College of Pharmacy employs Rockford University undergraduate students through the Federal Work Study program and provides the students a rich professional experience in conducting research and working with the distance learning information technology office. Another direct economic impact includes the work the pharmacy students provide through clinical rotations at 104 pharmacies, hospitals, and clinics across the region. The faculty and students also frequently provide outreach to the public through a variety of healthcare programs which include healthy lifestyle choices, disease awareness and prevention, blood pressure and diabetes screening at local churches, health fairs, and county fairs (particularly focused on rural populations), awareness programs about expired medications including pharmaceutical collection efforts with local law enforcement agencies, volunteering at local food pantries, and influenza and Tdap (tetanus, diphtheria, pertussis) vaccination clinics in collaboration with local health departments, other health education programs, and charity organizations.

Summary

The University of Illinois College of Pharmacy continues to monitor and respond to the need for healthcare professionals in the State of Illinois, especially in rural areas. In addition to student tuition income, the PharmD program at Rockford relies on the General Professions Dedicated Fund appropriation to support its mission and operations. This program improves the health of the citizens of Illinois through our presence in the Rockford area by working directly with patients in hospitals and clinics, training future pharmacists for practice in rural areas of the state, and through health education and immunization outreach programs. In addition, the program also contributes to the economic stability of the State of Illinois through the creation of new jobs in the region and the annual addition of new graduates into the workforce.

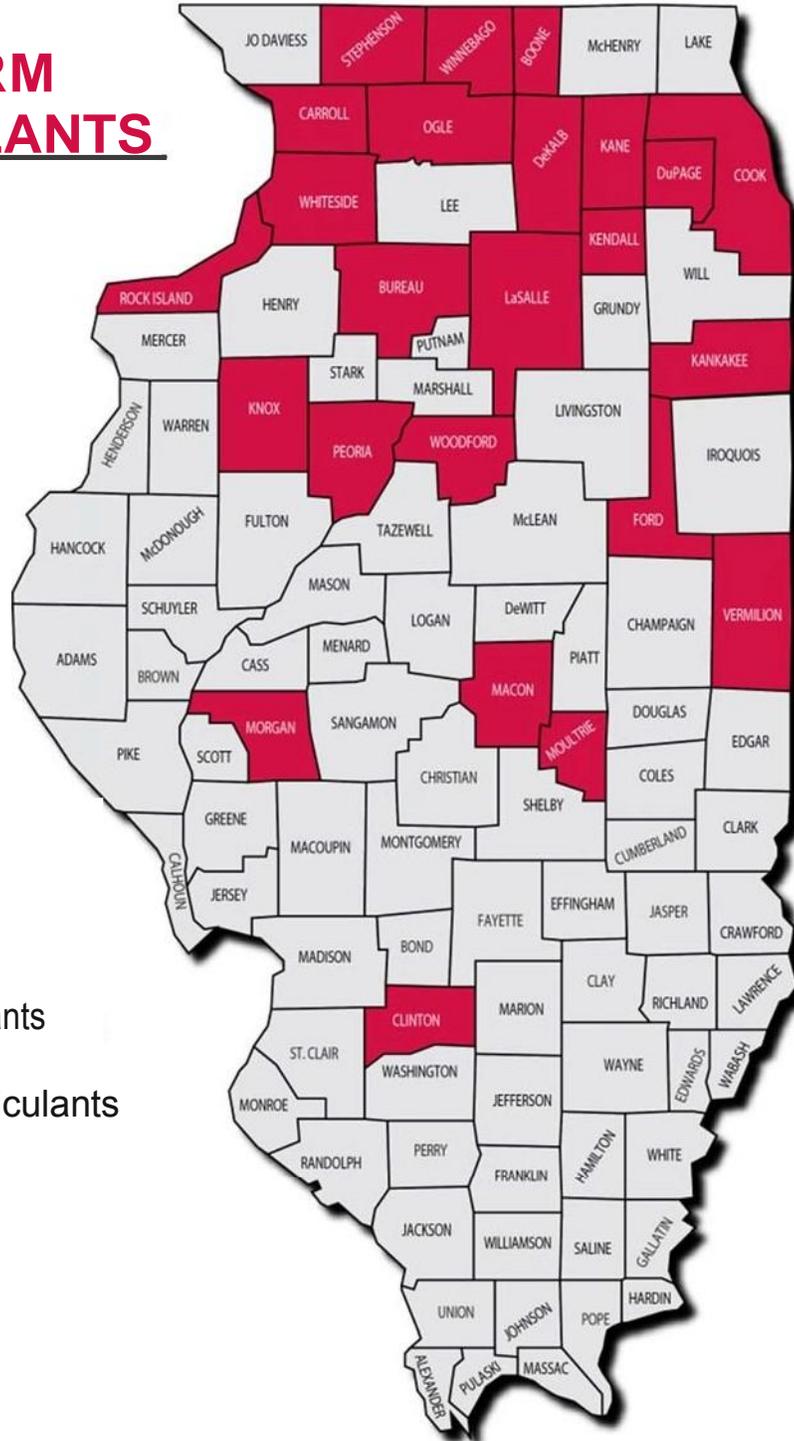
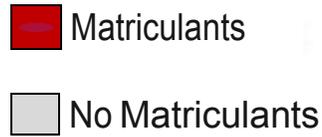
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Appendix A: RPHARM Matriculant Map, Classes of 2014-2019

**RPHARM
MATRICULANTS**

Classes of
2014-2019



Appendix B: BLS OES May 2014 Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates

<u>Location</u>	<u>Occupation code</u>	<u>Occupation title</u>	<u>Level</u>	<u>Employment</u>	<u>Employment RSE</u>	<u>Employment per 1,000 jobs</u>	<u>Location quotient</u>	<u>Median hourly wage</u>	<u>Mean hourly wage</u>	<u>Annual mean wage</u>	<u>Mean wage RSE</u>
Bloomington-Normal, IL	29-1051	Pharmacists	detail	120	22.20%	1.407	0.65	\$57.52	\$54.07	\$112,470	4.30%
Cape Girardeau-Jackson, MO-IL	29-1051	Pharmacists	detail	120	36.00%	2.857	1.33	\$63.24	\$64.22	\$133,570	4.90%
Champaign-Urbana, IL	29-1051	Pharmacists	detail	170	19.20%	1.781	0.83	\$58.22	\$56.00	\$116,470	3.20%
Chicago-Joliet-Naperville, IL Metropolitan Division	29-1051	Pharmacists	detail	7,090	6.20%	1.888	0.88	\$58.38	\$55.21	\$114,840	2.40%
Danville, IL	29-1051	Pharmacists	detail	90	31.50%	3.432	1.59	\$58.05	\$56.40	\$117,300	4.40%
Davenport-Moline-Rock Island, IA-IL	29-1051	Pharmacists	detail	310	9.80%	1.724	0.8	\$56.52	\$56.14	\$116,770	1.20%
Decatur, IL	29-1051	Pharmacists	detail	110	11.50%	2.379	1.11	\$61.64	\$59.02	\$122,760	4.30%
Gary, IN Metropolitan Division	29-1051	Pharmacists	detail	750	7.60%	2.814	1.31	\$57.55	\$57.82	\$120,260	2.70%
Kankakee-Bradley, IL	29-1051	Pharmacists	detail	100	23.60%	2.457	1.14	\$58.86	\$56.65	\$117,820	3.60%
Lake County-Kenosha County, IL-WI Metropolitan Division	29-1051	Pharmacists	detail	930	12.60%	2.363	1.1	\$59.44	\$56.32	\$117,140	3.00%
Peoria, IL	29-1051	Pharmacists	detail	420	11.00%	2.358	1.1	\$59.38	\$58.65	\$122,000	2.90%
Rockford, IL	29-1051	Pharmacists	detail	270	27.60%	1.882	0.87	\$59.83	\$59.05	\$122,830	2.70%
Springfield, IL	29-1051	Pharmacists	detail	260	18.00%	2.357	1.1	\$61.25	\$58.95	\$122,610	3.00%
St. Louis, MO-IL	29-1051	Pharmacists	detail	2,830	6.70%	2.166	1.01	\$58.25	\$57.30	\$119,180	1.20%
East Central Illinois nonmetropolitan area	29-1051	Pharmacists	detail	200	17.10%	1.718	0.8	\$64.08	\$62.19	\$129,350	2.10%
Northwest Illinois nonmetropolitan area	29-1051	Pharmacists	detail	230	7.70%	1.759	0.82	\$56.18	\$50.74	\$105,540	10.50%
South Illinois nonmetropolitan area	29-1051	Pharmacists	detail	310	19.20%	2.155	1	\$57.77	\$55.29	\$115,010	3.90%
West Central Illinois nonmetropolitan area	29-1051	Pharmacists	detail	400	8.30%	2.244	1.04	\$55.04	\$54.98	\$114,350	7.70%

Notes: BLS indicates that the Occupational Employment and Wage Estimates are calculated from data collected in a national survey of employers.

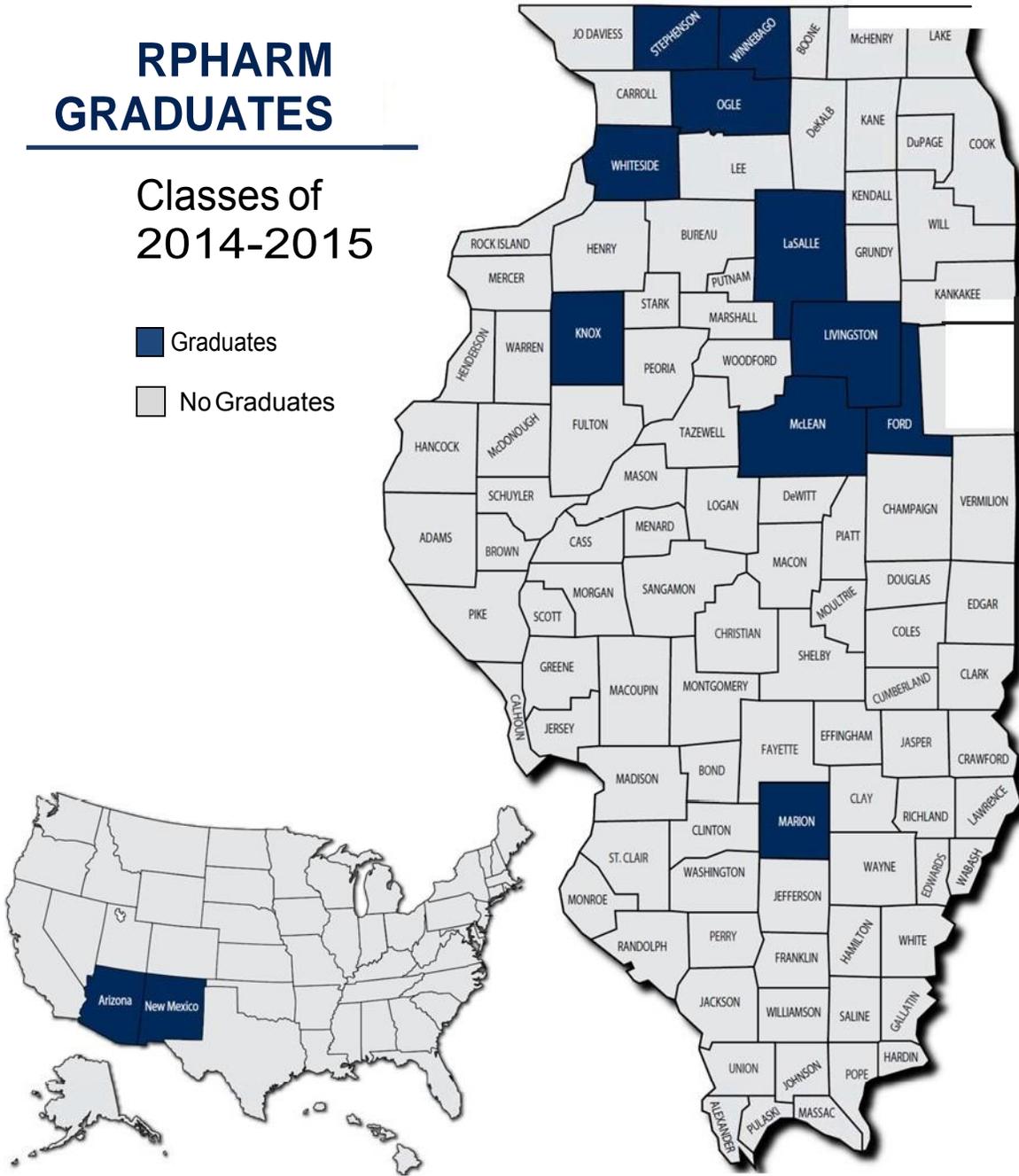
- **Occupation Title:** a descriptive title that corresponds to the SOC code.
- **Employment:** the estimated total occupational employment (not including self-employed).
- **Employment RSE:** the Relative Standard Error of the employment estimate, a measure of the reliability or precision of the employment estimate. The relative standard error is defined as the ratio of the standard error to the survey estimate. For example, a relative standard error of 10 percent implies that the standard error is one-tenth as large as the survey estimate.
- **Employment per 1000 jobs:** the number of jobs (employment) in the given occupation per 1,000 jobs in the given area.
- **Location Quotient:** (State, metropolitan, and nonmetropolitan statistical area estimates only) the ratio of an occupation's share of employment in a given area to that occupation's share of employment in the U.S. as a whole. For example, an occupation that makes up 10 percent of employment in a specific metropolitan area compared with 2 percent of U.S. employment would have a location quotient of 5 for the area in question.
- **Median Hourly Wage:** the estimated 50th percentile of the distribution of wages based on data collected from employers in all industries; 50 percent of workers in an occupation earn less than the median wage, and 50 percent earn more than the median wage.
- **Mean Hourly Wage:** the estimated total hourly wages of an occupation divided by its estimated employment, i.e., the average hourly wage.
- **Mean Annual Wage:** the estimated total annual wages of an occupation divided by its estimated employment, i.e., the average annual wage.
- **Mean RSE:** the relative standard error of the mean wage estimates, a measure of the reliability or precision of the mean wage estimates. The relative standard error is defined as the ratio of the standard error to the survey estimate. For example, a relative standard error of 10 percent implies that the standard error is one-tenth as large as the survey estimate.

Appendix C: RPHARM Graduate Map, Classes of 2014-2015

RPHARM GRADUATES

Classes of 2014-2015

- Graduates
- No Graduates



Appendix E
UNIVERSITIES' COMPLETED
DATA COLLECTION INSTRUMENT
(Summary)

UNIVERSITIES' COMPLETED DATA COLLECTION INSTRUMENT

Chicago State University, Southern Illinois University, and the University of Illinois each offer a pharmacy education program developed in the last 10 years. They received special appropriations from the General Professions Dedicated Fund that totaled \$2 million during the audit period of fiscal years 2012-2014. The practice of pharmacy is governed by the Illinois Pharmacy Practice Act.

- Chicago State University wrote that minorities have limited access to pharmacy education and that the enrollment of African-Americans in Midwestern pharmacy schools was only three percent at the time it was exploring a new pharmacy program in 2003.
- Southern Illinois University had found at the time it was researching a pharmacy program that there was a need for pharmacists in Illinois and there was also an adequate pool of applicants.
- The University of Illinois had found that nearly 50 million Americans lived in rural communities which had about half the number of health care professionals as compared to urban or suburban areas.

The Office of the Auditor General sent the three universities (CSU, SIUE, UIC) a Data Collection Instrument (DCI) which asked for information about their pharmacy programs. The universities' answers are **summarized** in the columns to facilitate comparison.

The DCI asked universities to also include supporting documentation for certain specified questions. The documents enclosed are indicated within the responses (and labeled as attached, appendix, or supporting document) but have not been reproduced in this audit report. The only exception was the study/analysis conducted by universities which was specifically mentioned by House Resolution Number 204 and is reproduced in Appendix B (for CSU), Appendix C (for SIUE), and Appendix D (for UIC) of this audit report.

SUMMARY OF UNIVERSITIES' PHARMACY PROGRAMS Fiscal Years 2012 – 2014			
Question	Chicago State University	Southern Illinois University	University of Illinois
1. UNIVERSITY. Name of university/campus.	Chicago State University	Southern Illinois University (Edwardsville)	University of Illinois (at Chicago, or UIC)
2. STATUTES. Name of the law/regulation related to the pharmacy program. <ul style="list-style-type: none"> Provide citation or attach. 	Rules for the administration of the pharmacy program govern the requirements for colleges/schools of pharmacy in Illinois. (Illinois Pharmacy Practice Act; rules at: 68 Ill. Adm. Code Part 1330: Section 1330.300 Approval of Pharmacy Programs.)	Pharmacy Practice Act (225 ILCS 85/1).	The PharmD (pharmacy) program was approved by the Illinois Board of Higher Education (IBHE). The College of Pharmacy (COP) is a part of the University of Illinois and is governed by its statutes (Supporting Document 2).
3. MISSION. Mission, goals, and objectives of the pharmacy school/program (for the audit period of FY 2012–2014). <ul style="list-style-type: none"> Provide. 	The mission of the CSU College of Pharmacy (COP) is the development of student and faculty scholars who will impact the health care needs of people in the region, state, and the nation. COP's mission is to educate individuals from diverse backgrounds to enhance culturally competent care and reduce health care disparities.	The School of Pharmacy (SOP) had a strategic plan for 2009-2014. In 2013 a new strategic plan was approved which spans 2013-2018. SOP is committed to providing excellence in pharmaceutical education and the development of pharmacy leaders as a service to the community in the improvement of the quality of health care services (Appendix 1).	Since its inception in 1859, the College of Pharmacy is the oldest academic unit of the University of Illinois and has been among the top ten colleges of pharmacy in the U.S. COP's vision is to be a global leader in improving human health and benefiting society through pharmaceutical education, research, service and entrepreneurial activity (Supporting Document 3).
4. ORGANIZATIONAL CHART. Organizational chart showing the pharmacy program relative to the university. <ul style="list-style-type: none"> Attach. 	Dean of College of Pharmacy reports to the Provost and Senior Vice President for Academic Affairs (attached).	The Dean of the School of Pharmacy reports to the Provost and Vice Chancellor for Academic Affairs (Appendix 2).	The pharmacy program reports to the Vice Chancellor for Academic Affairs and Provost (Supporting Document 4).
5. ESTABLISHED. Year when the pharmacy program was started and accredited.	The pharmacy program was established in July 2007 and the inaugural class began in August 2008. Program received Pre-Candidate accreditation status from the Accreditation Council for Pharmacy Education (ACPE) in June 2008 and achieved Full Accreditation status in	Pharmacy program's inaugural class began in Fall 2005. Program was accredited in July 2009.	Pharmacy program's inaugural class began in: <ul style="list-style-type: none"> Chicago: September 1859 Rockford: August 2010 The program was first accredited for academic term 1980-1981 (the Rockford campus is considered part of the University program).

SUMMARY OF UNIVERSITIES' PHARMACY PROGRAMS			
Fiscal Years 2012 – 2014			
Question	Chicago State University	Southern Illinois University	University of Illinois
	June 2012.		
6. POLICIES. Operational documents used by the pharmacy program (e.g., policies and procedures). • Explain.	A complete Policy and Procedures Manual exists for the College of Pharmacy. All program areas of operations (academic and non-academic) are covered. In addition, COP has other operational documents such as: By-Laws, Student Handbook, the University faculty handbook, etc.	Constitution and Bylaws for Faculty Governance (Appendix 3).	Policies and procedures set by University and faculty bylaws (Supporting Document 6).
7. MEASURES. Types of measures or indicators used to gauge program performance. • Provide.	As a requirement of continued accreditation by ACPE, all colleges/schools of pharmacy must gather, evaluate, and post on its website various measures of program performance assessment. This includes graduation rates, licensure board examination first pass rates, examples of student learning achievements, research achievements, post-graduation residency placements, job placements, etc. Each program can choose its performance measures except graduation and licensure first pass rates that are required to be listed by all programs.	School of Pharmacy uses a comprehensive assessment plan to gauge program performance. The plan utilizes indicators to assess its written goals and objectives (Appendix 4).	National rankings provide an important indicator of success. StartClass.com, an education research website which ranks pharmacy schools, ranked College of Pharmacy 3rd out of 127 national pharmacy schools in July 2015 (Supporting Document 7).
8. UNIVERSITY MONITORING. Methods used by the university to monitor the pharmacy program. • Explain and provide examples.	COP is monitored by the University to verify program progress and achievements. COP participates in the systematic and periodic Program Review process for all programs at the University (example attached). The PME (performance, measurement, and evaluation) plans and reports are also submitted annually (example	School of Pharmacy submits Annual Report to Provost and Vice Chancellor for Academic Affairs. Appendix 5 has an example of Annual Report and Appendix 6 has an example of Program Report.	The University monitors financial indicators such as spending, deficits, and fund balances. In addition, the State Senate appropriations committee periodically requests Agency Outcomes forms because of the special State appropriation that we receive (Supporting Document 8).

SUMMARY OF UNIVERSITIES' PHARMACY PROGRAMS Fiscal Years 2012 – 2014			
Question	Chicago State University	Southern Illinois University	University of Illinois
	attached). In addition, accreditation reports (full and interim) submitted to ACPE and the State Board of Pharmacy have been reviewed/approved by the University.		
9. PROGRAM REPORTS. Regular internal reports used by the pharmacy program. <ul style="list-style-type: none"> Specify, provide sample. 	Example reports are attached: (1) PharmCas and Supplemental Application comparisons; and (2) Data for Class of 2016.	Performance data gathered as part of the school's on-going assessment plan are continually updated. These data are used for University monitoring, accreditation, and quality assurance purposes. Appendix 7 has an example of data related to student demographics, e.g., enrollment and graduation.	Each fall, the Office of Student Affairs at the College of Pharmacy prepares an annual admissions report to detail the characteristics of our applicant pool and incoming class compared to prior years. In addition, the Dean periodically compares enrollment and application numbers, graduating student outcomes, tuition rates, and student demographics with peer institutions which show UIC is among the top 3 schools in its peer group for total applicants (Supporting Document 9).
10. CRITERIA. Selection criteria for pharmacy program. <ul style="list-style-type: none"> Mark all that apply. 	<ul style="list-style-type: none"> Undergraduate courses in biology, chemistry Undergraduate degree Undergraduate GPA Pharmacy College Admissions Test scores (PCAT) Interview Letters of Recommendation Interest in working in medically underserved areas Other, such as writing sample; military service; health care-related work experience; leadership; disadvantaged background; rural upbringing; 	<ul style="list-style-type: none"> Undergraduate courses in biology, chemistry Undergraduate degree Undergraduate GPA Pharmacy College Admissions Test scores (PCAT) Interview Letters of Recommendation Writing sample, math/science GPA, Illinois residence, military service, pharmacy/health care experience. 	<ul style="list-style-type: none"> Undergraduate courses in communication, life sciences, physical sciences, mathematics/statistics, social/behavioral sciences, and humanities Undergraduate degree Undergraduate GPA Pharmacy College Admissions Test scores (PCAT) Interview Letters of Recommendation Interest in working in rural areas Other, such as writing, geographic location, military

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Question	Chicago State University	Southern Illinois University	University of Illinois
	interest in serving underrepresented minority communities.		background, ability to speak multiple languages.
11. FUND. Amount appropriated to the pharmacy program from the General Professions Dedicated Fund (#22).	FY12: \$307,000 FY13: \$307,000 FY14: \$307,000	FY12: \$1,250,000 FY13: \$1,250,000 FY14: \$1,250,000	FY12: \$500,000 FY13: \$500,000 FY14: \$500,000
12. COST. Total operational cost of the pharmacy program to the university.	FY12: \$4,937,584 FY13: \$6,141,618 FY14: \$6,224,483	FY12: \$10,192,619 FY13: \$10,377,786 FY14: \$10,833,030 Note: SIUE reported the total operational cost of the pharmacy program (above) based on IBHE rules. This number reflects both direct and indirect costs. Budgeted direct costs only were: FY12: \$6,243,000 FY13: \$6,496,000 FY14: \$6,711,001	FY12: \$74,135,000 FY13: \$75,115,000 FY14: \$84,657,000
13. EXPENDITURES. Any requirements (e.g., in accounting policies or procedures) to use appropriations only for the purposes for which they were appropriated. • Specify and attach policy.	CSU is an agency of the State of Illinois. The rules and regulations described under State statutes, or the Office of the State Controller are followed. In addition, the University will not develop accounting policies or procedures that contradict such requirements.	Yes. Appendix 9 has the rules for spending from the special appropriations fund. Included are emails and documents to set up the account.	Yes. The University monitors expenditures on special appropriation funds. Accounting policies, procedures and requirements are embedded throughout policies and procedures.
14. FUND USE. Was all money from GPD Fund #22 used for the pharmacy program?	Yes.	Yes.	Yes.
15. NEED. Impact if money from GPD Fund #22 is no longer available. • Specify.	These funds are needed to ensure that students have comprehensive electronic library and information resources, pharmacy practice experiential education networks enabling them to	The elimination of these funds for pharmacy will have a devastating impact on its ability to continue educational operations as this money supports 17 faculty and staff members. Essential services for the	Without these funds, the pharmacy program in Rockford will experience a significant loss of educational programming, with the possibility of severe cuts to the rural pharmacy programs.

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	be educated as members of interprofessional health care teams, current laboratory resources, etc. If these funds were not available, other methods of financing programmatic and accreditation-required needs would be necessary, such as annual tuition increases, which would place further financial burdens on our student population. COP prides itself on providing a high-quality education at a comparatively affordable price. We are sensitive to the economic needs of our student population and greatly appreciate the program funds received from the State.	region and the state will also be severely impacted.	These funds represent approximately 12% of College of Pharmacy's State budget in Rockford.
16. OTHER STATE FUNDS. All other sources of State funds (besides Fund #22) for the pharmacy program.	None.	None.	None (only GRF, tuition).
17. PHARMACY TUITION. Tuition (in-state) and fees for the pharmacy program (does <u>not</u> include room and board).	FY12: \$24,341 FY13: \$24,625 FY14: \$25,852	FY12: \$23,462 FY13: \$24,358 FY14: \$24,997	FY12: \$25,462 FY13: \$26,316 FY14: \$27,442
18. ENROLLMENT. Total student enrollment in the pharmacy program.	FY12: 344 FY13: 358 FY14: 360	FY12: 324 FY13: 325 FY14: 324	FY12: 737 (Includes Rockford: 88) FY13: 784 (Includes Rockford: 134) FY14: 812 (Includes Rockford: 174)
	Note: The UIC College of Pharmacy also has masters and doctorate programs which increase total enrollment to 863 in FY12, 926 in FY13 and 945 in FY14.		
19. GRADUATION. Pharmacy program's graduation rate.	FY12: 82 (95%) FY13: 83 (92%) FY14: 86 (95%)	FY12: 72 (90%) FY13: 80 (90%) FY14: 79 (93%) Note: SIUE said that it reported 4-year, on-time graduation rates. Another university reported their 6-	FY12: 157 (97%) FY13: 171 (99%) FY14: 188 (95%)

