Home Care Bulletin
May/June '01

American Association for Respiratory Care

New Report Looks at the Use and Effectiveness of Telemedicine

Editor's Note: *Last January, the AARC Board of Directors approved a position statement on telehealth outlining the importance of including respiratory therapists on the telemedicine team. The following report from the Agency for Healthcare Research and Quality explains current technologies in this area and how they are being used in the home and other remote settings.*

Telemedicine is the use of telecommunications technology for medical diagnostic, monitoring, and therapeutic purposes when distance separates the users. Because modern computer and communications technology has the ability to capture and quickly transmit textual, audio, and video information, many have advocated its use to improve health care in rural areas, in the home, and in other places where medical personnel are not readily available. There is a growing call for telemedicine services to be covered by health insurance, though its benefits and costs are not clear.

In order to clarify these issues, the Agency for Healthcare Research and Quality, under its Evidence-based Practice Program, recently supported a study to assess specific areas of telemedicine, with a focus on those that would substitute for face-to-face medical diagnosis and treatment of the Medicare population. The report identifies health care services that could be provided using telemedicine and describes existing programs in three categories of telemedicine: store-and-forward telemedicine services, self-monitoring/testing telemedicine services, and clinician-interactive telemedicine services. It also summarizes scientific evidence on the efficacy, safety, and cost-effectiveness of these services; identifies gaps in the evidence; and makes recommendations for evaluating telemedicine services.

The report defines "store-and-forward telemedicine services" as those which collect clinical data, store them, and then forward them to be interpreted later. These systems have the ability to capture and store digital still or moving images of patients, as well as audio and text data. A store-and-forward system eliminates the need for the patient and the clinician to be available at the same time and place. Store-and-forward is therefore an asynchronous, noninteractive form of telemedicine. It is usually employed as a clinical consultation (as opposed to an office or hospital visit).

"Self-monitoring/testing telemedicine services" enable physicians and other health care providers to monitor physiologic measurements, test results, images, and sounds, usually collected in a patient's residence or a care facility. Post-acute-care patients, patients with chronic illnesses, and patients with conditions that limit their mobility often require close monitoring and follow-up. Telemedicine programs use a variety of strategies to accomplish this monitoring while reducing the need for face-to-face visits that may be inconvenient or costly for the patient. The close monitoring afforded by these approaches may allow better care through earlier detection of problems, and may therefore reduce costs.

"Clinician-interactive telemedicine services" are real-time clinician-patient interactions that, in the conventional approach, require face-to-face encounters between a patient and a physician or other health care provider. Examples of clinician-interactive services that might be delivered by telemedicine include online office visits, consultations, hospital visits, and home visits, as well as a variety of specialized examinations and procedures.

The Evidence-based Practice Center team that developed the report sought to identify procedures, programs, and services in the three study areas. Members of the team first conducted a general literature search for

"New Report" continued on page 2

"New Report" continued from page 1

information about ongoing telemedicine programs and activities within each program, then searched for peer-reviewed literature for the systematic review. Both literature searches used the MEDLINE, EMBASE, CINAHL, and HealthSTAR electronic bibliographic databases. Researchers also searched through telemedicine reports and compilations, including their reference lists, as well as Internet sites. Finally, they contacted known telemedicine experts to find additional resources to identify and describe telemedicine programs.

Through the review of the general literature, the team identified 455 telemedicine programs, of which 362 are in the United States. Among U.S. programs, 111 are located at academic medical centers and 68 are in hospital-based health care networks; 80 are in federal, military, or Department of Veterans Affairs medical centers. Over 30 medical specialties are represented in these programs, and many programs include more than one activity. About 50 programs provide services in patients' homes.

The study found that the most common telemedicine activities are:

- Consultations or second opinions (290)
- Diagnostic test interpretation (169)
- Chronic disease management (130)
- Post-hospitalization or postoperative follow-up (102)
- Emergency room triage (95)
- "Visits" by a specialist (78)

The report also indicated that many diverse populations are being served by telemedicine, but more programs serve rural patients than any other group. Of the 455 programs catalogued in the general literature review, approximately 120 (26%) were providing health care to rural populations. Telemedicine also serves a large number of veterans and elderly. The numbers of telemedicine encounters increased steadily throughout the 1990s, with significantly more consults in 1997 and 1998 than in previous years.

A total of 177 articles were determined to potentially have evidence for the efficacy of one of the three study areas and were included in the systematic review. After exclusion criteria were applied, there were 15 articles that assessed store-and-forward telemedicine, 14 articles that evaluated self-monitoring/testing, and 48 articles that assessed clinician-interactive services. A total of nine randomized controlled trials were identified: one in store-and-forward, six in self-monitoring/testing, and two in clinician-interactive services.

Study results showed that the use of telemedicine is small but growing. Active programs demonstrate that the technology can work, and their growing numbers indicate that telemedicine can be used beneficially from clinical and economic standpoints. The longevity of these programs, however, is not clear, and many may fail to survive beyond initial funding or enthusiasm.

The evidence for the efficacy of telemedicine technology is less clear. The problem is not that studies have strong evidence against efficacy, but rather that their methodologies preclude definitive statements. Many of them have small sample sizes that preclude statistical power, and the settings of others may not be equivalent to clinical settings. Still others focus on patient populations that might be less likely than others to benefit from improved health services, such as people who have complex chronic diseases.

For a complete copy of the report, go to: http://www.ahrq.gov/clinic/telemedsum.htm. ■

Home Care Bulletin
is published by the
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2001-2002 CAMHC Available

The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has reorganized its *Comprehensive Accreditation Manual for Home Care* (CAMHC) to better meet the needs of the four types of home care organizations accredited under the Joint Commission's Home Care Accreditation Program. The 2001-2002 edition of the CAMHC is divided into two main sections. One section contains common standards that apply to all types of home care organizations. The second section provides segment-specific standards for:

- Home health (including personal care and support services)
- Hospice
- Pharmacy (including home care and long-term care pharmacies and non-physician based ambulatory infusion centers)
- Home medical equipment (including respiratory therapy and rehabilitation technology services)

The new structure for the CAMHC is designed to help home care organizations better understand standards requirements and more effectively prepare for an accreditation survey. In addition to the new format, all home care standards — common and segment-specific — have been significantly rewritten in a clear, simple style. The only new standards for 2001 are those for pain management (across all segments) and bereavement (hospice only).

Standard intent statements are now segment-specific and have been streamlined and consolidated. Also, the scoring questions for both common and segment-specific standards are more consistent. Additionally, a separate "Compliance Tips" section replaces the previous "Examples of Implementation." The tips are designed to help home care organizations with standards that have proven to be particularly challenging to comply with in the past.

In addition to the CAMHC, Joint Commission Resources is offering home care organizations two other survey preparation products:

- Segment-specific accreditation manuals for home health, hospice, pharmacy, and home medical equipment organizations. These four new books were published as the result of feedback from accredited home care organizations and feature standards, intent statement, and scoring specific to particular service segments. Common standards, intent statements, and scoring are also included. The smaller, portable books are designed as an easier-to-use education tool for home care organizations that provide only one or two services, such as home health and hospice.
- The *Automated 2001-2002 Comprehensive Accreditation Manual for Home Care* is

"2001 -2002 CAMHC" continued on page 3

"2001 -2002 CAMHC" continued from page 2

the electronic version of the traditional accreditation manual. The automated version provides the information in one easy-to-use, online manual for PCs, LANs, and Intranets. The software allows users to conduct searches by words or phrases, click on hyperlinks to quickly access corresponding information, print selected text and graphics for reference, and view HTML files on an Intranet.

The *2001-2002 Comprehensive Accreditation Manual for Home Care* is available for $225, using order code CAHC-01XY. Segment-specific manuals are available for $95 each or $350 for all four. The *Automated 2001-2002 Comprehensive Accreditation Manual for Home Care* is available for $395, using order code AO-01CXY, (for a single personal computer license) or $1,995 (for a site license). The electronic version (for a single personal computer license) and traditional print copy of the CAMHC also is available for $550.

To order any of the home care products, contact the Joint Commission's Customer Service Center at (630) 792-5800 or via e-mail at customerservice@jcaho.org. ■

New Home Test for OSA

Snorers can now take the first step toward assessing whether or not they are at risk for obstructive sleep apnea (OSA) without leaving their homes. Sleep Solutions Inc.'s Bedbugg™ At-Home Diagnostic Service is the first FDA-cleared self-administered patient test to evaluate snorers for forms of sleep-disordered breathing such as OSA. The test requires a doctor's prescription, but can be ordered by phone, fax, or over the Internet and is shipped directly to the patient's home.

"Awareness of sleep apnea as a widespread and serious health problem is growing, yet 95% of sleep apnea sufferers still don't know they have it," says Bruce Adornato, MD, former director of the Stanford Sleep Clinic in San Francisco, certified sleep specialist, and Sleep Solutions' medical director. "The Bedbugg makes it much easier for people to get tested, and with the risk of complications such as heart attack and stroke, early detection is critical."

Following simple instructions and automatic voice prompts, the patient applies a small, comfortable sensor to the upper lip, chest, and fingertip and then presses the "Start" button, the only user control on the device. Voice prompts alert the patient if any of the sensors are disturbed during the night.

The bedside console collects data for up to three nights and is then returned to Sleep Solutions in a prepaid shipper. Sleep Solutions compiles the data for episodes of apnea and hypopnea, oxygen saturation, pulse rate, respiratory effort, and snoring intensity. A comprehensive summary is immediately sent to the physician via fax, mail, or through the company's password-protected web site. At that point, the physician makes the diagnosis and submits a claim for reimbursement under existing health care codes.

"With limited staff and bedspace, traditional sleep clinics can't handle the number of patients that need to be tested, especially with new evidence suggesting that a single night of testing may not be enough," says Scott Adams, Sleep Solutions' chairman and chief executive officer. "Using the Bedbugg service, physicians get three nights of patient data for less than half the cost of a single night in a sleep center, enabling them to better meet the needs of their patients while keeping costs down." ■

Section Membership: Each Voice Is Important

by George Gaebler, MS.Ed., RRT, director, respiratory care and cardiovascular service line; administrator, University Hospital ,Syracuse, NY

As a past member of the AARC Taskforce for Organizational Restructuring, past-speaker of the AARC House of Delegates, and current AARC Transition Committee member, I thought I might offer some thought-provoking insights about the role of the AARC Specialty Sections with respect to the Bylaws changes enacted by the Board of Directors (BOD). The ratification of these very significant Bylaws changes in late 1998 brings us to a point where membership in the Specialty Sections should be desired by all members of the AARC.

One of our major objectives in restructuring the BOD membership was to streamline the connection of the profession to its members. The Bylaws now stipulate that the BOD shall include "a Section Director from each Specialty Section of at least 1000 active members of the Association." While the Bylaws are a living document, responsive to change by the membership, this new provision indicates a new commitment on the part of Association leaders to include greater diversity of opinion in the decision-making process at the highest level of the organization.

The new role of the section chairs places them at the apex of communications, where they can serve as a defined, direct voice for the specialty practitioners of any section meeting the 1000 member requirement. Never before have specialty practitioners from the grassroots within respiratory care practice had such a clearly defined voice at the AARC Board level. This allows any specialty practitioner a clear path for communications directly to the BOD, unencumbered by the affiliate communications pathways that may unintentionally filter a message so that it loses significance or relevance to the original perspective of the section member. Likewise, it provides the Board with a clear message, direct from specialty practice grassroots members, about issues confronting them in their everyday practice.

I am sure many AARC members and non-members alike have asked themselves how their voices can be heard, especially concerning their area of practice. Joining one or more of the AARC Specialty Sections is the solution, thanks to this new allowance in the AARC Bylaws.

The future growth and direction of the profession depends on consistent input and feedback from AARC members. The Specialty Sections provide the best opportunity for that feedback. You could think of the sections as "mini-associations" representing specially focused practitioners across the breadth of the Association. Your membership in the section provides the opportunity to directly impact the activities and direction of the profession in a way never possible before this change occurred. Indeed, a simplified and multi-directional membership voice in the Association was a baseline assumption by the Taskforce for Organizational Restructuring.

I invite all of you to seek out section membership in your chosen area of practice, pull others in to augment your collective voice, and help the profession move in the direction needed for the future. The emphasis on clinical activities in the Specialty Sections prompts the BOD to pause and listen to members who live the profession, teach the profession, and care for the profession. After all, our profession belongs to the folks in the trenches, and the future depends on your involvement and insight.

All of the sections probably include members who were part of the HOD and BOD process that brought the Specialty Sections to prominence. I challenge them to step up and lead the transition process. ■

People on the Move

Editor's Note: *"People on the Move" is a new column in the Bulletin devoted to announcing promotions and other job-related changes among members of the Home Care Section. Send your contributions to section chair, Joe Lewarski, at the addresses/numbers listed on page 2.*

Joe Lewarski to head new National Respiratory Network

Home Care Section Chair Joseph S. Lewarski has been named director of the newly created National Respiratory Network, a service being offer by the MED Group (MED), a 240-member home care network based in Lubbock, TX. The Network, which was launched at the MED annual member conference in San Antonio, TX, in May, is being billed as a "network within a network" that will bring focus to meeting the specific and distinct needs of the respiratory providers in the MED organization. Says MED CEO David A. Miller, "We are not only pleased to be able to announce this important new service for our membership, but are also excited to have an outstanding individual such as Joe Lewarski to lead the effort. The combination of Joe's clinical experience, participation as an owner and manager of a dealership, his position as chair of the Home Care Section of the American Association of Respiratory Care, and his ability to communicate and teach is rare indeed. We are truly fortunate to have him on our team."

Prior to joining MED, Joe was a vice-president and partner in Hytech Homecare, a division of Hytree Pharmacy, Inc., in Cleveland, OH. While there, he was responsible for directing the day-to-day operations of the 100-employee firm, including the adult and pediatric clinical and respiratory care programs, sales and marketing efforts, profit and loss accountability, managed care contracts, and policies/procedures for accreditation purposes. Prior to his position at Hytech, he held positions in both distribution and hospital settings. He is a distinguished honor graduate of the respiratory therapy program at the Academy of Health Sciences in San Antonio and a Summa Cum Laude graduate in business administration from Myers College in Cleveland, OH. Joe will continue to reside and maintain an office in the Cleveland area.

Jim Stegmaier, Georgette Frate-Mikus, take on new positions at Hytech

Hytech Homecare, a division of Hytree Pharmacy, Inc., in Cleveland, OH, has named James Stegmaier, RRT, CCM, as its new vice president of clinical services. Jim has been with the company over five years as the director of clinical services. In his new role, he will oversee all of the day-to-day clinical and operation activities. Georgette Frate-Mikus, RRT, CCM, has been named director of clinical services. Georgette has been with Hytech for nearly 14 years and has held numerous key positions within the organization. She will manage the home care clinical team and be directly involved in the delivery of services.

Hytech Homecare is a full service, JCAHO accredited home medical equipment provider specializing in home oxygen, respiratory, infusion, and pharmacy services to clients throughout Northeast Ohio. Hytech is a division of Hytree Pharmacy, Inc., a wholly owned subsidiary of Omnicare, Inc.■

Experience the Best of the Science, Tradition, and Future of Respiratory Care

28th Annual Donald F. Egan Scientific Lecture

COPD — On the Exponential Curve of Progress

John Heffner, MD, of the Medical University of South Carolina will address COPD and its growing significance for respiratory therapists.

16th Annual Phil Kittredge Memorial Lecture

Mechanical Ventilation: How Did We Get Here and Where Are We Going?

Among therapists, Rich Branson, RRT, FAARC, of the University of Cincinnati Medical Center, is well recognized as an authority and visionary when it comes to mechanical ventilation.

27th Annual OPEN FORUM

Hundreds of original research papers will be showcased over the four days of the Congress, reviewing the latest in pediatric, adult, critical care, home care, and education. (You can still submit your research project — deadline July 31). Learn about cutting edge research in the OPEN FORUM and see the latest technology in the Exhibit Hall.

17th Annual New Horizons Symposium

This year the topic is airway clearance techniques. This featured symposium attracts an audience of hundreds who come to immerse themselves in the most thorough review of a clinical topic.

Secure your early bird low-cost registration fee now! Register online at www.aarc.org. Also, continue checking the AARC website for the latest information on the Congress.

The AARC's International Respiratory Congress is the gold standard of respiratory care meetings. The Congress boasts:

- The lowest cost of continuing education per credit of any show, any where.
- The largest and most impressive exhibit hall with the most vendors, where you can make you best deals on major purchases AT THE SHOW!
- The largest gathering of respiratory care experts and opinion-makers in the world.
- The most diverse and most dynamic series of lectures.
- The most opportunities for YOU to participate in your profession through research and networking. ■

Specialty Practitioner of the Year

Don't forget to nominate a fellow section member for Specialty Practitioner of the Year! Submit your nomination online at: www.aarc.org/sections/home-care_section/home-care.html.

JCAHO Accreditation Report

The AARC is currently seeking information on JCAHO accreditation site visits. Please use the following form to share information from your latest site visit with your colleagues in the Association. The information will be posted immediately on the AARC web site at http://www.aarc.org/members_area/resources/jcaho.html and will also be featured in the *Bulletin*.

Accreditation visit you are reporting (choose one):

❏ Home Care
❏ Hospital
❏ Long Term Care
❏ Pathology & Clinical Laboratory Services

Inspection Date: _____

Facility Name:_____

Contact: _____
(Please provide name and e-mail address.)

1. What was the surveyors' focus during your site visit?_____

_____

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_____

2. What areas were cited as being exemplary?

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3. What suggestions were made by the surveyors?

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4. What changes have you made to improve compliance with the guidelines?

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Additional comments:

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