Diagnostics Bulletin
Mar./Apr. '00

American Association for Respiratory Care

Notes from the Chair

by Catherine M. Foss, BS, RRT, RPFT

Our children may learn about heroes of the past.
Our task is to make ourselves architects of the future.
— Jomo Mzee Kenyatta

Spring is coming; signs of renewal and change emerge as the snow melts away. As we enter this season, transitions are also happening in the AARC and medical field that will affect each one of you involved in diagnostics.

First of all, I am pleased to welcome two new medical directors to our section, Dr. Robin Elwood from Oklahoma City, OK, and Dr. William Peruzzi from Chicago, IL. I'm sure their counsel over the coming months will assist our section leadership in dealing with the many challenges that lie ahead.

Secondly, the new AARC bylaws, which went into effect December 14, 1999, now require that section chairs be elected by the section membership. Initially, the elected chairs from the two sections having the highest membership rolls will be given seats on the AARC Board of Directors. Each year thereafter, two more sections will be given the opportunity to make this transition, provided their membership rolls exceed 1000 active practitioners.

The importance of this bylaws change cannot be underestimated. Sections that qualify for a seat on the Board will acquire a greater voice in the AARC, allowing them to bring their concerns and issues to the forefront. Our section is currently below the 1000 member cut-off, but we hope to raise that number so that we will qualify for the Board of Directors' seat in the near future.

In the meantime, we are currently accepting nominations for our first round of elections for the chair-elect position of the Diagnostic Specialty Section. (The newly elected chair-elect will serve one year in that position before assuming the chair position for two years, for a total tenure of three years.) Please review your professional growth and that of your co-workers in diagnostics and consider filling out a nomination form, either for yourself or a colleague. Elections will be held later this year for this new and prestigious position.

Outside of the Association, a major change is also on the horizon this year in terms of Medicare payment. Specifically, the government is proposing new Ambulatory Payment Classifications for Medicare outpatient prospective payments. Read the article in this issue explaining these changes and how you and your department can prepare.

Lastly, I challenge each one of you to recruit at least three new active members for the AARC and our specialty section. Talk to the people in your department and colleagues in your region. This is a very important time for us to band together, network, and become a cohesive group that can let its voice be heard loudly. Remember: our section is currently below the 1000 member cut-off that will allow representation on the AARC Board. It will be up to us to correct that situation.

I hope you will join me as I look forward to spring and the challenges before us. ■

Diagnostic Section Meeting Minutes

The Diagnostics Section held its annual business meeting during the AARC International Congress in Las Vegas. Here is a summary of the issues discussed at the meeting and their implications for practitioners as we go forward with section activities this year:

Communication

Our section will publish six *Bulletins* this year, and we are currently looking for article ideas and potential authors. If you have suggestions or are interested in being an author, you are encouraged to contact the editors or chair at the addresses/numbers listed on page 2. Upcoming issues will feature the following topics:

- Cardiac and Multi-disciplinary
- Pulmonary Physiology/Function Adult
- Pulmonary Physiology/Function Pediatric
- Bronchoscope, Sleep Issues
- Blood Gases

Networking

The section would like to increase its networking capabilities, and suggestions at the meeting ranged from better utilization of the AARC web site (www.aarc.org) and the Diagnostic Section "Members Only" site and list-serve (see ad in this issue about how to sign

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up for and use the listserve) to spreading the word about other helpful web sites, such as those for the National Committee on Clinical Laboratory Standards, Joint Commission on Accreditation of Healthcare Organizations, American Thoracic Society, Dr. Westgard's site, and others. Our internet coordinator, Sue Blonshine, is currently looking for more suggestions, so sign on to the listserve and tell her about your favorite sites.

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We would also like to increase our dialogue with state society diagnostic sections by making a list of their chairs and/or activities available to the membership, either on the section web site or through the *Bulletin*. Lastly, members are encouraged to utilize the section's Resource Directory to access colleagues with expertise in specific areas. If you would like to become a member of the panel, you can sign up on web site or fill out the form that appears in this issue.

The future of the section

Now that sections with 1000 or more active members will be eligible for a seat on the AARC Board of Directors, recruitment of new members is imperative to the future of our section. Nominations for the chair-elect position — the first to be elected by the membership — must be submitted by **March 16**. (All section members should have received a letter in the mail with a nomination form.) The chair-elect elections will be held every third year; the winner will then serve a one-year term as chair-elect before serving a two-year term as section chair.

Practitioner of the Year

The section is currently seeking nominations for its 2000 Specialty Practitioner of the Year. For your convenience, a nomination form appears in this issue. We are also looking for someone to act as coordinator of our selection process for this important award. Interested individuals are urged to contact the chair at the addresses/numbers listed on this page.

Clinical Practice Guidelines

Revisions are currently in the works for the AARC's Diagnostic Clinical Practice Guidelines (CPGs). Current CPGs, available online at the RC Journal web site (rcjournal.com), include:

Spirometry
Diffusing Capacity
Static Lung Volumes
Body Plethysmography
Arterial Blood Gas Puncture
Arterial Blood Gas Analysis
Pulse Oximetry
Bronchoscopy
Infant Testing
Metabolic Testing
Polysomnography

CPGs soon to be released include Cardiopulmonary Exercise Testing, and suggested CPGs include Six Minute Walk and Muscle Strength Testing (MIP/MEP). Carl Mottram is chairing this committee.

Educational materials

The following educational materials are available to section members:

- Individual Independent Study Packages
  - Static Lung Volumes
  - Spirometry
  - Whole Body Plethysmography
  - Diffusing Capacity
  - Peak Flow
- American Thoracic Society Pulmonary Function Procedure Manual: www.thoracic.org, (212) 315-8700.
- Alpha -1 ATD Educational Brochure on Pulmonary Function Testing
  ($ .30 /each if ordering >10 brochures, http://alpha1.org/market1.htm, (800)-521-3025. This brochure, which is written at an eighth grade reading level and will soon be published in Spanish as well, is a good resource for patients and others requiring a basic knowledge of pulmonary function testing.

Diagnostics Uniform Reporting Manual update

The updated manual is now available for purchase on the AARC web site. If your lab participated in the validation study of this product, you should have received your discount voucher in the mail by the end of December. Sue Blonshine chairs this committee.

National Committee for Clinical Laboratory Standards

Sue Blonshine reported on the NCCLS Leadership Conference 1999, which approved the generation of a document applying the quality system to Respiratory Care and Imaging Services. Also approved as projects in concept were quality systems guidelines for cardiology and nursing, and a document addressing the development of patient outcome studies. In addition, the document for the collection of Arterial Blood (H-11) 3rd edition is now available from NCCLS.

In other NCCLS news:

- The C46-P will be single document combining all related blood gas documents; the working group is chaired by Sharon Ehrymeyer, PhD. The document is tentatively scheduled for release in June 2000.
- Carl Mottram has agreed to participate in the pulse oximetry working group.
- The NCCLS 2000 Leadership Conference is scheduled for March 28 to 31 in Arlington, VA. Attendance is open to NCCLS members, volunteers, and members of the extended health care community. The focus is "Applying Quality Systems in Health Care."
- The proposed level document addressing "Application of the Quality System Model to Respiratory Services" is under review by the Area Committee on Health Care Services. Board approval was expected in the first quarter of this year. After the Board of Directors' approval, the document will be available for comments for six months, then advanced to approved level document.
- The Area Committee on Health Care Services met in October 1999. The Chairholder's Council met in November 1999. Susan Blonshine attended both

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meetings. A document addressing the design and development of patient outcome studies was approved for document generation. A document addressing the application of a quality system model to patient identification was approved as a project in concept.

Research and outcomes studies

The section is currently calling for abstracts for the 2000 AARC Congress. In addition, the National Emphysema Treatment Trial is recruiting patients. A brochure is available to interested facilities. Other studies underway include:

- ATRA Emphysema Trial
- SCOR Pulmonary Fibrosis Study
- Pulmonary Hypertension Studies

Government issues

HCFA is proposing new Ambulatory Procedure Classifications for outpatient services, and the Medicare prospective payment system for outpatients is expected to be implemented in either July of 2000 or January of 2001. Both of these developments have implications for diagnostic laboratories, as do the new OSHA directives requiring safety syringes for health care workers that went into effect last November.

ATS laboratory registration

This registry will plan and generate research and promote collaboration on the types of tests, types of equipment, and outcome studies utilized in diagnostics labs.

The 2000 International Congress program

Program proposals for the Congress, which is scheduled for October 7-10 in Cincinnati, OH, were submitted at the end of December.

Symposia suggestions included:

- Bronchoscopy advances
- Ventilator Diagnostics (cross sectional symposium)
- Sleep Lab (education inspection)
- Neonatal Testing/Monitoring
- Lung Transplantation

Lecture suggestions included:

- Advances in Asthma (leukotriene inhibitors, exhaled nitric oxide)
- Advances in Emphysema (Vitamin A)
- Bedside Mechanics, Invasive Monitoring
- Blood Gas Quality Control
- Multi-skilling
- ATS Laboratory Registration

Suggestions for the "Pro/Con" series included:

- Auto CPAP
- Electronic Versus Wet QC
- Temp Correction of Blood Gases
- Demand Versus Continuous O_2 Delivery Devices

Suggestions for the "5 Things I Learned About . . ." series included:

- Split Night Sleep Studies
- Cross Training

Proposed tutorials included:

- Uniform Reporting Manual
- Sleep Scoring

Top ten issues of professional concern to the diagnostic specialty arena

Lastly, participants in the business meeting responded to a question from the AARC Program Committee about the top ten professional concerns of our members. Here is what the group came up with:

1. *Marketing the section:* Find better ways to network with all diagnostic practitioners out in the field who are not members of the AARC and/or section and get them to join as active members.
2. *Licensure and regulation:* Establish mandatory standards for personnel performing diagnostic tests, improve competency assessment and credentials, hold regular review courses for the CPFT and RPFT exams, and examine the merits of licensure versus registration in various organizations with cross coverage; i.e., polysomnography, respiratory therapy, exercise physiology.
3. *Educational opportunities:* Ensure that the curriculum in accredited respiratory care programs is sufficient to prepare practitioners to work in diagnostics (PFT, exercise, polysomnography, bronchoscopy assist, conscious sedation, echocardiography, and blood gas labs). Individuals should have a working knowledge of regulatory issues for JCAHO, CAP, and CLIA, as well as issues such as equipment evaluation, quality control, calibration, quality assurance, total quality management, etc.
4. *Standards:* Adherence to current standards of care in diagnostics across the continuum of care — from hospitals to primary care offices to freestanding clinics to field testing on job sites. Proper techniques should be practiced and best practices need to be benchmarked.
5. *Reimbursement/CPT code revisions:* These revisions should include current use. The section is also concerned about the changes coming with the proposed Medicare APC style of billing, although there is a belief that the AARC Uniform Reporting Manual for Diagnostics will help standardize these issues. The Manual should be marketed for that purpose.
6. *Protocols in diagnostics:* How to make them work effectively.
7. *Universal software:* This should be available for biological standards, QA analysis for PFT, and exercise studies. Additionally, universal software should be available to download any vendor's QC/calibration data for statistical analysis.
8. *Predicteds/Interpretations:* A working group is needed to address regional recommendations for PFT and exercise predicteds. Interpretation guidelines should be standardized.
9. *Neonatal and pediatric testing:* Greater clarification is needed in this area of testing.
10. *Expanding diagnostic services:* Guidelines or suggestions on how to develop a diagnostic service or expand an existing service would be useful, particularly in terms of the information necessary to convince administrators, financiers, business associates, etc., that such a service or expansion is necessary. ■

Diagnostics Specialty Practitioner of the Year: *Susan Blonshine, BS, RRT, RPFT*

Listing all of Susan Blonshine's accomplishments on behalf of the AARC and the Diagnostics Section would be impossible in this small space. Indeed, covering just those that she brought to fruition in 1999 is more than we can handle here. "In the past year alone, Susan has achieved what would be for many of us a lifetime of accomplishments," says Carl Mottram, 1997-99 section chair. Just consider the following highlights -

As the AARC representative to the National Committee on Clinical Laboratory Standards (NCCLS), Blonshine served as chair of the working group assigned to revise the arterial blood gas analysis guideline, thus effecting positive changes in a document that impacts RTs working in blood gas labs everywhere. She was also asked to co-chair another NCCLS committee charged with developing a guideline titled "Quality System Model for Health Care" and was named a regional committee chair by NCCLS, a position formerly held only by physicians in that organization.

At the AARC itself, Blonshine served as chair of the Diagnostic Uniform Reporting Manual Committee and member of the Diagnostics Clinical Practice Guidelines Committee. She also held a position on the NBRC Board of Directors, found time to publish a comprehensive competency assessment-training manual in cardiopulmonary diagnostics, and worked with the AARC and NBRC on a spirometry course for which she also serves as program director. All this while pursuing a busy career at TechEd in Mason, MI.

Why does she do it? Says Susan, "It is through professional commitment with others that we can have a strong voice in legislative issues, health care delivery, and ultimately, the quality of respiratory services provided in all areas." ■

The ABCs of APCs

by Catherine M. Foss, BS, RRT, RPFT

What are APCs? They are the new Ambulatory Payment Classifications proposed by the Health Care Financing Administration (HCFA) for Medicare outpatient prospective payments. The Balanced Budget Act of 1997 required HCFA to implement an outpatient prospective payment system (OPPS) based on average hospital cost and with a phased-in reduced beneficiary co-pay. The government's objective is to simplify the payment system, ensure deficit reduction, restrain government spending, and cover legitimate hospital costs. The proposed rule was published September 8, 1998 in the Federal Register Vol. 63, #173. Comments were solicited, and a revision was published June 20, 1999 in Vol. 64, #125.

Y2K issues in the government have pushed back the implementation of this guideline. The government must give a minimum of 90 days notice before implementing the changes. This may occur in July 2000 or January 2001. Currently, patient co-payments are based on 20% of the charges. The OPPS rule proposes to phase in a decrease in co-pays until the patient pays 20% of the APC rate. It is estimated that low volume rural hospitals and teaching hospitals will be hardest hit with decreased payments. The government plans no volume adjustments to cover this variance, their intent being not to encourage "inefficiencies." It is expected that other third party payers will use APCs as a standard in coming years.

What does this mean to those of us in the diagnostic arena? Services under the OPPS are classified into APCs. Services in each APC group are supposed to be similar clinically and in resource requirements. Initially, only existing payable benefits with CPT codes will be assigned APC codes. It is uncertain how new technology issues will be addressed. Of note: pulmonary rehabilitation is specifically excluded under this proposed rule because it is not currently a recognized benefit, except for the experimental National Emphysema Treatment Trial.

More than one APC may be paid per patient encounter, but only one payment rate has been set for each APC category. One of the striking changes is the elimination of pulse oximetry as a reimbursable charge. Both codes 94760 and 94761 have been eliminated. Only overnight pulse oximetry in sleep studies will be covered. The rationale for this came from a government audit of thousands of outpatient surgical procedures — all of the procedures billed for pulse oximetry monitoring. The conclusion was that pulse oximetry is a standard of care and is covered under whatever other procedure it is bundled with. Unfortunately, they forgot about diagnostic testing, such as the six minute ambulating oximetry tests to titrate oxygen levels. (Please note that this pertains to hospital-based testing only. See the following article for an update on pulse oximetry reimbursement in doctor's offices, freestanding clinics, and pulmonary rehabilitation programs not affiliated with hospitals.)

Description	CPT	APC	Rel. Weight	Payment
Level I Pulmonary Tests		**971**		
Breathing Capacity Test	94010	971	0.98	$50.39
Evaluation of Wheezing	94060	971	0.98	$50.39
MVV Lung Function Test	94200	971	0.98	$50.39
Expired Gas Collection	94250	971	0.98	$50.39
Thoracic Gas Volume	94260	971	0.98	$50.39
Measure Airflow Resistance	94360	971	0.98	$50.39
Flow Volume Loop	94375	971	0.98	$50.39
Measure Blood Oxygen Level	94762	971	0.98	$50.39
Exhaled Carbon Dioxide Test	94770	971	0.98	$50.39
Pulmonary Service/Procedure	94799	971	0.98	$50.39
CO2 Breathing Response Curve	94400	971	0.98	$50.39
Description	**CPT**	**APC**	**Rel. Weight**	**Payment**
Level II Pulmonary Tests		**972**		
Residual Volume	94240	972	1.00	$51.42
Lung Nitrogen Washout Curve	94360	972	1.00	$51.42
Breath Airway Closing Volume	94370	972	1.00	$51.42
Exhaled Air Analysis O2	94680	972	1.00	$51.42
Exhaled Air Analysis O2, CO2	94681	972	1.00	$51.42
Exhaled Air Analysis	94690	972	1.00	$51.42
Diffusing Capacity	94720	972	1.00	$51.42
Membrane Diffusing Capacity	94725	972	1.00	$51.42
Description	**CPT**	**APC**	**Rel. Weight**	**Payment**
Level III Pulmonary Tests		**973**		
Evaluation of Wheezing	94070	973	1.81	$93.07
Pulmonary Stress Test/Simple	94620	973	1.81	$93.07
Pulmonary Compliance Study	94750	973	1.81	$93.07
Breath Recording Infant	94772	973	1.81	$93.07
Bronchial Allergy Tests	95070	973	1.81	$93.07
Bronchial Allergy Tests	95071	973	1.81	$93.07
Description	**CPT**	**APC**	**Rel. Weight**	**Payment**
Miscellaneous				
Airway Inhalation Treatment	94640	976	0.44	$22.52
Aerosol Inhalation Treatment	94642	976	0.44	$22.52
Aerosol or Vapor Inhalation	94664	976	0.44	$22.52
Aerosol or Vapor Inhalation	94665	976	0.44	$22.52
Cardiac Rehab	93797	948	0.81	$41.65
Cardiac Rehab/Monitor	93798	948	0.81	$41.65
Provocation Testing	95078	977	0.56	$26.80
Multiple Sleep Latency	95805	979	10.15	$521.91
Sleep Study Unattended	95806	979	10.15	$521.91
Sleep Study Attended	95807	979	10.15	$521.91
Polysomnography, 1-3	95808	979	10.15	$521.91
Polysomnography, 4 or more	95810	979	10.15	$521.91
Polysomnography w/CPAP	95811	979	10.15	$521.91
Hyperbaric Oxygen Therapy	99183	969	2.65	$136.26
Pulmonary Rehab	——-	——	——	——
Measure Blood Oxygen	94760	——	——-	———
Measure Blood Oxygen	94761	——	——-	———

Here is a list of the proposed APCs related to diagnostics, and their payment rates. The HCFA descriptions of the CPT codes do not always mesh with the CPT verbiage; therefore, it is best to look up the CPT codes in your facilities book. The Federal Register does not include any descriptors.