SUMMARY OF UNIVERSITIES' PHARMACY PROGRAMS Fiscal Years 2012 – 2014			
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		year graduation rates, which are also valid. SIUE's 6-year graduation rates were: 2012 = 98%; 2013 = 94%; and 2014 = 100%.	
20. FACULTY/STAFF.			
Fiscal Year 2012			
• Faculty:	31	42 FT, 1 PT	90
• Staff:	14	8 FT	241
Fiscal Year 2013			
• Faculty:	31	42 FT, 1 PT	91
• Staff:	15	7 FT	259
Fiscal Year 2014			
• Faculty:	34	42 FT, 1 PT	245
• Staff:	18	7 FT, 1 PT	152*
			*Recategorization of staff to faculty (e.g., these staff were faculty but worked in pharmacy clinics/hospital)
21. JOBS. Totals may not add due to rounding.			
Fiscal Year 2012			
• Pharmacy Jobs:	86%	85%	40%
• Other Jobs:	0%	0%	1%
• Continued Education:	13%	14%	28%
• Other -e.g., unknown:	1%	1%	32%
Total:	100%	100%	100%
Fiscal Year 2013			
• Pharmacy Jobs:	94%	86%	44%
• Other Jobs:	0%	0%	0%
• Continued Education:	6%	13%	32%
• Other -e.g., unknown:	0%	1%	24%
Total:	100%	100%	100%
Fiscal Year 2014			
• Pharmacy Jobs:	88%	88%	54%
• Other Jobs:	0	0%	0%
• Continued Education:	13%	12%	30%
• Other -e.g., unknown:	0	0%	15%
Total:	100%	100%	100%
22. ILLINOIS JOBS. Found pharmacy jobs in Illinois.	FY12: 50 (65%) FY13: 63 (78%) FY14: 60 (68%)	FY12: 50 (69%) FY13: 53 (66%) FY14: 51 (66%)	FY12: Not available FY13: Not available FY14*: 72 (57%) *Includes only the respondents.
23. RURAL JOBS. Found pharmacy jobs in rural areas.	FY12*: 3% FY13*: 3% FY14*: 3% *Estimated by CSU.	FY12: 18 (25%) FY13: 17 (21%) FY14: 16 (20%)	FY12: Not available FY13: Not available FY14: 5 (4%) Rockford 4 (80%)
24. SURVEYS. Follow up with graduates to	The College of Pharmacy used Alumni Employment	Surveys of our alumni are completed by the	AACP creates a survey for graduating students at all

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determine where they are working, what they learned that was useful, what could be improved, etc. <ul style="list-style-type: none"> Specify and attach blank survey. 	Survey and Graduating Exit Survey (attached).	American Association of Colleges of Pharmacy every 3-5 years. The SIUE survey was completed in 2013 (Appendix 11).	colleges of pharmacy. This survey provides feedback on curriculum, educational resources, professional competencies, site experience, student services provided, and overall student experience and impressions (Supporting Document 24).
25. EXTERNAL REPORTS. External reports on pharmacy program accomplishments. <ul style="list-style-type: none"> Specify and attach reports. 	CSU issues an Annual Report for its College of Pharmacy which highlights things such as student and faculty achievements (attached).	Report by the Dean of the pharmacy program posted on the SIUE webpage.	Annual publication titled "Catalyst" focuses on research accomplishments by College of Pharmacy faculty and students and also publishes "UIC Pharmacist" to highlight student, research, and alumni successes (Supporting Document 25).
26. STUDY. Performed study or analysis ". . . of the need for pharmacists in the labor market and, in particular, in rural areas and whether that study or analysis demonstrates how the university's program meets any identified need?" (House Resolution #204) <ul style="list-style-type: none"> Attach. <p>Auditor's Note: Any study/analysis performed by the universities on the need for pharmacists is included in this audit report as follows:</p> <ul style="list-style-type: none"> Appendix B has CSU; Appendix C has 	CSU provided an analysis dated April 2015 which stated that 37 percent of practicing pharmacists are age 55 or older and will be retiring. The diversity of pharmacists in Illinois does not represent the racial diversity of the US. The CSU pharmacy program addresses the need for pharmacists in underserved areas. Areas that lack pharmacies are more common in segregated black and Hispanic communities, particularly those that were classified as low-income and medically underserved areas. Approximately two-thirds of its graduates' primary work sites were in	The SIUE School of Pharmacy has informally monitored where graduates will be practicing since 2009, when the inaugural class graduated.	UIC provided its July 2015 analysis which said the rural pharmacy program in Rockford was created due to a national shortage and maldistribution of pharmacists. The demand for pharmacists is often high in rural communities where access to medical services may be limited. The students who are drawn to the RPHARM program tend to be from rural areas of the State. The rural shortage is evidenced by the fact that salaries offered to pharmacists in rural areas are higher than in the urban areas while the cost of living is lower in rural areas.

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SUIE; and – Appendix D has UIC.	underrepresented minority communities.		There are currently 22 students enrolled in the rural pharmacy program (Supporting Document 26).
27. ANALYSIS. Reason for establishing the pharmacy program.	<p>CSU's 2006 Educational Questionnaire for Rep. Jesse Jackson stated that underrepresented minorities have had limited access to pharmacy education. As a result, less than 10% of enrolled pharmacy students are Black or African-American and less than 4% are Hispanic or Latino. In addition, 5.4% and 2.6% of all full-time faculty in the 82 U.S. pharmacy schools are Black or Hispanic.</p> <p>In 2003, the enrollment of African-Americans in the 18 existing Midwestern colleges/schools of pharmacy was only 3% (submission attached).</p>	Appendix 12 and Appendix 13 have the consultant's report evaluating the need and feasibility for a pharmacy program at SIUE. Appendix 14 provides the RAMP funding request from 2004 for the pharmacy program.	The decision to expand the pharmacy program to Rockford was in response to a national shortage and maldistribution of pharmacists. The rural pharmacy program (RPHARM) was established to prepare pharmacy students to practice in rural Illinois. Rural communities in the United States are served by fewer health care professionals per capita. Rural communities have about half the number of health care professionals compared to urban or suburban areas. Further, 49 million Americans (about 17% of the total population) live in rural communities (Supporting Document 27).
28. SUPPORT. Research showing the need for establishing a new pharmacy program. <ul style="list-style-type: none"> Specify and attach research documents. 	CSU submitted a questionnaire to Rep. Jesse Jackson to seek financial support for a new pharmacy college. CSU wrote that underrepresented minorities will find CSU's educational environment to be culturally and economically diverse. The faculty at CSU is dedicated, caring and culturally diverse. CSU's mission to provide such an environment, which will offer learning experiences that enable students to flourish academically and personally, will help to overcome the barriers that	SIUE retained a consultant who submitted his report in 2000 which concluded that SIUE had the basic infrastructure and leadership and there was a need for pharmacists in Illinois, along with an adequate pool of applicants. His recommendations included seeking \$4.4 million in State appropriation, recruiting a quality dean and faculty, identifying proper facilities to house the new pharmacy program, and developing clinical education sites (Appendix 12, 13, 14).	UIC summarized the need for pharmacists to IBHE in its submission for a new unit of instruction in 2007 and also explained its reasoning in the analysis for this audit (see Appendix D of this audit report). UIC noted that hosting students at the Rockford campus would build upon the strength of the regional campus of the College of Medicine with its focus on rural medicine. Preexisting programs, faculty, facilities and staff make partnering with the College of Medicine a cost effective and reasonable approach.

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	underrepresented minorities face in pharmacy education (attached).		The trend towards interdisciplinary health care also supports the development of a pharmacy program at Rockford. (Supporting Document 28).
29. PROJECTION. Need for pharmacists in the next 10 to 15 years.	CSU expects a shortage of pharmacists in Illinois. Federal and state models of interprofessional team-based care will require more pharmacists with the level of education and training provided by contemporary pharmacy education programs. Examples of pharmacist roles include responsibilities in areas of drug distribution, patient safety, medication therapy management, health outcomes-based research, patient/health care provider education, drug benefit design, pharmacy business management, health care delivery system cost management, specialty pharmacy, Medicare/Medicaid drug utilization and cost containment programs, etc. More traditional medication dispensing roles will still be needed but newly emerging roles will require more pharmacists than in the past.	SIUE feels there will be a small shortage of pharmacists in the future, considering that the BLS handbook indicates that, <i>“employment of pharmacists is projected to grow 14 percent from 2012 to 2022, about as fast as the average for all occupations. Increased demand for prescription medications will lead to more demand for pharmaceutical services.”</i> The National Health Expenditure Projections indicate that prescription drug spending is expected to grow by 6.3% from 2015 to 2024 due to specialty drugs, newly insured patients through the Affordable Care Act, etc. which will increase demand for pharmacists. To date, our graduates of SIUE have been very successful in getting jobs.	The University said there has been a significant change in healthcare delivery and healthcare reimbursement as a result of the Affordable Care Act that continues to evolve. In addition, there continues to be political pressure to grant pharmacists provider status which would result in a momentous change in the needs and services provided by pharmacists. Despite many of these unknowns which the University has no direct control over, research evaluated indicates that there continues to be a significant shortage of pharmacists in rural areas across the entire State of Illinois. Research also has alluded to a significant shortage of pharmacists in underserved areas within urban areas of Illinois. Based on this information, the University believes there will be shortages of pharmacists across Illinois (Supporting Document 29).
30. INTERNAL AUDIT. Internal audit, university evaluation, or program assessments performed. • Specify.	CSU said that the pharmacy program expenditures are reviewed during the voucher submission process.	An internal audit of the School of Pharmacy was last conducted in 2011. This report contained one finding which has been remedied.	None.
31. LEGAL PROCEEDINGS. Investigations or	None.	None.	None.

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Question	Chicago State University	Southern Illinois University	University of Illinois
legal proceedings pertaining to the pharmacy program. • Specify.			
32. FRAUD. Assessment of the risk of fraud or finding fraud in the pharmacy program. • Specify.	None.	The program informally assesses the risk of fraud on a periodic basis as a means to responding to various surveys administered by the Office of Risk Management and Internal Audit. To date, we have not experienced any fraud related to the program.	The pharmacy program has not experienced any fraud. The risk of fraud is assessed annually by the University through the Fiscal Control and Internal Auditing Act (FCIAA) certification process. FCIAA is a State-mandated program to aid Illinois State agencies in reviewing their fiscal and administrative systems of internal control.
33. CHANGES. Any important changes to the pharmacy program after audit period (i.e., after June 30, 2014). • Specify.	None.	None.	None.
34. COMMENTS. Any other notable information regarding the pharmacy program.	The program has been recognized by the American Association of Colleges of Pharmacy for having the 10 th highest underrepresented minority student pharmacist enrollment of 130 colleges/schools of pharmacy nationally. The mission of the program is strongly anchored in the provision of health care services and increasing access to medically underserved populations. Based on analysis of faculty and student academic placements and alumni employment locations, the College is achieving its mission and vision.	Facts involving the SIUE Doctor of Pharmacy graduates from FY09-FY14: <ul style="list-style-type: none"> • 90% of all students admitted were Illinois residents. • 79% of all students admitted were residents of central and southern Illinois. • 96% overall graduation rate. • 97% average first time pass rate on the North American Pharmacist Licensure Examination (NAPLEX) and the Multistate Pharmacy Jurisprudence Examination (MPJE). Source: National Association of Boards of Pharmacy (NABP). These results rank #1 	Since its inception in 1859, the UIC College of Pharmacy is the oldest academic unit of the University of Illinois and has historically been among the top ten colleges of pharmacy in the U.S. The college is the 5 th oldest school of pharmacy in the nation and was the only college of pharmacy in the State of Illinois for 132 years. According to Smart Rank, the UIC COP is ranked as one of the top 3 pharmacy schools in the nation. AACP has also recognized the UIC COP as one of the top 4 pharmacy schools in the nation based on total research grant funding.

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		<p>in Illinois among public schools of pharmacy over same time period.</p> <ul style="list-style-type: none"> • 68% of graduates reside in and are licensed as pharmacists in Illinois. Source: IDFPR. • 21% of graduates reside in rural counties in Illinois as defined by Illinois Department of Public Health (IDPH) and Health Resources and Services Agency (HRSA). Source: IDFPR. • 92% of graduates who are Illinois residents reside outside of the greater Chicago region (Cook, DeKalb, DuPage, Kane, Kankakee, McHenry, Lake, and Will Counties). Source: IDFPR. 	
35. RESPONDENT.	Miriam A. Mobley Smith, PharmD, FASHP, Dean and Professor College of Pharmacy	Kimberly Labonte, Executive Director of Audits	Vanessa Peoples, Interim Assistant Vice President and Chief Business Officer
Source: University responses to the Auditor General's Data Collection Instrument about their pharmacy programs.			

Appendix F
UNIVERSITY RESPONSES TO AUDIT

November 30, 2015

Ameen Dada
Audit Manager
Illinois Office of Auditor General
740 E. Ash, FL 001
Springfield, IL 62703

Subject: Response to School of Pharmacy Audit Report (House Resolution Number 204)

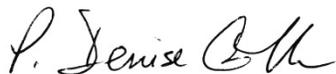
Dear Mr. Dada,

Thank you for providing us with a copy of the Program Audit for Pharmacy Programs at Illinois State Universities in response to House Resolution Number 204. In addition to the clarifications provided to your office by our Executive Director of Internal Audit, Kimberly Labonte, on November 18, 2015, we agree with the contents of the report. We thank you for the opportunity to provide clarifications.

We would like to mention again that the elimination of the special appropriation funds for the SIUE School of Pharmacy will have a devastating impact on its ability to continue educational operations as this money supports 17 faculty and staff members. Also, essential services for the region and the state will be severely affected.

Please let us know if we can be of any further assistance. Thank you.

Sincerely,



P. Denise Cobb, Ph.D.
Interim Provost and Vice Chancellor for Academic Affairs

UNIVERSITY OF ILLINOIS

Chicago • Springfield • Urbana-Champaign

Executive Assistant Vice President for Business and Finance
Office of Business and Financial Services
809 S. Marshfield Avenue, M/C 078
Chicago, Illinois 60612-7206

November 23, 2015

Ameen Dada
Audit Manager
Office of the Auditor General
Iles Park Plaza, 740 East Ash Street
Springfield, Illinois 62703-3154

Dear Mr. Dada:

We received the draft Pharmacy Program Audit Report relating to House Resolution Number 204. We appreciate the opportunity to review and respond to the draft Program Audit Report. At this time, we are in agreement with the report's comments as they relate to the University of Illinois.

The University of Illinois' College of Pharmacy was founded in 1859 and joined the University of Illinois system in 1896. It is the oldest and largest college of pharmacy in the State of Illinois. The College continues to set the national standard for excellence in pharmaceutical research, education, and clinical practice. It is consistently ranked a top five college of pharmacy for education and research and is the top clinical pharmacy program in the nation. The college's vision is to be a global leader in improving human health and benefiting society through pharmaceutical education, research, service, and entrepreneurial activity and it aims to be recognized as the best college of pharmacy in the world.

The financial support it receives, including the General Professions Dedicated Fund, has allowed the College to create and promote a variety of programs dedicated to training pharmacists in underserved and rural communities. The College of Pharmacy's success would simply not be possible without the financial support of the State of Illinois.

Thank you again for the opportunity to review and respond to the report and we look forward to receiving the Final Pharmacy Program Audit Report. If you have any questions please do not hesitate to contact our office.

Sincerely,



Vanessa Peoples
Interim Assistant Vice President for Business and Finance/Chief Business Officer
University of Illinois at Chicago

cc:

