

Fall 2012 Program Review - Annual Update by Section

As of: 5/14/2013 04:32 PM EST

Discipline/Program/Area Name

Respiratory Care/Therapy (PR)

[President's Office, Program Reviews, Academic Affairs (PR), Health Sciences Division (PR)]

Health Sciences – Respiratory Care

Academic Year

Respiratory Care/Therapy (PR)

[President's Office, Program Reviews, Academic Affairs (PR), Health Sciences Division (PR)]

2012

Name of person leading this review.

Respiratory Care/Therapy (PR)

[President's Office, Program Reviews, Academic Affairs (PR), Health Sciences Division (PR)]

Jeff Stephens RRT, RN, MSN, FNP-BC – Program Chair/Director

Names of all participants in this review.

Respiratory Care/Therapy (PR)

[President's Office, Program Reviews, Academic Affairs (PR), Health Sciences Division (PR)]

Jeff Stephens
Wendy Stout

Please review the five year headcount and FTES enrollment data provided on [Program Review website](#).
Comment on trends and how they affect your program.

Respiratory Care/Therapy (PR)

[President's Office, Program Reviews, Academic Affairs (PR), Health Sciences Division (PR)]

The respiratory care program has been in operation since fall 2006. Our total enrollment capacity for 5 fall semesters is 108 students. As of spring 2012 we have enrolled 94 students (87%), and have graduated 67 with degree conferment (71%). Annual successful course completion mirrors the college 77.4% (2010-2011) data.

FTES	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Admitted/Capacity	19/24	21/24	20/24	23/24	11/24
On-Time Graduation	15	17	12	12	11
Total Program Completion	15	17	12	17	17
Attrition	21.1%	19%	40%	29%	29%

The attrition rate has increased from 21% to 29% as the data indicates. This increase is attributed to program rigor, individual student decisions, medical necessity, and budgetary decreases in FTES.

RCP 5 year Enrollment Demographic Data

Age	2007-2008 19	2008-2009 21	2009-2010 20	2010-2011 23	2011-2012 11
19 or less	0	0	0	0	0
20-24	3 (16%)	4 (19%)	2 (10%)	2 (9%)	3 (33%)
25-49	13 (68%)	15(71%)	18 (90%)	21 (91%)	8 (67%)
Over 49	3 (16%)	2 (10%)	0	0	0

Gender	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Male	6 (32%)	7 (33%)	2 (20%)	8 (35%)	3 (33%)
Female	13 (68%)	14 (67%)	18 (80%)	15 (65%)	8 (67%)

Ethnicity	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
African American	2 (11%)	4 (19%)	1 (5%)	4 (17%)	3 (25%)
American Indian/Alaskan Native	0	0	0	0	0
Asian	0	0	1 (5%)	0	0
Filipino	1 (5%)	1 (5%)	1 (5%)	1 (4%)	0
Hispanic	3 (16%)	7 (33%)	13 (65%)	9 (39%)	5 (42%)
Pacific Islander	0	2 (9%)	1	0	0
Two or More Races	0	1 (5%)	0	0	0
Unknown/Non-Responder	0	0	1 (5%)	1 (4%)	0
White Non-Hispanic	13 (68%)	6 (29%)	3 (15%)	8 (36%)	4 (33%)

Additional data analysis reveals that the respiratory care program mirrors the colleges' data. Probable inferences indicate that a majority of students are enrolled in respiratory care as a second career secondary to the State's economic crisis and unemployment.

Using the student achievement data provided on the [Program Review website](#), please comment on any similarities or differences in success, retention, and persistence between race, gender, and location/method of delivery groups. Please comment on all three (success, persistence, and retention). Identify which trends and achievement gaps will be addressed in the current academic year.

Respiratory Care/Therapy (PR)

[President's Office, Program Reviews, Academic Affairs (PR), Health Sciences Division (PR)]

RCP 5 year Achievement Data (Graduate)

Age	2007-2008 15	2008-2009 17	2009-2010 12	2010-2011 12	2011-2012 17
19 or less	0	0	0	0	0
20-24	1 (7%)	2 (12%)	2 (17%)	1 (8%)	4 (24%)
25-49	11 (68%)	14 (82%)	10 (83%)	11 (91%)	13 (76%)
Over 49	3 (16%)	1 (6%)	0	0	0

Gender	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Male	5 (33%)	6 (33%)	2 (20%)	4 (35%)	7 (41%)
Female	10 (67%)	11 (67%)	10 (80%)	8 (65%)	10 (59%)

Ethnicity	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
African American	2 (13%)	1 (6%)	3 (25%)	1 (8%)	3 (18%)
American Indian/Alaskan Native	0	0	0	0	0
Asian	0	0	0	2 (17%)	0
Filipino	1 (7%)	1 (6%)	1 (8%)	1 (8%)	2 (12%)
Hispanic	2 (13%)	8 (47%)	4 (33%)	4 (34%)	5 (29%)
Pacific Islander	0	1 (6%)	0	0	0
Two or More Races	0	0	1 (8%)	0	0
Unknown/Non-Responder	0	0	0	1 (8%)	1 (6%)
White Non-Hispanic	10 (67%)	6 (35%)	3 (25%)	3 (25%)	6 (35%)

Summary

	2007-2008 to 2011-2012	Antelope Valley College
Student Progress/Achievement Rate Course Completion	(n = 67) 71%	77.4%
Age		
19 or less	0	28.3%
20 – 24	(n=10) 15.0%	32.0%
25 – 49	(n=53) 79.0%	33.5%
> 49	(n= 4) 6.0%	6.1%
Unknown	0	
Gender		
Female	(n=43) 64.0%	57.8%
Male	(n=24) 36.0%	41.0%
Ethnicity		

African American	(n=10) 14.0%	20.6%
American Indian/ Alaskan Native	0.0%	0.6%
Asian	(n=2) 3.0%	2.1%
Filipino	(n=6) 8.0%	1.9%
Hispanic	(n=23) 32.0%	31.6%
Pacific Islander	(n=1) 1.0%	0.3%
Two or More Races	(n=1) 1.0%	2.0%
Unknown/Non- Respondent		
White Non-Hispanic	(n=2) 3.0%	12.7%
	(n=28) 38.0%	28.2%

Respiratory care data and comparative analysis reveals no statistical significance between college enrollment data, student success, persistence, and retention. Only one achievement gap identified the **attrition rate** has increased from 21% to 29% as the data indicates. This increase is attributed to program rigor, individual student decisions, medical necessity, and budgetary decreases in FTES. Attrition rates are expected to drop over the next year as past budgetary changes and program rigor will have stabilized.

Analyze changes in student achievement and achievement gaps over the past five years. Cite examples of using data during that time as the basis for resource allocation (e.g. human, facilities/physical, technology, financial, professional development) or making other changes that resulted in improvements in student achievement.

Respiratory Care/Therapy (PR)

[President's Office, Program Reviews, Academic Affairs (PR), Health Sciences Division (PR)]

When the respiratory care program was instituted there were limited requirements for admission that lead to significant attrition rates. Specific observations and data collection revealed a limited ability for student success based on knowledge gaps between anatomy physiology, chemistry, and algebra. The highly technical nature of respiratory care in combination with the gaps led to student failure. In 2009 pre-requisites of anatomy, physiology, chemistry, and algebra were instituted as program requirements. This has improved students' ability to complete the program successfully as seen by a decrease in student attrition from 40% to 29%.

Annual evaluative tools utilized include the Student Program Resource Survey, Program Personnel Resource Survey, Graduate Survey, Employer Survey, and student credentialing test results. These tools provide data on resource availability /allocation such as personnel, facilities, laboratory equipment, learning resources, instructional support, clinical resources, and medical direction. Gaps in student achievement/success related to a lack of up-to-date equipment, limited medical direction, knowledge base (cognitive domain), clinical proficiency (psychomotor domain), and behavioral skills (affective domain) have been identified. Over the past 4 years the program has sought resource allocation from the Perkins IV program improvement fund (\$87,957.24) for interactive computer software for testing and up-to-date equipment for lab simulation including simulation manikin, and \$4,800.00 for instructor professional development. In addition, a change was made of a medical director that has increased involvement to include grand rounds with the students and semester lecture series. The 2011 surveys rated the program >3 on a 5 point Liker scale which identified no deficiencies.

Provide examples from your program where assessment findings of Student Learning Outcomes (SLOs), Program Learning Outcomes (PLOs), and/or Operational Outcomes (OOs) were discussed and used to make budget decisions in the past year. This should include brief descriptions of assessment findings, when the discussions occurred, who participated, and what, if any, budget items/resources resulted.

Respiratory Care/Therapy (PR)

[President's Office, Program Reviews, Academic Affairs (PR), Health Sciences Division (PR)]

Student Learning Outcomes and Program Learning Outcomes are assessed annually to determine program operational requirements. Summative clinical and criterion based evaluations reflective of national respiratory care performance guidelines are tools that are used and tailored specifically to each SLO and PLO. Student weaknesses in curriculum can then be identified and adjusted to achieve program goals. As an example, in 2009 national testing revealed a weakness in mechanical ventilation. The testing results were discussed at an advisory committee meeting on February 17, 2009; 4:30 pm, in T502. Attending: Dr. Ravi Shankar, Medical Director, Dr. Karen Cowell, RN, Dean, Health Sciences, Ashley Hubbell, Manager, Radiology and Respiratory Services, Lancaster Community Hospital/Glenda Franklin, CRT, Interim Director, Respiratory Services, Antelope Valley Hospital; Robert Vigran, RRT, Instructor Jeff Stephens, RRT, RN, MSN, FNP, Program Director, Nicole Ervin, Student, & Lynn Brandt, RRT, Advisory Committee Chair

Committee members suggested purchase of a PFT, Bennett 840 ventilator with pediatric and neonatal capabilities, and/or the Draeger Evita. These were considered to be critical to the program. In response, Perkins IV grant funding was obtained to purchase and integrate the equipment into the program curriculum.

