Respiratory Care Clinical Education: A Needs Assessment for Preceptor Training

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BACKGROUND: There has been a growing interest in the use of volunteer clinical preceptors to provide clinical instruction to respiratory therapy (RT) students. However, many RT preceptors have had little or no training in preceptorship. We sought to identify the preceptor training needs of programs that lead to the Registered Respiratory Therapist or Certified Respiratory Therapist credential (RT programs). METHODS: Via e-mail we asked the directors of accredited RT programs to respond to a Web-based survey. RESULTS: Seventy-four RT program directors, from programs across the United States, responded. Eighty-two percent of the respondents’ programs offer an associate’s degree and 16% offer a baccalaureate degree. The majority of the respondents’ programs use unpaid clinical preceptors. Thirty-two percent of the respondents indicated that the preceptors had received no preceptor training. Among the preceptors who did receive training, the duration of training ranged from 1 hour to 6 weeks. The training was typically delivered by the director of clinical education or program faculty. Eighty-one percent of the respondents believed there is a need for a standardized preceptor-training program. The respondents’ understanding of, curriculum for, and implementation of preceptor training differed considerably, and there were substantial differences in the content and duration of the existing preceptor-training programs. Seventy-two percent of the respondents had experienced barriers to preceptor training. CONCLUSIONS: A standardized preceptor-training program is needed to improve the quality of preceptorship and assure that RT programs prepare graduates for 21st-century RT practice. Key words: preceptor, respiratory therapy education, respiratory care education, clinical education. [Respir Care 2009;54(7):868–877. © 2009 Daedalus Enterprises]

Introduction

In recent years there has been a growing interest in the use of volunteer clinical preceptors to provide clinical instruction to respiratory therapy (RT) students. Today’s preceptors play a vital role in teaching the next generation of RTs at the bedside. Without proper training and support, however, preceptors are often set up to fail at this important task.

As educators we seek the best strategies to facilitate our students’ acquisition of the necessary knowledge, skills, and attitudes to prepare them for practice in today’s complex health-care environment. RT students need appropriate clinical experiences, with opportunities to perfect the performance of patient-care skills, to validate theory and knowledge, and to acquire abilities that can only be acquired through clinical practice.1 An unsatisfactory or irrelevant clinical experience can lead to learner dissatisfaction with the career.2 We believe that the use of qualified preceptors is important for exposing RT students to the complex practitioner role they need to understand.

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Preceptorship, in which the learner works with a professional practicing clinician, is the model of choice for clinical teaching in undergraduate and postgraduate healthcare education.1-6 RT educators are concerned about the preparation of RT preceptors. Increasing our preceptors’ awareness of the learning processes in the clinical environment is crucial. Historically the “see one, do one, teach one” method has been useful in clinical education, but it is now apparent that learners must have the opportunity to weigh their performance against an accepted standard and to refine their practice until they achieve sufficient expertise.1 We believe the preceptorship model can both provide those opportunities and inspire RT students’ learning, influence their role socialization, and reinforce their competence.

A preceptorship is a one-on-one, reality-based clinical experience in which an experienced professional is teamed with a learner.2 The literature clearly demonstrates the benefits of preceptorship to both the preceptor and the learner. Indeed, the study by Ohrling and Hallberg7 revealed that preceptorship reduces the risk of nursing students feeling helpless and empowers them in their learning at the bedside. The literature also demonstrates that preceptoring promotes learners’ role socialization (ie, how students internalize the occupational role and learn the attitude and behavior norms of the health-care culture) and thus helps integrate the learner into the profession.7-9

Billay and Uonge identified attributes that preceptors should possess, including: being a role model and a facilitator; having good communication skills; being knowledgeable about the field; and understanding the principles of adult education.3 We have observed that many RT preceptors are thrown into preceptorship with little to no direction as to what is expected of a preceptor. At the 2005 American Association for Respiratory Care (AARC) Summer Forum, Debra Gray presented the preceptor-training model that was adopted by the American Physical Therapy Association. After that symposium, 35 RT members of the AARC Education Section, most of whom were already running preceptor-training programs, formed an ad hoc committee to study RT preceptor-training and develop and implement a national RT preceptor-training program. Joseph G Sorbello MEd RRT, of the Department of Respiratory Therapy Education at Upstate Medical University, State University of New York, in Syracuse, New York, is the committee chair. Over about a year the committee gathered information on preceptor-training content, content-delivery methods, suggestions, et cetera, then decided to conduct a needs-assessment for a national RT preceptor-training program. We designed a survey to gather opinions and information about existing RT-preceptor-training program content, barriers, and content-delivery methods. We asked:

- Is there a need for a national RT-preceptor-training program? If so:
  - What content should be included?
  - What content-delivery methods should be used?
  - What are the barriers to starting a national RT-preceptor-training program?

## Methods

The institutional review board of the University of Arkansas for Medical Sciences approved this study. The survey instrument (Appendix) was developed in 2 stages. First, from the literature we identified relevant measures of preceptor-training needs and drafted a 32-item survey instrument. Second, the draft was reviewed by a panel of experts for content and face validity. The panel consisted of 5 registered RTs who hold faculty appointments at 2 university-based RT programs, two of whom had previously developed preceptor-training programs. The draft instrument was also reviewed by a qualitative-methods expert who is not an RT, to assess content and face validity. Following review, we revised the instrument based on the panel’s recommendations.

Via e-mail we invited 248 program directors of accredited RT programs listed at the Web site of the Committee on Accreditation for Respiratory Care. Two-hundred forty-six of the invitees were directors of programs that lead to the Registered Respiratory Therapist credential, and 44 were directors of programs that lead to the Certified Respiratory Therapist credential. Twenty-one of the program directors in the Committee on Accreditation for Respiratory Care database did not list an e-mail address, and 21 of the e-mail addresses were incorrect. The invitation e-mail gave instructions on how to access the survey Web site, and provided a password. The invitees were advised that
they were free to refrain from answering particular questions, and to withdraw from the study at any time.

The survey was administered with survey software (Perception, Questionmark, Norwalk, Connecticut). Respondent-identification factors were not requested or used, and the respondents were informed that the demographic data would be used for descriptive reporting and to develop a preceptor-training program.

Results

Seventy-four (30%) of the 248 invited program directors responded. Fifty-three respondents (72%) were from 2-year institutions, 18 (24%) were from 4-year institutions, and 3 (4%) were from institutions that grant both 2-year and 4-year degrees. Four percent of the respondents were also located at academic health-science centers. The RT programs settings were: 53% urban, 18% suburban, 23% small town, and 7% rural. The associate’s degree is offered at 82% of the institutions, and the baccalaureate degree at 16% (Table 1).

Though all RT programs must offer at least an associate’s degree for accreditation, some 4-year colleges and universities also offer associate’s degrees in RT rather than baccalaureate degrees. Sixty-one of the respondent programs grant the associate’s degree. One institution also offers an associate’s degree of applied science and an integrated master’s program.

Table 2 summarizes the responses on the existing preceptorship systems at the respondents’ institutions. Fifteen percent of the respondents reported that in their programs clinical instruction is directly supervised by college faculty members, 20% of whom were full-time and 4.5% were part-time. Seventeen percent of the respondents reported that they use volunteer, unpaid clinical preceptors (Fig. 1).

Fifty-six percent reported that clinical instructors or preceptors receive some type of training prior to receiving students, and 32% indicated that no training is provided (Fig. 2). Among the programs that indicated that they do provide preceptor training, 63% indicated that the training was an “orientation to the program,” usually by the direc-
tor of clinical education, and these orientations ranged from 1 hour to 8 hours. Twenty-six percent of the respondents reported that their programs have formal preceptor training. In the programs that do provide formal preceptor training the duration range was 2 hours to 4 days. Twenty-six percent of the respondents reported that the training is provided by the clinical affiliate. Three percent of the respondent programs use online preceptor training (Fig. 3).

Eighty-one percent of the respondents thought that there is a need for a standardized preceptor-training program, 13% thought such a program is not needed, 1% were uncertain about the need, and 5% did not answer this question. Eighty percent of the respondents rated the importance of such a program positively (ie, a rating of > 6 on the 1–10 scale), and 32% of the respondents rated it as “most important” (rating 10) (Fig. 4).

The respondents estimated that up to 75 preceptors would need training in their institutions annually (estimate range 0–75, estimate mean ± SD 17 ± 14).

The respondents’ importance-rankings of the various preceptor training needs included: how to assess/evaluate clinical performance 57%; how to provide effective feedback 44%; understanding the preceptor’s roles and responsibilities 41%; communication skills 26%; understanding of inter-rater reliability 19%; dealing with difficult students 17%; understanding student needs 15%; and principles of adult learning 15%. Lower-ranked training needs included learning styles, teaching strategies, critical thinking skills, balancing workload with teaching, legal issues, teachable moments, and dealing with the exceptional student (Table 3).

Seventy-two percent of the respondents reported that they had experienced barriers to providing preceptor training. The top 4 barriers reported were lack of time or resources (37%), lack of incentives for preceptors to participate (16%), lack of curriculum (12%), and staffing limitations at clinical affiliate sites that would prevent preceptor participation (12%).

The respondents’ ratings of the effectiveness of content-delivery methods in preceptor training indicated that they believed workshops (median number of respondents 8) were followed closely by computer-based training (median number of respondents 7) or an online format (median number of respondents 7) as being the most effective delivery methods. The other content-delivery methods video, classroom, and Web-conference received median ratings of 6.5, 6.5, and 6.0, respectively. However, the respondents thought that the classroom or Web-conference format would be most preferred by the preceptor-training participants (Fig. 5).

Fifty-five percent of the respondents believed that RT department managers in their areas would support preceptor training, in various degrees. Some respondents believed that the department managers would be willing to provide the use of institutional technology to deliver the program (36%), grant employees paid time off to attend preceptor training (23%), or pay registration fees (22%).
Thirty-one percent of the respondents thought that department managers would support a 4-hour preceptor training, 36% thought department managers would support an 8-hour preceptor training, and 5% thought department managers would support a 2-day (16-hour) preceptor training.

Seventy-nine percent of the respondents thought that preceptors would desire continuing-education credit for preceptor training. Sixty-seven percent thought the preceptor-training program should lead to certification for the preceptor, perhaps because 39% of the respondents did not believe that practitioners were receiving any type of reward for preceptorship from their employer. Though 18% of the respondents thought that many practitioners are required (by job description) to precept, they also thought that the rewards available to practitioners included career advancement (30%), increased pay (18%), and recognition or awards (11%). It was also postulated that some preceptors receive other rewards, such as continuing-education credits, use of palm-top computers, better schedules, tuition assistance, or payment of conference fees.

**Discussion**

According to Newble and Cannon, “It is a fact that clinical teaching is the most neglected area of all teaching, despite being the one where more deficiencies have been found than in any other.” Furthermore, they described many medical clinical teaching encounters as “haphazard, mediocre, and lacking in intellectual stimulation.” One hundred years after the Flexner report, which led to important reforms in medical education, preceptorship has been reestablished in medical education to assure that medical students have adequate observation, supervision, and mentoring. There is also widespread acceptance of preceptorship in nursing education. The American Physical Therapy Association developed and adopted a national clinical-instructor credentialing program.

Many RT programs struggle to find qualified and competent preceptors who can serve as role models and mentors. According to Schmitt, “It is time that our profession unites and assumes responsibility for the development of successful clinicians.” Currently, many RTs practicing full-time and precepting students have few resources available for developing their preceptor qualifications and competency.

The present study affirms the course that the original ad hoc group charted. According to Sorbello:

Much of the program, in design, quality and philosophy, will mirror what the physical therapists
have created to educate and train their clinical preceptors/instructors. It is our plan to deliver a variety of lecture presentations, interactive discussions, break-out sessions, question-and-answer periods, written and practical testing delivered and facilitated by those who are expert and well-seasoned in all the critical aspects of clinical instruction. We want this to be recognized as a very high quality program. We are very, very concerned with quality control and continuous quality improvement. Consumer utility, satisfaction, and validity are top concerns. As such, we want to be absolutely sure that this process be done properly, so we hope everyone is patient with its growth and development. (Personal communication, Joseph G Sorbello MEd RRT, Department of Respiratory Therapy Education, State University of New York, Upstate Medical University, Syracuse, New York.)

The work group also recognizes the importance of awarding continuing-education credits and keeping the cost reasonable. The initial preceptor-training course was presented at the 2008 AARC Summer Forum in Phoenix, Arizona, to about 150 participants. We are also working towards offering the course via distance education. We certainly embrace the concept of looking at alternative ways to meet the needs of hard-working clinicians and having the preceptor-training be at their convenience. Distance-education delivery has been highly requested, because not everyone gets to attend the Summer Forums, International Congresses, or AARC state meetings. We do want to make the distance-education version available as soon as possible (personal communication, Joseph G Sorbello MEd RRT, Department of Respiratory Therapy Education, State University of New York, Upstate Medical University, Syracuse, New York), and online and other distance-education technologies are rapidly becoming more effective, popular, cost-effective, and time-efficient.

The respondents’ understanding of, curriculum for, and implementation of preceptor training differed considerably, and there were substantial differences in the content and duration of the existing preceptor-training programs. Seventy-two percent of the respondents had experienced barriers to preceptor training, and one of the major barriers was the lack of access to a preceptor-training program. We defined access as the distance between preceptors and the training being sought, the time needed for the delivery or communication of that training, and the availability of information (curriculum) for the training. At least 37% of the respondents indicated that they do not have the opportunity to offer a preceptor-training program because of lack of time or other resources to develop such a program. Another 12% indicated that the lack of an appropriate curriculum is a barrier.

Though the low (30%) survey-response rate (without repeated mailings) is a limitation of our results, we believe that our findings are an important addition to the body of knowledge on this topic. We plan to survey RT department managers on their perceptions of the need for a standardized preceptor-training program.

To study how our respondents may have differed from those who did not respond (Figs. 6 and 7) we compared our data about the respondent programs to data from the web site of the Commission on Accreditation of Allied Health Education Programs (CAAHEP), which lists information about RT programs in the United States, including type of institution, degrees awarded, and location. The majority of RT programs listed at the CAAHEP Web site and the majority of our respondent’s programs are in 2-year

![Fig. 5. Respondents’ ratings of their preferences about content-delivery methods and the effectiveness of those methods.](image-url)
institutions and offer the associate’s degree. Our respondents’ locations also correspond fairly closely with the CAAHEP data, except in the southwest region. We believe our respondents provide a fairly representative cross-section of the population in terms of institution type, degrees awarded, and locations, except in the southwest region.

**Conclusions**

To improve RT education we need to develop and implement a standardized and easily accessible preceptor-training program, and there is probably value in working directly with the RT programs to invest in making the preceptor-training curriculum readily available to practitioners.

Preceptor training is definitely an important component in an RT’s professional development, and is a long-range strategy for strengthening the professionalism and stature of the field of respiratory therapy. This is a necessary step to assure that RT programs achieve standards of excellence. Certifying instructors to teach the preceptor-training
program, solidifying commitment and support for the program from the AARC, and developing a system for evaluating the preceptorship program will be essential. Once the program is fully developed and the curriculum validated, it could be offered through partnerships with healthcare institutions and RT programs that would improve the preceptor-training program and the quality of RT education.

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REFERENCES

Appendix

Survey of Directors of Respiratory Therapy Programs
Respiratory Therapy Preceptor Training Needs Assessment

Part 1: Demographics
1. Type of institution (check all that apply): __ 2-year college   __ University   __ Academic health science center
   __Private   __ Public
2. Location of institution (state): ________________________________
3. Location of institution: __ Urban   __ Suburban   __ Small town   __ Rural
4. Degree offered by your program: __ Associate degree   __ Baccalaureate degree   __ Other (specify ____________)
5. How many total clinical hours per student are included in your curriculum?
6. How many actual hours of clinical instruction by paid program faculty per student are included in your curriculum?
7. Number of paid full-time faculty teaching clinical courses?
8. Number of paid part-time faculty directly teaching students at the bedside?
9. Number of paid FTE faculty directly teaching students at the bedside?
10. Number of clinical instructors/preceptors employed by the clinical affiliate who devote full-time effort to the clinical instruction of your students when they are assigned to that affiliate?
11. Numbers of clinical instructors/preceptors employed by the clinical affiliate who participate in the clinical instruction of your students when they are assigned to the affiliate, but who also have an assigned patient workload?
12. What is the maximum number of students receiving clinical instruction per instructor/preceptor (ie maximum student: instructor ratio in any clinical setting)?
13. Number of primary clinical affiliates?
14. Please indicate the number of clinical sites utilized by your program for each of the following clinical specialties:
   __ NICU   __ Asthma education   __ PICU   __ Pulmonary rehabilitation   __ Home care   __ Intubation
   __ Pulmonary function testing   __ Bronchoscopy   __ General care   __ Adult critical care   __ Sleep laboratory
15. Who directly supervises the clinical instruction of respiratory therapy students in your institution? (check all that apply)
   __ College faculty: __ full-time   __ part-time
   __ Paid clinical instructors: __ full-time   __ part-time
   __ Volunteer, unpaid clinical preceptors
   __ Please explain if a combination of the above is used.
   __ Other: please explain:

Part 2: Preceptor-Training Needs
1. Do clinical instructors/preceptors receive any type of training prior to receiving students?
   __ Yes
   __ No. Please go to Question 4.
   If yes, please describe the type of training that they receive.
   If yes, please describe the length of training that they receive.
2. Who delivers that training?
2b. Is the training designed to meet the specific needs of respiratory care clinical preceptors?
3. I believe there is a need for a standardized preceptor-training program available for use by respiratory therapy education programs:
   __ Yes
   __ No. If no, thank you for completing this survey. You may submit your survey now.
   __ Uncertain
4. Please rate the importance of having a preceptor-training program available for use by your education program:

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5. Please estimate the number of clinical preceptors who would need training each year to meet the needs of your program:
   ____________
6. Please rate the following content areas’ importance in preceptor training and development

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Roles and responsibilities
Respiratory Care Preceptor Training

Writing behavioral objectives
Basic principles of learning
Characteristics of the adult learner
Learning styles
Student needs in the clinical environment
Principles of student assessment
(Formative and summative)
Evaluation of student clinical performance
Establishing inter-rater reliability
Providing effective feedback
Selecting a teaching strategy
Legal issues in clinical education
Dealing with the difficult student
Dealing with the exceptional student
Communication skills

7. What are the 3 most important preceptor-training needs at your institution?
8. What are the 3 most important barriers to conducting successful preceptor training at your institution?
9. Please rate the effectiveness of each of the following methods of delivery to achieve the training needs of clinical preceptors in your program.

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Classroom
Video
Online
Workshops
Computer-based training
Web conferencing

10. Please rank the preferred delivery methods in the order you feel would be most effective to achieve the training needs of clinical preceptors in your program from 1 (most desirable) to 6 (least desirable).
   __ Classroom
   __ Video
   __ Online
   __ Workshops
   __ Computer-based training
   __ Web conferencing

11. I believe department managers in my area would support preceptor training:

   Strongly Disagree Disagree Neutral Agree Strongly Agree
   1  2  3  4  5  6  7  8  9  10

12. In which of the following ways would the department managers in your clinical affiliates support preceptor training and development? Check all that apply.
   __ Paid time off to attend a workshop
   __ Payment of registration fees
   __ Use of institutional technology to complete a course

   Other: please describe:

13. I believe most department managers in my area would agree to the length of a preceptor-training program at:
   __ 1/2 day (4 hours) __ 1 day (8 hours) __ 2 days (16 hours)

14. I believe preceptors would desire continuing education credit for this activity:

   Strongly Disagree Disagree Neutral Agree Strongly Agree
   1  2  3  4  5  6  7  8  9  10

15. I believe the preceptor-training program should ultimately lead to certification for the clinical preceptor:

   Strongly Disagree Disagree Neutral Agree Strongly Agree
   1  2  3  4  5  6  7  8  9  10

16. What do you think a reasonable fee for delivering the equivalent of a 4-hour preceptor-training program that was fully approved for continuing-education credit would be? Please type in a dollar value per preceptor trained in the space provided:

17. Do practitioners who act as clinical preceptors in your area receive any type of reward from their employer (eg, career-ladder opportunities, additional pay)?