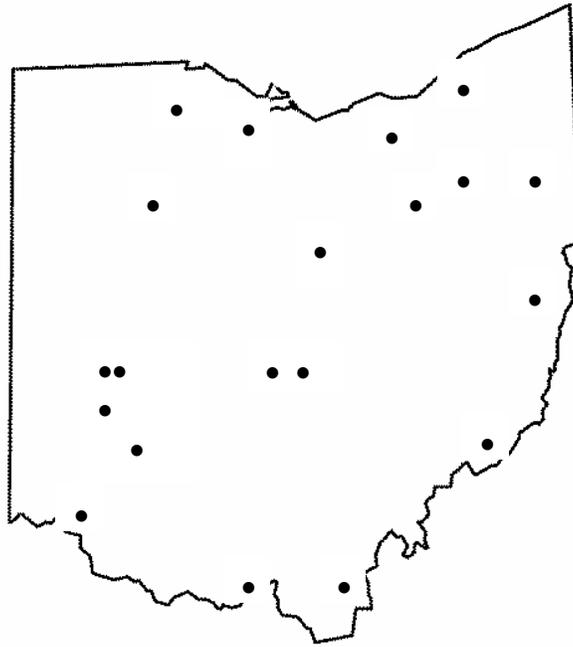


An Update on Respiratory Care Education Programs in Ohio:

Class of 2005 and Future Projections



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Introduction

The Ohio Respiratory Care Board (ORCB) continues interest in the quality and productivity of the approved respiratory care educational programs in Ohio. The ORCB continues to receive anecdotal reports of shortages of licensed respiratory care professionals in Ohio hospitals, long term care facilities, and durable medical equipment providers throughout the State, the expanded use of patient care clinical protocols requiring advanced clinical judgments and decision-making by therapists, and the declining numbers of advanced practitioners with the Registered Respiratory Therapist (RRT) credential.

The results of a statewide survey of hospitals in Ohio conducted at The Ohio State University revealed an estimated 236 full time staff therapist vacancies on December 31, 2004. According to the JCAHO over 50% of ventilator sentinel events are related to respiratory therapy training shortfalls, and 20% are have been related to respiratory therapist staffing shortages.¹ The American Association for Respiratory Care (AARC) has published papers recently advocating expanded advanced education opportunities for respiratory therapists, especially those who use patient care clinical protocols,² and with the Committee on Accreditation for Respiratory Care (CoARC) and the National Board for Respiratory Care (NBRC), issued a statement advocating the Registered Respiratory Therapist (RRT) credential.³

The ORCB commissioned a seven year retrospective review of student enrollments, graduation rates, and quality outcomes by the ORCB Education Committee and published Respiratory Care Education in Ohio in December 2004.⁴ Although comprehensive, that report was retrospective and did not include graduation data for 2005, the number of new graduates becoming RRT, future projections, or data on new educational programs opening in the State. The purpose of this report is to update the 2004 report and to describe and project trends through 2007.

Methods

Copies of the CoARC 2004 Annual Reports were requested from the program directors of the 19 respiratory care educational programs identified in the 2004 ORCB report. As the CoARC Annual Report only included data for classes graduating from 1999 – 2004, and did not include data for 2005-2007, the ORCB Education Committee requested supplemental data from program directors of the 19 established programs and 3 new programs in Ohio. The 2005-2007

supplements included number of applicants for enrollment, maximum enrollment, and actual enrollment; student attrition and causes of attrition; number of graduates; number of graduates employed in respiratory care-related jobs within three months of graduation, and quality outcome measures of the program such as the results of graduate and employer surveys and licensing and credentialing examinations. Data were collected in August 2005 and are oriented to the year of graduation or projected graduation. These data were entered into a computerized statistical spreadsheet, Statistical Package for the Social Sciences (SPSS v 14.0), and annual totals of applications, program capacity, initial enrollment, student attrition, graduates, graduates placed in RT-jobs, Certified Respiratory Therapists (CRT), and RRTs were calculated.

Results

Table 1 and figure 1 present student enrollment data for the classes of 2003 – 2007. Increases in the number of applications during the period continue the trend begun in 2001 for the class of 2003. The 807 applications for class of 2007 were significantly higher ($p < .001$) than those for classes of 2003-2005. There were consistent small annual increases in statewide educational program capacity, and initial student enrollments increased annually, continuing the trend begun in 2002 for the class of 2004. Program capacity was not reported by several programs for the Class of 2007, and total statewide capacity was not calculated for the class of 2007. Student attrition increased with enrollment, but the attrition rate decreased slightly from an annual average of 26% for the Classes of 2000-2004 to 23% for the Classes of 2005-2006.

	2003	2004	2005	2006	2007
Applications	453	582	586	722	819
Capacity	442	454	468	475	
Enrollment	266	326	361	397	392
Attrition	70	95	81	90	
In Progress			55	258	

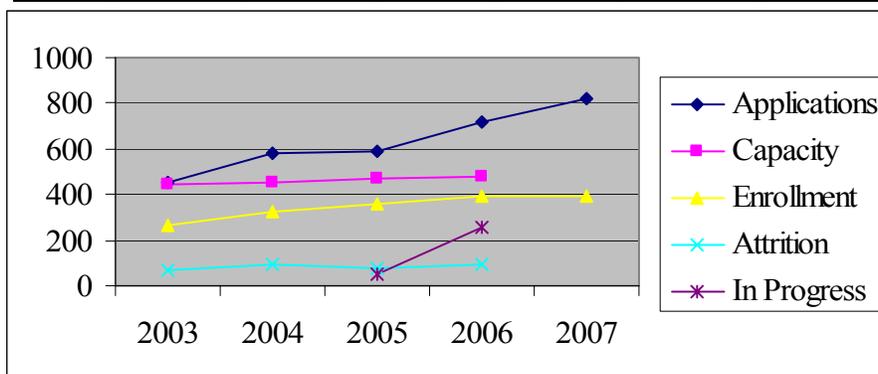


Table 1 and Figure 1. Student enrollment data for the classes of 2003 – 2007

Table 2 and figure 2 present graduate data and projections for 2000 -2006. The number of 2005 graduates increased over 40% from the lowest recorded in 2003. The number of graduates projected for 2006 may decrease slightly, but the number of students who remain in progress from 2005 and who may graduate in 2006 will affect the final number of graduates.

The number of graduates placed in RT-related jobs continued to increase, but the difference between number of graduates and those having jobs increased slightly since 2003. The number of CRTs resembles closely the number of graduates, except for the class of 2005. The August reporting date may have been too soon after graduation to accurately reflect the Class of 2005. The number of new RRTs continues as approximately 50% of graduates annually.

	2000	2001	2002	2003	2004	2005	2006
Students in Progress						55	258
Graduates	185	208	186	183	245	264	
Grads-Jobs	170	196	175	177	219	237	
Total CRTs	161	205	168	169	218	164	
Total RRTs	86	92	81	85	96		

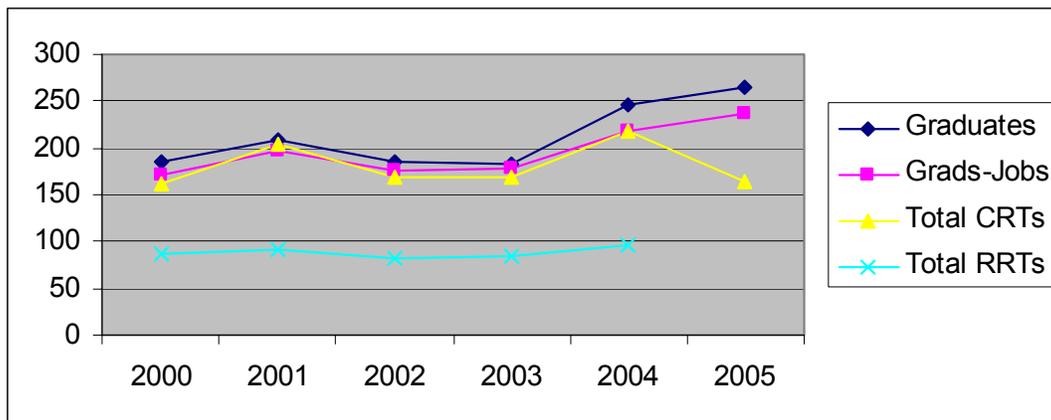


Table 2 and Figure 2. Graduate data for 2000 -2006.

Changes and New Programs

There have been several changes in respiratory therapy educational programs since the 2004 ORCB report. Statewide enrollment capacity increased. The Ohio State University, Sinclair Community College, and Cincinnati State Technical College Program increased their program capacity. Bowling Green State University opened a second site at Lorain Community

College in Lorain, Ohio. The University of Toledo is no longer enrolling new students in their associate degree entry level program.

Ohio will soon have four baccalaureate level respiratory therapy educational programs. Joining The Ohio State University, Youngstown State University, and the University of Toledo, the University of Akron will be phasing out the associate degree program in respiratory therapy, graduating the final class in 2008, and converting respiratory therapy to a Bachelor of Science degree program, planning to graduate the first baccalaureate class in 2009.

Table 3 lists Miami Jacobs Career Center in Dayton, University of Rio Grande & Buckeye Hills Career Center in Rio Grande, and Southern State Community College in Hillsboro which have received letters of review from the CoARC for new programs. All three are proposed as associate degree, advanced level programs.

Sponsoring Institution	CoARC Status	Site Visit	Self-Study
Miami Jacobs Career Center Dayton	200514 Letter of Review	Fall 2007	Jan 2007
University of Rio Grande & Buckeye Hills Career Center Rio Grande, Ohio	200504A Letter of Review	Fall 2007	Jan 2007
Southern State Community College Hillsboro, Ohio	Letter of Review	Spring 2008	June 2007

Table 3. New Respiratory Therapy Educational Programs in Ohio

Conclusions

- Reversing a four-year trend, the productivity of Ohio's respiratory therapy educational programs increased for 2004 and 2005.
- Attrition remains common in many programs, and with fewer students "in progress" for 2006 than who graduated in 2005, statewide productivity will likely decline in 2006.
- New programs will increase statewide capacity and may increase graduate productivity beginning in 2007.
- Although the demand for respiratory therapists remains strong, the number of new graduates not employed as respiratory therapists within 3 months of graduation increased in 2004 and again in 2005.
- Although all Ohio respiratory therapy programs are accredited as "advanced," graduates with the advanced level RRT credential remain limited to 50% RRT.
- Therapists with baccalaureate degrees in respiratory therapy will be increasing and Ohio will likely have the third most baccalaureate programs in the country in 2009.

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