More recently in 2011, clinical evaluative tools identified neonatal performance deficiencies within respiratory care and nursing students. As a result a task force (Dean: Karen Cowell - Nursing faculty: Elizabeth Sundberg Casey Scudmore, Sandra Hughes – Respiratory faculty: Jeff Stephens) determined that additional lab simulation would improve student performance. In response, collaborative Perkins IV grant funding was obtained to purchase a neonatal simulation manikin.

In addition, limited annual proposition 20 money has been dedicated solely to purchase durable supplies (nasal cannula, oxygen masks, arterial blood gas kits...) that the students are required to have throughout the program. The equipment operation and use of all durable medical supplies are linked to specific course SLOs and PLOs.

Analyze changes in SLO, PLO and/or OO assessment findings over the past five years. Cite examples of using data during that time as the basis for resource allocation (e.g. human, facilities/physical, technology, financial, professional development) or making other changes that resulted in the improvement of SLO, PLO and/or OO findings this past year.

Respiratory Care/Therapy (PR)

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SLO's were developed and implemented for each course in 2009. There are only 2 years of data available. All SLO's reflect both program learning objectives and the Commission on Accreditation (CoARC) for respiratory care benchmarks. Changes to staffing, physical facilities/technology, and resource allocation have been made to meet achievement targets. For example, recent CoARC requirements mandate a 6:1 ratio students/instructor and class outlines of record have been submitted to the academics policy and procedure committee. In addition, based on the student competences, self-assessment examinations, and national board credentialing results (poor mechanical ventilation skills, critical-thinking skills, and quality assurance) monies have been acquired from Perkins grant funding to improve technology and advance professional development. Action plans reflect the need to meet the maintenance of classroom/lab durables and supplies through proposition 20 funding.

Review the program goals and objectives related to improving outcome results and/or student achievement identified in the most recent comprehensive self study and subsequent annual update(s). List program goals and objectives for this academic year, adding new ones if needed.

Respiratory Care/Therapy (PR)

[President's Office, Program Reviews, Academic Affairs (PR), Health Sciences Division (PR)]

Goal 1: To prepare students as competent advance-practice therapists.

Objective(s):

1a. Upon completion of the program, the student will demonstrate the ability to comprehend, apply, and evaluate clinical information relevant to their role as an entry level and/or advance-practice therapist (**knowledge domain**).

1b. Upon completion of the program, the student will demonstrate the technical proficiency in all the skills necessary to fulfill the role as a entry-level and/or advanced-practice therapist (**psychomotor domain**).

1c. Upon completion of the program, the student will demonstrate professional behavior consistent with employer expectations for entry-level and/or advanced-practice therapist (**affective domain**).

As the colleges' mission is to "serve the community by placing student success and student-centered learning as our number one priority through higher educational standards and innovative programs and services ..." The primary program goal addresses the mission by identification of domains (knowledge, psychomotor, and affective) that promote student-centered success.

Outcomes' assessment activities include evaluation of data from program and student learning objectives (SLOs). With 4 years of data the program has achieved a 72% (63 graduates) program completion rate, and an 87% credentialing pass rate on national examinations. This exceeds benchmark requirements (80%) set by the Commission on Accreditation for Respiratory Care (CoARC). This represents a 7% improvement from academic year 2010-2011. Additional activities include Standardized Assessment Testing (Cohort 2012 n=17) 78.5% pass on Comprehensive CRT Self-Assessment Examination compared to national pass rates of 59%. Analysis of data from cohort 2011 and cohort 2012 showed an improvement from 85.7% to 90.9% respectively.

List significant new and continuing resource needs in rank order of importance. Identify the document (e.g. Educational Master Plan, action plan, state mandate, accreditation mandate) and/or data which corroborate each need.

Respiratory Care/Therapy (PR)

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Resource needs are linked to improved student critical thinking, performance, and ultimate student success. There is overwhelming research identifying clinical simulation as a leading factor in developing and improving critical thinking and student performance. In a dynamic field of study, these advancements must be incorporated to insure student success. Reviewing student performance and respiratory care standards there are several areas of program improvement required to meet national standards. The order of importance would include:

1. Maintain current staffing and budget.
2. Cardiac monitoring system with simulation scenarios.
3. Advanced adult and infant ventilators.
4. Additional simulation manikins.

Student Achievement Outcome Improvement: The manipulation of equipment by order or protocol, performance of quality control, achieve adequate respiratory support, and determine the appropriateness of respiratory care. NOTE: These are areas in which students have shown deficiencies on national examinations that would improve student success.