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The Respiratory Care Practitioner Workforce Study Conducted for the Respiratory Care Board of California

Overarching Purpose of the Workforce Study

- To describe the character of the RCP workforce in California
- To collect information on important dimensions related to policy areas the Board may want to consider in addressing future Respiratory Care workforce needs
- To examine the supply and demand characteristics that will affect the future of the Respiratory Care workforce
- To create a model to forecast the future Respiratory Care workforce needs of California

Focus of Today's Presentation

- Additional data on RCPs (particularly related to future workforce considerations)
- Reviews of selected results from the Employers' and Educator' survey
- A discussion of forces shaping the Respiratory Care workforce into the future
- A discussion of the forecast model and its implications

Study Data Sources

- RCP licensee database
- Expert panels
- Three surveys:
 - Respiratory Care Practitioners
 - Employers
 - Educators
- Data from a variety of existing databases
 - *E-4 Population Estimates for Cities, Counties and the State*
 - *Race/Ethnic Population with Age and Sex Detail, 2000–2050*
 - *OES Employment and Wages by Occupation*
 - *Home Medical Device Retailer Licensing System*
 - *State Utilization Data File of Hospitals Calendar Year 2005*

Survey Data Considerations

- Some survey questions focus on factual information (ex. How many RCPs are employed in your unit?).
- Other survey questions elicit perceptions from survey respondents. Such perceptions may or may not accurately reflect reality (ex. Are RCP education requirements appropriate for their job duties?).

Survey Data Considerations

- There is a possibility that those returning the surveys were different than the general population of RCPs, employers, educators in ways that we were not able to detect.

Do stakeholders groups share common perceptions on important workforce issues?

- One of the overall positive findings of the study was the high level of agreement on most of the issues
 - High levels of agreement were seen regarding issues impacting the workforce, and the relative magnitude of those impacts

Respiratory Care Workforce Study



Practitioner Survey

Notes on Chapter 2
of the 2007 RCP Workforce Study

This Section of the Presentation Will Highlight Some of the RCP Survey Findings on:

- RCP pay in California
- Procedures and policies
- The context in which respiratory care is delivered and how this relates to job satisfaction

We will also discuss some of the findings with implications for the *workforce supply model*.

What Is the Average Pay Rate for RCPs in California?

\$30.09	Average base pay rate for all survey respondents working in respiratory care
\$27.15	California Employment Development Department (EDD) estimate for 1 st Quarter 2006

- Some of the gap between these rates can be explained by the occupational classification that EDD uses for Respiratory Therapists
- This classification does not include directors, managers, some supervisors, educators and RCPs working in the manufacturing/distributing sector

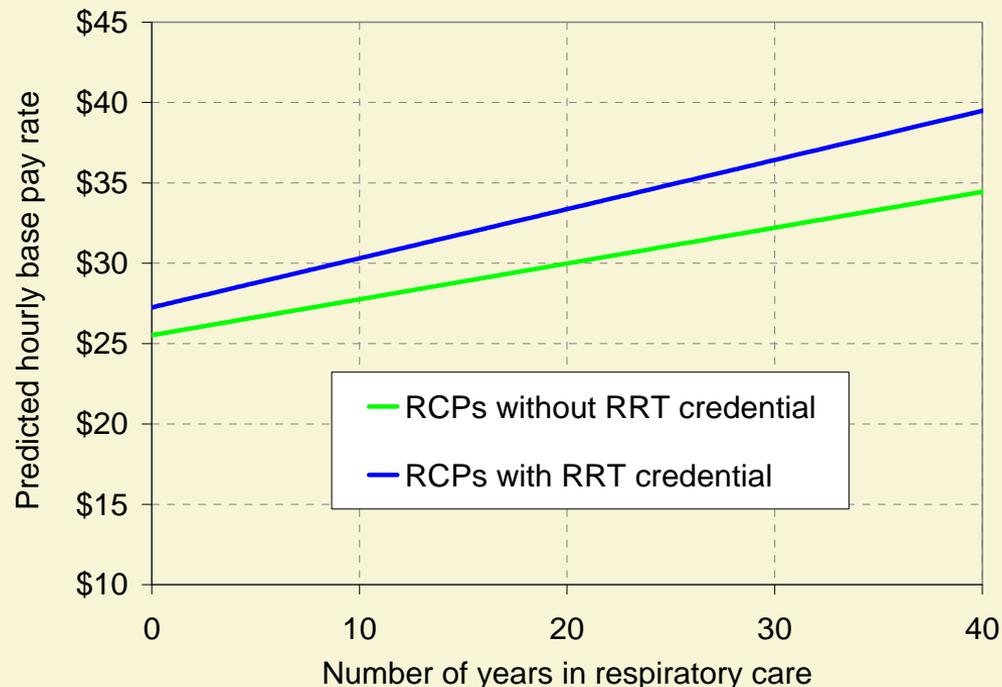
How Do Pay Rates Vary across Work Settings?

- Average base pay rates ranged from about \$28 to \$37 an hour
- RCPs working for manufacturers and distributors had the highest average pay rates
- Base pay rates for RCPs working in long-term acute care, rehabilitation hospitals, sub-acute care and skilled nursing facilities were lower than other settings

	Mean Base Pay Rate
Manufacturer/distributor	\$37.15
Accredited education program	\$36.24
Durable medical equipment/home care	\$31.73
Outpatient facility/physicians office	\$30.67
Acute care hospital	\$29.99
Long-term acute care/rehabilitation hospital/sub-acute care	\$28.52
Skilled nursing facility	\$28.25

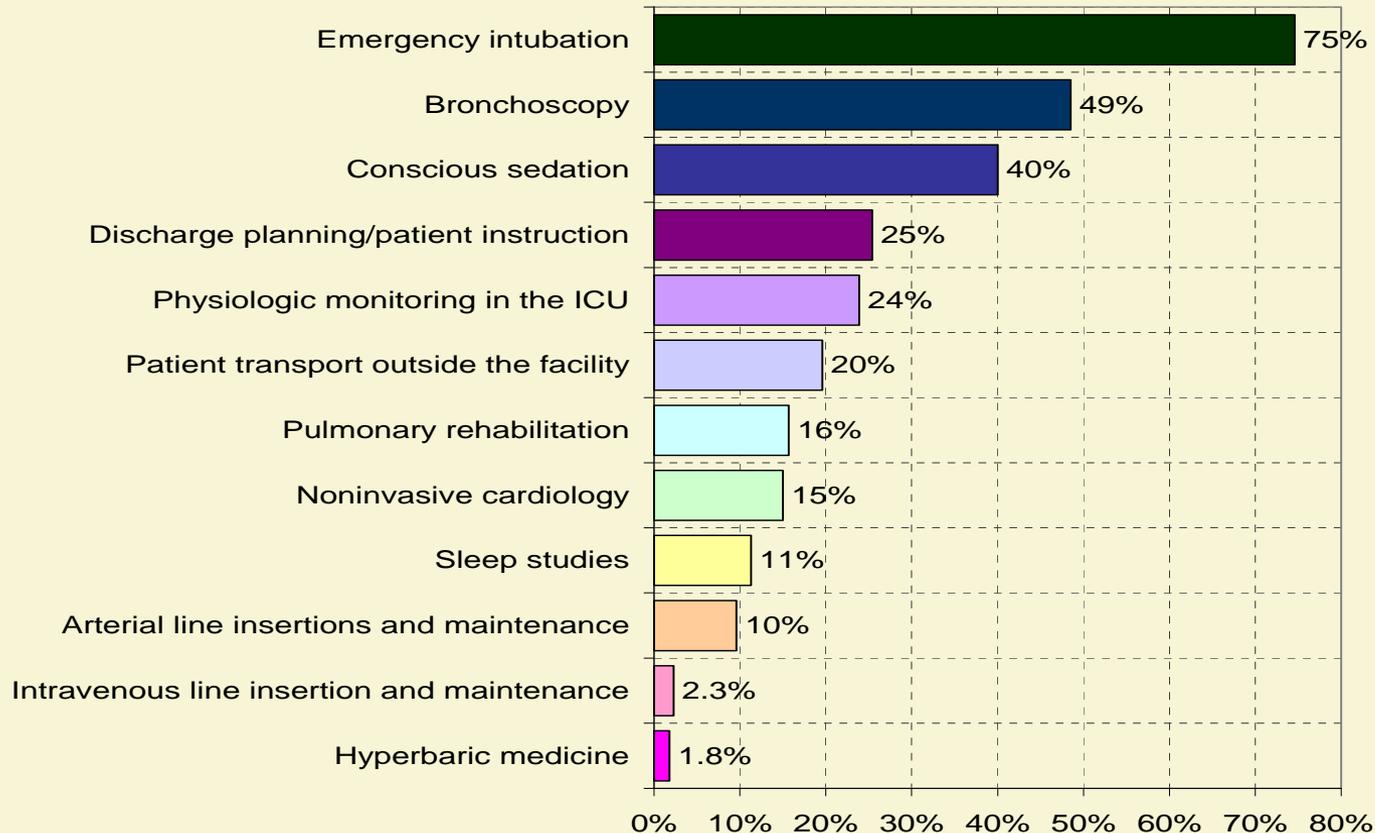
How Do Pay Rates Vary with Experience and Credentials?

- The average base pay rate for an RCP starting out in the profession was \$24.54
- Starting hourly base pay rates for RCPs with the RRT credential were on average \$1.73 higher than rates for RCPs without the RRT credential
- Pay increased with years of experience in the profession, but the rate of increase in pay was greater for RCPs with the RRT credential

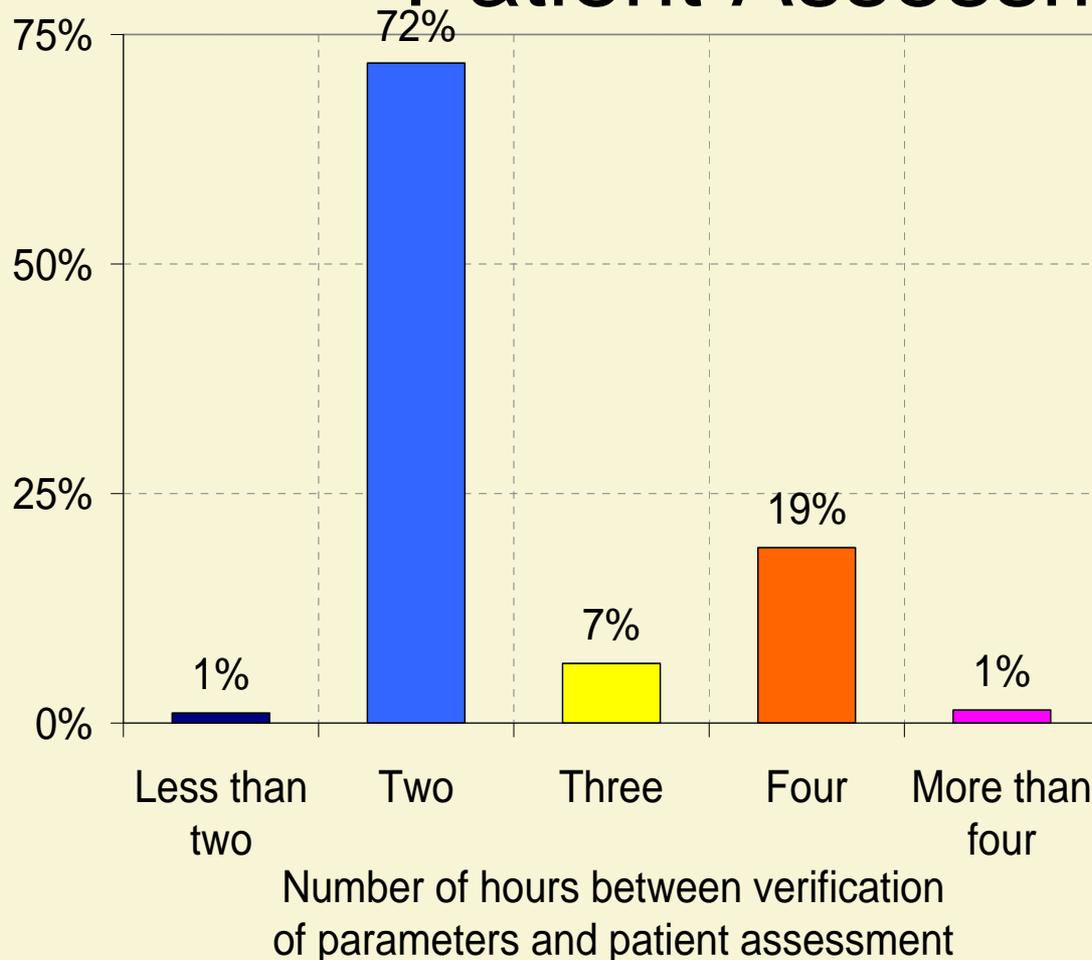


How Frequently Do RCPs Assist with Medical Procedures?

- RCPs reported frequently assisting with a variety of medical procedures
- Emergency intubation was by far the procedure for which the largest number of RCPs assist
- Just under half of respondents assist with bronchoscopies
- Forty percent of respondents commonly assist with conscious sedation



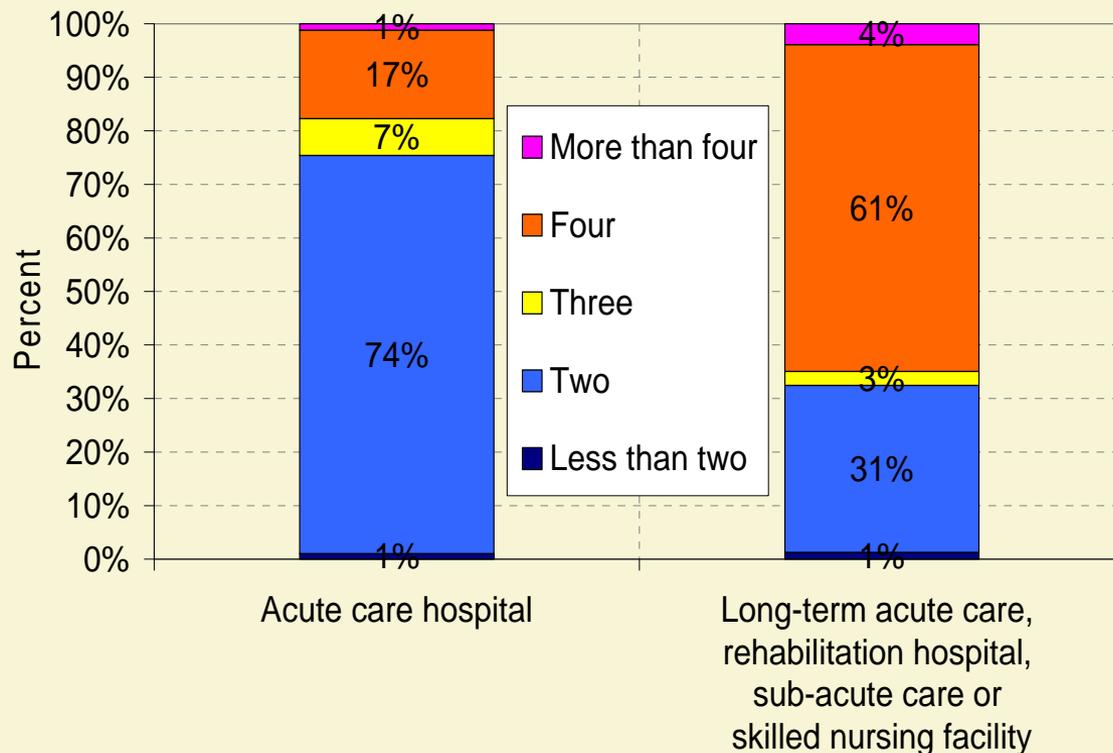
How Often Are RCPs Responsible for Verifying Ventilator Parameters and Patient Assessment?



- Most RCPs were responsible for verifying parameters and assessments every two hours
- Nineteen percent reported a four hour interval

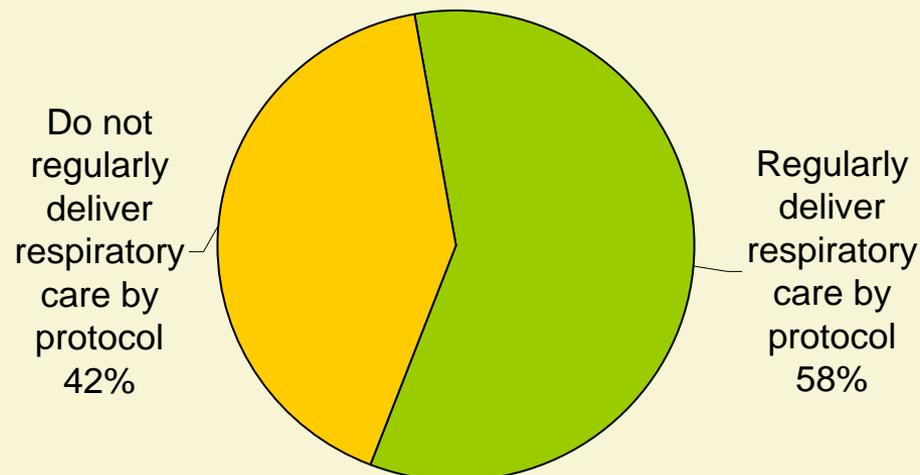
How Do These Intervals Vary Across Settings?

- A two hour interval was the norm in acute care hospitals
- More than two-thirds of RCPs working in long-term acute care, rehabilitation hospitals, sub-acute care, and skilled nursing facilities reported intervals of four hours or more.



How Widespread Is Delivery of Respiratory Care by Protocol?

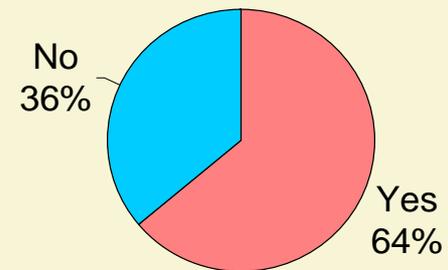
- More than half of RCPs reported regularly delivering respiratory care by protocol
- Thirty-one percent of these RCPs routinely used more than five protocols
- RCPs routinely delivering respiratory care by protocol reported higher levels of satisfaction with quality of patient care



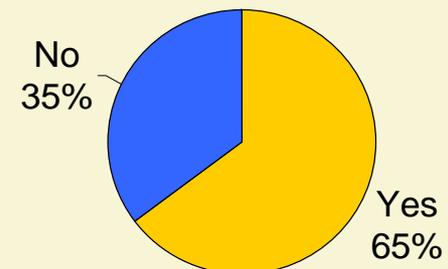
How Widespread Is Use of Concurrent Therapy and Triage?

- 64 percent of RCPs reported doing concurrent therapy in order to complete their workload
- 65 percent of RCPs reported routinely prioritizing care in order to get their workload done
- A significant portion of RCPs—46 percent—report having to use *both* practices in order to complete their workload

Do you do concurrent therapy (initiate more than one treatment at a time in order to be able to complete your workload)?



Do you have to routinely prioritize care (triage) in order to get your workload done?



Does Use of Concurrent Therapy and Triage Affect Job Satisfaction?

RCPs who reported using concurrent therapy and triage were less satisfied with:

- The quality of care where they work

- Their workload

- Their involvement in decisions

- Their job in general

- This relationship is particularly important in light of the widespread use of both workload management practices—most RCPs (83%) reported routine use of one or both practices

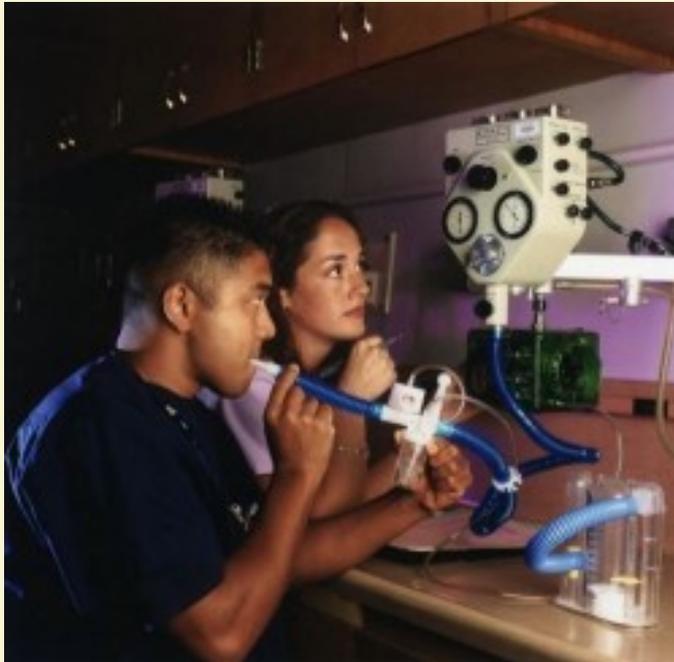
Findings with Implications for the Workforce Supply Model

- Not everyone with an active, clear RCP license was currently employed in respiratory care
- 9.7 percent were working in another profession, retired, or out of the workforce for a variety of reasons
- 4 percent were working in respiratory care outside California
- This means that an estimated 86.3 percent of RCPs with active, clear licenses were employed in respiratory care in California

How Many RCPs Plan to Leave the Profession by 2016?

- Forty-two percent of those currently working in respiratory care indicated that they intend to leave the profession within the next ten years
- For the potential workforce in 2006 (13,884 active, clear licenses) this translates to 5,828 RCPs with plans to leave the profession during the next ten years

Respiratory Care Workforce Study



Employer and Educator Surveys

Notes on Chapters 3 & 4
of the 2007 RCP Workforce Study

Overview

Employer Survey

- Consistency
- Staffing Implications
- Hiring Difficulties
- Future Expectations

Educator Survey

- Student Profile
- Trends in Education
- Future Expectations

Employer Perspectives on Education

- ◆ Do RCPs Have the Right Amount of Training ?
 - Yes, Training is Appropriate for Job—62%
 - No, Not Enough Education / Training—38%

- ◆ How Well Do California RCP Programs Prepare Students?
 - Some Programs Adequately Prepare—52%
 - Most Programs Adequately Prepare—37%

Educator Perspectives on Education

- ◆ Do RCPs Have the Right Amount of Training?
 - Yes, Training is Appropriate for Job—65%
 - No, Not Enough Education / Training—35%

- ◆ How Well Do California RCP Programs Prepare Students?
 - Some Programs Adequately Prepare—35%
 - Most Programs Adequately Prepare—65%

Perspectives on Possible Changes in Education

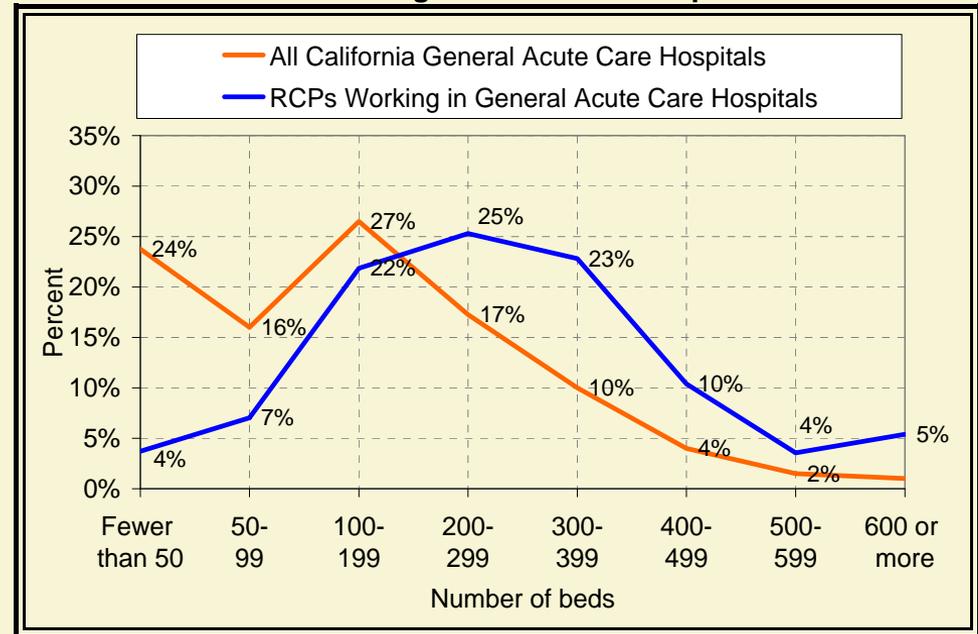
Combined Educator and Acute Care Employer Opinions about Educational Requirements				
	Education Program Directors		Acute Care Employers	
	Yes	No	Yes	No
Given your expectations for the respiratory care profession in the next 5 years, should the entry level educational requirement for Respiratory Care Practitioners be increased from the current 2-year degree to a 4-year (Bachelor's) degree?	40%	60%	30%	70%
Given your expectations for the respiratory care profession in the next 5 years, should the State establish a standard or model curriculum for respiratory care education programs?	45%	55%	80%	20%
Given your expectations for the respiratory care profession in the next 5 years, should progression to RRT from CRT be required by the state within a designed timeframe such as 3 years?	70%	30%	66%	34%
Given your expectations for the respiratory care profession in the next 5 years, should the RRT be the entry level exam for licensure?	75%	25%	59%	41%
Given your expectations for the respiratory care profession in the next 5 years, are there other education or training requirements that need to be changed?	42%	58%	46%	54%

Current RCP Staffing

◆ Acute Care Hospitals

- 85% of all RCP hours
- Mean FTEs 40.4 (100%)
- RCP FTE Regular Employees 36.0 (89.2%)
- RCP FTE Travelers or Registry 3.4 (8.4%)

Figure 3.1: Comparison of the Distribution of the Number of Beds for All California General Acute Care Hospitals and for RCPs Working in Acute Care Hospitals*



* Source: Office of Statewide Health Planning and Development (OSHPD) Healthcare Information Resource Center, State Utilization Data File of Hospitals for Calendar Year 2005. Distribution includes all 400 open hospitals.

Employment Transitions

◆ Acute Care Employers Last Year

- Total Staff Beginning of Year 38.24 (100%)
- New Hires 4.43 (11.6%)
- Dismissals / Terminations 0.84 (2.2%)
- Voluntary Resignations 2.98 (7.8%)
- **90% Retention**

Hiring Difficulties

- ◆ ***Past Three Years – 78.7% Acute Care Hospitals Encountered Hiring Difficulties***

Most Important Factors

- Not Enough RCPs in Area
- Not Enough Qualified RCPs

Less Important Factors

- Lower Benefits Than Surrounding Area
- Salaries Below Those Offered in Surrounding Area

Future Expectations

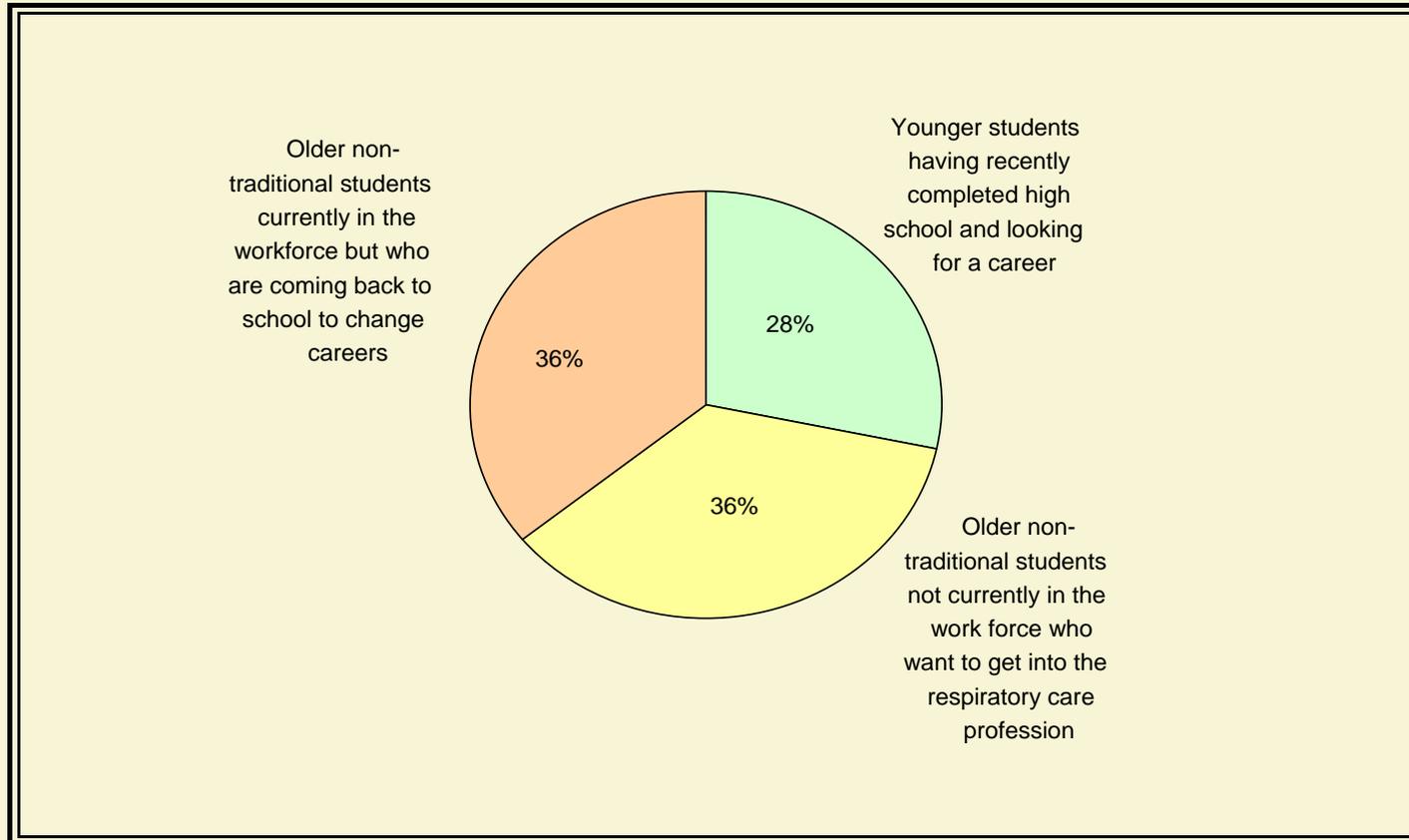
◆ Next Five Years—72% Anticipate Staff Increase

Important Factors for Increase

- General Patient Load Increasing—61%
- Facility Planning on Expanding Patient Capacity—61%
- Increased Need for Respiratory Services Within Dept.—52%
- Increasing Numbers of Specialty Departments or Units—43%
- Increased Use and Sophisticated Technology will Require more RCPs—39%

Education Survey

Figure 4.4: Distribution of Respiratory Care Students by Age Group and Career Track



◆ Student Profile

■ Quality Improved—61%

■ 72% Older Non-Traditional

Trends in Education

Figure 4.2: Average Annual Entry Level Program Admissions, Enrollments and Graduations, 2000-2007

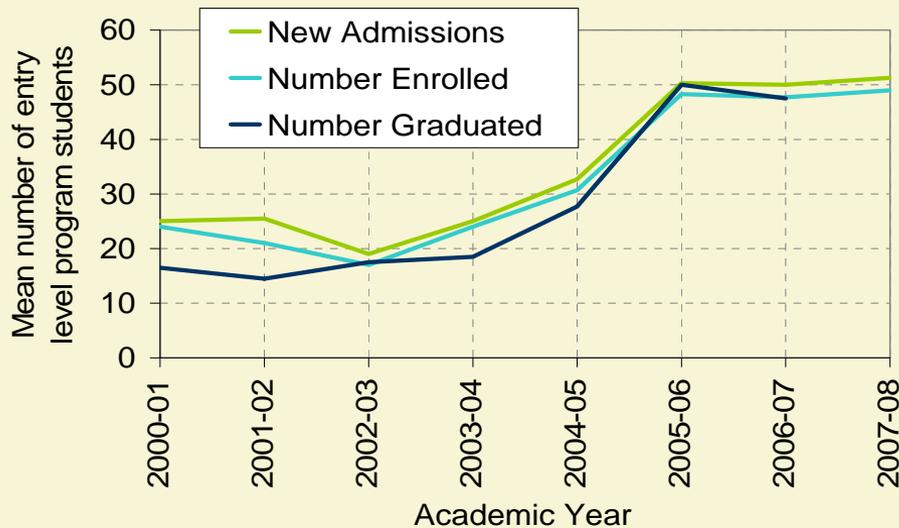
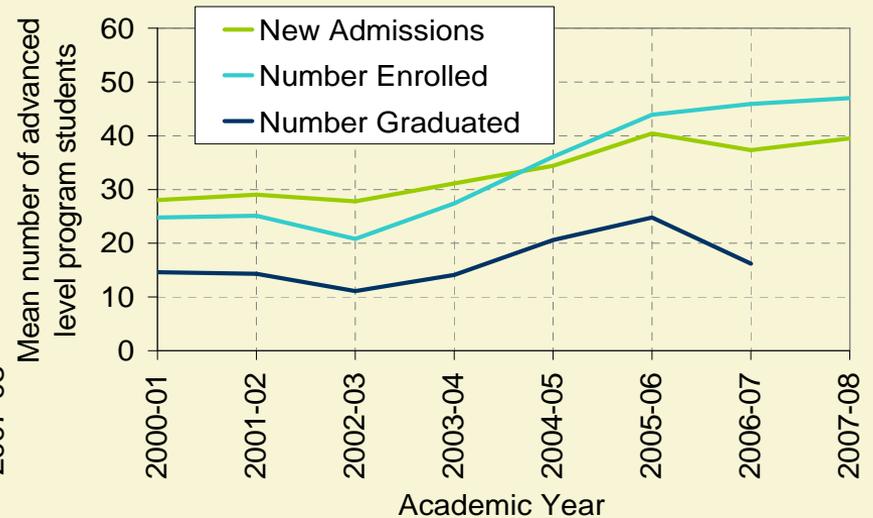


Figure 4.3: Average Annual Advanced Level Program Admissions, Enrollments and Graduations, 2000-2007



◆ **Advanced Level Graduations Slipping**

Future Expectations

◆ Next Five Years

- 50% Anticipate Increased Enrollment
- 60% Anticipate Increased Faculty Hiring

❖ *Important Factors for Student Increases*

- Increased Need for Respiratory Care Services—80%
- More Resources for Expansion Available—40%

❖ *Important Factors For Faculty Increases*

- Increased Program Enrollment—75%
- Increased Need for Respiratory Care Services—64%

Respiratory Care Workforce Study

Perspectives on Important Issues

Notes on Chapter 5
of the 2007 RCP Workforce Study

Are there enough RCPs?

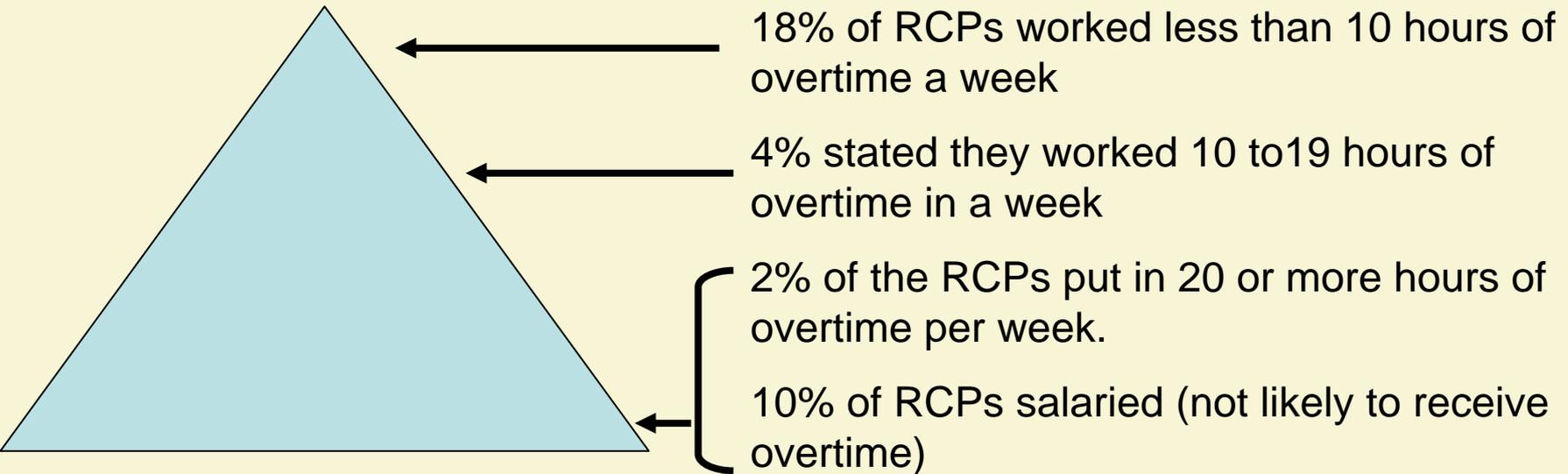
- Because there are no mandated staffing ratios for RCPs, it is difficult to benchmark the profession either in terms of present staffing levels or to project future needs

Are there enough RCPs?

- Information gathered from the surveys of RCPs, educators and employers all point to a current shortage of RCPs:
 - 8 out of 10 employers encountered difficulties in hiring qualified RCPs in the past 3 years;
 - a majority of employers indicated they expect hiring difficulties to continue into the future;
 - employers indicated about a 10.2% RCP vacancy rate;
 - employers are filling about 8.4% of their FTE positions with temporary travelers or registry workers.
 - the true vacancy rate of regular RCPs may be running closer to 20%

How can staff shortages be addressed?

- In addition to registry and travelers, regular use of overtime is a likely mechanism to address the shortage of RCPs.



The Overtime Pyramid

23% of RCPs indicate they hold two or more respiratory care positions

66% of RCPs indicated that they do not work any overtime in their primary position

Can Overtime Fulfill Future Demand?



Clearly, a pyramid exists with regard to overtime—one-third of the RCPs are carrying the bulk of the overtime. Even with a modest growth rate in the profession, it is clear that overtime will not be a viable supply for the needed FTE resources to meet the growing future demand for respiratory care services.

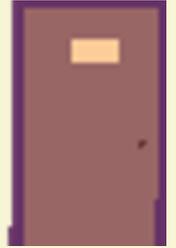
Is Retention An Issue in Addressing Future Demand?

- Pathways for control:
 - ② Low - Retirement – Between 50 – 60% of the current workforce will be retiring in the next 2 decades.
 - ⑤ Voluntary separation – Less severe than retirement but still affecting 8 – 15% of the workforce
Impact may be more dramatic as this affects younger RCPs, reducing availability “pool” for longer period
 - ⑧ Involuntary separation – Affects relatively small proportion of workforce (2 – 7%), but is widespread among employers.

Can Improving Retention Fulfill Future Demand?

While retention offers possibilities for increasing the number of RTPs in the future, one of the biggest sources of attrition—retirement—is difficult to address.

Can Improving Retention Fulfill Future Demand?



Attrition through Voluntary and Involuntary Separation likely affects 8 – 12% of the workforce pool at any one point in time.

- “Age Specific Strategies” for addressing voluntary separation should be considered.
- Three quarters of employers feedback suggests that a large underlying cause of involuntary separations may be due to deficits in “non-profession specific” areas —unacceptable work habits, such as unexcused absenteeism, failure to complete assignments, poor interactions with staff or patients, etc.
- 36% indicated the “profession specific” reason of an unacceptable level of knowledge or skills, while one-half (52%) maintained that they had to terminate/dismiss employees for the “profession specific” reasons of violation of patient care protocols or hospital regulations.

The Impact of the Education Pipeline on Future Demand



The Impact of the Education Pipeline on Future Demand

The Not So Good News

- From academic year 2000/01 to 2007/08 advanced program new student admissions increased from an average of 28 to 39.5.
- However, attrition appears to be a significant factor for advanced level programs. During the past seven years, advanced level graduations averaged about 43 percent of admissions.

The Impact of the Education Pipeline on Future Demand

Something to Think About:

- Given the somewhat limited production of the advanced education programs—an average of about 15 graduates per year—and the relatively small number of these education programs (30) in the State, today's educational pipeline may not have the capacity to produce the number of future RCPs needed.
- To meet tomorrow's demand, programs will need to be increased significantly, or the number of students in RCP education programs will need to increase substantially if more RCPs are to be brought to the workforce through the education channel.

Respiratory Care Workforce Study

The Supply and Demand for RCP Licenses in California

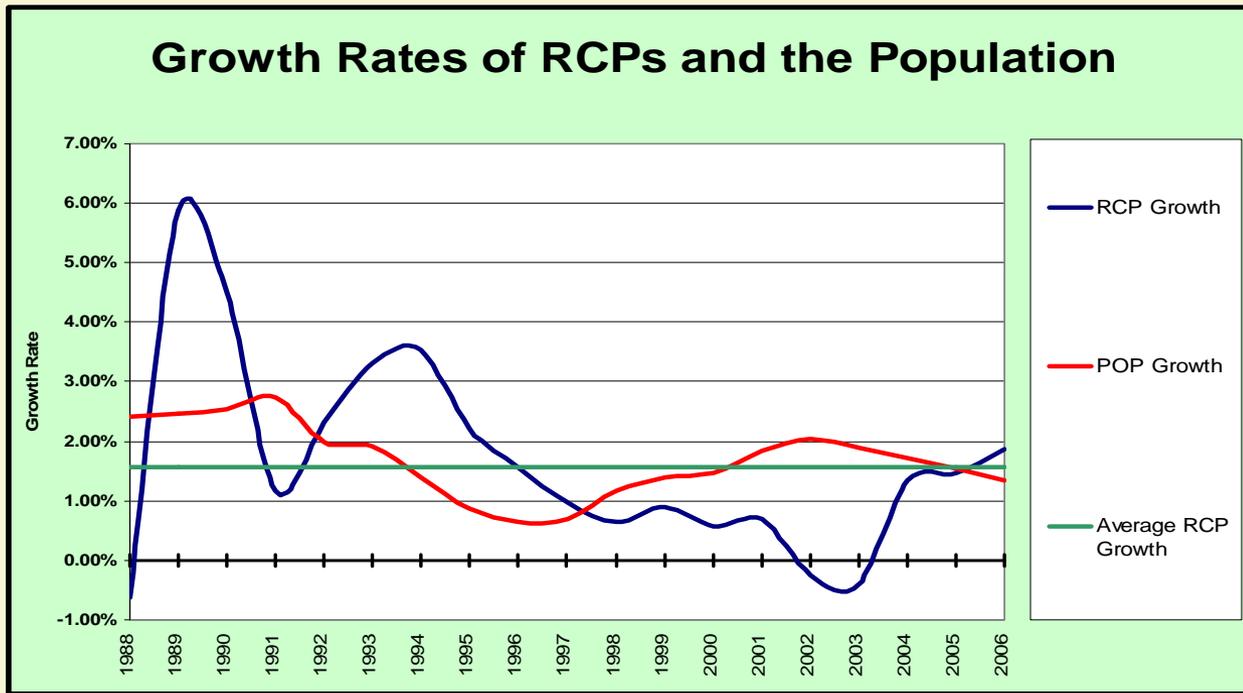


Notes on Chapter 6
of the 2007 RCP Workforce Study

The Purpose of Chapter 6:

- Where is the RCP Workforce going?
 - What Happened in the Past?
 - What is Going on Today?
 - How Do We Predict the Future?
 - » *Discuss the ISR methods for predicting future RCP license numbers*
 - Combining the estimation methods allows for discussion for what future holds.

How Has the Workforce Grown in the Past?



- Average growth of RCPS Licenses = 1.6%
- Average Californian Population growth = 1.7%
- Major slow down in the growth of RCPs In the early 2000s

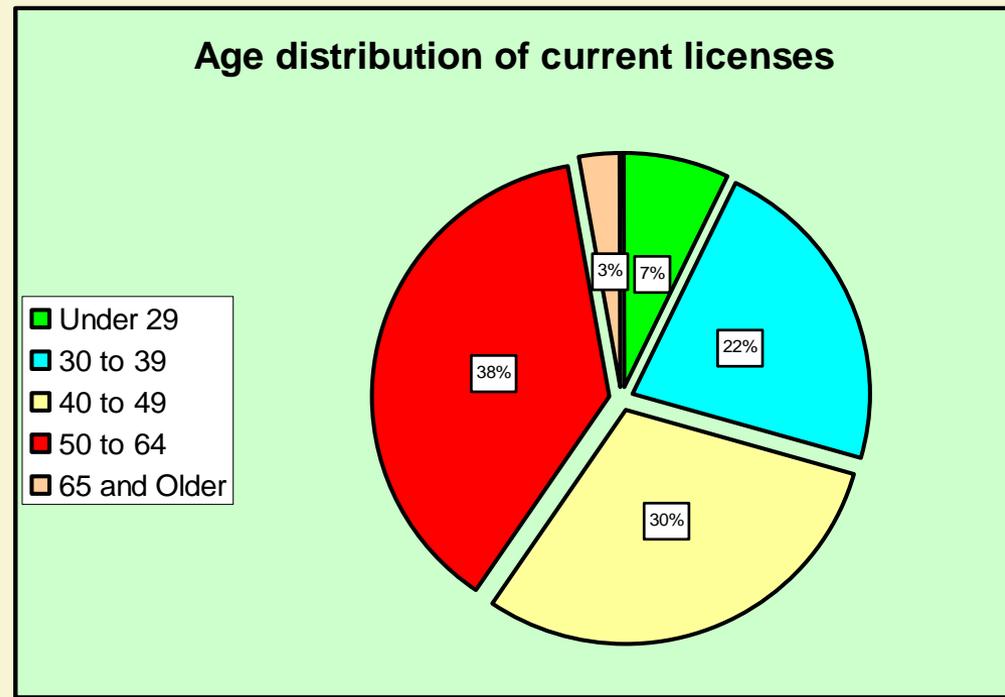
➤ Initial Findings:

➤ Growth in RCPs, on average, has kept pace with the growth in the Californian Population

➤ From fiscal year 1989-1990, there has been an average of 40.7 RCPs per 100,000 Californians serving this State

What Does the Workforce Look Like Today?

- 41% of RCPs are 50 years old and older
- Only 29.5% are under the age of 40
- New RCP licenses have been growing at an average rate of only 0.8% a year since fiscal year 1989-1990



Potential Problem: Will new RCP licenses be able to replace the existing ones?

What Will Tomorrow Bring?

Designing a method to describe the Future:

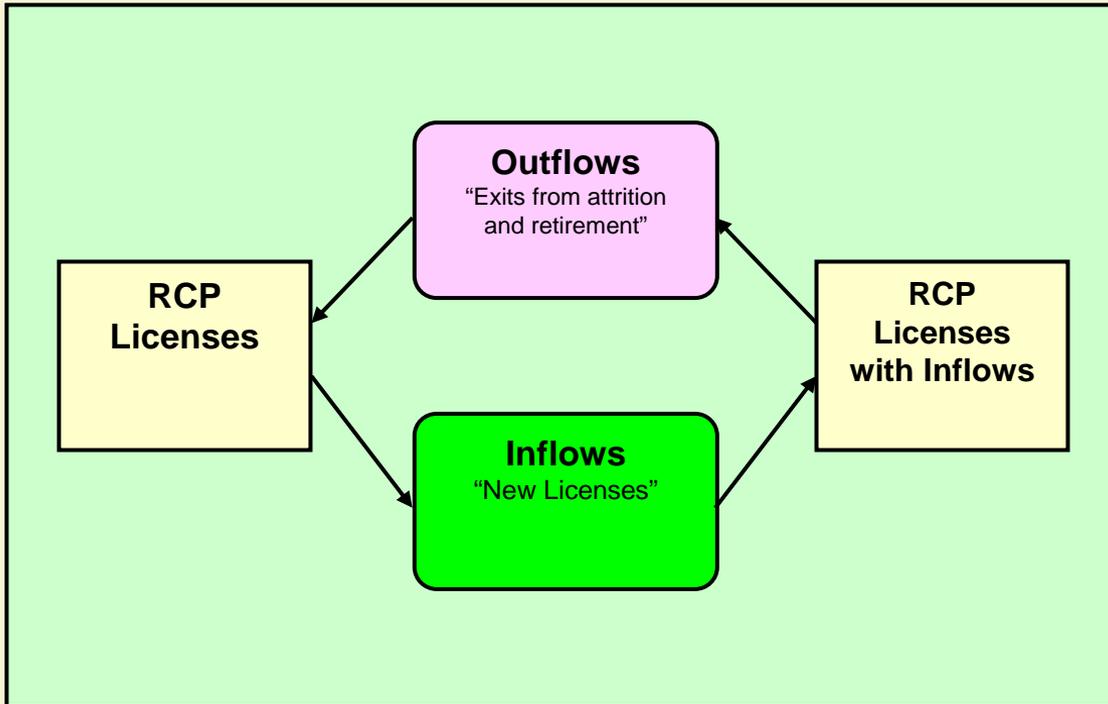
- 1st Component = Future Supply Model:
 - Give insights on the future amounts of licenses in Workforce
 - Give insights on how the Production of new licenses will affect the Workforce
 - Show how current exits trends (whether through Attrition or Retirement) will affect the future

- 2nd Component = Future Demand Model:
 - Give insight on the needs of Californian citizens
 - Will account for the changing nature of the Californian Population

- *By combining these methods, the ISR can make assumptions and statements about the future of the profession.*

The Supply of RCPs

ISR System Model

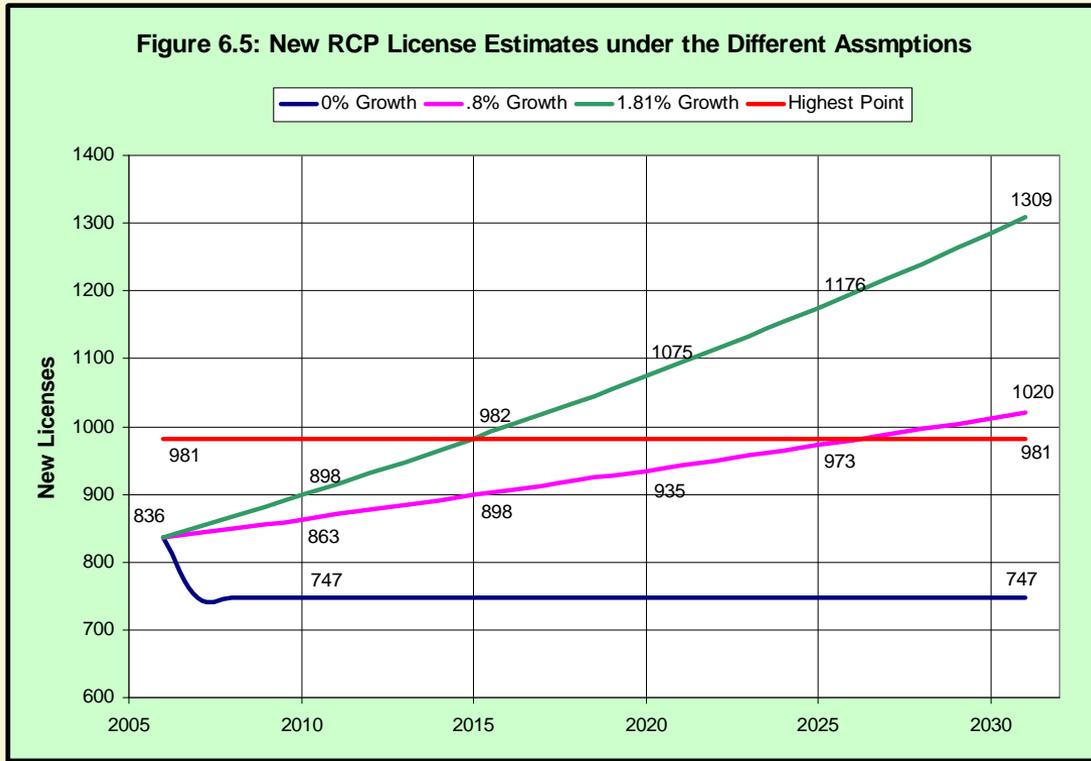


Step 1: The model calculates the INFLOWS of RCPs based on a desired rate

- Step 2: It then removes the OUTFLOWS to create a calculation of the number of licenses in the future

Note: During these steps, it makes sure all licensees are in the correct age categories

Factors That Control the Supply Model



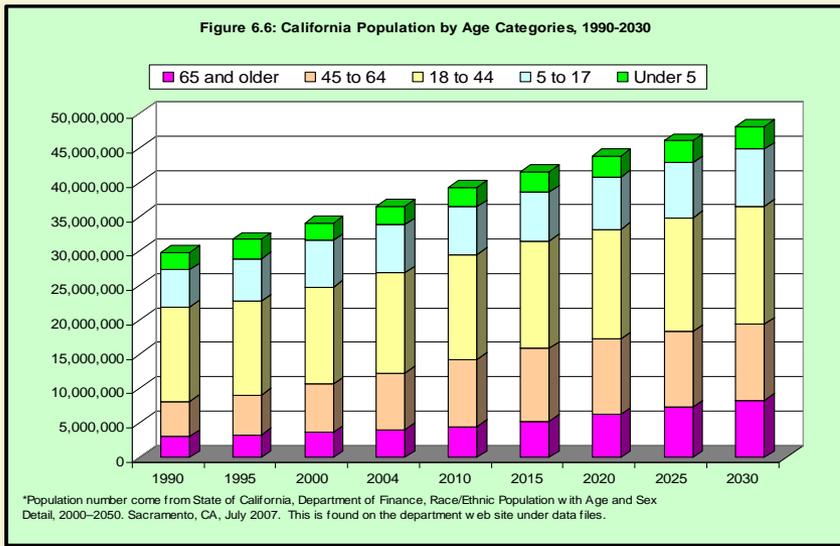
Drivers of this estimation technique:

- How many people are getting their RCP license
- How many are leaving through Attrition
- How many are ready to retire (ISR assumes that retirement occur at age 70)

Input Assumptions Used in Projections:

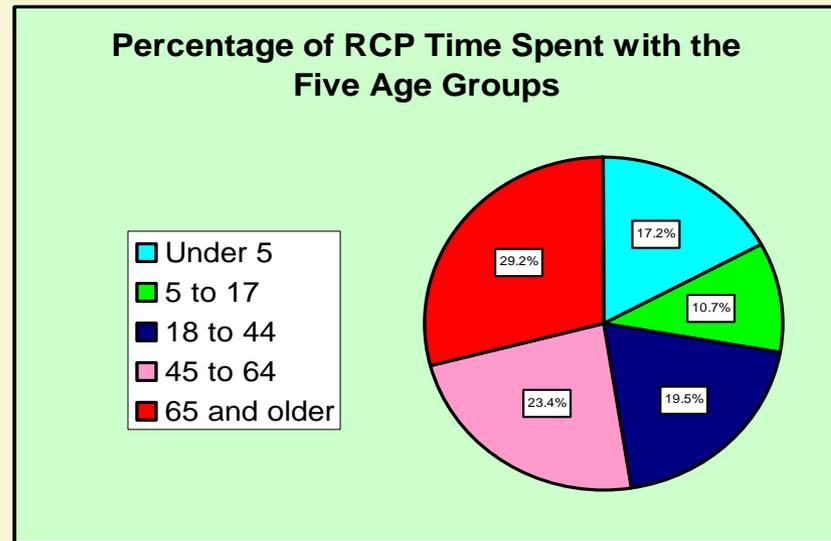
- **Worst Case Scenario = 0% growth, a constant rate of 747 new licenses occurs every year**
- **Mid-Range Scenario = .8% growth in new licenses, from the 05-06 new license total (836)**
- **Best Case Scenario = 1.81% growth in new licenses, from the 05-06 new license total**

The Demand for RCPs



How will demand be characterized into the future?

- ✓ The demand model takes into account the predicted ages of Californians into the future
- ✓ The Demand Model incorporates the concept that different age groups use RCPs at different rates
- ✓ These percentages allowed the ISR to calculate usage ratios for RCPs by the Age Categories



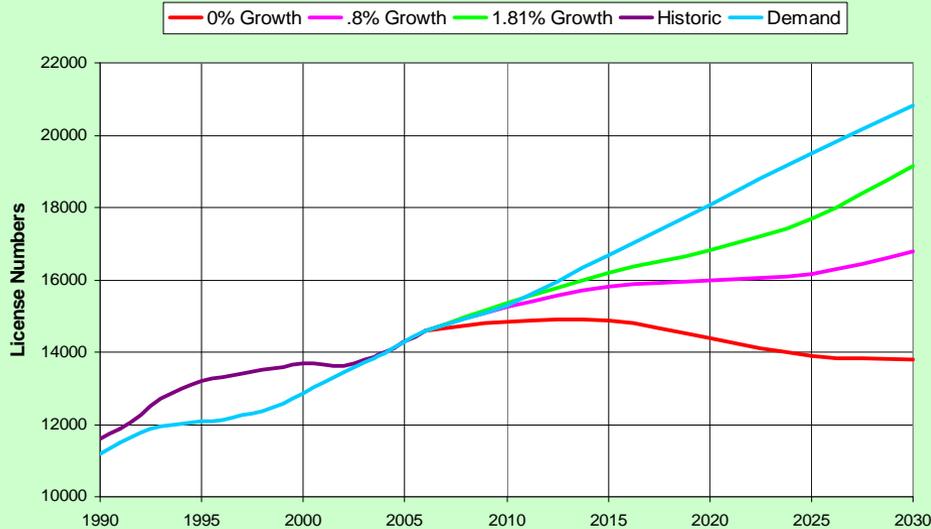
Use Ratios of RCPs by Age Categories

Under 5	5 to 17	18 to 44	45 to 64	65 and older
92.4	22.3	19.2	37.6	102.0

- ✓ In order to generate future demand estimates, the model assumes that these "Use Ratios" remain constant into the future

The Future of the RCP Workforce

Figure 6.8: Estimated Supply and Demand of RCP Licenses, 1990 - 2030



Results:

➤ The Demand for licenses into the future exceeds the Supply of licenses under all 3 growth projections

➤ Under the .8% growth pattern, in 2015 the RCP workforce will be short 839 licenses! (This represents 5% of the needed number of licenses)

➤ By 2020, the deficit more than doubles, and then almost doubles again by 2030

Table 6.6: Estimated Supply and Demand Differences

Year	2010	2015	2020	2025	2030
0% Growth	-449	-1,811	-3,666	-5,592	-7,035
.8% Growth	-43	-839	-2,067	-3,313	-4,033
1.81% Growth	40	-472	-1,224	-1,806	-1,677

The ISR sees the potential for a “perfect storm” scenario~ driven by a constellation of factors that will create serious shortages of RCPs available to meet the needs of the California population in the coming decades.



- Age distribution of the current RCP workforce



- Older individuals returning to school in RCP programs, resulting in shorter career spans



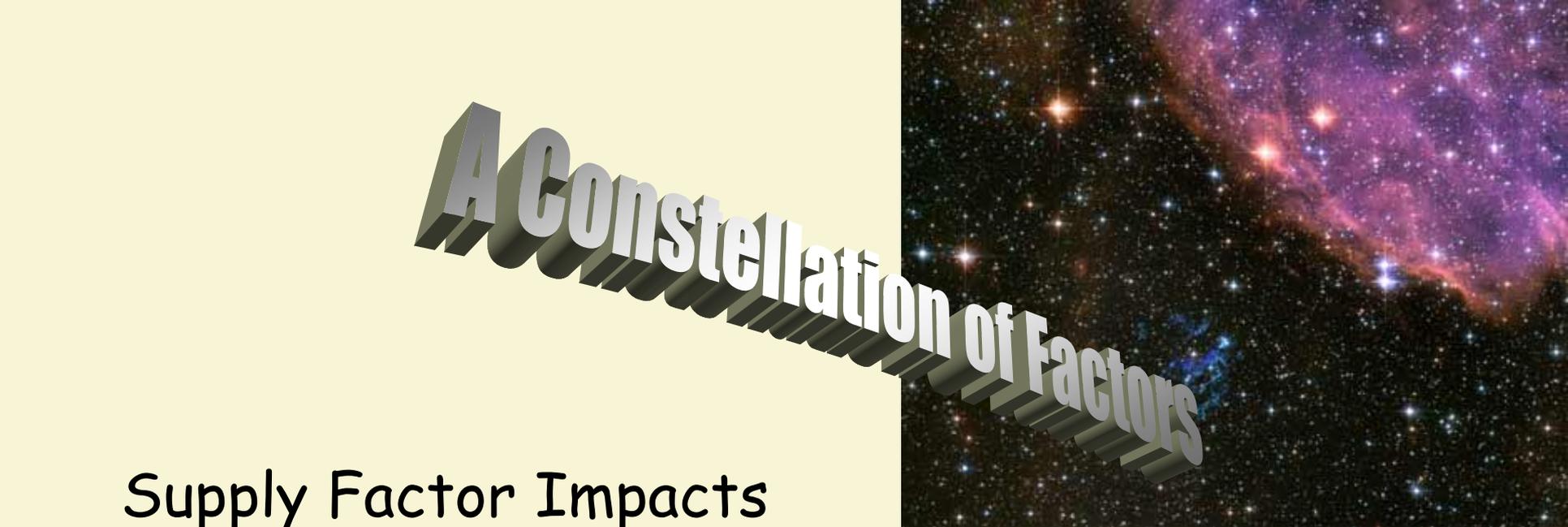
- Within California's growing population, a disproportionately larger number of 65 and older individuals who consume an especially large portion of available respiratory care service



- A growing California population

- An inadequate supply of graduating students entering the workforce





A Constellation of Factors

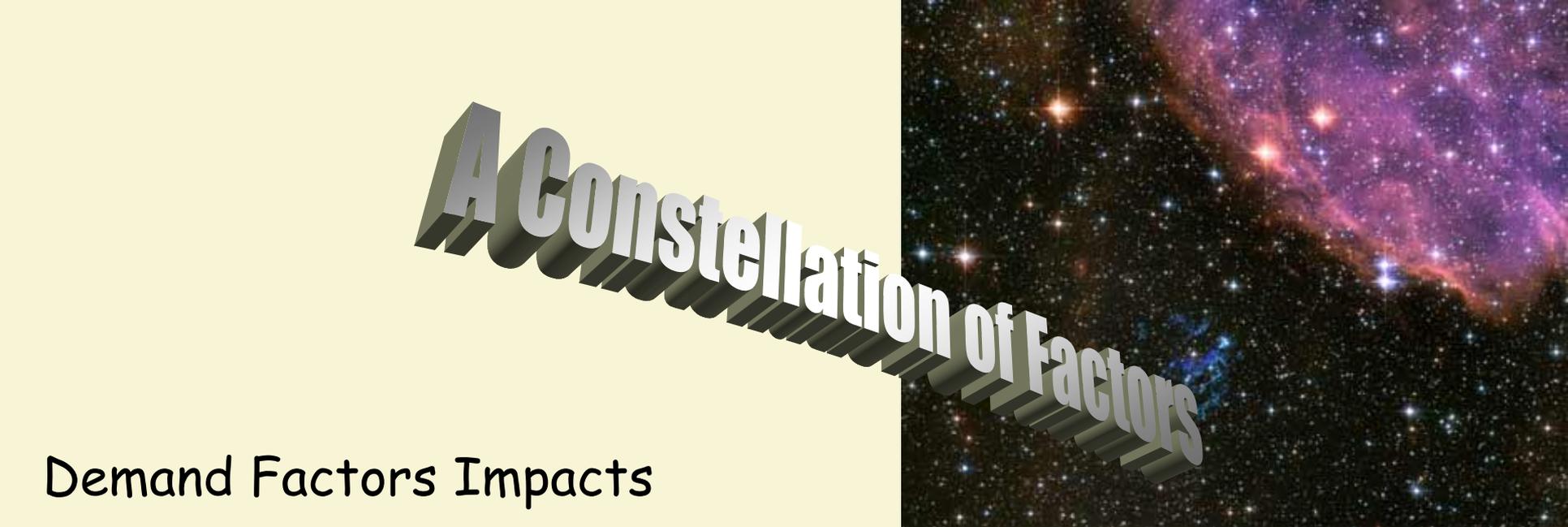
Supply Factor Impacts

A large group of the current RCP Workforce will retire in the next 15-20 years.

A significant portion of those in RCP education programs is older individuals returning to school, impacting the age of those entering the profession—this will result in shorter career spans for new licensees.

Current education programs will be unable to produce enough graduates to fill even the “best case” growth scenarios.

A Constellation of Factors



Demand Factors Impacts

A growing California population will require additional respiratory care services.

A disproportionately larger number of 65 and older individuals in the population will consume an especially large portion of available respiratory care services within the larger population.