What should you do now? I suggest you look at your billing practices. Review your third party/Medicare matrix of patients. Anticipate revenue changes for your future budget. Evaluate your department for cost efficiencies. Consider protocols to decrease unnecessary utilization of services. Discuss these issues with your administrator and finance departments. Most hospitals and the AARC have already sent in comments to this proposed rule. We need to prepare for these upcoming changes. START NOW. ■

HCFA Changes Pulse Oximetry Rules for Settings Outside the Hospital

Under new rules from the Health Care Financing Administration, pulse oximetry (codes 94760 and 94761) can no longer be billed separately by hospitals, including hospital-based diagnostics services. (See related article above.) Initially, the new rules also applied to pulse oximetry delivered in doctor's offices, free-standing clinics, and pulmonary rehabilitation programs, but changes issued late last year have altered that situation.

Under the final rule for doctor's offices and free-standing clinics, which was published in the November 2, 1999 Federal Register, pulse oximetry in these settings can be billed separately when certain requirements are met. According to the January issue of the Washington Watchline, a newsletter published by the National Association of Medical Directors of Respiratory Care, "The end result is that payment for CPT codes 94760 and 94761 may be made under the physician fee schedule but only if no other payments are made to that provider under the physician fee schedule on that date. This change allows physicians to bill for pulse oximetry if no other claims are submitted on that date. It also allows independent diagnostic facilities (IDFs) to bill for pulse oximetry."

The final rule for hospital-based outpatient services has yet to be published. It should be finalized later this year. ■

The AARC Uniform Reporting Manual for Diagnostic Services: *A Tool for Our Times*

by Bill Dubbs, MHA, RRT, AARC associate executive director

The economics of health care continue to be a major factor in influencing the delivery of health care services. With the increasing proliferation of prospective payment systems across the continuum of care, it is imperative that successful managers have tools to identify the resources required for the efficient administration of high quality services. It is critical that these tools be seen as credible with health care decision makers.

Prior to the development of the Diagnostics Uniform Reporting Manual, time standards for many commonly used diagnostic procedures based on current AARC and American Thoracic Society standards for test performance were not available. Hence, the AARC developed this manual to provide managers with a tool to assist them in identifying trends in the utilization of their services, forecasting demand for equipment and supplies, accurately determining personnel requirements, and providing a foundation for benchmarking efficiency indicators within the industry. This manual identifies diagnostic procedures commonly performed within sleep, pulmonary, blood gas, and noninvasive cardiology laboratories, and provides time standards for their performance.

How was this manual developed?

A small panel of content experts who established methodology and guided the project through its completion initially drafted the contents of this manual. Based on the current standard of care, they identified and drafted the initial procedures, identified applicable professional practice guidelines and other resources which can be referenced, suggested current CPT codes that may be acceptable to HCFA intermediaries, assured the validity of data upon which time standards are based, and made sure the manual would be "user friendly."

The other major groups that contributed significantly to the development of the manual were several large panels of volunteer experts in the areas of sleep, pulmonary, blood gas, and noninvasive cardiology diagnostic services. These experts are supervisors of the diagnostic services provided in their facilities. Through surveys, they reviewed each of the procedures in their areas of expertise and reported the time required to perform these procedures in their facilities according to the definitions in this manual.

Contents and organization

Here is a brief overview of the organization of the manual:

Section	Description/Purpose
Introduction and Background	Describes the concept and process of developing a uniform reporting system and identifies potential uses for the manual.
Methodology for Developing Time Standards	Provides methodology for developing valid time standards for facility-specific diagnostic procedures and support procedures which do not have assigned time standards.
Sleep Disorders	Lists tasks common to all procedures. Identifies sleep diagnostic procedures with time standards and examples of procedures without time standards.
Noninvasive Cardiology	Lists tasks common to all procedures. Identifies noninvasive cardiology diagnostic procedures with time standards and examples of procedures without time standards.
Pulmonary Disease	Lists tasks common to all procedures. Identifies pulmonary function diagnostic procedures with time standards and examples of procedures without time standards.
Blood Gases and Electrolytes	Lists tasks common to all procedures. Identifies blood gas diagnostic procedures with time standards and examples of procedures without time standards.
Support Procedures	Identifies non-clinical procedures that support clinical, management, and supervisory procedures. These procedures require significantly different amounts of time in different facilities, suggesting it will be necessary for each facility to develop its unique standards. Non-allocated hours are discussed.
Non-Allocated Hours	Non-allocated time is time spent by employees on non-productive procedures.
Appendix	Provides forms and instructions for calculating and reporting workload and efficiency. Enables user to develop systems for workload measurement and reporting, describes the methodology used to develop the manual, and lists the facility clinical experts who participated in the development of the manual.

Acknowledgements

The AARC wishes to gratefully acknowledge the contributions of Susan Blonshine, Robert Brown, Carl Mottram, and Jack Wanger in the development of the AARC Uniform Reporting Manual for Diagnostic Services. Their leadership and vision contributed significantly to the successful development of this manual. We also acknowledge James Chapman, Cameron Harris, and Pam Minkley, who provided consultation in the areas of sleep and noninvasive diagnostics. We also wish to acknowledge the assistance of the many clinical experts who participated in this project.

You may obtain additional information or order this manual from the AARC by calling (972) 243-2272. The item number is PM88 and the price is $99 ($135 for nonmembers). ■

Adolescents, Asthma, and Compliance

by Traci Arney MN, ARNP

Adolescence is such an emotional time for everyone. Our teens are striving for adulthood without the life experiences of adults to prevent costly mistakes. Synonymous with adolescence is the difficulty with compliance to rules and responsibility. For those with medical conditions that require maintenance medications, these difficulties can be life-threatening. Teens with asthma are a particular challenge for health care providers. Medication compliance is the most frustrating challenge for all involved; the problems and remedies for teens with asthma include limited medical support, medication selection, and their individual lifestyles and personality. All of these issues impact asthma care.

Unfortunately, many teens do not have a primary care provider. Small children usually have routine physicals and immunizations that bring the child into the health care arena. Teens, for the most part, do not have that luxury. Asthmatic teens are usually at the mercy of urgent care facilities, emergency rooms, and occasional sick visits to a family practitioner. Consistency is a problem with teens and asthma. Optimal control of their airways cannot be met when the child is seen once a year during a 15 minute sick visit. It is imperative that the asthmatic adolescent be introduced into the health care system and receive frequent follow up examinations and health education.

Even when regular care is available, adolescents can be a challenge when there is a need to adhere to a medication regimen. Practitioners need to encourage the adolescent patient to take medications as prescribed. It is generally easier for them if the number of doses needed per day is kept to a minimum. Selection of particular maintenance drugs that are only required once or twice a day will alleviate some of the noncompliance (Table 1). Taste is an issue also. Medications that are not palatable will remain in the container. If the teen won't take the medication, it surely becomes a ineffective form of treatment.

Some patients refuse to take inhalers, using the excuse of inconvenience. The leukatrine blockers (Accolate and Singulair) may do well with these patients. The side effects are minimal, and a pill once or twice a day is usually easier for them to comply with. In addition, the safety profile of the mast cell stabilizers is present, and patients appreciate that guarantee.

The adolescent patient needs to have choices in his or her therapy. The "either this or that" philosophy gives the patient a feeling of being part of the decision-making process and helps to foster a positive relationship with the health care provider, who is seen as someone who respects the teen's opinion rather than just another authority figure telling him or her how it is going to be.

Another effective approach that can be taken by the practitioner is to pay close attention to the teen's lifestyle and personality. Kids who plays football, soccer, basketball, or another physically demanding sport will listen to what you have to say if they think it has a chance of improving their competitive performance. Endurance and speed are important in sports, and the asthmatic teen usually desires to improve them. The teen who is activity-oriented (clubs, band, chorus, drama, etc.) is likely to want to stay in good health as well to avoid missing practices and performances.

Of course, some teens are almost impossible to negotiate with. Teens involved with drugs, defiance, and juvenile delinquency will not adhere to a medication regimen because their health is not a priority for them. Missed appointments, respiratory distress, and lost inhalers are constant battles with this group. How can a health care provider persuade that difficult young person to take medications? The first step with these patients is to be honest about their noncompliance — don't pretend that the signs are not there or that they are not a contributing factor to their poor health.

From the practitioner's perspective, the most effective time to reach these difficult teens is when they are very sick. This is the best and most influential time to be honest with them and address the smoking, drug use, defiance, and lack of personal consideration they exhibit when they do not show up for their scheduled appointments. All the health care provider can do is be honest and informative. This means talking of potential death and how easy it can be to feel better with just a little cooperation and responsibility.

There are some basic guidelines that can aid in successfully dealing with teens and their asthma, each of which can be adapted and expanded to each individual patient. General rules when dealing with adolescents:

- Criticism only breeds defiance.
- Praise the positive; i.e., the teen is now taking his or her medications more frequently than before and his or her lung function has improved. Let them know you are proud of their endeavors.
- The less frequent the medication, the more compliant they may be.
- Make them responsible for their own health. They must accept the responsibility for feeling bad when they do not take their medication.
- Frequent visits will foster the practitioner/patient relationship, as well as provide the opportunity to follow their progress more closely.
- If symptomatic at all, medication therapy needs to be reevaluated (medication compliance, inhaler technique, poor medication response).

Evaluation of the adolescent's goals is particularly important. The health care provider needs to help these teens meet the goals they have set for themselves — not expect them to reach the goals we set for them. Give them a month on a new medication, then see them again to reevaluate the progress. Frequently, it is easier to educate your patient when he or she is not in crisis. Patients are fatigued when a flare is occurring, and it is not the most opportune time for informative conversation.

Sending home literature may be helpful, and visual aids are very important with teens. Viewing a pictorial of bronchospasm, airway edema, and sputum production, along with those of an open, clear airway can have an impact on the adolescent. The analogy of breathing through a clogged straw versus an open garden hose is a great mental image of the coughing, wheezing, and the shortness of breath that afflicts these patients, and it gives them a better understanding of the physiology behind their illness. Tying medications to their effect on the airway also gives the teen a sense of control.

Our success in controlling asthma in the adolescent is directly linked to our ability to educate the patient and family. The most important items to get across are the necessity of frequent follow up visits and medication compliance, and it is also important to become a trusted resource to the family. Listening to teens and trying to identify their specific weaknesses are truly important to gaining their trust and their confidence. When we gain their trust, we also gain their willingness to comply with the regimen that will keep them healthy and happy for years to come. ■

Controller Medications (Table 1)

Medication	Dosage	Frequency
Intal	**2 puffs**	**4 times per day, then titrate to twice per day**
Tilaide	**same as Intal**	**same as above**
Singulair	**10 mg**	**daily**
Accolate	**20 mg**	**twice per day**
Azmacort	**4 puffs**	**twice per day**
Vanceril SS	**4 puffs**	**twice per day**
Vanceril DS	**2 puffs**	**twice per day**
Flovent 44, 110, 220	**titrate for control**	**titrate for control**
Pulmacort Tubihaler	**2 to 4 puffs**	**daily or twice per day**
Aerobid	**2 puffs**	**twice per day**
Aerobid M	**2 puffs**	**twice per day**

Specialty Practitioner of the Year

Don't forget to make your nominations for the 2000 Diagnostics *Specialty Practitioner of the Year*. This honor is given to an outstanding practitioner from this section each year at the AARC's Annual Convention.

The recipient of this award will be determined by the section chair or a selection committee appointed by the chair. Each nominee must be a member of the AARC and a member of the section.

Use the following form to send in your nominations for this important award:

I would like to nominate _____ for Diagnostics Specialty Practitioner of the Year because

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Nominee	Your Name
Hospital	Hospital
Address	Address
City State, Zip	City State, Zip
Phone	Phone

Mail or FAX your completed form to the section chair at the address/number listed on page 2 of this issue.

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