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VOL.102. No. 7 JANUARY 2006

The Ongoing Battle Over Economic Credentialing

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Volume 102 Number 7 January 2006

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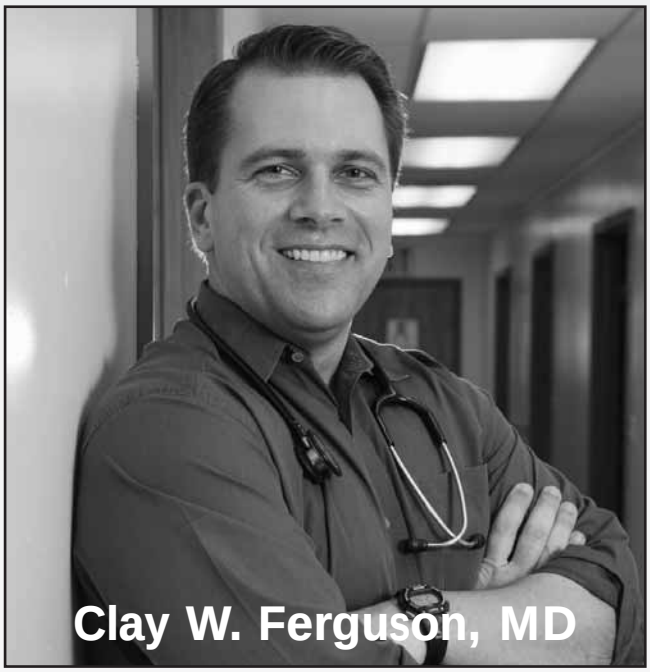


Contents

The Ongoing Battle Over Ecomonic Credentialing

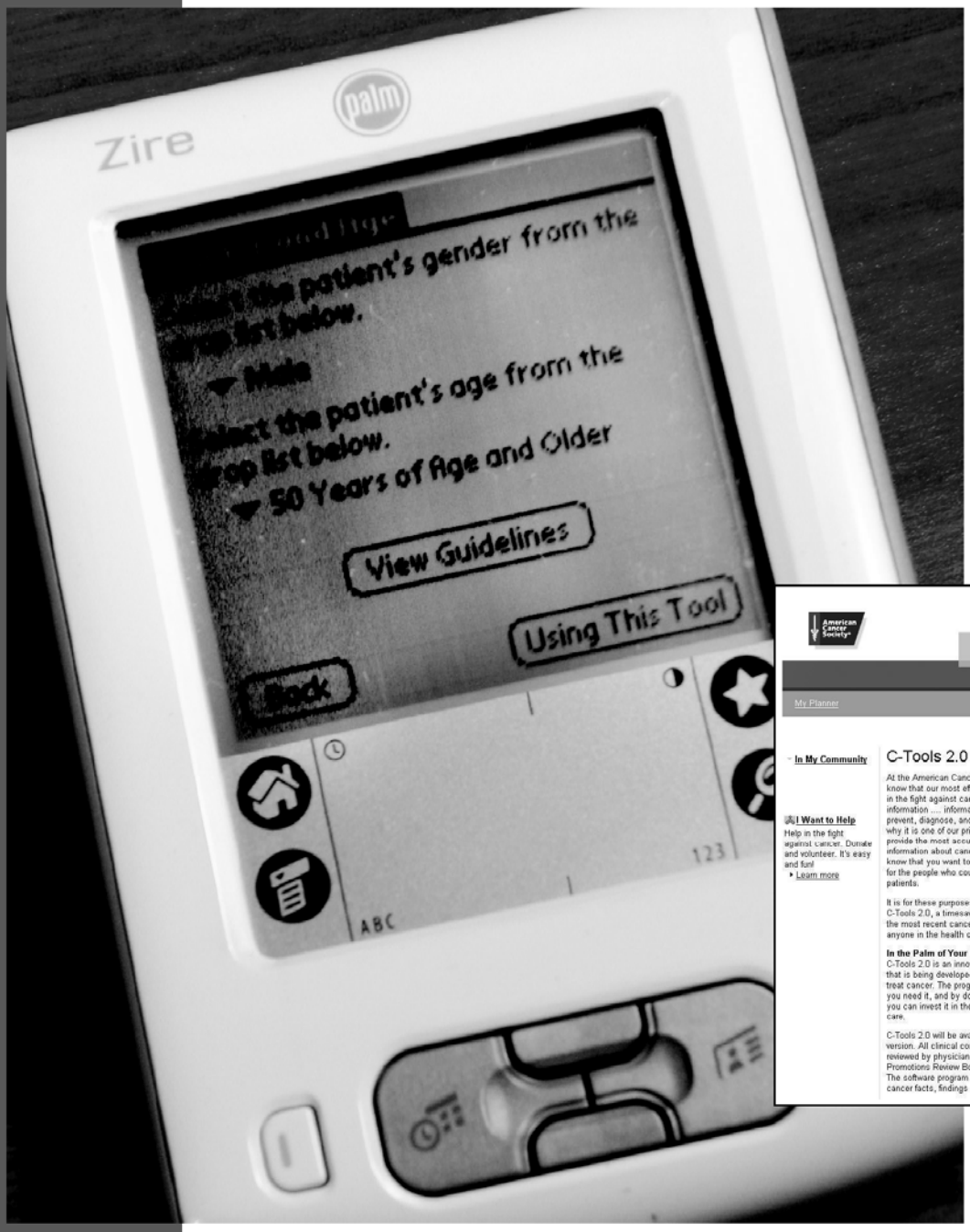
Baptist Health's Economic Conflict of Interest Policy, adopted in 2003, has already meant a loss of privileges for several area doctors. This month's cover story highlights Baptist's policy and provides an update on its potential effect on Dr. Janet Cathey.

BY CASEY L. **PENN**

In Every Issue

Design by: Jeremy Henderson

Knowledge is Power



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Advertising Information: Stephanie Hopkins, Publisher, 5 Leona Lane, Mayflower, AR; (501) 920-3884.

Postmaster: Send address changes to: The Journal of the Arkansas Medical Society, P.O. Box 55088, Little Rock, Arkansas 72215-5088.

Subscription rate: $30.00 annually for domestic; $40.00, foreign. Single issue $3.00.

The Journal of the Arkansas Medical Society (ISSN 0004-1858) is published monthly by the Arkansas Medical Society, #10 Corporate Hill Drive, Suite 300, Little Rock, Arkansas 72205. (501) 224-8967. Printed by The Ovid Bell Press Inc., Fulton, Missouri 65251. Periodicals postage is paid at Little Rock, Arkansas, and at additional mailing offices.

Articles and advertisements published in The Journal are for the interest of its readers and do not represent the official position or endorsement of The Journal or the Arkansas Medical Society. The Journal reserves the right to make the final decision on all content and advertisements.

Were We the Problem?

SAMUEL E. **LANDRUM, MD, FACS**

The problems surrounding medical practices seem to have become more burdensome and frequent over the years. Colleagues of my generation, who began their careers about forty years ago, are especially prone to remember the "good old days," and bringing up these times is a sure fire way to get an agreeable conversation going among us. After all, we remember how it was when the only intrusion for us was the need to sign an insurance claim that was completed by the patient or office staff. No coding was required, and the fee for "Professional Services" was usually sufficient for office visits or procedures.

We enjoyed the privilege of gladly providing professional courtesy to each other and our family members. Clergy of the same faith were usually treated without a bill being rendered and the poor were welcome in many practices with a reduced fee or none at all. Complaints about fees being reduced or services denied were almost non-existent. This is not to say that income in general was never mentioned, but most doctors found that working hard generated an income that was quite satisfactory.

In the latter part of the 1960's Medicare was enacted. This brought more income for more doctors in that non-paying, older patients now could get all the diagnostic services and treatment that they wanted. It was a wonderful time for all. There were hardly any limits – at least it seemed that way at first. The country thought that good health could be bought or delivered, and we were glad to join in to get it done. "Health care delivery" was a super hot topic on the agenda of many symposia.

The successful moon landing, promised to be a goal of the sixties by President Kennedy, gave way to President Nixon dedicating the country to the cure for cancer during the 1970's. Everyone thought that if sufficient money was made available, no goal was unreachable in a short time.

After a few years, of course, the costs attributed to health care rose steeply. The payers for good and other reasons attempted to rein in the amount payable for doctors, and I think they have been successful. It surely has brought about a burdensome aspect to running a medical practice that was non-existent before. Whereas it was a violation of free trade policy for physicians to establish a fee schedule for general use, now fees are rigidly set and controlled by payers.

Probably greedy actions by a few doctors, as the gravy began to run, has brought on restrictions for all of us during the recent two decades. I have learned from studies conducted on practice patterns in Arkansas and other states that some procedures or treatments have a frequency that defies reason. Perhaps there are some who can work 28 hours every day seeing patients.

We also had a less than proud record when it came to the "self policing" that the medical profession was granted for so long. It was usually easy to use the principle that "I could have made the same mistake," and colleagues were allowed to continue to have privileges when in our heart we knew that we personally “wouldn't take our dog to them.” We especially met resistance to limit privileges if the practitioners admitted many patients to the hospital. It is extremely tough to carry out this professional responsibility the way that is needed.

Maybe the upcoming doctors will be better at this; at least, most are getting a good bit of formal education in business management. AMS

By Casey L. **Penn**

The Ongoing Battle Over Economic Credentialing

Baptist Health recently adopted a policy that is impacting the lives and practices of area doctors who have invested in private hospitals. If you were to guess that Baptist doesn't want them to do that, you'd be right. Mark Lowman, Baptist Health's vice president of strategic development, described and defended the new policy when he stated, "In May 2003, the Baptist Health Board acted within its power and fiduciary responsibility to adopt an Economic Conflict of Interest Policy prohibiting privileges for physicians who have ownership or investment interests in competing hospitals."

The policy was adopted not long before the opening of Arkansas Surgical Hospital (ASH) – just the kind of competition Baptist didn't want.

"The policy – not directed toward any specific hospital or for that matter, for profit hospitals – is intended to protect the mission of our nonprofit community hospital, applies to all of our professional staff at all of our facilities, and is consistent with what is required of our Board and employees," said Lowman. "The policy was adopted to counter the proliferation of limited service hospitals which have the effect of eroding patient access to a full range of health care services including trauma centers, psychiatric units, emergency departments and care for the uninsured. The federal General Accounting Office has concluded that limited service hospitals are 'siphoning off the most financially rewarding portions of community hospitals business.'"

So, is the new policy about protecting service choices for patients or about protecting profits for Baptist? Is it the result of physicians taking control of their own practices or plotting to take core business from community hospitals? The American Medical Association (AMA) defines economic credentialing (www.ama.org) as "the use of economic criteria unrelated to quality of care or professional competence in determining a physician's qualifications for initial or continuing hospital medical staff membership or privileges." They denounce the practice, stating, "The AMA opposes the use of economic criteria unrelated to patient care to grant privileges."

There is considerable debate on both sides. No matter, Baptist Health's Economic Conflict of Interest Policy is being enforced. Considering the language of the policy, it probably won't surprise you that someone investing in ASH, also called the spine hospital, would be in trouble. Indeed, even Steven Cathey, MD, Baptist Health's own former chief of medical staff and surgery section, had his privileges revoked as a result of his financial interest in ASH.

It's safe to say that Steven Cathey disagrees with the policy and with Baptist's treatment of him, but in lieu of the policy, it's not surprising that he was targeted. What is surprising, at least to some, is that Baptist not only revoked the privileges of Steven Cathey, but also decided to revoke his wife's privileges. Baptist administration notified gynecologist Janet Cathey three weeks before the opening of ASH that her privileges would be revoked upon ASH's opening. The puzzle is *why*. Janet Cathey has no connections to the spine hospital. "My husband and I have very different practices," said Dr. Cathey. "We have always kept our practices totally separate and have always made our practice decisions independently. We were stunned when I was informed that Baptist would apply the economic credentialing policy against me for his decision to invest in ASH. Privileges are traditionally based on education, competence, quality of care, peer relationships and continued education. The idea that privileges are based upon economic reasons and not quality of care is whole new ground."

Baptist answers the question of *why* in the language of the policy. They prohibit privileges for physicians with ownership or investment interest in a competing hospital. That goes for "those with any interest, directly or indirectly, in real or personal property used by a competing hospital." The policy states that "'Indirect ownership or investment' means a situation where between the practitioner (or the practitioner's immediate family member) and the competing hospital there exists an unbroken chain of any number of per-

sons or entities having ownership or investment interests between them." It goes on to define immediate family member as "husband or wife, birth or adoptive parent, child, sibling, step-parent, stepchild, stepbrother, stepsister, father-in-law, mother-in-law, son-in-law, brother-in-law, sister-in-law, grandparent, grandchild, spouse of grandparent and spouse of grandchild." In other words, according to Baptist's policy, Janet Cathey is guilty by association with – of all people – her husband. Lowman noted, "The 'indirect,' or family member provision is consistent with federal anti physician self referral laws as well as a standard provision on virtually all conflict of interest policies."

Steven Cathey's privileges are one thing. At least he has his work at ASH to fall back on. But Janet Cathey? She's in a pickle. Although she has privileges at St. Vincent, many patients can't see her there without paying increased costs. Dr. Cathey pointed out that even the new Any Willing Provider legislation doesn't help in this situation because it doesn't apply to self-funded insurance, which many of Dr. Cathey's patients have. Patients with self-funded insurance will have to go to another hospital to see Dr. Cathey or find another gynecologist, which defeats the very purpose of Any Willing Provider.

Referring her patients to her husband's investment interest isn't an option, either. "I could not then, nor can I now tell you anything about ASH. I have never considered doing surgery there. It's a specialty hospital, and gynecology is not the specialty," said Dr. Cathey.

Though they've taken action to enforce the policy against Janet Cathey, Baptist Health has yet to successfully revoke her privileges. After Baptist's administration notified Dr. Cathey of their decision to revoke her privileges, she asked the court to intervene. Dr. Cathey is now the plaintiff in a lawsuit against Baptist Health. She chose Mitchell, Blackstock, Barnes, Wagoner, Ivers & Sneddon, PLLC (MBBWIS) of Little Rock to represent her. Her motion is now before Judge Kilgore, who issued a temporary restraining order to prevent Baptist from revoking her privileges until the issue is decided. "Because of the court injunction, Dr. Cathey still has privileges at Baptist and is still able to use all of Baptist's products at this time," said Emily Sneddon of MBBWIS.

"Baptist is seeking to take away Dr. Cathey's privileges solely because of her husband's investment in the spine hospital. We are asking the court to find the economic credentialing policy illegal and therefore unenforceable and to issue a permanent order preventing Baptist from using the policy to revoke Dr. Cathey's privileges at Baptist Health." The law firm set out in

its briefs some reasons why they feel the policy should be ruled illegal. Among those, they say the policy illegally restrains free trade and impermissibly interferes with the doctor-patient relationship.

Dr. Cathey never thought she'd sue Baptist Health, her main turf for practicing medicine for two decades. "The decision to file suit was made with great anguish, and only after I was sure there was no other option," said Dr. Cathey. "During the 19 years that I have been in private practice in Ob-Gyn, I have built my practice around Baptist Health. Baptist was my personal choice for health care. My children were born at Baptist North Little Rock. That's where I took them when they needed stitches or had croup. Steve and I appeared in promotional ad campaigns and were in television commercials for Baptist. It was only a few years ago we chaired Bolo Bash, the annual Baptist Foundation fundraiser."

Aside from the emotional ramifications of the actions being taken against her, Dr. Cathey could not ignore how losing her Baptist privileges would affect her patients – and her livelihood. "The immediate issue was not simply a matter of hospital admissions. I have privileges at St. Vincent's, too. But as a stipulation to participate in insurance contracts with companies in which Baptist Health is the 'preferred provider,' I must have active privileges at a Baptist Health facility.

"When I filed suit, my primary concern was to protect the relationship I had established with these patients, many of which I'd seen for almost 19 years." Dr. Cathey has experienced a trusting doctor-patient relationship from both sides. Her patients place their trust in her, and she has, in years past, placed her faith in her own doctors. As a young child, Dr. Cathey suffered from serious heart complications. Even at age five, she can remember looking forward to seeing her heart doctor. