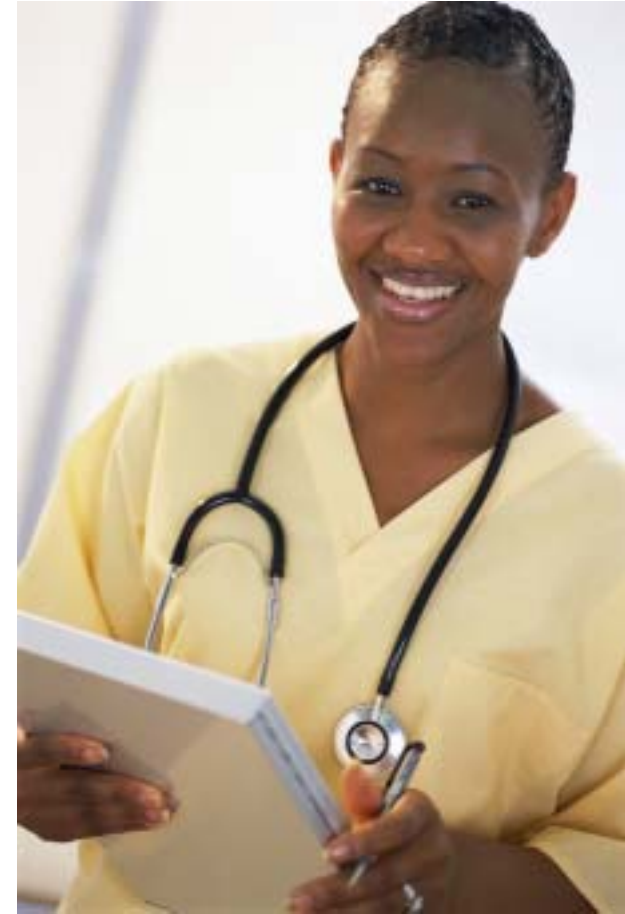


# Responding to the Shortage of Nurses and Health Care Workers

**Jim Purcell**

**Associate Vice Chancellor for Strategic Planning and Analysis  
Oklahoma State Regents for Higher Education**

- **Career Tech and Higher Ed Survey Overview**
- **Relationship between Hospital vacancies and Postsecondary Education productivity**
- **Proposed Higher Education and Career Tech response**

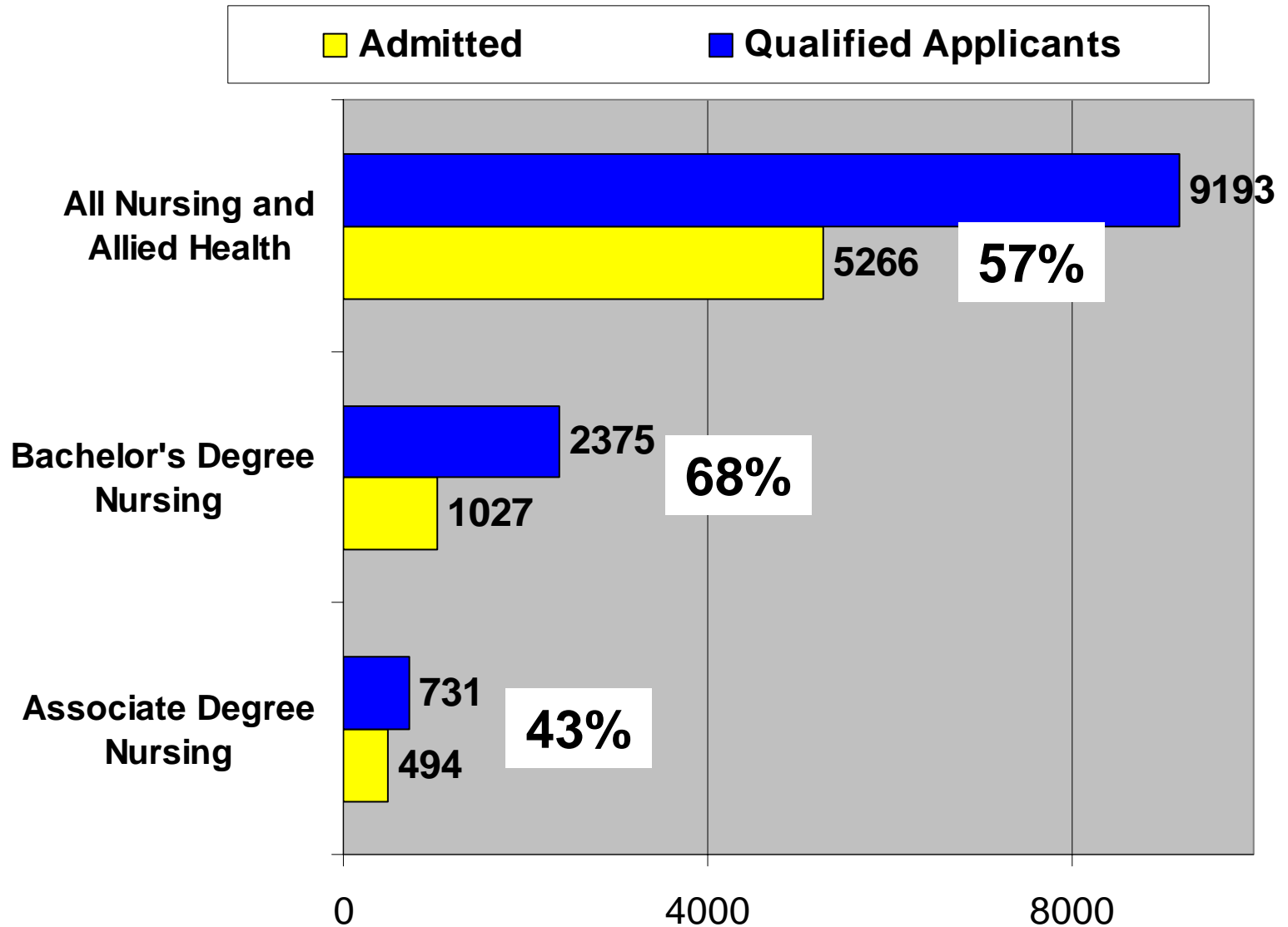


# Findings

## Ability of Postsecondary Education to respond to the need for workers

- Students:
  - There is a large number of qualified applicants for Nursing and Allied Health educational programs.
  - Oklahoma needs to admit more applicants into its programs.
  - 86% of health profession graduates stay and work in Oklahoma.

# Nursing and Allied Health Pipeline (all Postsecondary)



# Findings

## Ability of Postsecondary Education to respond to the need for workers

- Faculty

- There is a shortage in nursing and allied health faculty (156)
- The shortage is largest in RN faculty. (17)  
Another 37 RN faculty plan to retire in the next 5 years.
- Nursing faculty often leave for higher paying jobs in Hospitals.

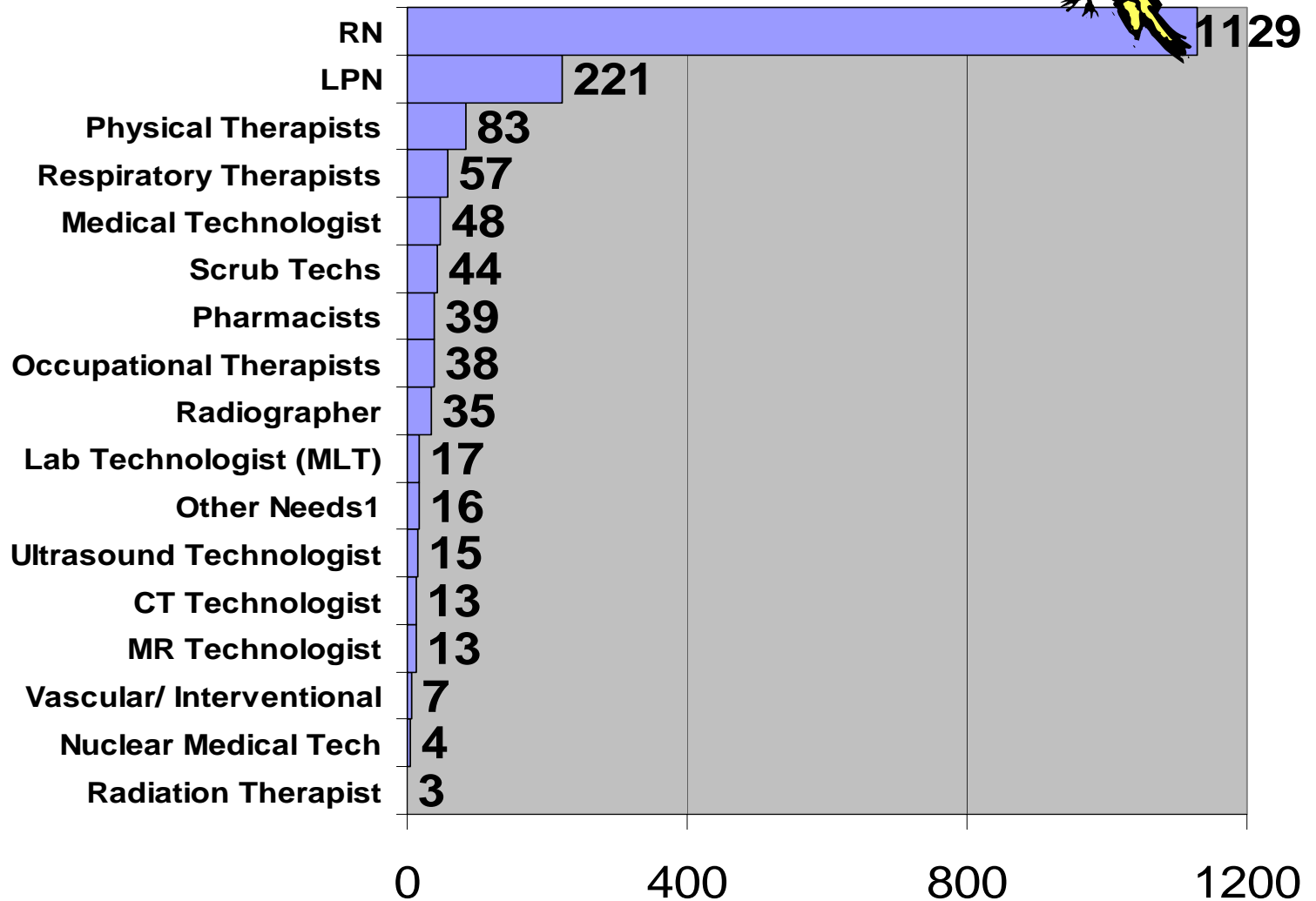
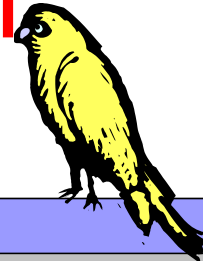


- Resource Issues

- Budget cuts in the early part of the century exacerbated the shortage.
- Adequate clinical space not available in all parts of the state.
- Current funding structure makes it difficult to quickly expand high-cost programs.
- Faculty salaries need to be raised to compete with the local healthcare industry rates to maintain faculty.

# Current Situation

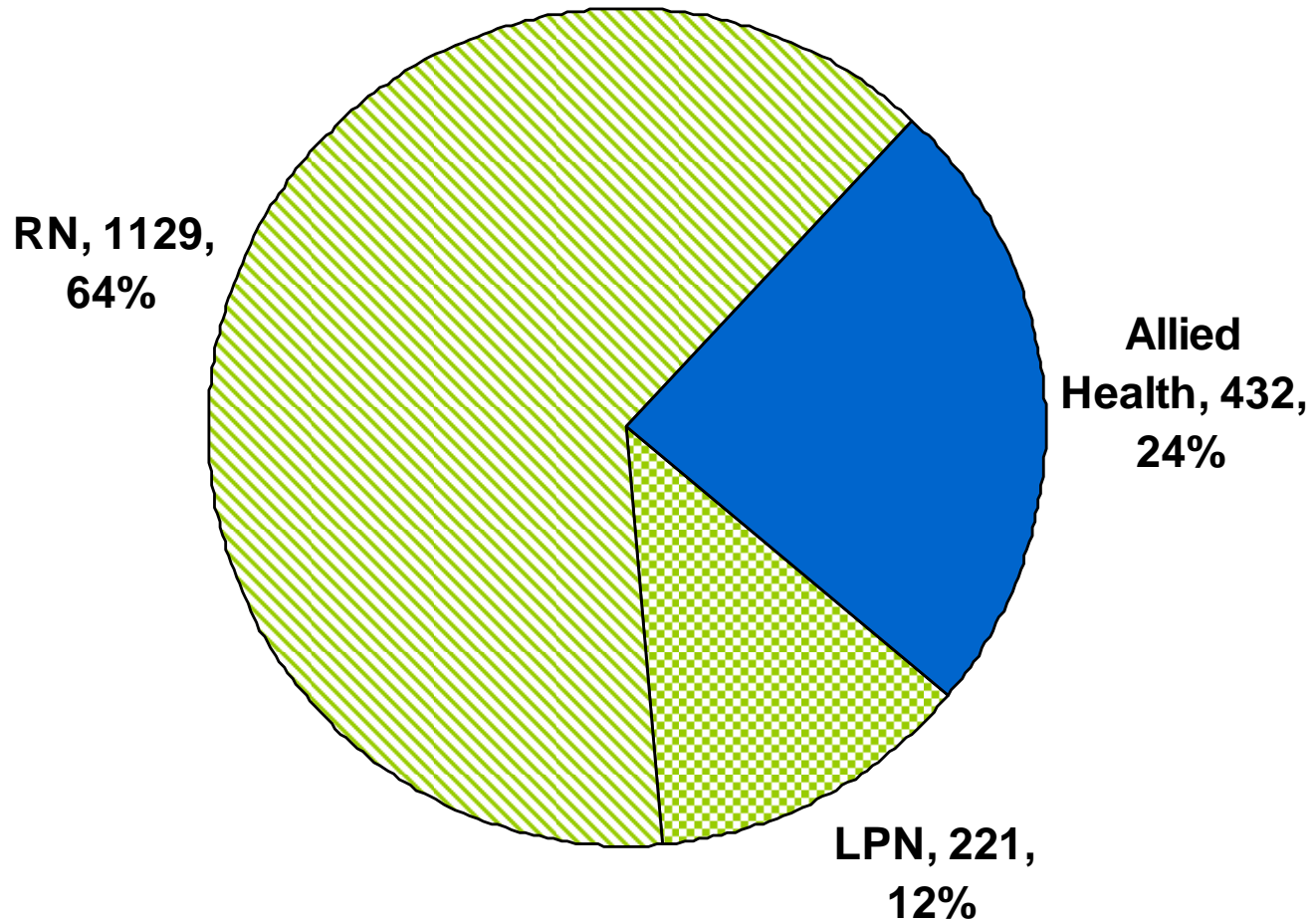
## Hospital Staff Vacancies



Source: Oklahoma Hospital Association

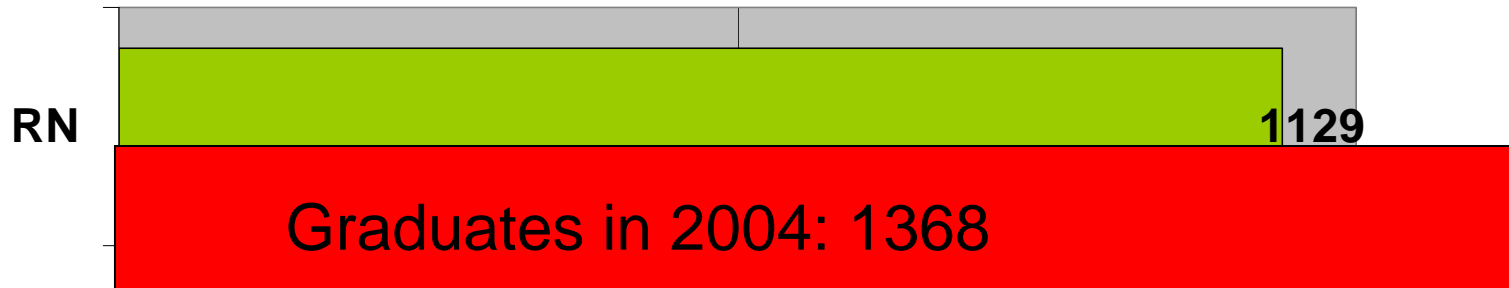
# Current Situation

## Hospital Vacancies by Type

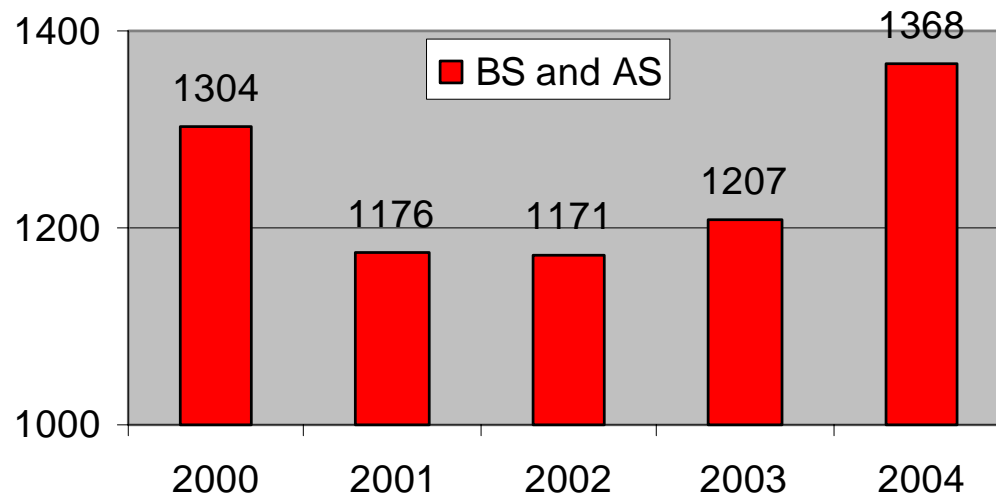


# Current Situation

## Hospital Nursing Vacancies



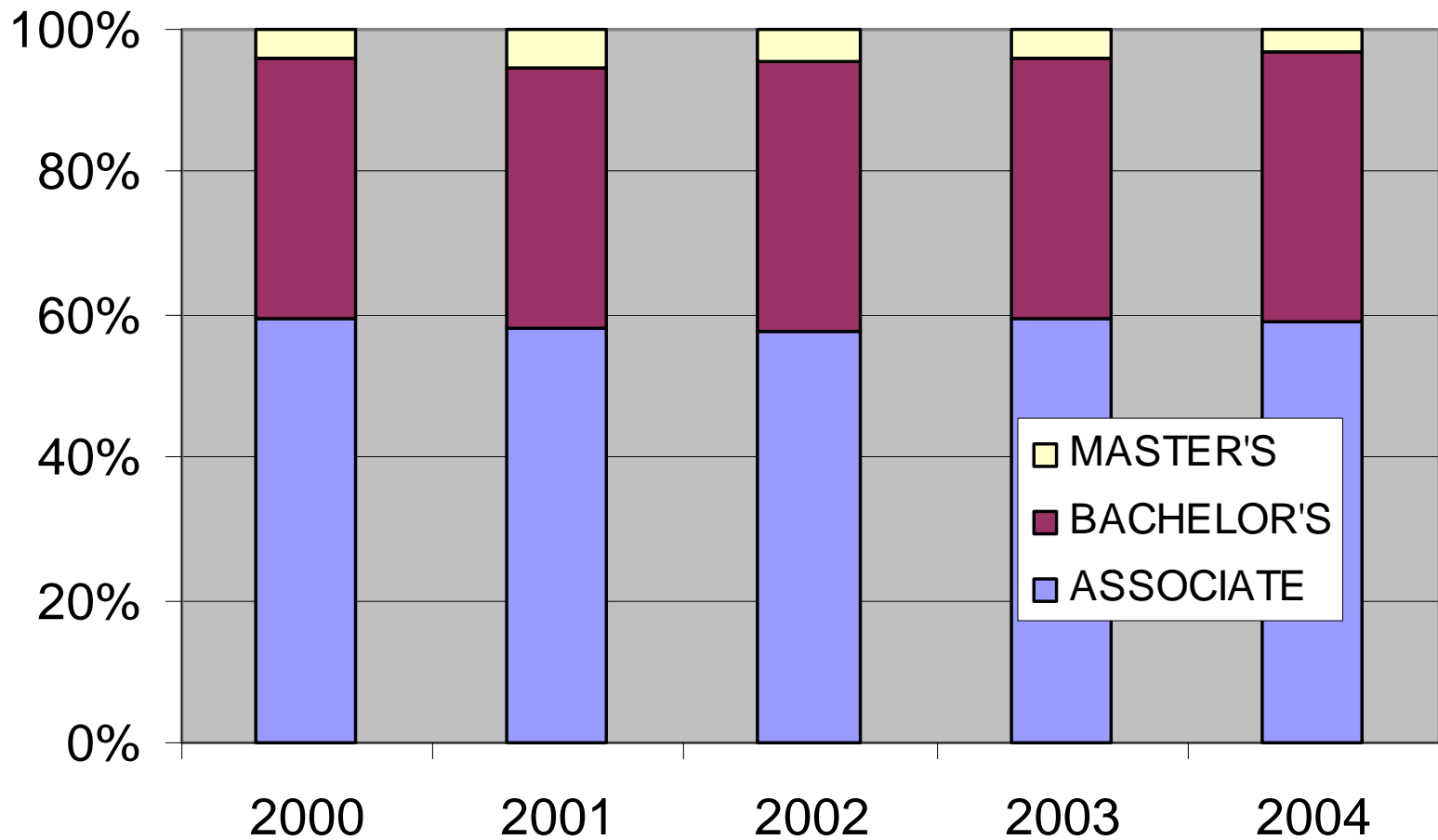
## Registered Nursing Graduates 1999-2000 to 2003-2004



Source: UDS

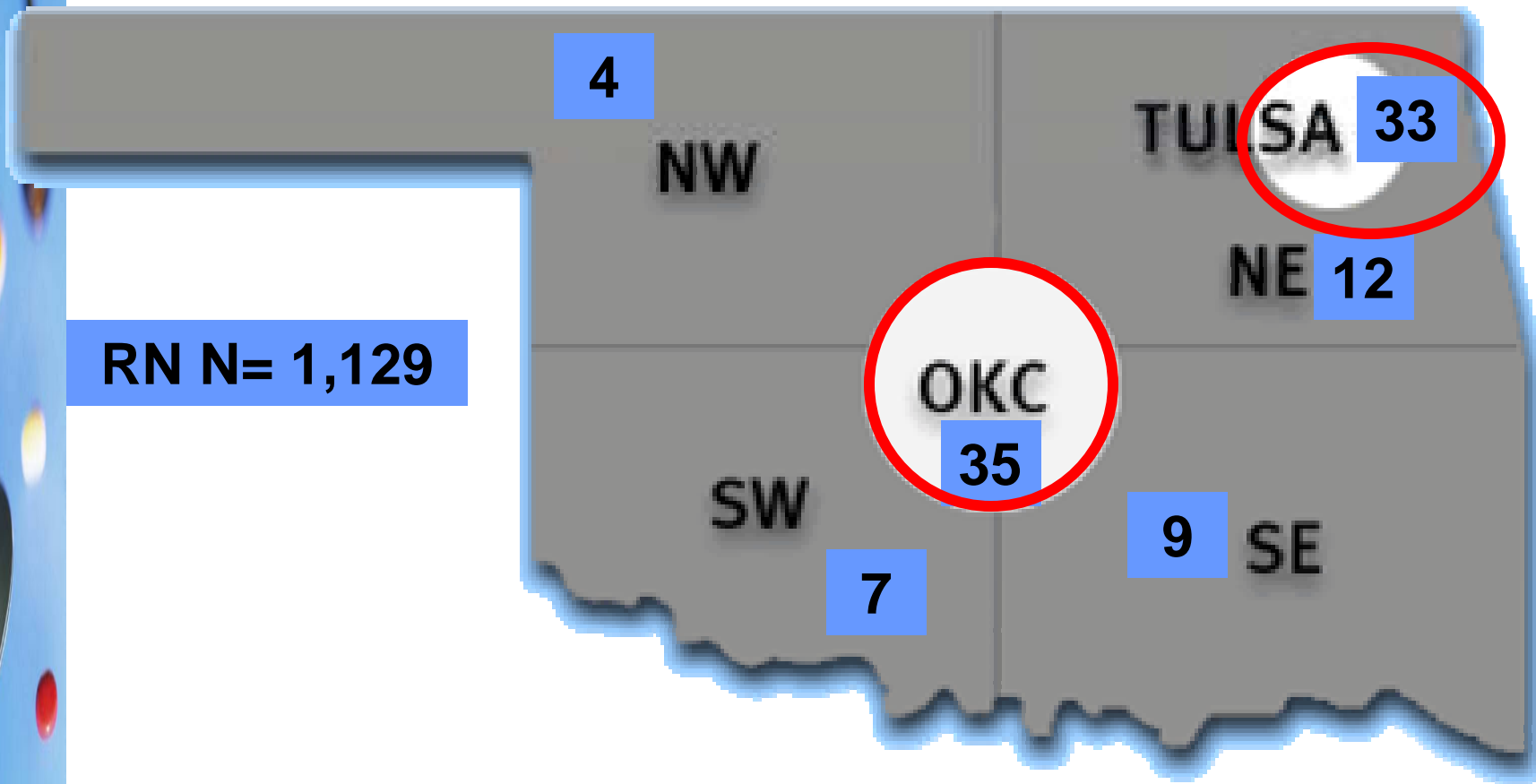
# Current Situation

## Nursing Graduates by Type



# RN needs by Location

Percent of state-wide vacancies



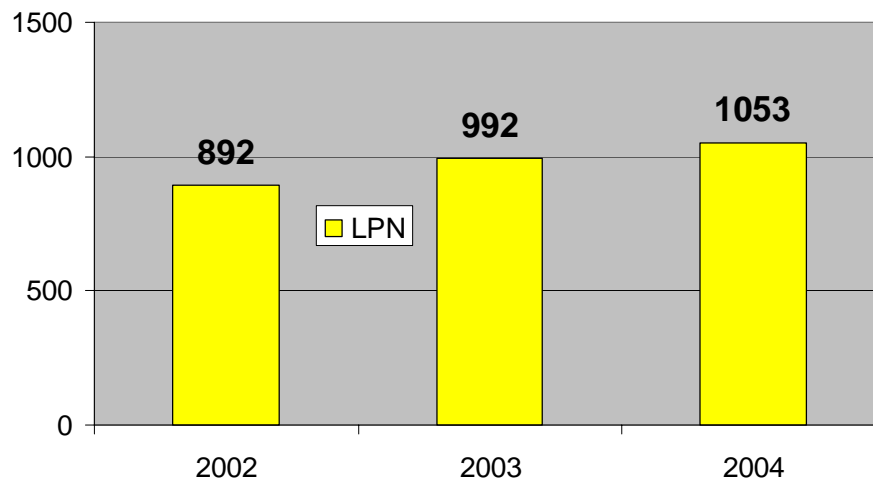
# Current Situation

## Hospital Nursing Vacancies



Completers in 2004: 1,053

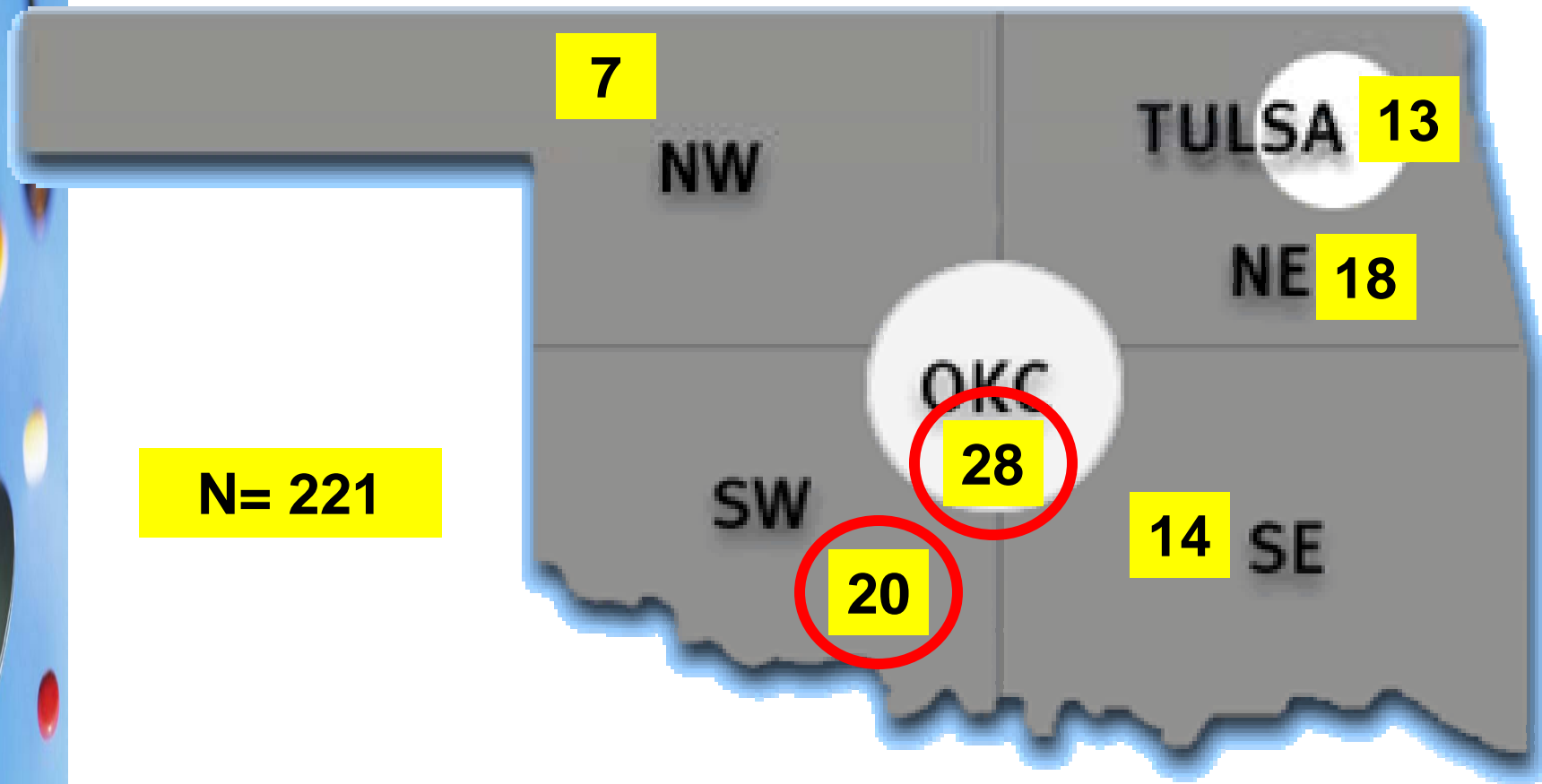
## Career Tech LPN Program Completers



Source: CT

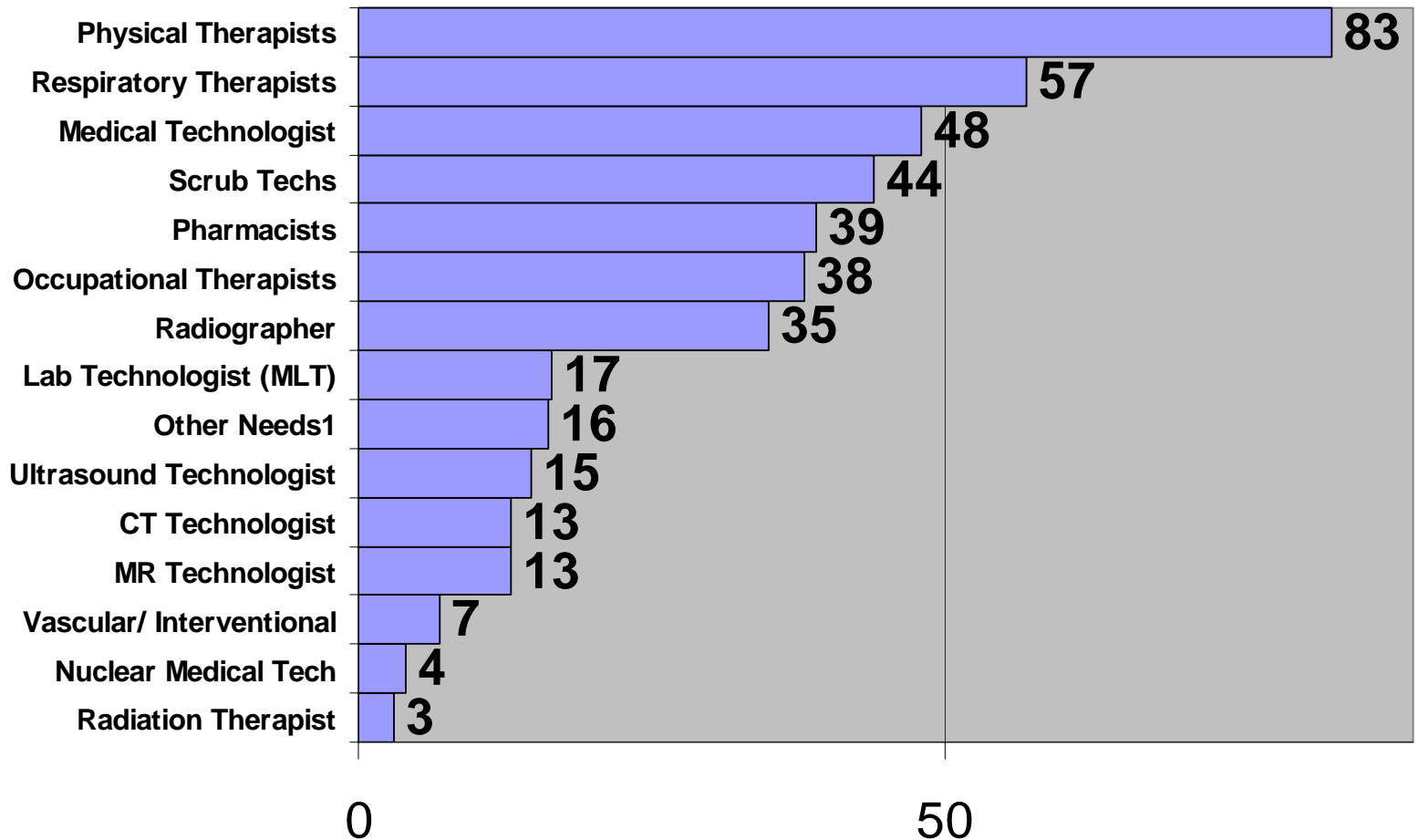
# LPN Needs by Location

Percent of state-wide vacancies



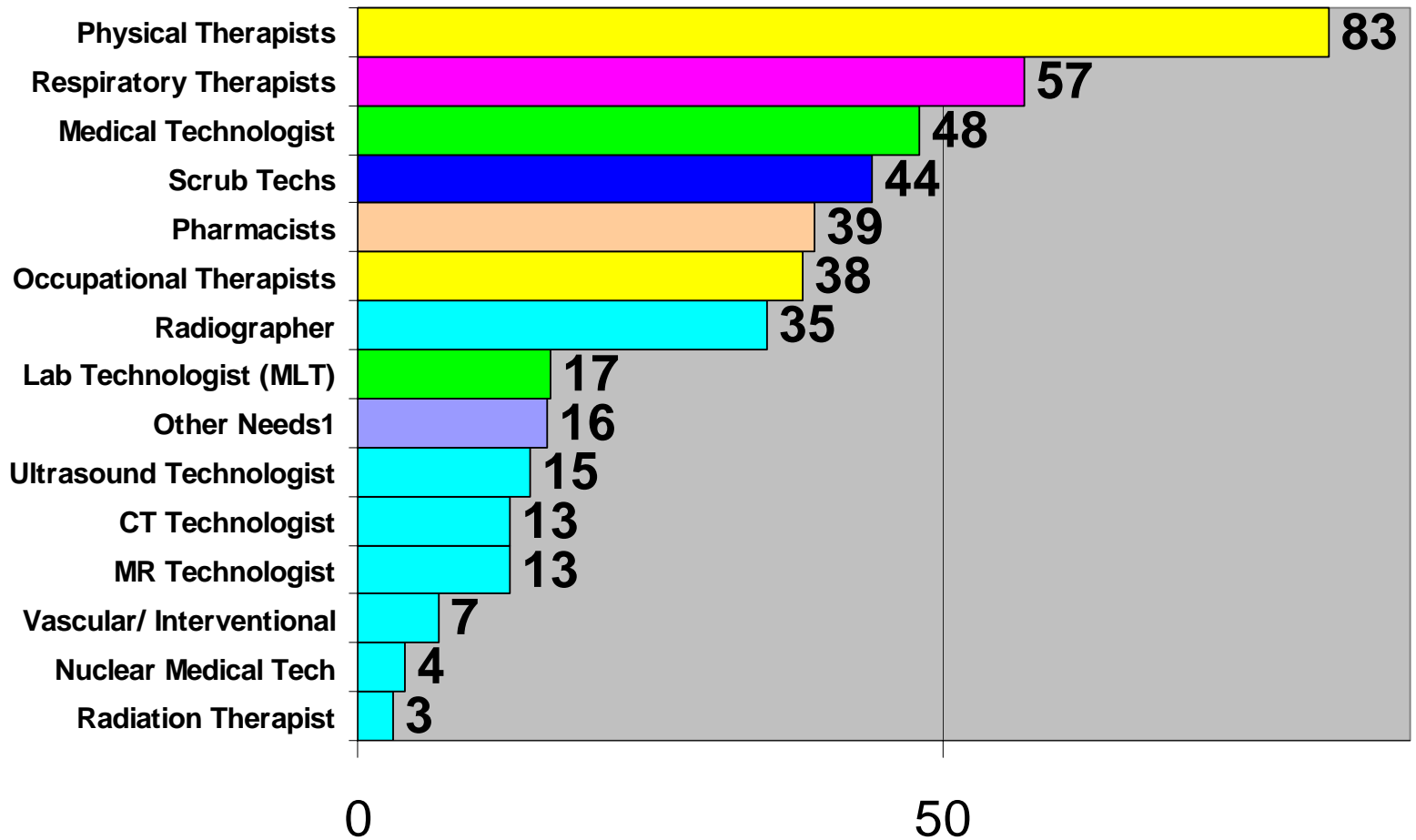
# Current Situation

## Hospital Staff Allied Health Vacancies



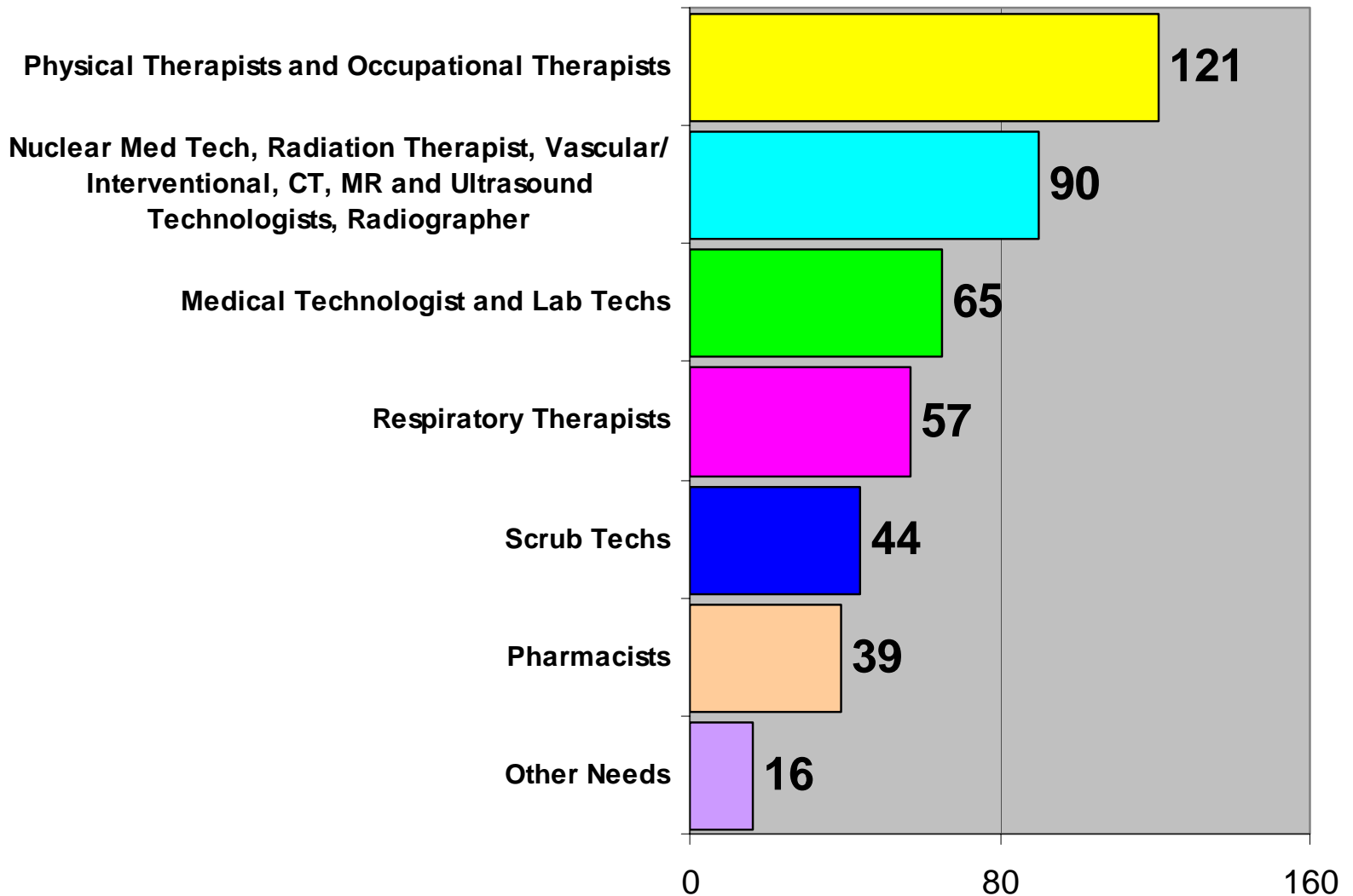
# Current Situation

## Hospital Staff Allied Health Vacancies



# Current Situation

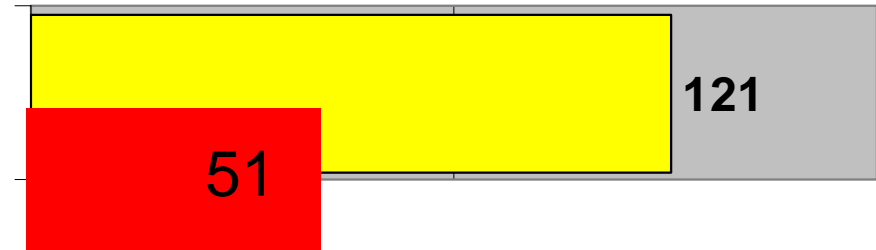
## Hospital Allied Health Vacancies



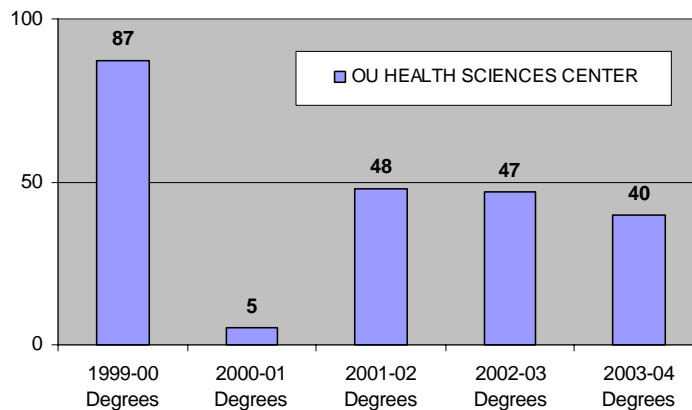
# Ability of Postsecondary Education to respond to the need for workers

## Hospital Allied Health Vacancies

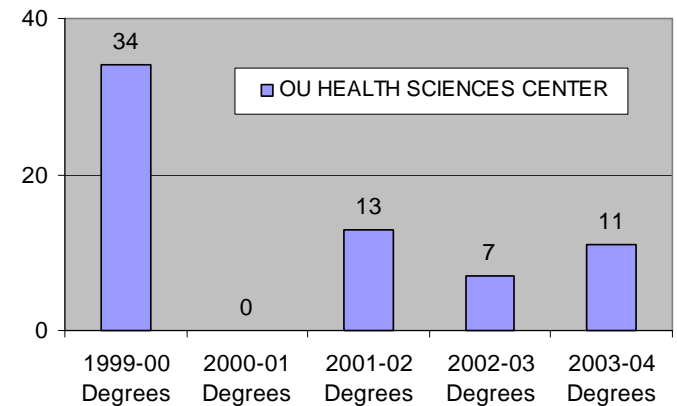
Physical Therapists and Occupational Therapists



## Physical Therapist Degrees



## Occupational Therapist Degrees

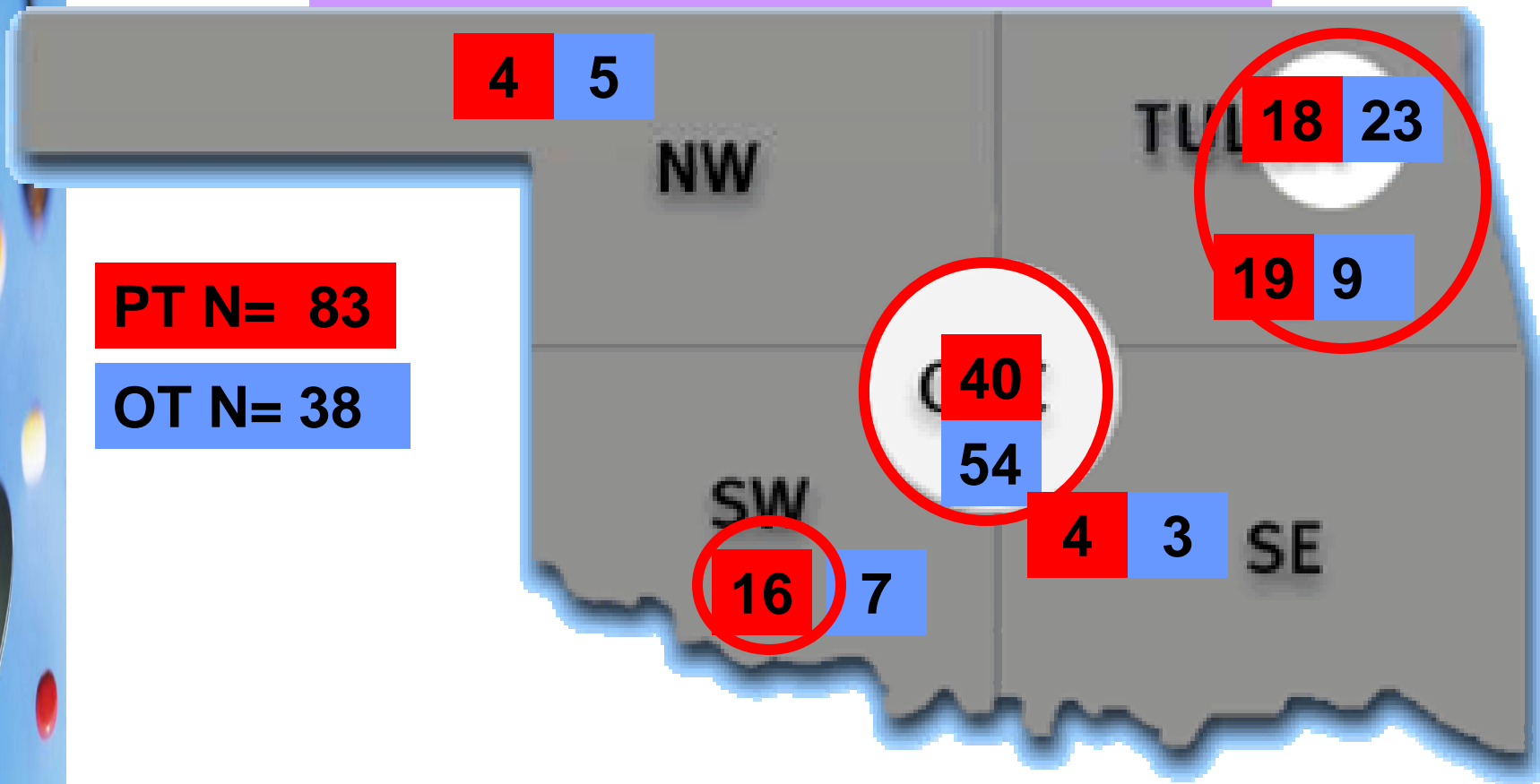


Source: IPEDS

# PT & OT

## needs by Location

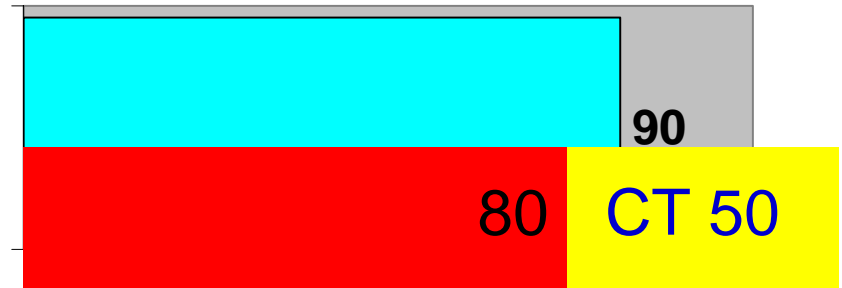
Percent of state-wide vacancies



# Ability of Postsecondary Education to respond to the need for workers

## Hospital Allied Health Vacancies

Nuclear Med Tech, Radiation Therapist,  
Vascular/ Interventional, CT, MR and  
Ultrasound Technologists, Radiographer  
**Radiologic Technology (CT)**



	1999-00 Degrees	2000-01 Degrees	2001-02 Degrees	2002-03 Degrees	2003-04 Degrees
<b>ASSOCIATE</b>					
BACONE COLLEGE	12	0	0	0	0
NORTHERN OKLAHOMA COLLEGE	0	0	1	0	1
ROSE STATE COLLEGE	17	14	12	11	19
SWOSU - SAYRE CAMPUS	12	7	14	9	12
TULSA COMMUNITY COLLEGE	13	16	18	26	24
WESTERN OKLAHOMA STATE COLLEGE	0	5	7	15	14
	54	42	52	61	70
<b>BACHELOR'S</b>					
OU HEALTH SCIENCES CENTER	14	17	19	12	10
<b>MASTER'S</b>					
OU HEALTH SCIENCES CENTER	1	0	1	1	0
<b>TOTAL</b>	<b>69</b>	<b>59</b>	<b>72</b>	<b>74</b>	<b>80</b>

Source: UDS



# Ability of Postsecondary Education to respond to the need for workers

## Hospital Allied Health Vacancies

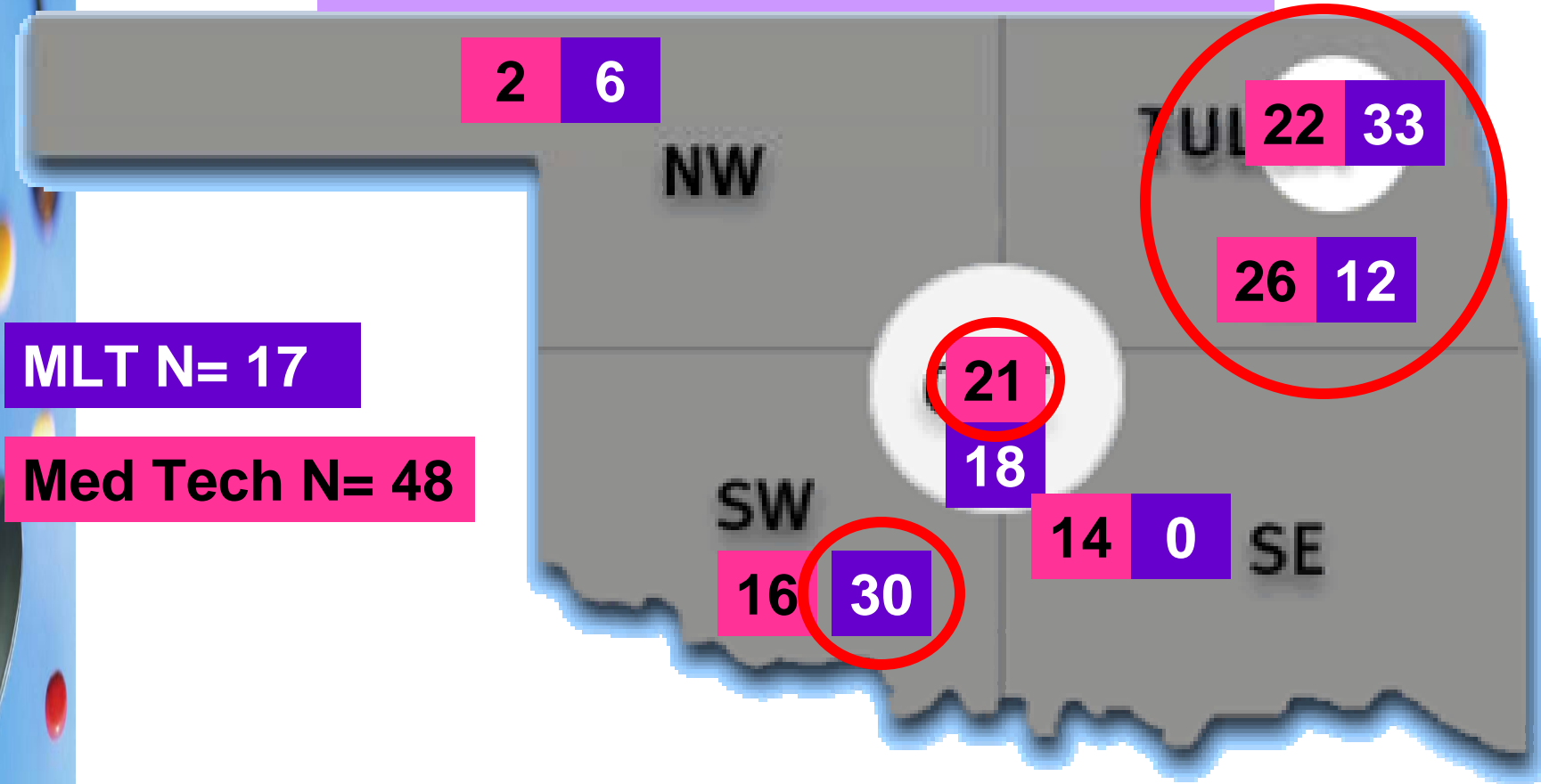
### Medical Technologist and Lab Techs

						65
	1999-00	2000-01	2001-02	2002-03	2003-04	76
ASSOCIATE	Degrees	Degrees	Degrees	Degrees	Degrees	
<b>CLINICAL/ MEDICAL LABORATORY TECHNICIANS, ETC</b>						
TULSA COMMUNITY COLLEGE	10	12	20	25	23	
CONNORS STATE COLLEGE	0	0	0	0	3	
NORTHEASTERN OKLAHOMA A&M COLLEGE	3	3	4	5	3	
ROSE STATE COLLEGE	4	2	0	12	16	
SEMINOLE STATE COLLEGE	4	6	6	9	5	
SOUTHWESTERN OKLAHOMA STATE UNIVERSITY	0	0	0	0	0	
ST. GREGORY'S UNIVERSITY	0	0	0	0	0	
SWOSU - SAYRE CAMPUS	4	2	1	6	3	
TULSA COMMUNITY COLLEGE	5	3	4	3	10	
WESTERN OKLAHOMA STATE COLLEGE	0	0	0	0	0	
<b>ASSOCIATE TOTAL</b>	<b>30</b>	<b>28</b>	<b>35</b>	<b>60</b>	<b>63</b>	
<b>CLINICAL LABORATORY SCIENCE/ MEDICAL TEC</b>						
<b>BACHELOR'S</b>						
CAMERON UNIVERSITY	2	3	3	4	4	
EAST CENTRAL UNIVERSITY	2	3	3	2	2	
NORTHEASTERN STATE UNIVERSITY	6	4	5	2	4	
OKLAHOMA CHRISTIAN UNIVERSITY	0	0	0	0	0	
OKLAHOMA PANHANDLE STATE UNIVERSITY	0	0	0	0	0	
OKLAHOMA STATE UNIVERSITY	3	2	3	1	0	
ORAL ROBERTS UNIVERSITY	0	0	0	0	0	
SOUTHWESTERN OKLAHOMA STATE UNIVERSITY	2	2	3	1	1	
UNIVERSITY OF CENTRAL OKLAHOMA	2	4	0	2	1	
UNIVERSITY OF OKLAHOMA	1	0	1	0	0	
UNIVERSITY OF SCIENCE AND ARTS OF OKLAHOMA	1	0	0	0	1	
<b>BACHELOR'S TOTAL</b>	<b>19</b>	<b>18</b>	<b>18</b>	<b>12</b>	<b>13</b>	
<b>ALL MED LAB</b>	<b>49</b>	<b>46</b>	<b>53</b>	<b>72</b>	<b>76</b>	

# Medical Technologist & Lab Technologist (MLT)

## needs by Location

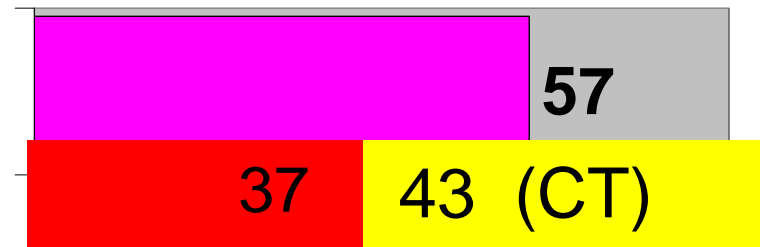
Percent of state-wide vacancies



# Ability of Postsecondary Education to respond to the need for workers

## Hospital Allied Health Vacancies

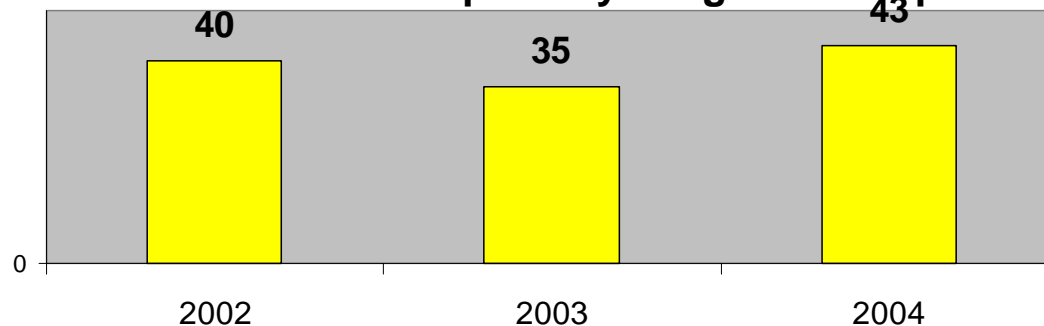
**Respiratory Therapists**



## RESPIRATORY CARE THERAPY/THERAPIST

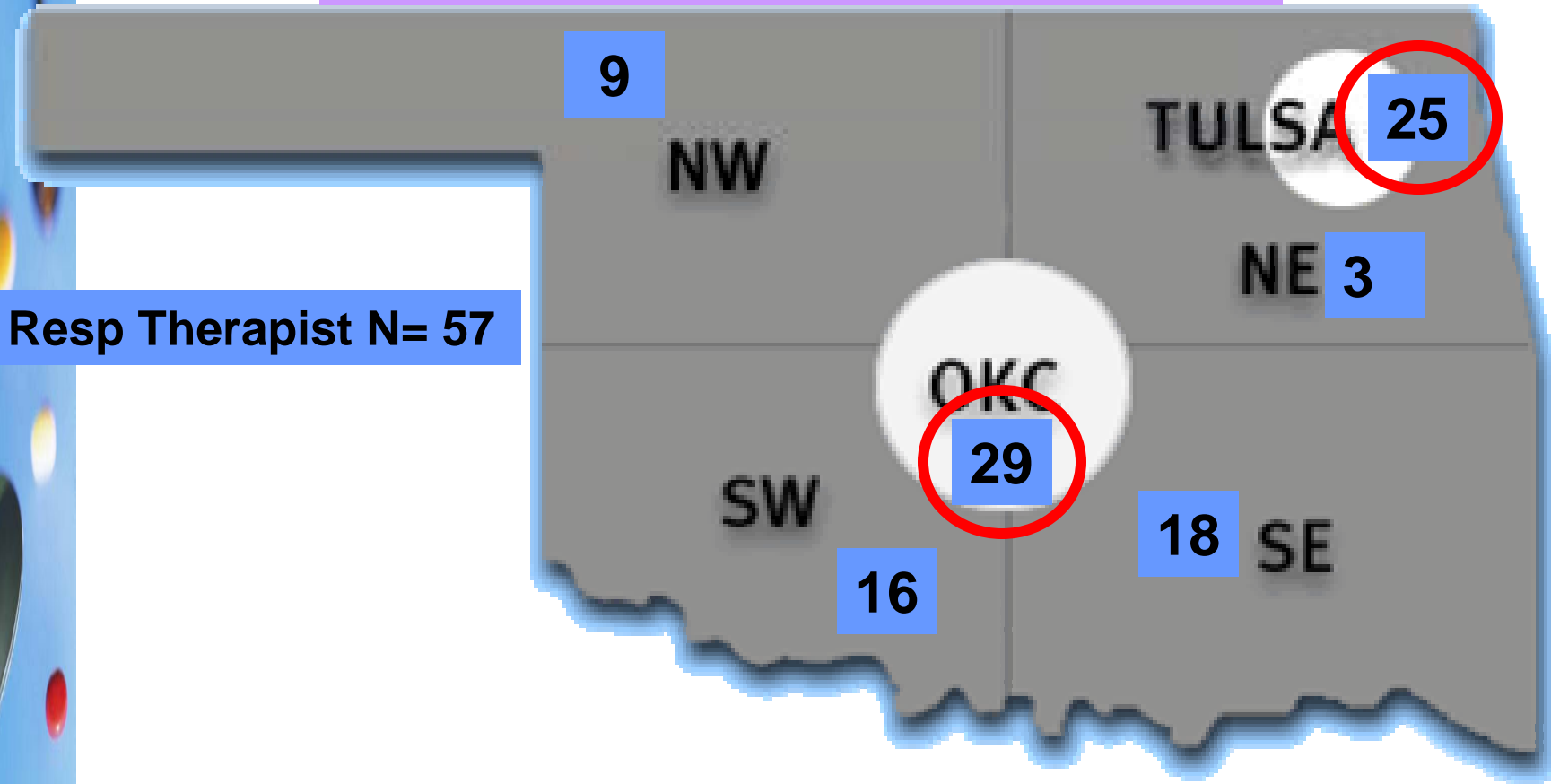
	1999-00 Degrees	2000-01 Degrees	2001-02 Degrees	2002-03 Degrees	2003-04 Degrees
NORTHERN OKLAHOMA COLLEGE	0	0	5	8	10
ROSE STATE COLLEGE	9	10	10	6	12
TULSA COMMUNITY COLLEGE	9	9	15	2	15
<b>TOTAL</b>	<b>18</b>	<b>19</b>	<b>30</b>	<b>16</b>	<b>37</b>

## Career Tech Respiratory Program Completers



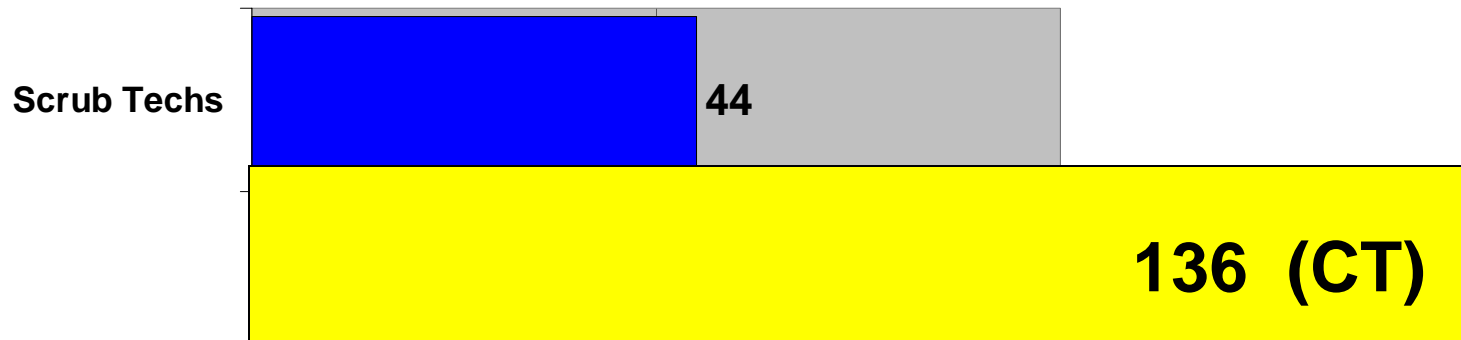
# Respiratory Therapist needs by Location

Percent of state-wide vacancies

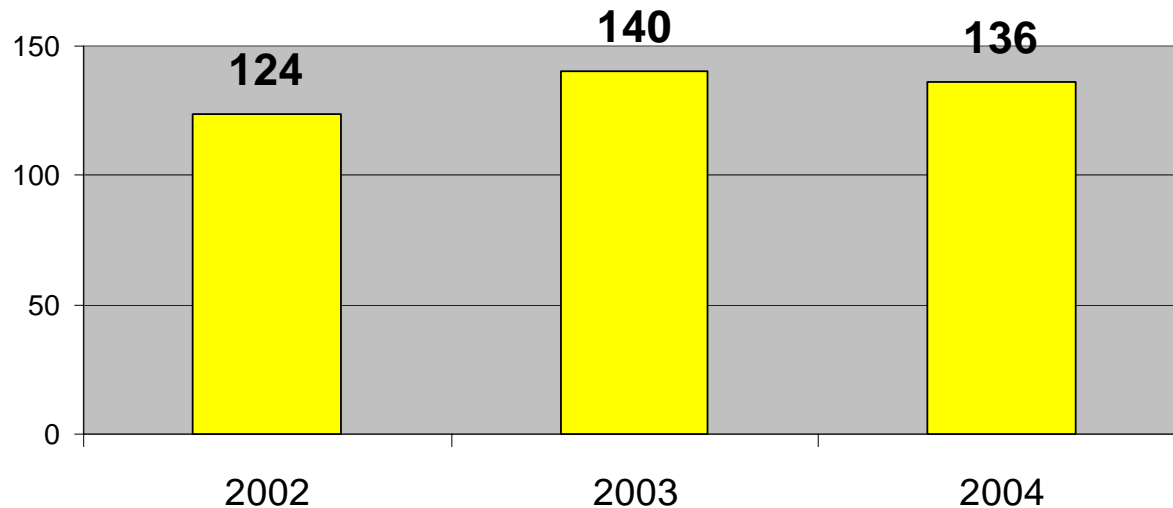


# Ability of Postsecondary Education to respond to the need for workers

## Hospital Allied Health Vacancies

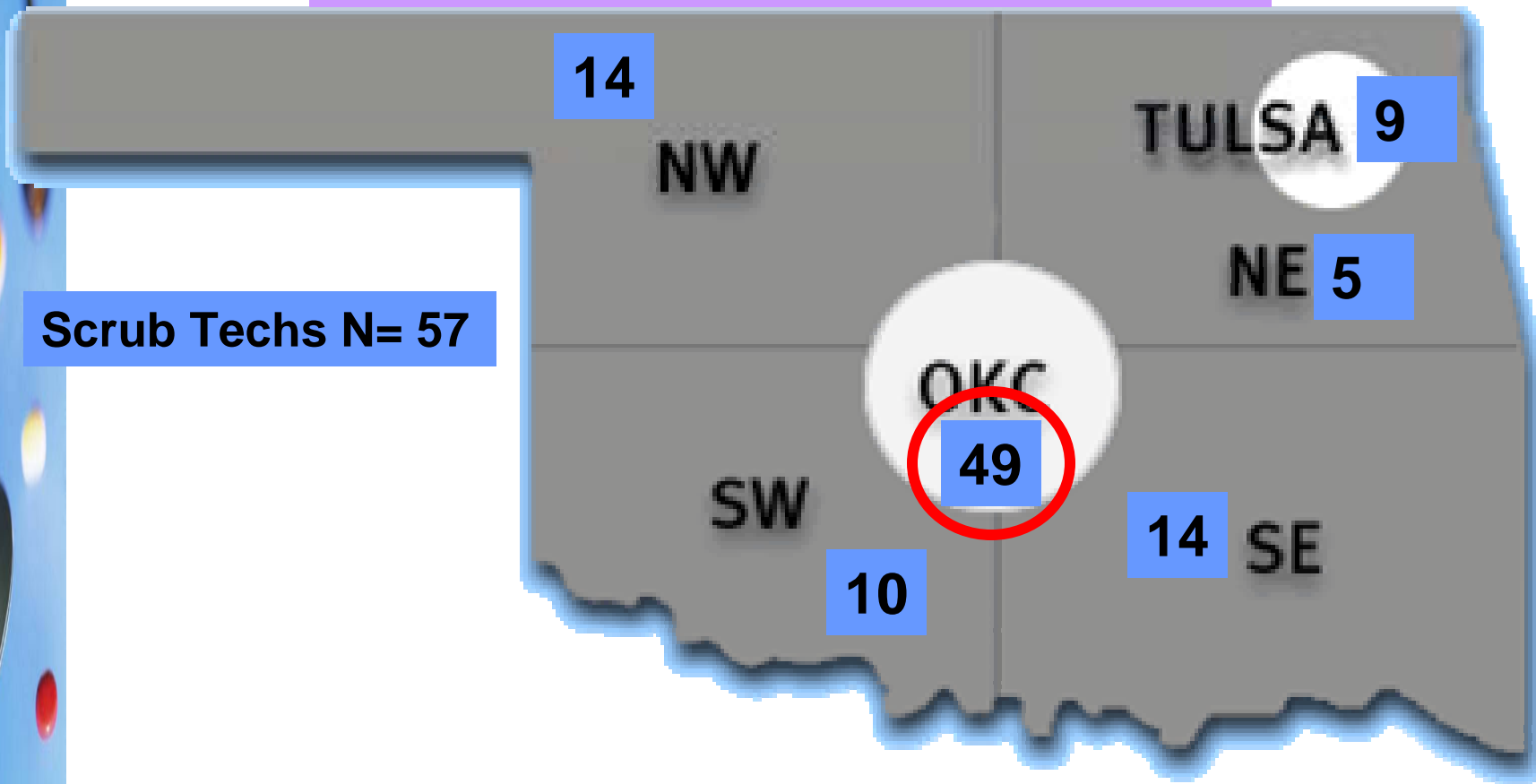


## Surgical Technology Program Completers



# Scrub Techs needs by Location

Percent of state-wide vacancies



# Ability of Postsecondary Education to respond to the need for workers

## Hospital Allied Health Vacancies

**Pharmacists**

**39**

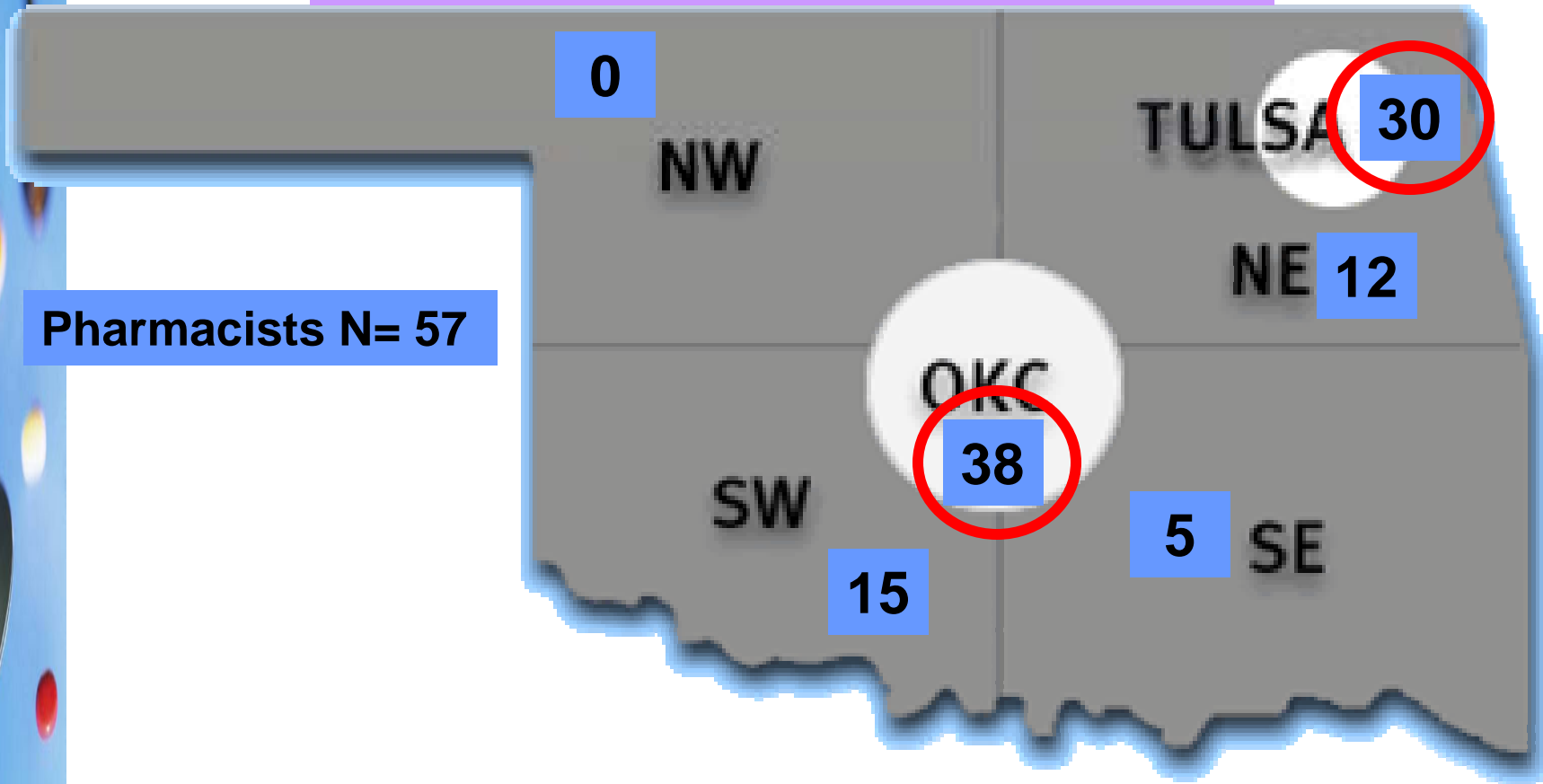
**201**

<b>PHARMACY (PHARMD [USA], PHARMD OR BS/BPH)</b>					
	1999-00 Degrees	2000-01 Degrees	2001-02 Degrees	2002-03 Degrees	2003-04 Degrees
<b>BACHELOR'S</b>					
OU HEALTH SCIENCES CENTER	85	32	1	0	0
<b>FIRST PROFESSIONAL</b>					
OU HEALTH SCIENCES CENTER	43	37	82	112	93
SOUTHWESTERN OKLAHOMA STATE UNIVERSITY	0	28	62	87	108
<b>TOTAL</b>	<b>43</b>	<b>65</b>	<b>144</b>	<b>199</b>	<b>201</b>

**Source: UDS**

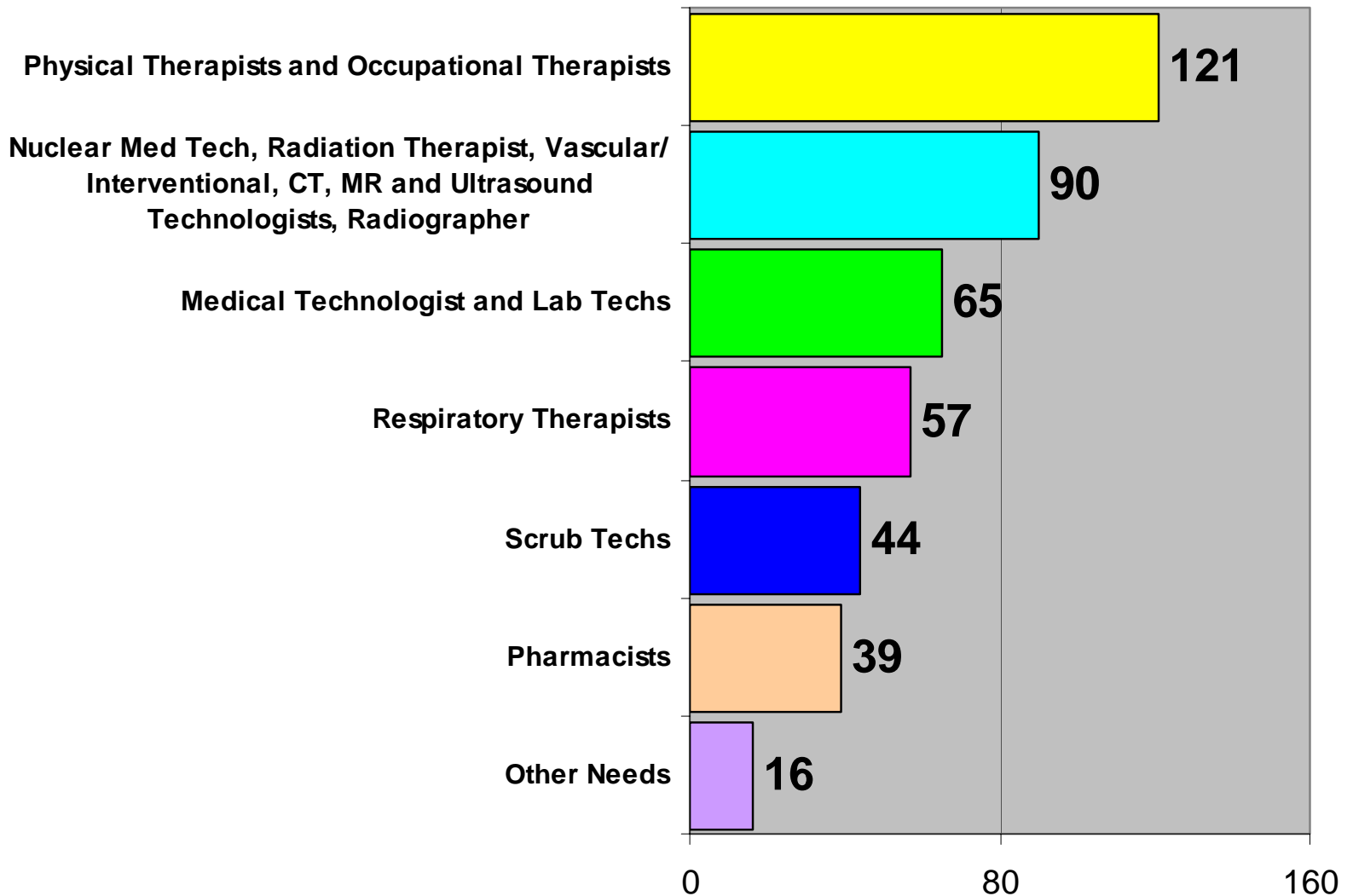
# Pharmacists needs by Location

Percent of state-wide vacancies



# Current Situation

## Hospital Allied Health Vacancies



Action is required **Stat!**



# Solution

To meet the demand for Oklahoma healthcare professionals, Oklahoma postsecondary education will need to supply additional graduates.

- Admit additional qualified applicants into high-demand programs.
  - Hire additional faculty based upon geographic workforce needs and institutional capabilities
  - Train additional faculty
  - Develop seamless partnership between college and Career Tech courses and work toward statewide articulation
- Strong oversight of Nursing and Allied Health programs until the healthcare worker shortage dissipates:
    - Earmark funds toward high demand specialties.
    - Fund according to institutional commitment to produce healthcare graduates.

# Prognosis for solving the Healthcare worker shortage

- A solution is possible . . . and necessary
- Combination of **triage** and **long-term care**
- Costly



# Solution -Triage



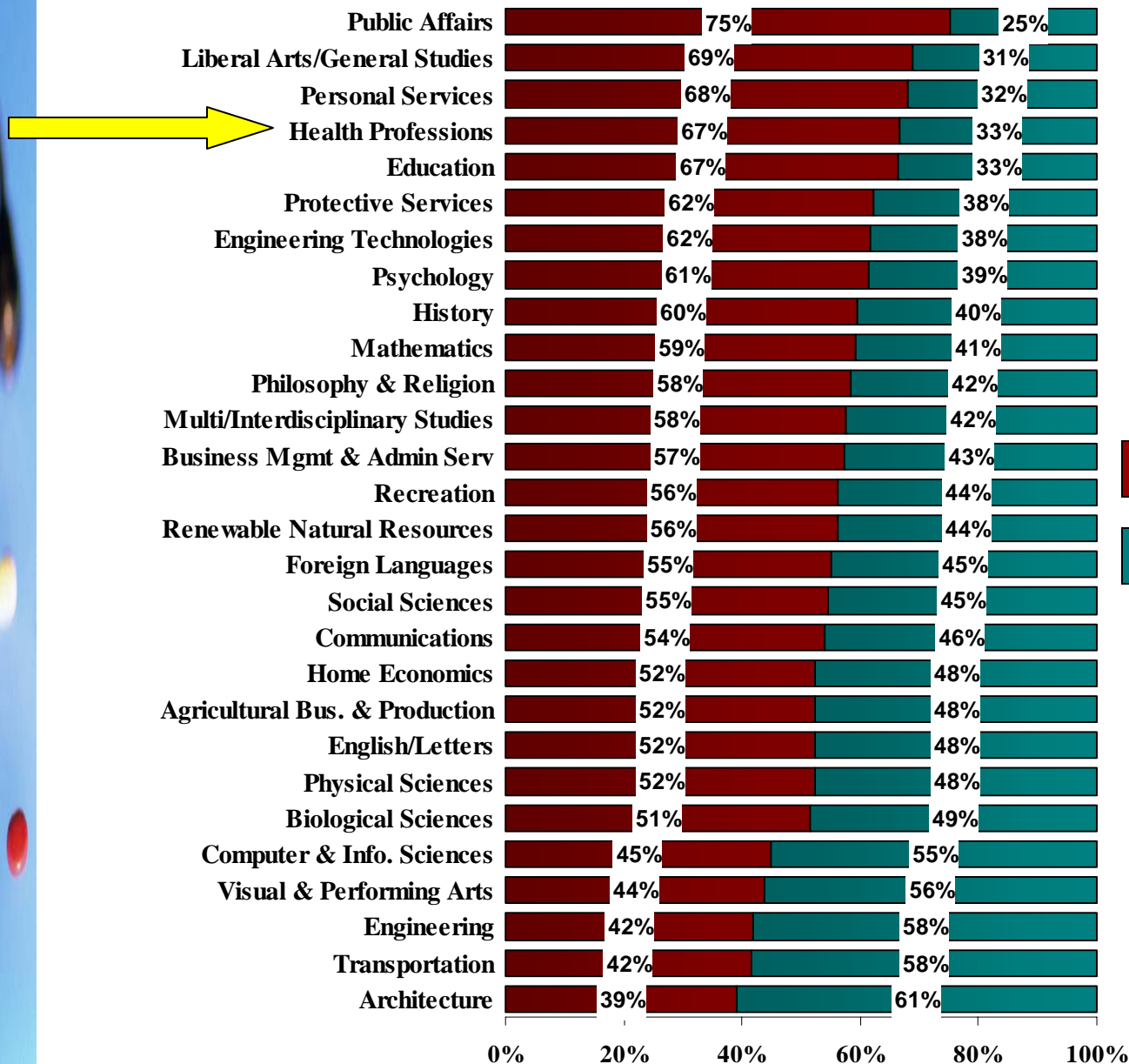
- **Current OSRHE Initiative:**
  - In this fiscal year, OSRHE allocated to Western Oklahoma State College an additional \$450,000 for the purpose of doubling the number of Associate Degree Nursing degrees awarded annually from 44 to 88.
- **Current ODCTE Initiative:**
  - In this fiscal year, the Career Tech system has added an additional 4 programs in the health care field at a cost of approximately \$480,000 to produce an additional 50 completers.

# Solution -Triage

## Preliminary cost estimates

- OSRHE First-year cost of \$5,190,000
  - \$3,500,000 for new faculty and related expenses, including additional instructional materials and graduate school tuition for some faculty.
  - \$400,000 to replace external grant funds scheduled to run out in some current programs.
  - \$450,000 to increase faculty salaries in targeted programs toward the goal of paying at the 60<sup>th</sup> percentile.
  - \$150,000 for student scholarships in “high need/ few applicant” programs.
  - \$690,000 for graduate faculty, staff and expenses at OUHSC to teach MSN and Allied Health graduate students who will become Faculty.
- ODCTE first –year cost of 3,180,000
  - 2,700,000 for 10 new full-time programs
    - 1.2 million for direct classroom expenses for instructors, curriculum, and support services such as guidance and counseling
    - 1.5 million for equipment.
  - 480,000 for 4 short-term certification programs

# Oklahoma Employment by Field of Study



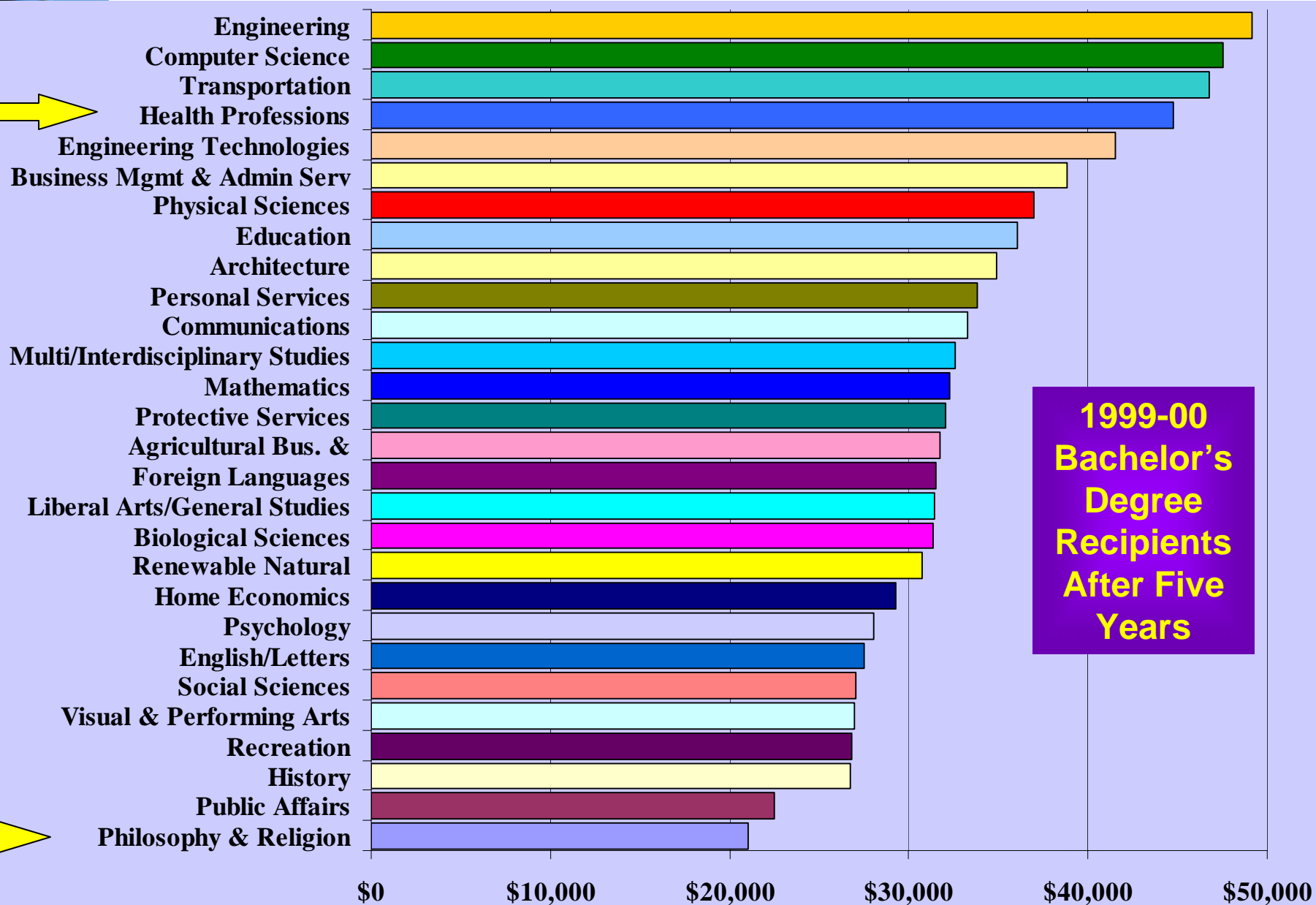
**1999-00  
Bachelor's  
Degree  
Recipients  
After Five  
Years**

**% Employed**  
**% Not Found**

# Health Professions

- **Overall, 70 percent of health profession graduates, were employed in OK:**
  - **Cert – 85%,**
  - **AAS – 81%,**
  - **AA/AS – 68%,**
  - **Bachelor's – 67%,**
  - **Master's – 67%,**
  - **Professional – 51%.**

# Average Salaries by Field of Study



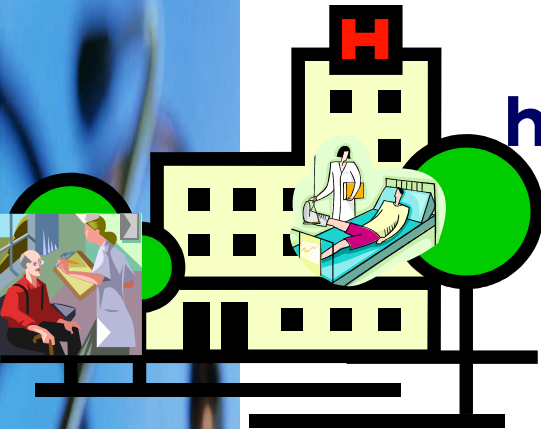


# What Others Are Doing

- **Arizona** hospital officials estimate that it will take \$40 million in funding over the next five years to double the number of nursing graduates.
- **California** recently dedicated \$90 million over five years to expand nurse training program capacity from 6,000 annually to 9,500.
- **Tennessee** officials estimate that it will take \$38.8 million and 383 new full-time faculty members to graduate an additional 4,969 nurses over the next five years.

Source: Caring for the Future: A Report from the Metropolitan Chicago Healthcare Council.

# Abbreviated and excessively simple history of funding **healthcare education**



- Training originally connected to hospitals
  - Apprentice training
  - Responsive to hospital needs
  - Not the primary interest or function of Hospital
  - Costly

**Hospital-based programs funded by the hospital: When a hospital needed more of a certain specialty they trained people. Absorbed full cost. (some federal funding)**

**Futurist Ed Barlow: Close to customer and speed to market.**



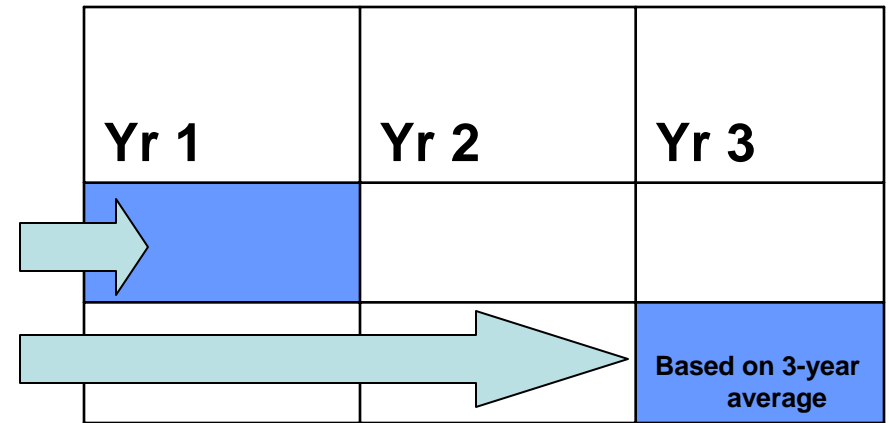
- as nursing and other allied health fields became a profession moved to colleges
  - Academic structure
  - Responsive to college interests: research, global learning.
  - Not as responsive to Hospital needs because funding structure different

**Public Colleges funded by tuition and funding formulas with the formula picking up to 2/3 of the expense. Funding formula based upon historic performance.**

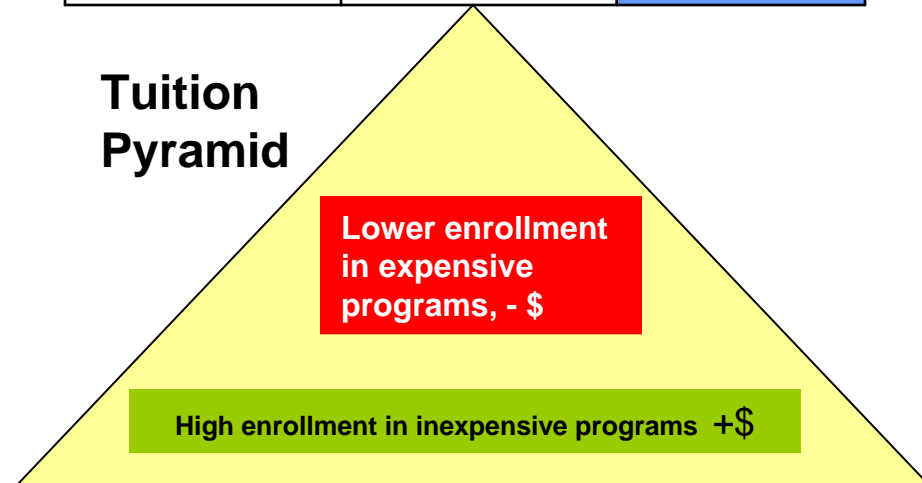
# Abbreviated and excessively simple history of funding higher education



- Students pay tuition and fees.
- State pays colleges in a formula usually based upon a combination of credit hour production and expenses.
- In times of financial constraint there is incentive to **maximize revenue** and **minimize cost**.
- **Reduction in high-priced programs:**
  - **Nursing, Science, etc.**



## Tuition Pyramid





- **Questions?**

**Oklahoma State Regents  
for Higher Education**

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