

ST. PETERSBURG COLLEGE
2003-2004 Program Review
“Respiratory Care Program”

Introduction to the Program Review Process

Forster Research has prepared this document for St. Petersburg College (SPC) as the final report of findings for the 2003-2004 Respiratory Care Program Review. SPC’s program review is a collaborative effort to continuously measure and improve the quality of educational services provided to the community. This report first summarizes the existing quantitative data of enrollment, graduation, and employment trends available at this point in time. Next, focus group research was employed to explore industry needs, job features, major core competencies in the field, and program curriculum. Finally, Forster Research conducted a thematic analysis of the focus group interaction in order to prepare a review of findings for this report.

The program review process described in this report goes far beyond the “periodic review of existing programs” required by the State Board of Community Colleges; and exceeds the necessary guidelines within the SACS review procedures. In the end, this review process will not only continuously measure and improve the quality of existing educational services provided to the community, but also anticipate the future educational needs of the community.

Key contributors in the SPC program review process include: students, alumni, faculty, program directors, provosts, administrators in Educational and Student Services, the President’s Cabinet, and local practitioners and opinion leaders in the respiratory care field.

Forster Research is a local research-consulting firm, which provides an array of research services suited to the program review process. The principal owner, Kurt Forster, has first hand knowledge of the Florida Community College System and St. Petersburg College as a college administrator and instructor.

Overview of SPC’s Respiratory Care Program

The Respiratory Care Program at St. Petersburg College is designed to prepare students for employment as Respiratory Therapists; and is accredited by the Commission on Accreditation of the Allied Health Education Programs (CAAHEP) in collaboration with the Committee on Accreditation for Respiratory Care (CoARC). Currently, 48 States including Florida, license respiratory care personnel.

In addition to completing general education courses common to all A.S. degrees in the College, students study anatomy and physiology, chemistry, and a wide array of technical courses dealing

with the procedures, equipment, and diagnostic tests used in the field. Additionally, clinical practice is a required part of the program. After completing the program graduates receive the degree of Associates in Science in Respiratory Care allowing them to apply for the entry-level certification examination of the National Board of Respiratory Care. Upon successful completion of (1) the program curriculum, and (2) NBRC certification and registry examinations, the graduate will become a Registered Respiratory Therapist.

Graduates of the program are employed as Respiratory Therapists able to evaluate, treat, and care for patients with breathing disorders. Separate requirements for the Paramedic/EMS Transitional Program and the Certified Therapist Transitional Program have been designed to accommodate individuals with prior practical experience.

Enrollment Trends

Recently, enrollment in SPC’s Respiratory Care program has grown significantly with a waiting list for entering freshmen in 2003-2004 as well as 2004-2005. This trend is expected to continue with the closure of the entry-level programs at PTECH and Erwin Vocational Technical Center.

Annual Unduplicated Headcount (Enrollment in Programs)

<i>Program</i>	<i>98-99</i>	<i>99-00</i>	<i>00-01</i>	<i>01-02</i>	<i>02-03</i>
Respiratory Care A.S.	72	43	49	44	61

source: SPC Factbook 2003-2004

Graduation Trends

When compared to other health related programs there are a relatively small number of graduates in SPC’s Respiratory Care Program. However, the number of program graduates is expected to grow as enrollment increases.

Annual Graduates by Program

<i>Program</i>	<i>98-99</i>	<i>99-00</i>	<i>00-01</i>	<i>01-02</i>	<i>02-03</i>
Respiratory Care A.S.	14	15	10	6	9

source: SPC Factbook 2003-2004

Employment Trends

Graduates of the Respiratory Care program are employed in entry-level positions working as respiratory therapists. They work as part of a health care team under the supervision of a physician to administer respiratory care and life support to patients with heart and lung difficulties. Respiratory therapists treat all types of patients ranging from premature infants whose lungs are not fully developed, to elderly people experiencing lung disease.

Respiratory therapists most commonly use oxygen or oxygen mixtures, chest physiotherapy, ventilators, and aerosol medications to treat patients according to a doctor's order. While their work is commonly performed in a hospital setting, some respiratory therapists work in a homecare environment teaching patients and family members to use ventilators and other life support systems, or in nursing homes.

About 9 out of 10 respiratory therapy jobs are in hospital departments of respiratory care, anesthesiology, or pulmonary medicine. Because hospitals operate around the clock, therapists may work evening, nights or weekends, usually about 35 to 40 hours per week. In an emergency, respiratory therapists work under a great deal of stress and the risk of catching infectious diseases. Further, therapists spend long hours standing and walking between patients rooms. Operating respiratory equipment requires mechanical ability, manual dexterity, and basic mathematical problem solving skills.

As prescribed by State Licensure and Board Certification, formal training is necessary for entry into this field. Around the country postsecondary training is offered by community colleges and universities. Most are two year programs; some however, are 4-year bachelor's programs. Locally, one year certification programs were eliminated in January 2002 as a result of increasing technical requirements.

According to the U.S. Department of Labor, Bureau of Labor Statistics, "job opportunities for Respiratory Therapists are expected to remain good." And, "Employment of Respiratory Therapists is expected to increase much faster than the average for all occupations through the year 2006 because of substantial growth of the middle aged and elderly population, a development that will heighten the incidence of cardiopulmonary disease." They further describe the importance of specialized training within the field saying, "Opportunities are expected to be highly favorable for respiratory therapists with cardiopulmonary care skills and experience in working with infants."

Occupational employment and wage estimates available from the Florida Department of Labor and Employment Security project significant growth in respiratory therapy positions across the state of Florida through the year 2007, and in Pinellas County through the year 2008. Respiratory therapy is among the fastest growing occupations in the state and in Pinellas County. However, the total number of annual openings in this highly specialized field is not large when compared with other, broader, occupational categories.

Florida Occupational Employment Estimates

	Employment	Employment	Total	Percent	Annual
Occupation	1997	2007	Change	Change	Openings
Respiratory Therapist	5,071	8,218	3,147	62.06	391

source: Florida Department of Labor and Employment Security, Office of Labor Market Statistics

Pinellas County Occupational Employment Estimates

	Employment	Employment	Total	Percent	Annual
Occupation	1998	2008	Change	Change	Openings
Respiratory Therapist	356	518	162	45.51	21

source: Florida Department of Labor and Employment Security, Office of Labor Market Statistics

According to a Hay Group survey quoted by the BLS, “the median annual base salary of full time respiratory therapists was \$32,500 in 1997.” “The middle 50 percent earned between \$29,300 and \$35,000. However, these salaries have increased noticeably since that time.

Also, a report of Occupational Wages provided by the Florida Agency for Workforce Innovation, shows salaries for respiratory therapists to be ranked among the high wage – high skill occupations in the State of Florida and in the Tampa, St. Petersburg, Clearwater Metropolitan Statistic Area. According to the report respiratory therapists earned an average hourly wage of \$18.64 across the state and \$18.22 within the local MSA in 2001. Average hourly entry-level wages for 2001 were \$15.47 statewide and \$15.45 locally.

Florida Occupational Wages 2001

	Average	Average	Average
Occupation	Wage	Entry Wage	Experienced Wage
Respiratory Therapist	18.64	15.47	20.68

source: Florida Agency for Workforce Innovation, Office of Labor Market Statistics

Tampa – St. Petersburg – Clearwater MSA Occupational Wages 2001

Occupation	Average Wage	Average Entry Wage	Average Experienced Wage
Respiratory Therapist	18.22	15.45	20.19

source: Florida Agency for Workforce Innovation, Office of Labor Market Statistics

A more recent and closer snapshot of employment shows an average of 3 to 4 jobs, which fit the specific description for SPC’s Respiratory Care Program, being listed in the St. Petersburg Times each Sunday, over a twelve week period from March 21st to June 13th, 2004 with salary ranging from \$28,000 to \$68,000 per year.

Summary of Quantitative Data

Although this program is not large in terms of the numbers of students enrolled, the need and opportunity for SPC’s Respiratory Care Program is great. The U.S. Department of Labor, Bureau of Labor Statistics finds respiratory therapy to be ranked among the fastest growing occupations across the nation; with the number of respiratory therapists expected to grow much faster than the average through the year 2006.

The highly specialized, formal education provided by SPC is a necessity for both entry and advancement in the field. Furthermore, SPC’s Respiratory Care Program has maintained a strong presence in the relatively small and close knit respiratory care community actively maintaining relationships with both public and private health care providers.

Although the total number of new jobs is relatively small, respiratory therapy positions are among the fastest growing occupations. While wages are not high for the degree of specialization required, salaries for respiratory therapists are ranked among the high wage – high skill occupations in the State of Florida and in the Tampa, St. Petersburg, Clearwater Metropolitan Statistic Area.

Focus Group Methodology

Working as a team, SPC’s Respiratory Care Program Director, staff in Educational and Student Services, and Forster Research identified the key elements in designing a successful industry focus group, as well as a profile of group participants.

A list of possible participants was identified and contacted by the Program Director. Next, a detailed packet of program curriculum materials was sent out by Educational and Student

Services to each of the individuals who had agreed to participate. By asking participants to review the curriculum prior to the focus group, valuable time was saved during the focus group, and participants were prepared to offer well thought out suggestions for improving the program. With input from the other team members, Forster Research prepared a flexible yet thorough focus group agenda to guide the focus group discussion, exploring the industry needs, job features, major core competencies in the field, and the relevancy of program curriculum.

On October 15, 2003 a two-hour focus group session was conducted with 10 opinion leaders from the local respiratory care profession. Forster Research provided group facilitation, with input from the Program Director. Participants represented large and small, public and private agencies, from across the county. Because the profession is so closely knit, the majority of participants have been part of the program's advisory committee. However, additional opinion leaders were invited to join the core group.

Finally, Forster Research conducted a thematic analysis of the focus group interaction in order to prepare a summary of findings for this report. Final steps in the program review process require the Program Director to incorporate these findings into an action plan, and for Educational and Student Services to evaluate the need for follow-up including subsequent reviews.

Focus Group Findings

Overall Perception of the Program

As most of these participants are involved with the Advisory Committee to the Respiratory Care Program, they are, of course, very familiar with St. Petersburg College, and the program. They appreciate how "receptive the school is" to their needs as employers.

They also made it clear that they are a group comprised of the major employers of Respiratory Therapists in the area, and that as employers; they are both thoroughly familiar with the program's graduates and extremely pleased with the quality of those employees. One participant said, "Students in clinical rotation are bright and involved." "It's a good experience." Another employer summed up the group's comments saying, "It's a very good program just based on what the graduates do." "These students are the ones that go on to become managers, physicians, and nurses." Several participants pointed out that, "There is world of difference between PTEC and SPC graduates." Another added, "SPC instills more enthusiasm for their careers." One student said "When I came out of PTEC I knew what I was doing. Now I know why."

Job Titles & Certifications

These employers make clear distinctions between two levels of certification for respiratory care workers as designated by the National Board of Respiratory Care. A Certified Therapist – CRT examination is the minimum needed for state license and insurance requirements. However,

respiratory care professionals may be designated as Registered Respiratory Therapists upon successful completion of a college program like this one, and passing both the NBRC certification and registry examinations. As a group, these employers prefer to hire and work with Registered Respiratory Therapists. One said, “I wish they would all take the registry.” The group agreed when he added, I’m concerned about a lack of professionalism among technicians that are not advancing and not joining the professional organization.” “The ones that just want to earn \$15 an hour and go home.”

Respiratory care workers may vary widely in the intensity and amount of post secondary training they receive, from fundamental vocational programs on up through four-year Bachelor’s programs. However, it should be noted that one year certifications are no longer permitted in the State’s certification process. Participants also pointed out that, “Graduates with a Bachelors degree have more opportunity to advance, especially in management where some hospital positions require a four-year degree.”

Perception of Program Curriculum

These participants are very pleased with the Respiratory Care Program curriculum offered by St. Petersburg College. They believe both the content and delivery methods do a good job of preparing students to pass certification and registry exams, and to work in the field.

Participants pointed out the importance of on-site training provided by hospitals and they believe the program does a good job of organizing clinical rotations for students in the program. One participant expressed concerned that, “Students may not be ready for RET 1874L – Clinical Practice I, when they get there.” Several others replied that, “The sights and sounds and smells there are just what students need at this point; and even if they can’t help the ~~technician~~ **therapist** they are learning by watching what is done.” Students invited to the group said they “want more time in the field to practice, not just one time per week.”

Because the program content is designed to meet specific professional accreditation requirements and because these participants are so pleased with the program, very few suggestions were offered for improvements. A few participants suggested that a ‘medical ethics’ course or at least some additional content could be created to cover ethics in a medical context instead of, or in addition to the current ethics class common to all A.S. degrees.

Two participants suggested an interview would be a good addition to the selection process to make sure students are “serious and able to act professional.” One group member stressed the importance of specific technical skills such as reading wave forms. Another employer-participant wants the college to be aware that his knowledge of physics has helped him on the job. One student participants said a statistics class, such as a practical application of statistics, would be helpful to compare and understand a journal such as a “nurses’ journals” (e.g. understanding a bell shaped curve and distribution.) No other suggestions were offered to change any part of the curriculum for the Respiratory Care A.S. Degree.

New Trends in the Field

Participants were clear about several new trends in the respiratory care profession that may affect the program and/or its' graduates. First, participants pointed out that the past trend toward "patient focus" which they described as, "doing whatever is necessary for the patient at the moment – drawing blood, giving EKG's, etc," "has not proven successful for the profession, so now we are focusing more on our specialty." Like many fields, respiratory care is becoming more specialized and incorporating more high technology equipment and procedures.

As the field moves toward a higher degree of specialization, "physicians are depending on therapist more and more to make decisions and follow protocol." There is a definite need for Respiratory Therapists to bring more independent thinking and problem solving to the medical teams with which they work. Program Director, Stephen Mikles pointed out, "That's why we are the only program in the state with an assessment class - to learn protocols."

Additionally, participants pointed out that under the previous trend, "It seemed that nurses would take over," (respiratory care decisions and procedures), "but that turned out to not be the case because it caused higher costs." Consequently Respiratory Therapists are becoming more important to the industry and adding additional skills to the medical care team. In particular participants stressed the importance of, "assessment skills as a main way to help the patient." Still, nearly all of these Respiratory Care Professionals emphasized the need for continued teamwork skills in working with nurses as part of the future of the field. One participant added, "Respiratory Therapists must help nurses learn and appreciate what they do and know."

Elsewhere in the discussion participants pointed out that, "there is a huge deficit in the state for licensed polysomnographers." "Respiratory Therapists could do that work and this program could provide the training."

Finally, some participants took the opportunity to discuss their desire to do away with the two exam system in favor of one exam only for the Registered Respiratory Therapist. Apparently, there are many in the profession that would like to see that type of change in the future.

Other Skills Required

When asked about the other skills these employers expect of SPC Respiratory Care Program graduates, there was a surprising lack of demand for computer skills. Unfortunately, time did not permit us to explore their reasons for not mentioning computer skills. However, participants were clear that specialized technology skills are very important for the employees they hire. Perhaps traditional computer skills are just an obvious requirement to using specialized high tech equipment. One participant stated that respiratory care specializations were, "covered well from an introductory standpoint," and that they "provide in hospital training in areas of specialization."

Most participants say that the communication ability and social skills of new employees are pretty good, but many lack professionalism and specifically professional attitudes. One group

member added that, “some lack of professionalism comes from existing staff at the hospital facility.” “The student needs to learn with whom to align himself.”

