Institutional Program Review

BS in Respiratory Care
AS in Respiratory Care

College of Arts and Sciences

Dakota State University

Program Reaccreditation Site Visit
November 17-18, 2008

Reviewer:
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PART 1: INSTITUTIONAL HISTORY

- **Brief history of the institution and its mission:**

The Legislature established Dakota State University as an institution specializing in programs in computer management, computer information systems, and other related undergraduate and graduate programs as outlined in SDCL 13-59-2.2. A special emphasis is the preparation of the elementary and secondary teachers with expertise in the use of computer technology and information processing in the teaching and learning process.

The Board implemented SDCL 13-59-2.2 by authorizing undergraduate and graduate programs that are technology-infused and promote excellence in teaching and learning. These programs support research, scholarly and creative activities and provide service to the State of South Dakota and the region. Dakota State University is a member of the South Dakota System of Higher Education.

- **Description of the college's mission and its place within the organizational structure of the institution:**

The College of Arts and Sciences offers a variety of programs and courses leading to many successful careers. Computer technology is integrated throughout all majors. The College offers the vast majority of the general education courses that serve as background for all degrees.

The disciplines within the College of Arts and Sciences are Academic Skills, Art, Art Design, Biology, Chemistry, Computer Graphics, Digital Arts, English, Geography, History, Mass Communication, Mathematics, Music, Philosophy, Physics, Physical Science, Respiratory Care, Scientific Forensic Technology, Sociology, Spanish, Speech, Theatre, and Web Design.

In addition to degree programs, the College of Arts and Sciences offers majors, minors, and courses which qualify students to apply for admission to professional schools and programs such as chiropractic medicine, dentistry, library science, medicine, mortuary science, optometry, pharmacy, physical therapy, and occupational therapy.

- **History/development of the respiratory care program:**

The Dakota State University Respiratory Therapist Program was begun at Sioux Valley Hospital in 1966 with initial application to the Board of Schools made in 1968. Approval was initially granted in March 1973, and again in January 1978. This program graduated a total of 68 students.

There was desire on the part of the hospital to offer a greater degree of upward mobility to graduates of the program by obtaining college credit for the didactic and clinical phases of the program. Initial contacts were made as early as 1976. With JRCRTE's decision to require sponsorship of therapist programs, intensified efforts to meet this requirement occurred. Of all the regional colleges, Dakota State offered the best overall potential for a successful program meeting our objectives. At the same time it was determined by our advisory committee, acting on a previous suggestion of the JRCRTE, that in order to provide a sufficient number of graduates, efforts should be made to utilize both major hospitals in Sioux Falls and thereby have sufficient clinical facilities to handle an increased number of students.

A coordinating committee was formed consisting of representatives of Sioux Valley and McKennan Hospitals and Dakota State College. This committee, with the help of a consultative visit from Mr. Phillip A. von der Heydt, made the decision in 1979 to proceed with a 1 + 1 curriculum using both hospitals as clinical affiliates. The fall semesters at the college were designed to minimize transportation problems for students, but still give the opportunity to be part of the college environment and its associated activities. The college offered a strengthened, uniform science background, as well as having the prerequisites for respiratory care courses part of the program rather than a prerequisite. This allowed for the clinical part of the education to be spread out over a reasonable period of time without unduly prolonging the period of time the student had to be in school. This was not the case with the two years of prerequisites + one year clinical format that Sioux Valley had previously used.

At its May 25, 1984 meeting, the Respiratory Care Advisory Committee recommended that a proposal be prepared on a 2 + 2 curriculum because the national trend was in this direction and away from Technician preparation. A task force prepared the curriculum proposal, which was then reviewed and endorsed by the advisory committee. The proposal was then reviewed and approved by the college and the South Dakota Board of Regents. The revised program began accepting students in fall 1986.

Several events have occurred since our last site visit in 1998. An ongoing change involves curricular redesign and implementation. We previously had two separate routes in the BS option, and they have been merged into one. We have dropped courses, added courses, and modified courses as the market dictated. For example, we have gone to a more Biology-based curriculum instead of a Chemistry emphasis. We have also added courses on advanced computer applications, etc. Our communities of interest supported these changes, especially the hospitals that employ several of our graduates. They felt these changes would create a better, more well-rounded grad. The advisory committee

has been a welcome asset for curriculum redesign, as they give our students the view of the "real world" they will enter upon graduation.

The South Dakota Society for Respiratory Care has increased the amount of our two clinical student scholarships to $1000 each. This may help us advertise more aggressively and attract the higher quality student to our program, as well as assisting students with the high cost of education. A respiratory care practitioner from Rapid City died recently. A scholarship was set up in his memory, and approximately $20,000 has been raised so far. During the month of June 2008, all money raised was quadruple-matched by the state. This scholarship award is another option for our students.

The prerequisite GPA for acceptance into the clinical portion of training has been increased to a 2.50. The lower-end student that just barely made the previous minimum (2.25) GPA would struggle all year, and if they graduated, they had trouble getting credentialled. With the higher GPA, students set their sights higher and achieve a greater level of understanding on campus, which is then carried over to the clinical training.

A major development in our program in 2004 was obtaining funding that allowed us to open a clinical affiliate in the Black Hills region. Students in that area are now able to complete their general education classes at Black Hills State University or the South Dakota School of Mines and Technology, and then their clinical training at Rapid City Regional Hospital. This has been very successful for the students in that region who were unable to attend classes and clinical on the eastern side of the state. They could now take their gen eds and clinical training in the Black Hills region and get a degree from DSU without ever traveling to the campus. They also helps fill the openings in the Regional Hospital department.

- **Date of last institutional program review and last accreditation review:**

August 6-7, 1998. The Institutional Program Review for Respiratory Care that was due in 2004 was moved to 2008 to coincide with the program's reaccreditation self study preparation and site visit.

- **Outcome of last institutional program review (and/or last accreditation review) and changes made to the respiratory care program since that last review:**

The last institutional program review had some recommendations/comments ("C"), and our response to them ("R") follows each entry.

C1: Continue to nurture relationships with clinical affiliates.
R1: We have a strong relationship with our clinical affiliates, and work daily to maintain and improve that relationship.

C2: Investigate recruitment strategies to improve enrollments.

R2: Recruitment is always paramount in our thoughts. We have tried to target select groups of students, improve communication with the recruiters on campus, continued to send out information to prospective students, and continued with the shadowing experiences. In addition, we have expanded our web pages to give the prospective student more information. We have discussed the issue several times at our advisory committee meetings, and have requested input especially from the high school counselors on the committee.

C3: Assure that all students sign any disciplinary documentation.
R3: Students now sign all disciplinary documentation to improve tracking data.

C4: Continue to support faculty participation in national programs.
R4: We continue to send the Program Director and the Director of Clinical Education to the AARC Summer Forum (one person each year), and two faculty members each year to the AARC International Respiratory Congress.

C5: Perform needs assessment for both 2-year and 4-year curricula.
R5: The need for the AS and BS programs has been discussed with our communities of interest on the advisory committee. Since they represent such a diverse group and come from all across the state, they give us the current indication for needs. We have a continuing knowledge of the demand for respiratory therapists, and the presence of job openings across the state and region. The department heads on the committee have given their impressions of their needs relating to graduates. This includes necessary skills and knowledge, and if there is anything lacking in the curriculum. The committee felt that a full scale survey did not need to be done at this time, since we are familiar with the status of departments and their needs and are continuing to discuss the situation at current and future advisory committee meetings.

C6: Investigate the need to increase services offered to students while in their year in Sioux Falls. Services requested included financial aid, counseling and academic support services.
R6: We have increased the level of student support through the Sioux Falls Center for Higher Education (now called the South Dakota Universities & Research Center, or the "University Center") in Sioux Falls. Students can now register for classes, pay fees, handle financial aid, and purchase books in Sioux Falls, rather than making a trip to the main campus. By having this improved access, students spend fewer hours on the road commuting and feel the campus is helping them more.

The last site visit for reaccreditation in 1998 had similar recommendations, including looking into services from the college while students are in clinicals (point 6 above); make sure students sign all pertinent records regarding performance (point 3 above); and advisory committee should review and approve yearly reports (this is done annually).

PART 2: TRENDS IN THE DISCIPLINE

- **International, national, regional and state trends in respiratory care:**

There is an increasing need for respiratory therapists in most areas of the country. As hospitals expand their outreach, they often diversify into smaller communities, clinics, durable medical equipment, etc. The impending baby boomer retirement is getting closer every day, and new therapists are needed to replace them and support current and future job needs. Most hospitals have turnover in their staffs, necessitating new therapists for replacements, which also brings new viewpoints into the facility and should improve services.

There is continuing discussion/debate about moving the entry level educational requirement for the respiratory therapist to the BS level. The AS entry level was begun not too many years ago, and it took about 10-12 years of debating to bring this to fruition. Looking at the levels of discussion and evaluating everyone's passionate viewpoints to change or not suggests that this change may not arrive for a few years yet.

Other discussion relates to creating an additional critical care credentialing exam and credential. While some people think this will lead to excessive initials after one's name (BS, RRT, RPFT, RICUP, etc), others think this is a minor consideration and that current conditions warrant development and offering of the exam to interested practitioners.

Both primary affiliate hospitals in Sioux Falls have moved to a new computerized order and charting system and their goal is to be paperless. Both faculty and students have gone through the training. Understanding is improving, but will always take time. Luckily, there are several resource persons to help everyone.

The NBRC is releasing a new matrix as a result of national surveys and we will pass on this more current knowledge to the students in classes and clinical rotations.

The decision-making processes that the students are using to provide the best care to their patients are becoming more usual in current practice. The doctor no longer tells us what to do, but through the use of protocols, the therapist has more freedom in patient care.

A disturbing trend is that the number of high school graduates in South Dakota is decreasing over time, so that diminishes the potential applicant pool. All schools will be sharpening their recruiting skills to get the brightest and best, and our role in this will be to make sure the recruiters have the most current knowledge about respiratory care and can include it in their presentations to high school students and others.

A trend that might add potential students is movement toward establishing 2+2 affiliations with community colleges, and granting university credit to more classes taken through the Vocational-Technical schools. Students who thought their credits were dead-ended may now have more options in an education.

- **Ways in which these trends have influenced the respiratory care program and its curriculum, now and in the future:**

To address the issue of increasing need for practitioners even in a decreasing pool of high school graduates, our program faculty has been making itself available to do presentations for local, regional, or statewide health fairs, Scrubs camps (to high school students to show various medical careers), and special topic presentations to selected groups. By doing this, more people may discover respiratory care and its potential.

Since the national standard may be moving toward a BS-entry degree in the future, we have started marketing the BS in Respiratory Care degree in the Sioux Falls region, and especially the Rapid City market. There has been encouraging interest in the program and we are working with several students to make it successful for them to have an additional step to their medical career as they move from the AS degree to BS graduates.

Since the hospitals in Sioux Falls moved to a new computerized system for orders and charting, the students have had to learn it, and this is added on to their regular school work. We have adjusted schedules accordingly to accommodate training schedules.

The NBRC matrix re-focuses the efforts of the faculty and students and prepares students to take the successfully pass the credentialing exams after graduation. The faculty will study the revised matrix and make sure everything is covered in classes and clinical.

It has been a challenge to get the students used to critical thinking and independent action, but this will improve with continuing clinical experience. They practice the techniques in lab classes, and reinforce them in the clinical reviews and put them to work on the clinical areas with their patients.

We have also had discussion about moving the program curriculum to a BS-only degree in anticipation of the national movement in this direction. We are in the early stages in which we are looking at the options of how our curriculum could move toward a BS degree by 2012 and are going to present this information to our advisory committee at the next meeting. The market and the department heads seem to think that this may be a more viable option than several years ago when we first brought it up.

To help the student move toward a specialty credential (NPS, etc), we are having our senior students plan their own clinical course according to their interests. If they want to specialize in pediatrics or adult critical care or rehab, etc, they line up their rotations and carry them out. This serves to foster a deeper interest in certain areas of practice and could lead to following that course for a career.

- **Program limitations relative to the trends described above and what is needed to resolve those limitations:**

We need to make more students aware of the profession, but unfortunately, there is a lack of time for effective recruitment in the Rapid City area, and Rapid City Regional Hospital

does not seem to be providing strong backing of recruitment efforts to bring students to the hospital. Our efforts toward strengthening recruitment and improving the involvement of the hospital will continue, and we will look for more ways to find time for these efforts.

The cost of gas for travel to distant sites for recruitment is adding a large expense to our College's operating budget, and there really is no alternative, other than to incorporate as many health fairs and recruitment visits as possible into one trip and to be as cost effective as possible.

The high cost of gas also impacts the students who need to commute to the hospital for clinical and class times. To help address this, we have made some clinical shifts longer so the student does not need to drive for just a short time. We also make sure to put sufficient class and lab times for the same reason. The students realize we're trying our best to help them be better able to survive the high costs of education.

South Dakota is a very rural state, and hospitals are often many miles apart. Our primary clinical sites in Sioux Falls are approximately 350 miles away from our satellite campus in Rapid City. While this physical distance is a long way if one drives, the use of telephone, email, fax, videoconferencing and other methods helps the sites stay on the same page with students, recruitment, financial issues, advising, and other things.

Having two primary clinical affiliate hospitals and one satellite hospital may be limiting the class sizes we are able to accept. Unfortunately, since our state is so rural and most hospitals are small, we do not have many options for expansion of clinical sites. While these primary affiliate sites have many different procedures and opportunities, we would have more options if we lived in a more populated state with larger cities and more large hospitals. But we need to work with the conditions in our state as we find them, and keep looking for ways to improve.

PART 3: ACADEMIC PROGRAMS AND CURRICULUM

- **Mission statements for the respiratory care program:**

    - Students will understand the important concepts and basic terminology of several of the major disciplines within the respiratory care profession.
    - Students will be able to use their knowledge of concepts in respiratory care to solve new and unfamiliar problems.
    - Students will understand the process of science including the basic steps of the scientific method and be able to use this ability to conduct research in respiratory care.

    - Students will have a basic knowledge of the history and philosophy of medicine and the interrelationships among the specialties.
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- Students will understand the ethical and humanistic implications of the practice of medicine including issues that are controversial in nature.
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- Students will be proficient users of computer technology to find information, acquire and analyze data, and communicate results and conclusions.
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- Students will be able to communicate their knowledge and results effectively for a wide range of purposes and intended audiences.
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- Graduates of the program will be well prepared to enter graduate or professional school to further their career goals in respiratory care, the health professions or related areas.

- **Academic degrees offered within the academic program:**

  Associate of Science in Respiratory Care
  Bachelor of Science in Respiratory Care

- **Curricular options within the respiratory care program:**

  Our respiratory care curriculum is fairly lock-stepped throughout, with the exception of the 4th year spring clinical experience rotations (RESP 475). In this class, the student has the responsibility of deciding what area of concentration he or she will follow, and how to achieve that goal. The minimum number of clinical hours is set (320 hours), but the student is free to rotate any shift at any time to obtain the maximum exposure and experience to support his or her plans.

- **Differences between the AS and BS degrees in Respiratory Care:**

  The AS degree is designed as two semesters of general education followed by three semesters of professional (RESP) classes. The BS degree has three semesters of general education and one semester of professional (RESP) classes.

  Most students go through the AS route and become Registered Respiratory Therapists after graduation and take a job. The BS route has more classes in advanced science, statistics, computers, management, etc, and prepares the student to take a job with more responsibilities, such as in education or management.

- **Comparison of the DSU AS/BS Respiratory Care Programs with similar programs offered in the region:**

DSU's respiratory care program is the only such program in South Dakota. There are other programs in the region, such as in Fargo and Bismarck, ND, Sioux City, IA, Rochester, MN, etc. All programs follow a similar curriculum, with required and suggested courses listed in the CAAHEP *Standards and Guidelines for the Profession of Respiratory Care*. After incorporating the required and suggested courses into their curriculum, programs are fairly free to modify courses and rotations to a degree and to emphasize different options for the student.

- **Special strengths and/or unique features of the program:**

Because the student completes two semesters at Dakota State University before beginning the clinical training in Sioux Falls, he or she develops an excellent background in written and verbal communication and mathematical computations. They also have an appreciation of how computers may be utilized in their coursework. Their medical vocabulary and study of anatomy and physiology and physics will enable them to more quickly progress to the advanced applications of respiratory care. Have extensive exposure to science courses helps the student develop an appreciation of those courses since they can see the usefulness of the information presented.

The two plus two type of curriculum design allows the student to better appreciate the role a therapist plays in the functioning of a respiratory care department, as well as the expanded possibilities of a baccalaureate degree. The curriculum design also allows flexibility to the student with previous college experience who may take college-based coursework from the third year while still on campus during the first fall and spring semesters. In this way, the route to the B.S. degree is completed in a shorter time interval.

Having the three largest hospitals in the state as the primary clinical affiliates for the program exposes the students to a wide variety of patients to care for as well as a varied inventory of respiratory care equipment with which to work. This variety plus being accustomed to two different hospitals and staffs gives the student excellent hands-on experience and confidence necessary to cope with new situations and deal with all types of respiratory practitioners and physicians.

Another major advantage is the constant support offered by the medical directors and the primary clinical affiliate hospitals. Whenever our program needed something in the way of support for curricular changes, programmatic details, funding, etc., the doctors and hospitals were always there to back us up. Having the three largest hospitals as clinical sites and a group of pulmonologists as strong and motivated as we have is a major strength of the program.

Our program's advisory committee is very active and also strongly supports us at every opportunity. This committee has been used as a model for other DSU committees, a fact that speaks well for its effectiveness. Whenever we needed advice or input or backing, the advisory committee was there for us, and we appreciate its efforts.

Although the logistics of rotating students throughout the state and region for observation in other hospitals for the Observation Practicum course is challenging, it has proven to be an excellent experience for the students and truly makes this a statewide and nationwide program.

The student not only observes the functioning of another department in RESP 395, but also observes the managerial aspect in RESP 495. These courses complement each other and give the student more complete and realistic views of medical care in locations other than the primary clinical affiliates.

Since we are with a smaller university, the faculty members know each other and have an excellent supportive, cooperative nature which always makes work with them so pleasant. They will do everything possible to honor one's request for assistance on any project and in turn appreciate our support for their work or assignments.

And, finally, our respiratory care faculty is a major strength of the program. The dedication of the Director of Clinical Education, Site Coordinator, and the clinical instructors are truly inspiring to peers and to the students. If the faculty can relate their enthusiasm for the field to the students, they will in turn internalize and apply it during training and after graduation

- **Students' typical progression through the academic program and the appropriate sequence of courses**, as shown in the curriculum listing and check sheet, is included in ***Appendix A***.

  The recommended sequence of courses in respiratory care is designed to provide students with basic respiratory care principles in Introduction to Respiratory Care, which is taken concurrently with Clinical Experience I. By taking these two classes together, the student can observe procedures being delivered on clinical rotations, find out more about them in the classroom portion, then practice the techniques in the laboratory portion. After completing these core courses, students are prepared to take the fall semester of classes which includes Pathophysiology for Respiratory Care, Respiratory Critical Care, Clinical Experience II, and Observation Practicum. This semester is a follow-up to the summer semester and focuses on the critical aspects of the profession. In the spring semester, the student takes Advanced Respiratory Care, Clinical Experience III, Respiratory Care in Clinical Medicine, and Respiratory Care Management. This semester has more of a pediatrics/neonatology emphasis, but still covers all areas of the hospital. By integrating classroom, laboratory, and clinical experiences, the students have their learning reinforced continually and can apply the most current skills and techniques to their patients.

  The students also complete several clinical evaluations every semester. These evaluations determine that the student has achieved mastery of the topics and serves as a part of the clinical grade.

  The students are in constant contact with their assigned advisor, and the entire respiratory care faculty. Since we have such a good student: faculty ratio, we can

monitor their progress very easily, and advise changes in their study methods if something does not seem to be going smoothly for them.

The fourth spring semester of the senior year serves as a clinical semester prior to graduation. Coursework includes Pharmacology, Ethics for Health Professionals, Current Issues in Respiratory Care, and Clinical Experience IV. The student can now reinforce and expand his or her clinical knowledge in preparation for graduation and work beyond the program.

- **Curriculum management and course sequencing:**

  The respiratory care professional courses are offered in the same sequence each year. A student group starts clinical training after Memorial Day and completes the summer, fall, and spring semesters, and then graduates as a group in May. Basics of the profession are taught in the summer semester, and then built upon and expanded in the fall and spring semesters.

  There have not been any significant curricular changes in our program since the last program review in 1998. The main source of our changes arises from analysis of the NBRC RRT exam results, graduate and employer surveys, and ongoing evaluation during the program sequence. The ongoing changes involving curricular redesign and implementation depend on the results of the exams and surveys.

  We previously had two separate routes in the BS option, and they were merged into one. We have dropped courses, added courses, and modified courses as the market and our communities of interest indicated. We now have a more biology-based curriculum instead of a chemistry emphasis. We have added courses on advanced computer applications, etc. Our communities of interest in the advisory committee have supported all these changes, and felt the changes would create a better, more well-rounded and prepared graduate.

  The current discussion in the faculty and advisory committee involves investigating the feasibility of moving our 2+2 (AS/BS) program to a BS-only curriculum. We are gathering data now to see the pros and cons of such a move, and whether it is in the best interest of all parties involved.

  Enrollment statistics for the RESP courses have been fairly stable over the years, and within acceptable limits. The maximum attrition rate acceptable by our accrediting agency is a 30% average over three-year periods, and we have been well under that. By having general education courses completed prior to beginning the RESP courses, students have a chance to set up and improve their study habits, so when they start the respiratory care courses, they are usually successful. RESP enrollment numbers are:

- **Accreditation standards set by CoARC and how the respiratory care program compares to these standards:**

  We have just completed preparing our self study document for reaccreditation from our national accrediting agency, the Committee on Accreditation for

Respiratory Care (CoARC). A referee has been assigned and has been in communication several times making suggestions regarding how to improve the self study document and more fully prepare for the site visit. The site visitors have been scheduled, as have the dates for the visit. We are currently gathering documentation and working toward the site visit dates.

Our Report of Current Status (Annual Report) is also being prepared at this time, and is due to CoARC on September 19, 2008. This report will include portions of the same data as is found in the self study for reaccreditation document, such as enrollment, attrition, credentialing success, etc.

The standards set by our accrediting agency, and those met by our programs being reviewed are hopefully in close agreement and harmony with each other.

- **Arrangements/contracts with healthcare institutions which support delivery of the respiratory care program:**

  We have set up formalized affiliation agreements with our primary clinical affiliate hospitals – Avera McKennan Hospital and Sanford USD Medical Center in Sioux Falls, and Rapid City Regional Hospital in Rapid City, SD. The agreements are periodically reviewed and updated as necessary.

  In the middle of the A.S. fall clinical semester, students take a course called Observation Practicum, in which they have an observational rotation to two other hospitals, then write a comparative paper after the rotations. We line up observational agreements with each hospital prior to the students being assigned there, and update them approximately every three years. While this is only an observational time, all students are covered by liability insurance while at the other hospitals.

- **The extent to which distance education, internet, and related technologies are used for curriculum delivery:**

  Most classes in the general education semesters as well as the RESP courses are taught face to face. However, the HIM 130 Medical Terminology course is taught online. Students have chat rooms to discuss words and projects, and they can post responses to questions and have contact with their classmates.

  In the instance a course cannot be located at a campus near to the student, they make take it online if it matches our needs. This would be acceptable for intro to computers, math, speech, and similar classes.

  If we have a guest speaker or special topic presented in either Sioux Falls or Rapid City, we can allow the other student group to watch and interact through the use of the Digital Dakota Network (DDN), or Elluminate, or similar setup.

- **Instructional methodologies used to deliver the academic programs and curriculum within the respiratory care program:**

We use a multi-faceted approach to all teaching in our curriculum. If the student is presented material in varying, interesting ways that stimulate thought processes, learning will be enhanced and reinforced.

In **DIDACTIC** classes, we use the lecture/discussion format usually. This is an effective way to deliver the facts of the day's topic and gets it set in the student's mind. If there is a particularly good videotape or DVD related to the topic being presented, it could be brought in and introduced, viewed and discussed. Videos or DVDs can be borrowed from the medical school, or if they are especially relevant, we put in a request for a copy to be made for our program. That way, students can go back and review the program later for more reinforcement.

We have limited use of audiotapes for teaching selected material such as breath sounds. The medical director who initially presents this material to the students uses both lecture and audiotape to illustrate normal and abnormal sounds. The student is given the background of the sound, then hears it on the tape to further illustrate and clarify. The student may also have a handout to illustrate pitch, duration, frequency, etc., so the sound is more realistic. When the student then evaluates breath sounds on clinical rotations, they can draw on the previously heard sound and form a mental picture of how it appeared on paper. They are also encouraged to relate the sounds to the overall clinical picture of the patient, so they get a very well rounded conceptual base. Use of this format has proven effective, as evidenced by clinical instructors going with the student to check breath sounds on clinical rotations and verifying what was heard.

One technique used in didactic presentation most commonly is to project computer output to a screen in the front of the room. The most common program used for presentation notes is PowerPoint. We can also use this system when we discuss computerized clinical simulations in class. The case is projected to the front of the room where all students can see it, make choices and support them, and progress through the case. This format has been very well received, and the students seem to pay good attention when discussing cases this way. This is probably due to this being a different form of obtaining information, in a group, which is interesting to the student. The flexibility of this system is almost endless.

Guest speakers are utilized to present lectures as the course dictates. The students have a "new" face to look at, with sometimes-different points of view, so they enjoy this opportunity. Being affiliated with three large teaching hospitals gives us an excellent base to draw guest specialists from, and we in turn give respiratory care lectures to their groups to return the favor. If the speaker has an especially interesting or relevant topic, we may videotape it for future program use. We have frequent review sessions in class to assure us that the student is getting the material as we anticipated. Sometimes if a section is very difficult or lengthy, we include an impromptu review session to check our presentation methods and ourselves. If the student seems confused in class, these sessions can make a very difficult section more palatable and applicable for the student.

We encourage class interaction and discussion in lecture class. This makes it more enjoyable to discuss the topic and present scenarios that clarify and reinforce. It also changes the pace of the class from the standard lecture format to a more student-based format. The students think they have a hand in their own education, and often learn at a higher rate than if we just spoon fed them all the information and they just sit there and take it. Everyone likes to be a part of his or her environment, and discussion sessions help the student keep a fresh perspective on the educational process.

The appropriateness of all the varied methods we use in the didactic setting is determined through end-of-course student opinion surveys. These are completed very close to the end of every class the student takes through DSU, including didactic, laboratory and clinical classes. The student is free to express his or her views on the quality of the course, whether or not the information presented was helpful, if assignments were clear and reasonable, organization of the course, the instructor's ability to present material, etc.

We also evaluate the appropriateness of didactic courses through evaluation of unit test results. If the students as a whole seem to miss a certain question on an exam and all give the same response, we evaluate it to determine if the material was presented one way but interpreted a different way, or was ambiguous or confusing. If so, we look at possibly changing the method of presentation, maybe from lecture to an "enhanced" method such as video, computer, film, etc.

The students are also free to give us verbal feedback during didactic presentations to tell us if the pace of presentation is too fast, slow, etc. This helps us tailor each lecture to the capabilities of each student.

In the **LABORATORY** class setting, we utilize small groups to help the students have more hands-on experience for the particular equipment or technique being practiced that day. With smaller groups in the lab at one time and adequate equipment being available, the student can more easily see how a certain technique is done and retain that information for later application on the clinical areas.

The lab instructors initially demonstrate the technique for the students, and then they are given the opportunity to practice it and complete a lab worksheet. The worksheet clarifies and expands the information presented by the lab instructor and exercises the student's ability to see how changing one parameter can have a profound effect on another, etc. Often this drill and practice technique makes the concepts more real for the student, and gives them information that is available to them for application.

The student is free to use the lab anytime during the day or night for review of equipment or other techniques encountered on the clinical areas or in other classes. If we don't have a certain piece of equipment, the student can borrow equipment from the Department's storage room, practice with it, clean it up and return it. That way, there is a varied equipment "arsenal" at the student's disposal

which can be drawn on and utilized. If there is a technique or piece of equipment seen on the clinical areas which stimulates the student's interest, but it hasn't yet been covered in lab, the student is free to get the equipment, take it to the lab, and go through the manual alone or with an instructor. This initial familiarity will make it relevant much faster when it is actually covered in lab class.

To check if the student is actually obtaining the necessary information from lab, we carry out written and practical exams. The student is able to express the background of the procedure or technique in writing and also set it up and simulate the provision of care on a lab instructor. This is a very effective way to see if the concepts are making sense or being lost in the translation. The practical exam is applicable to the patient areas, since the students will do the same technique with patients. This gives them the chance to "work the bugs out" of the technique and refine it prior to taking their skills to the clinical areas.

We also determine appropriateness for the lab courses through the use of the student opinion surveys done close to the end of the semester. Students are free to express their opinion about the listed topics and may also write in comments if needed. This way, we can determine the satisfaction level of the students and make any course modifications necessary to maintain or improve it.

During the lab courses, the student is free to give us verbal feedback as is necessary. This assists us in making correction to teaching styles while the course is being presented, so the students may obtain a higher level of satisfaction much sooner than if they fill out the student opinion surveys at the course's end.

Another method used to determine appropriateness of lab courses is to observe the student's progress in the lab course itself. If a student seems to be falling behind the others in a certain topic, we can individualize instruction and help that student catch up to the others more quickly. We may also assign additional readings or assignments to make the progress better.

CLINICAL ROTATIONS are where the students "put it all together" from lecture and lab courses. They start out observing the procedures when they first arrive in the summer semester, and this initial observation serves to make the topics clearer when actually covered in lecture and lab. The student is then presented the background facts of the procedure in didactic, practices the procedure in lab class, then takes the information back out to clinical rotations to "close the loop" and provide feedback and reinforcement. The topics seem much more relevant when students can see how they are applied.

After the student have the lab classes and successfully complete the lab evaluations, they can then take this knowledge to clinical and practice it on patients, under the supervision of the clinical instructor. When they are ready, they can do a clinical evaluation on the procedure with the patient, and are given feedback and reinforcement from the clinical instructor. When the evaluation is successfully completed, the student is free to administer the therapy with progressively less direct supervision.

Another technique used on clinical rotation is the advantage of a 1:1 ratio between students and clinical instructors. This individualizes the teaching to students and allows them to proceed at his or her own pace. The student is more comfortable asking questions of one person than in a larger group sometimes, so again the interaction and feedback are positive reinforcements.

Another instructional methodology used is the wide range of experiences available on clinical rotation. The three primary affiliate hospitals have a large patient load that makes many teaching opportunities available. The student can see how different patients react differently to the same therapy and can compare how they differ from the anticipated results from lab classes.

Appropriateness of clinical rotations is also evaluated through the use of the end-of-course student opinion surveys. The student is able to comment on the areas where all the preparatory knowledge has been focused, and give us feedback on our effectiveness. We are also communicating frequently with other clinical instructors from staff to check student progress, and if a technique could be done differently to better serve the patient. We constantly note the progress of each student to determine if the knowledge from lecture and lab classes is actually making it to the clinical areas and is actually being applied to direct patient care.

Another tool to use for evaluation of all methods of instruction (didactic, lab and clinical) is the student exit survey. If there is a specific complaint or problem, we evaluate it for validity, and modify our techniques if warranted. Students feel free to express anything on their mind in these surveys, and we get some valuable responses.

PART 4: PROGRAM ENROLLMENTS AND STUDENT PLACEMENT

- **Admission standards:**

Undergraduate admission requirements are set by the South Dakota Board of Regents. For admission, high school graduates must meet the minimum course requirements with an average grade of C. Additionally, students must rank in the top 60% of their high school graduating class or obtain an ACT composite score of 18 or obtain a high school GPA of at least 2.6.

It is the policy of the respiratory care program to ensure equitable consideration of all applicants, to assist the applicant in determining if a suitable career choice has been made, and to ensure the best possible chance of success for each student selected to enter the program. Admission to DSU does not guarantee acceptance into the respiratory care program. University acceptance and RC Program acceptance are two separate entities.

The applicant should obtain an application form and return it to the Enrollment Services Center or to the Registrar's Office at DSU when it is completed. Official transcripts of high school and college work must be included.

Any student accepted by Dakota State University may enroll in the first fall or spring's respiratory care classes at any university if space permits. This does not guarantee later acceptance into the respiratory care program.

Any student who retakes more than 1 course to achieve the minimum grade requirement of a B will only be accepted into the respiratory care program on a probationary basis.

Acceptance into the University is based on previous grades, quality of preparation, admission tests, ACT, and high school and college grades.

In order to enroll in some required courses, it may be necessary to pass certain basic Math and English skills tests which are given prior to or during registration. Students not passing these tests will be required to take developmental courses in those areas prior to enrolling in regular classes; so entrance into the program may be delayed.

There is a limit of sixteen students in the Sioux Falls clinical portion of the curriculum, and ten students in the Rapid City clinical portion of the curriculum after the first year of the A.S. program. Admission to the clinical portion is granted to the students with the highest calculated GPAs from the 30 credits of the previous fall and spring semester's respiratory care curriculum, with a minimum GPA of 2.50. There must not be any individual grades lower than a C in the curriculum. The selection process may also involve an interview with the respiratory care admissions committee.

The deadline for application to the summer term is March 1. Applications received after that date will be put on a waiting list.

There is a limit of eight students in Sioux Falls and six in Rapid City in the fourth year spring clinical semester of the program. Admission to this clinical semester is granted to the students with the highest cumulative GPAs from the A.S. program classes and work completed in the B.S. curriculum to date, with a minimum GPA of 2.50. Students must have attained the RRT and have all prior coursework completed before beginning the fourth spring clinical semester.

- **Program enrollment:**

Year	98-99	99-00	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08
1st	29	32	25	26	53	45	55	54	78	75
2nd	12	10	8	4	7	14	14	19	23	22
3rd	26	28	21	12	34	28	54	59	63	70
4th	0	4	0	1	3	1	0	4	3	3
Totals	**67**	**74**	**54**	**43**	**97**	**88**	**123**	**136**	**167**	**170**

- **Changes in program enrollments:**

Program enrollments have been fairly steady over the past several years. The data as shown above makes it seem as if there are many, many students in the program, but actually is a slight misrepresentation of the data. I have been told that it was obtained from the BOR data, but that it does not differentiate between students that have declared only the AS in Respiratory Care major, and those who are listed as AS/BS majors.

If a student is an AS/BS respiratory care major, then graduates with the AS and goes to work and chooses not to pursue the BS at that current time, they have a period of 5 years in which to finish it. Therefore, the data in the 3rd year is artificially high due to their BS designation still being "active." I believe the data in the first year is fairly accurate, though.

In the early 2000s, our program went through a time of low enrollment, but numbers have come back up and remained strong and stable since that time. Some analysts felt the lower numbers were linked to a strong economy, and that a weaker economy brought in higher numbers, but I have not seen any scientific proof of that. In any case, our current numbers are acceptable and stable.

We are always looking for improved ways to get the word out about respiratory care and our program, and how to find and obtain people to enter the profession. We hold recruitment to be a high priority and are constantly thinking of ways to improve.

- **Student retention issues:**

Since we added on a satellite program in Rapid City, we have noticed a higher than normal rate of attrition at that location. Part of this problem can be attributed to small numbers of enrollees, and other factors such as the economy, commuting, family issues, etc, certainly add to the challenge of program enrollment.

We have also analyzed the number of students that discontinue enrollment due to academic vs. non-academic reasons. Non-academic reasons given have included not feeling comfortable in the medical profession working with patients; family issues with commuting, finances, working, etc; and wanting to change majors into something they have only dreamt about before. For the academic attrition, we always offer help and advice, since our numbers are not extreme, which allows us to tailor-make a tutoring program for each student who needs it. Sometimes, the student is just unable to understand concepts, even after repeated tutoring and counseling, and we have no other choice but to suspend them. Sometimes they re-enter the program after a year's absence, while other times they do not.

- **Student diversity:**

Diversity in our program has been fairly stable and predictable over the years. The students taking general education classes on campus are usually traditional-age, while those taking their gen eds at a university center are more non-traditional. When both groups enter clinical training, they usually meld into one big group with little separation based on age.

We have had several students of the non-Caucasian variety. In the last few years, we have had Native Americans, African Americans, and Chinese students. These students blend in well with the rest of the students and everyone works well together.

Most of our students are female. While some classes have more males than females, the females are usually the larger group. Group dynamics are different with a class totally made of up males or females, but the issues that came up have not been insurmountable.

- **Excess v. constrained capacity within the respiratory care program:**

We have not yet had to turn away students due to our clinical acceptances being at full capacity, but we have rejected students due to poor grades. We have had some students not accepted due to poor gen ed grades, but some have repeated them and re-entered the clinical program a year later and have done well.

- **Degrees granted:**

Year	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
A.S.	9	7	7	4	6	14	13	12	19	18
B.S.	0	4	0	1	3	1	0	4	3	3
Totals	**9**	**11**	**7**	**5**	**9**	**15**	**13**	**16**	**22**	**21**

- **Employment potential and placement since the last review (based on initial placement or updates:**

Our graduates have 100% placement. Occasionally, graduates choose to go into other careers (law, nursing, etc), or change interests and not take a job in respiratory care. There are plenty of jobs in the region and nationwide, and if they want to work after graduation, there is never a problem finding jobs.

1999 Graduates:	4 in Sioux Falls, SD
	1 in Pierre, SD
	1 in Fargo, ND
	1 in Milwaukee, WI
	1 in Mitchell, SD
	1 in Milbank, SD
2000 Graduates:	6 in Sioux Falls, SD
	1 in Mitchell, SD
	1 in Longmont, CO
	1 to Nursing
	1 in Aberdeen, SD
	1 in Minneapolis, MN
2001 Graduates:	5 in Sioux Falls, SD
	1 in Wells, MN
	1 out of field
2002 Graduates:	4 in Sioux Falls, SD
	1 in Rapid City
2003 Graduates:	7 in Sioux Falls, SD
	1 in Madison, SD
	1 to Rapid City
2004 Graduates:	9 in Sioux Falls, SD
	1 in Aberdeen, SD
	1 in Rapid City, SD
	1 in Minneapolis, MN
	1 in Brookings, SD
	1 to Law School in NE
	1 out of field
2005 Graduates:	8 in Sioux Falls, SD
	1 in Pierre, SD
	1 in Mitchell, SD
	1 in Las Vegas, NV
	1 in Omaha, NE
	1 out of field

2006 Graduates: 7 in Sioux Falls, SD
2 in Rapid City, SD
1 in Minneapolis, MN
1 in Aberdeen, SD
1 in Peoria, IL
1 in Spearfish, SD
1 in Casper, WY
1 in Pierre, SD
1 in Brookings, SD

2007 Graduates: 12 in Sioux Falls, SD
4 in Rapid City, SD
1 in Minneapolis, MN
1 in Kansas
1 in Yankton, SD
1 in Alliance, NE
1 in Hot Springs, SD
1 in Seattle, WA

2008 Graduates: 11 in Sioux Falls, SD
4 in Rapid City, SD
1 in Minneapolis, MN
1 in Seattle, WA
1 in Aberdeen, SD
1 in Sioux City, IA
1 in Reno, NV
1 in Pierre, SD

- **Progression, Persistence, Retention and Graduation Rates:**

	Enrollment	Graduates	Retention	Attrition
2002-2003	7	6	85.7%	14.3%
2003-2004	14	14	100.0%	0.0%
2004-2005	14	13	92.9%	7.1%
2005-2006	19	12	63.2%	36.8%
2006-2007	23	19	87.0%	13.0%
2006-2004 3-yr average			**84.8%**	**17.0%**
2006-2002 5-yr average			**84.8%**	**15.5%**

When we analyze the attrition data, we break it down into academic and non-academic reasons. This makes it clearer if the student was suspended due to grades, or quit because of finances, family problems, etc:

Grad Year	Total Attrition	Academic	Non-Academic
2003	**1**	1	0

2004	**0**	0	0
2005	**1**	1	0
2006	**7**	3	4
2007	**4**	2	2

PART 5: FACULTY CREDENTIALS

- The curriculum vitae of the Respiratory Care Program faculty are found by linking to the Program Review website.

- The curriculum vitae of the faculty who teach the support courses on campus (Biology, Anatomy and Physiology, Chemistry, and Physics) are found by linking to the Program Review website.

- **Anticipated changes in staffing because of retirements, program growth, etc:**

Our program currently operates with 4.85 FTE for a maximum of 26 clinical students. We just hired a clinical instructor to replace one who took another job, and do not anticipate any other staff changes in the near future. In the next 10 years or so, we may be facing faculty openings due to retirement, but we will plan for these well in advance. We do not foresee increasing clinical student numbers in the near future, as we are at maximum capacity in the affiliate hospitals, so the current number of faculty members should be adequate to achieve program goals.

- **Grant activity by respiratory care faculty:**

Our program was recently awarded a tobacco education/prevention grant in each of the past three years, and we are currently in the third year of these grants. The first year's (2006-2007) award was $24,000, the second year's (2007-2008) was $15,000, and the third year's (2008-2009) grant is in the amount of $20,000. We have used these funds to purchase educational software, posters, display boards, educational books and DVDs, and literature for use in health fairs and displays.

- **Faculty and/or faculty-student respiratory care research:**

The faculty members work closely with students to assist them in doing educational research to achieve their goals in advanced classes. The major research/exploration classes the BS students take are RESP 460 (Current Issues in Respiratory Care) and RESP 475 (Clinical Experience IV).

In RESP 460, students choose a topic of interest they would like to explore further, read several articles about it, write a summary of each article, and then prepare a final summation paper from these summaries. In RESP 475, students indicate to the faculty what area of clinical experience they want to explore. Ideally, they tie their goals from RESP 460 to those in RESP 475, so that they complement each other.

For example, if a student decided they wanted to pursue clinical experiences in pediatric trauma and its ramifications, they could use this as their topic in RESP 460, and complete clinical rotations in RESP 475 to make a more unified semester. The Program Director serves as the resource person for RESP 460, and the Director of Clinical Education is the resource person for RESP 475. The Clinical Instructors also serve as advisors on the clinical side and show students the practical, real world portion of their research. By offering advice and guidance to the student, the faculty members assist them in obtaining advanced knowledge in their area of emphasis, and make them more employable, successful practitioners after graduation.

- **Service to community/region provided by faculty and students:**

The faculty members present respiratory care information to the public, potential students, high school classes, and others in an effort to spread the word about our profession. We have done several hands-on demonstrations for high school students in a format where they can explore several medical careers. We have also set up displays in a health fair format in which we handed out literature, answered questions, and interacted with students and the public.

The students are also required to complete 4 hours of volunteer time every month of their fall and spring clinical semesters. Ideally, this is respiratory related, but this is not required. The purpose is to show the student that respiratory care and volunteerism extend very far beyond the walls of the hospital, and they seem to enjoy this opportunity. Students have volunteered in such diverse places as the Banquet (a place where meals are provided to those in need), churches, cardiopulmonary rehab facilities, Lung or Cancer Societies, and clinics.

- **Student organizations directly related to respiratory care:**

Students have the opportunity to belong to the Respiratory Care Club while taking general education classes, and another club while on clinical rotations in Sioux Falls and Rapid City. The on-campus club serves to create a more cohesive group, since the students can see who else in their major, and they have several opportunities to work with others in getting the word out about respiratory care. They maintain a display window in the Science Center, staff displays for the Activities Fair, Respiratory Care Week, the Great American Smokeout, etc.

The club for clinical students is not as active as the on-campus one, due to the fact that they are kept so busy learning, retaining and applying clinical knowledge, but they are still able to do a few special projects in the clinical year. This could include participation in Respiratory Care Week displays, presentations to other health career students, and assisting faculty with recruitment activities.

Both clubs, but particularly the on-campus one, also presents the respiratory care student with another option for tutoring assistance, in both giving and receiving help. If a student tutors another, their own skills are enhanced, and if they receive help, they are more likely to offer their help to others.

PART 6: ACADEMIC AND FINANCIAL SUPPORT

- **Academic support provided to faculty/students:**

Library materials and training: We have substantial textbook holdings in the school offices at the clinical affiliate hospitals, so these are considered the primary respiratory care libraries for our students. The hospitals also have excellent medical libraries that allow the student to not only look at respiratory care texts, but also the entire realm of medical texts and topics. If a certain book is unavailable in the libraries, the students have access to do computerized searches, and with this option, they can access thousands of articles.

The medical library at Avera McKennan Hospital has public computers that can access the Internet, and they have the Office Suite of products on for use. This is another source that the students find quite useful to use for information for case studies, pathology reports, discussion lists, etc.

The library on campus has some respiratory care textbooks and journals, but not to the extent as the affiliate hospitals. We felt it was important to keep medical texts and journals in the campus library so the students that were not yet in the clinical portion of the program would have access to some of the same literature as they would see in Sioux Falls. This is also a good place for the clinical students to use as another resource on weekends, etc.

Technology infrastructure: Dakota State University is "The Computer School" of South Dakota, and immerses the student and faculty in technology from their first day on campus. All students are issued Tablet computers, and most courses utilize the Tablets for note-taking, lab experiments, and associated tasks. Faculty also have Tablets or desktop models with current Office software which makes it easy to prepare class materials and disseminate them to the learning interface, Desire to Learn, or other locations. Email is also a very common way to notify students about class and assignments, or to send a group notice for a special event.

Computer hardware and software: The brand of PC used by faculty and students changes every few years, depending on features, price, etc. Currently there are desktop Dells, Gateway Tablets, and Fujitsu Tablet computers. Every time the brand changes, features are upgraded and the unit is faster and better prepared to handle the high demands placed on it by both faculty and students.

If we want to upgrade our tutorial or clinical simulation software, we put in a request to the College of Arts and Sciences, and if money is available, they pay for the items. We try not to ask for software upgrades every year, or if have a request, to make it complementary to the existing software so we can extend the useful life of it. We obtain ideas for software from various sources, including mailings, use of the Educators' listserv, etc.

Services provided via Office of Extended Services: Some of the general education classes are offered via distance learning, usually via an online method, interactive television, or independent study format. If some students have trouble finding a class, or making a class fit in with their school and/or work schedules, sometimes an online class will serve their purposes. This option has bailed out more than one student,

which makes it easier for them to continue in our program instead of having to stop out until a better class time arises.

Support staff available for faculty/college: We have wonderful support staff on campus. The Senior Secretaries are always there to assist staff and students in any way possible. They are well-versed with all facets of the university, including the various forms, travel, purchasing, scheduling, etc. Our program runs more smoothly because they are working with us. We don't utilize the secretarial staff in the affiliates as much, but they are also very supportive and willing to help us in any project we need to pursue.

There are other support staff personnel in the Registrar/Admissions/Financial Aid Offices with whom we work closely. These professionals take their jobs seriously and strive for accuracy in all issues dealing with students. Whenever they are asked to research a question or find resolution to a situation or suggest alternative methods of scheduling or financial aid, etc, they rise to the occasion and have a response prepared very quickly. Their support to the program is invaluable.

The Computing Services personnel are also extremely helpful. Whenever we become confused on a software application or hardware issue, they are there to help us figure it out. We have established an excellent rapport with these people, since the campus is so technology-oriented, and they serve without complaint. Their support has also been very valuable for both our students and the faculty.

Work Study students sometimes cover the offices in the absence of the secretaries. They handle call, answer student questions or direct them to the source, and generally are in charge until the secretary returns. The fill a key role in keeping the offices open in key times when students, faculty, or potential students call or stop in for assistance.

Financial support available to the respiratory care program: The respiratory care program has access to the following funds that are available for the College of Arts and Sciences:

Fiscal Year	State Funds	Local Funds	Total
2001	$38,298	$18,116	$56,414
2002	$29,180	$16,644	$45,824
2003	$30,310	$16,500	$46,810
2004	$30,310	$16,500	$46,810
2005	$30,007	$19.032	$49,039
2006	$27,525	$17,859	$45,384
2007	$27,006	$23,145	$50,151
2008	$66,176	$30,000	$96,876
2009	$63,606	$30,700	$94,306

The budget jumped in 2008 because the College of Natural Sciences merged with the College of Liberal Arts, forming the College of Arts and Sciences, and their budgets also merged.

PART 7: FACILITIES AND EQUIPMENT:

- **Facilities such as classrooms, laboratories, and other physical and/or technical facilities used deliver the respiratory care program:**

All three clinical affiliate hospitals provide us with classroom and laboratory facilities. We utilize these rooms on a rotating basis to maintain our presence in them and to provide the student with an easily-accessed room in which to study, review, set up and practice with equipment, use the computers, or whatever needs to be done.

We also maintain a school office in each facility. The Program Director and Clinical Instructor are located in Avera McKennan Hospital, and the Director of Clinical Education is located in Sanford USD Medical Center. We also have an office for the Site Coordinator and Clinical Instructor at Rapid City Regional Hospital. By having offices in these three places, the students have better access to us. The hospitals provide the physical equipment (desks, chairs, bookshelves, etc), and Dakota State University provides office equipment such as computers and printers, paper, pens, etc.

The main classrooms hold the maximum student load, but sometimes it gets crowded if working on a vent, etc. If we need more space, for example to teach an assessment technique, we can schedule a larger room. The classrooms are equipped with whiteboards, bulletin boards, and have lights that can selectively dim to show overheads, slides, or videos. The classrooms are adequate for our needs, although more room would always be appreciated.

The laboratory rooms are adequate for lab classes. If we have a maximum load of students in Sioux Falls, we have half do their labs at Avera McKennan and the other half at Sanford Health. We can then have two labs at each hospital so that the maximum number in any lab will be adequate for the size of the room. By doing this, students have sufficient room to practice techniques and procedures without being crowded. The room at Rapid City Regional Hospital could be larger, which would give the students more room to spread out and learn techniques and procedures more easily without bumping into other students and equipment all the time.

- **Quality of the facilities, relative to external or professional standards, academic program changes, student usage and feedback:**

The quality of the classrooms is adequate, although the ventilation, especially at Avera McKennan, could be improved. When the room has a full load of people and the door is closed, it gets rather warm in there. An improved air handling system would be appreciated. The door could be opened, but this lets in a sometimes unacceptable level of noise from the hallway. Students have mentioned the air exchange system on their end-of-course surveys, and we keep reminding the

Maintenance Department to keep watch over the system and to improve it when possible.

- **Additional facilities needed to improve the quality of the respiratory care program:**

As mentioned above, we could use bigger classrooms in all three affiliate hospitals. Unfortunately, reality check, we are really at the mercy of the hospitals, since space is at such a premium. The hospitals are constantly remodeling and expanding, so hopefully we'll be in line for better rooms in the future.

It would also be nice to have a classroom specifically reserved for our program, but again, reality check, we need to share the room with other people and groups. Our students are supposed to have reservation priority, and that happens most of the time.

- **Equipment requirements for the respiratory care program:**

We own some of the smaller pieces of laboratory equipment, such as oxygen therapy devices, airways, laryngoscopes, suction setups, etc. The larger pieces of equipment needed for lab instruction and/or practice are available through the clinical affiliate hospitals. They have been very supportive of our efforts to obtain equipment, and if a piece of equipment is available and we need it for class, they are usually able to accommodate us.

At other times, when a vendor comes in to demonstrate a piece of equipment for the staff members, we have students sit in on the presentation, especially if we are close to teaching the procedure or technique in lab. We also try and "work out a deal" with the vendor, where they give the students inservices on equipment, or loan us certain pieces of equipment for instructional use. This has worked out very well for us, and we appreciate the support of the vendors.

- **Quality of equipment currently being used, relative to external or professional standards, academic program changes, student usage and feedback:**

Since most of the larger equipment is borrowed from the hospitals, it is fairly new and in excellent working condition. Some of the smaller pieces of equipment, such as airways or oxygen therapy devices, get oily or start to break down after a period of time, and then we need to replace them. Students are impressed by how well the school and departments interact for their equipment needs, and they are grateful.

- **Additional equipment needed to improve the quality of the respiratory care program:**

We do not have any outstanding equipment needs. The main reason for this is our ability to borrow equipment from the affiliate hospitals for teaching purposes. This keeps our costs low and allows us to use current equipment and supplies for our students. This demonstrates the valuable support of the hospitals for our program.

- **Plans currently underway to improve either facilities or equipment:**

It seems like the hospitals are constantly in a state of remodeling. The issue of tearing down the oldest wing of Avera McKennan Hospital (where the respiratory

care school are department are located) comes up every few years, sounds serious, but then is forgotten. Until serious plans come up, our classroom and offices are fine for our use.

There was a recent plan at Rapid City Regional Hospital to remodel the respiratory care area and construct a nice roomy classroom. But due to financial conditions, this plan has been placed on hold, at least for now. The current classroom in small, and the students and faculty are looking forward to one day being in a new room.

Since we borrow the large pieces of equipment from the hospitals for learning purposes, we do not have any plans or needs to replace anything. They constantly evaluate equipment in order to keep their stockpiles current and functional.

PART 8: ASSESSMENT AND STRATEGIC PLANS:

- **The major field assessment plan for the respiratory care program is found by linking to the Program Review website.**

- **Critical analysis/review of the current major field assessment plan follows on the next pages.**

- **Strategic Plan of Dakota State University:**

Here is the link to the DSU Strategic Plan – 2007-2012 (Approved August 2007):

http://www.departments.dsu.edu/presidentoffice/Documents/strategic_plan.htm