

The Right Stuff

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Overview

- 1) Definition of a Clinical Laboratory Scientist**
- 2) Problem Statement**
- 3) What Does It Take to Be a CLS?**
- 4) Interest in the Profession**
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Definition

- **Clinical laboratory scientists (CLS):**
 - ✓ **Clinical laboratory testing plays a crucial role in the detection, diagnosis, and treatment of disease. Clinical laboratory scientists perform most of these tests.**
 - ✓ Clinical laboratory scientists perform complex chemical, biological, hematological, immunologic, microscopic, and bacteriological tests. Clinical laboratory scientists microscopically examine blood and other body fluids.
 - ✓ Clinical laboratory scientists evaluate test results, develop and modify procedures, and establish and monitor programs, to ensure the accuracy of tests. Some scientists supervise clinical laboratory technicians.
 - ✓ **Source:** US Department of Labor



The Problem

- **Outlook in California:**

- No growth in programs for 5 years
- 13 Total General CLS Training Programs
- California ranks 48 out of 50 states in CLS per 100,000 population
- Average age for CLS in California is > 50

Source: CHAAHWS 2/2011

The Problem

- **Outlook in California:**

- Estimated annual openings due to growth/separation 390 per year
- Estimated training capacity of all general training programs is approximately 125
- 844 CLSs will be eligible for retirement within 3 years

Source: CHAAHWS, 2/2011

The Problem

- **Outlook in California:**

- The top five non-nursing healthcare professions, based on **FTE's** are Respiratory Therapists, Pharmacists, Pharmacy Technician, Radiological Technician, and Clinical Laboratory Scientists
- The top five professions represent 76% of **total FTE's**
- Of the 14 non-nursing healthcare professions Clinical Laboratory Scientists rank **5th**
- Of the 14 non-nursing healthcare professions Clinical Laboratory Scientists rank **6th** for **Job Vacancies**
- **Source:** CHAAHWS 2/2011

The Problem

- **Outlook in California:**

- Of the top three occupations having the highest retirement eligibility, Clinical Laboratory Scientists pose the most immediate risk

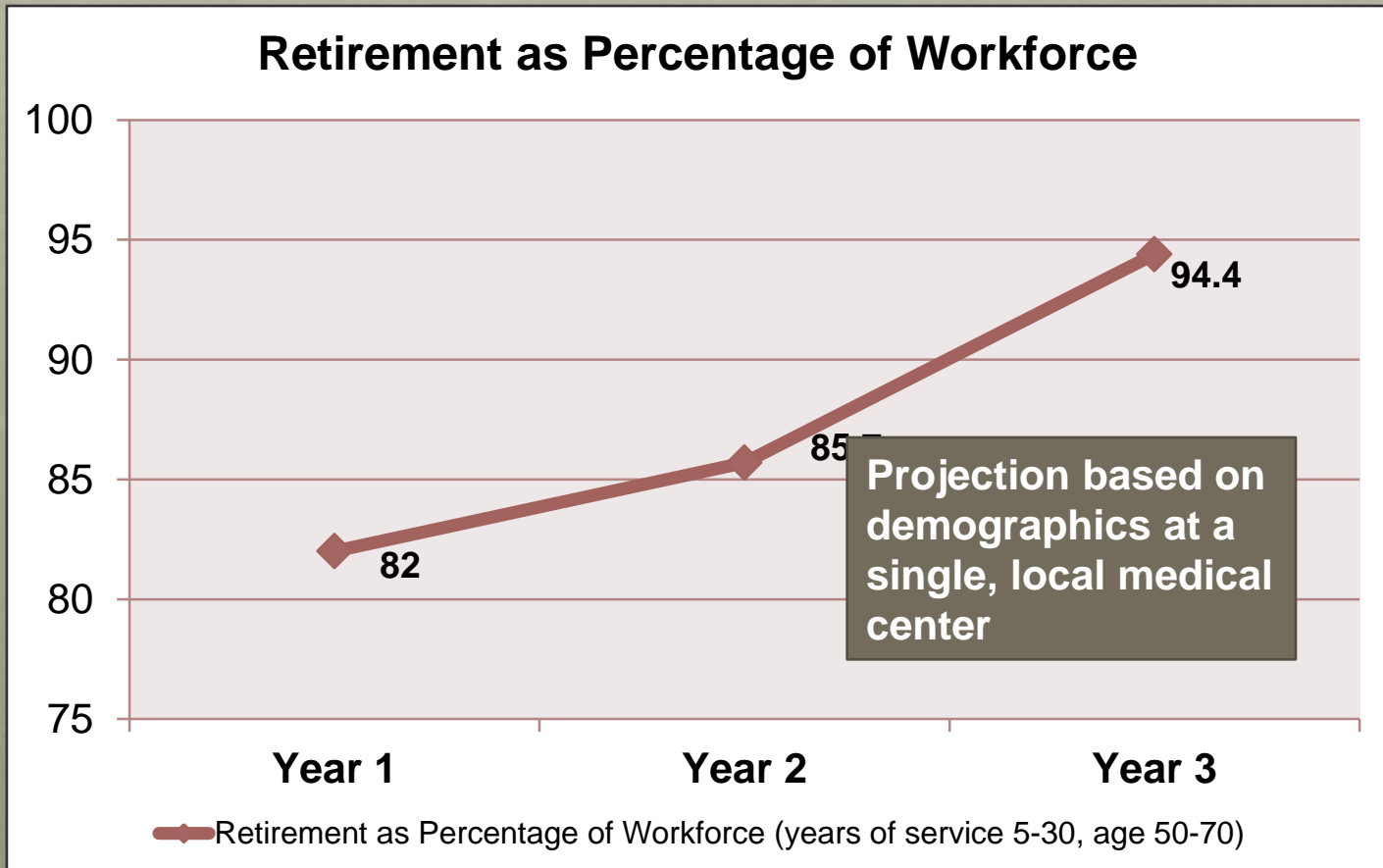
- By 2015, 844 FTE,s out of the total of 2763 FTE,s will will be eligible to retire

- 844 CLS FTE,s represents approximately 1/3 of the entire workforce of CLSs in California !

Source: CHAAHWS 2/2011

The Problem

At a Local Medical Center:



The Problem

- **Local Outlook:**

Due to:

- Multiple CLS training program closures
- Reduction of college or university pre-baccalaureate academic curriculum availability

Resulted in:

- Lack of local pre-baccalaureate, state required, academic courses
- Lack of post-baccalaureate State licensed training programs

What Does It Take To Become a CLS?

- ✓ Must have as B.A. or B.S. degree in a biological science or related field from a college or university maintaining standards equivalent, as determined by State Department of Health, to those institutions accredited by the Western Association of Schools and Colleges

Source: California Administrative Code, title 17, § 1033

What Does It Take To Become a CLS?

- Must have taken university or college level courses in:
 - ✓ Clinical/ Medical Hematology*
 - ✓ Clinical/ Medical Immunology*
 - ✓ Clinical/ Medical Microbiology*
 - ✓ Physics (to include light and electricity)-3 semester or equivalent quarter hours
 - ✓ Analytical Chemistry**
 - ✓ Quantitative Analysis**
 - ✓ Organic Chemistry**
 - ✓ Inorganic Chemistry

* 18 semester or equivalent quarter hours

** 16 semester or equivalent quarter hours

What Does It Take To Become a CLS?

- 52 Weeks of training in a California licensed Clinical Laboratory:
 - ✓ The Clinical Laboratory must also be licensed by the California DPH as a Clinical Laboratory Scientist Training program
 - ✓ 37 Hours per week practical laboratory training
 - ✓ 3 hours per week didactic lectures (150 hours of didactic lectures over the course of the year)

What Does It Take To Become a CLS?

- **New proposed Title 17 regulation changes:**
 - ✓ Possible major impact on both pre-baccalaureate and training programs
 - ✓ Changes not yet implemented

Note:

Complete text of requirements for CLS trainee can be found in the California Administrative Code, title 17, § 1033

Interest in Profession

At a local San Diego Medical Center:

- An increase in required **course deficits** by potential CLS trainee candidates was observed over the past 5 years
- A significant increase in **required course deficits** has become more pronounced in the last 3 years
- The candidate population is not being served adequately

Interest in Profession

At a local San Diego Medical Center:

- On a yearly basis, had in excess of 300-400 inquiries about CLS training program
- In 2010-2011 there were 56 potentially qualified applicants
- Of the 56 potentially qualified applicants, 75% were missing State required academic courses

Missing Prerequisites

Prerequisite	Percentage of Applicants Missing Prerequisite
<i>Clinical Hematology</i>	61%
<i>Clinical Microbiology</i>	46%
<i>Clinical Immunology</i>	57%
<i>Analytical / Quantitative Analysis</i>	52%

Interest in Profession

- ✓ Interest in becoming a Clinical Laboratory Scientist has come from unexpected sources
- ✓ Several distinctly different groups are being attracted to the profession
- ✓ Potential candidates are frequently discouraged by the difficulty in navigating the academic availability of required courses and State regulations

Interest in Profession

Types of Prospective Clinical Laboratory Scientist groups:

- ✓ High School graduates
- ✓ Community College graduates
 - AA degree, Major in Medical Laboratory Technology
 - AA degree in biological sciences from community colleges without a formal MLT curriculum
- ✓ Already licensed Clinical Laboratory Scientists wishing to re-enter the field
- ✓ Current certified California MLT's wishing to complete their B.S. degree and enter the CLS profession
- ✓ Foreign trained professionals
- ✓ Individuals lacking State required key academic courses

National University's Role in Correcting the Problem

- 1) Emphasis on community outreach
- 2) Individual counseling of prospective candidates
- 3) Offer pre-baccalaureate courses which satisfy State Department of Health requirements for prospective Clinical Laboratory Scientist candidates
- 4) Engaging local medical centers to become active CLS training facilities



National University's Role in Correcting the Problem

- 5) Offer unique on-line one-course-per-month format courses that satisfy State requirements
- 6) Supply required courses on a regular and frequent basis to satisfy prospective student needs
- 7) Provide state-of-the art technology to assure an excellent learning experience
- 8) Ensure that the student will be competitive in the field of Clinical Laboratory Science by offering both academic and practical hands-on laboratory experience



Summary

- Critical need for the Clinical Laboratory Scientist Profession
- Critical need for expanded local area academic support for prospective CLS candidates
- Critical need for local university and medical center involvement

Recommendations

- Expand availability of State required pre- and post-baccalaureate academic course offerings
- Increase visibility of the CLS profession to a more diverse population of prospective candidates
- Engage local medical centers to provide additional training positions

Recommendations

**In short, provide the
“right stuff” to the
student population to
be served for
maximum future
profession success**



Discussion

- Thank you for your time and attention
- Questions or comments?
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"Excuse me, sir, but would you mind getting the door for us?"