Other Educational Opportunities

Participants discussed some other educational opportunities for the Respiratory Care Program at SPC. For instance, all of these respiratory care professionals would like to see a 4-year baccalaureate program for respiratory care made available at SPC, but most agree that it may not be a good fit for the industry as very few hospital-employers require that type of degree for the respiratory therapists they hire. One participant suggested that, “We would need to involve employers to enhance the marketability.” “An industry study might not bare it out.” It was further pointed out that there may not be a strong enough job title and/or monetary reward to get the four-year program approved. Another participant suggested that, “Maybe students seeking a four-year degree should add health care administration or research or business into their program.”

All of these participants agree that it is very important to make use of online courses in the program saying, “That is the model for today.” They also like the idea of an online baccalaureate degree which includes a research emphasis as an extension of SPC’s Respiratory Care Program. No one perceives any difficulty for handling admissions standards with online courses or a baccalaureate program.

Finally, participants suggested the program could provide additional educational opportunities in the form of prep courses for the CRT and RRT respiratory therapy credential exams, as well as the CPFT and RPFT polysomnographers credential exams, and the neonatal credential exam. Currently students are likely to seek this type of exam preparation from third party companies like Kettering.

Summary of Qualitative Data

- Employers are very familiar and pleased with the quality of St. Petersburg College, the Respiratory Care Program, and its’ graduates.
- These opinion leaders believe both the content and delivery of the curriculum do a good job of preparing students to pass certification and registry exams, and to work in the field.
- Participants appreciate the way the program assists students in organizing clinical rotations for students in the program.
- Employers prefer to hire and work with Registered Respiratory Therapists.
- Respiratory care is becoming more specialized and incorporating more high technology equipment and procedures.

- As the field moves toward a higher degree of specialization, “physicians are depending on therapist more and more to make decisions and follow protocol.”
- Respiratory Therapists are becoming more important to the industry and adding additional skills to the medical care team.
- Most respiratory care specializations are, “covered well from an introductory standpoint,” by the Program.
- “There is a huge deficit in the state for licensed polysomnographers.”
- While participants would like to see a 4-year program for respiratory care made available at SPC, very few hospital-employers require that type of degree for the respiratory therapists they hire.
- Contributors agree that it is very important to make use of online courses in the program saying, “That is the model for today.”
- Participants suggested the program could provide additional educational opportunities in the form of prep courses for various respiratory therapy credential exams.

Part V: Program Review Action Plan

Program: Respiratory Care

Date: 9/30/04

Action Item (state briefly)

Completion Date

- 1. Prep courses for the credentialing exams. (Kettering)**
- 2. Polysomnography certificate program.**

- 1. Session 3 2004-2005.**
- 2. To be determined following community needs assessment.**

Special Resources Needed

None.

Area(s) of Concern/Improvement

None noted.

A. P. Miles
Program Director

[Signature]
Provost

Part VI: Final Review by President's Cabinet

Summary of observations, recommendations and decisions from Cabinet

Questions were raised about accuracy of enrollment and graduation data.
The table was revised to reflect actual student cohorts and their persistence.

[Signature]
President's Signature

Outcomes Assessment: Action Plan Follow-Up and Evaluation Report

Check the type of Assessment Activity that is Applicable:

<input type="checkbox"/>	End-of-Program Assessment
<input type="checkbox"/>	Program Review
<input type="checkbox"/>	General Education Outcomes Assessment
<input type="checkbox"/>	Other (specify)

Current Date: 1/12/06

Department/Program: Respiratory Care

Reference Assessment Record:

Report Prepared By: Stephen Mikles

Date of Original Assessment Activity: 03/04

I. Status of each Action Plan items identified in original assessment activity:

Kettering review has been implemented with 100% participation by the graduating classes of 2004 & 2005. Polysomnography needs assessment was completed in July 2005. 8 of 60 surveys were returned and only 6 supported the development of a certificate program at SPC.

II Plan for completing each action plan item that is not currently complete (include timeline):

March 2006 - Members of the RC advisory committee will be asked to provide any additional strategies to support the development of a Polysomnography certificate program at SPC.

III. Evaluate the impact of the implementation of action plan items on program quality

Kettering review reinforces high pass rates on the NBRC credentialing examinations. Polysomnography has no correlation to the RC program quality.

Signatures:

Provost:

VP: Educational and Student Services:


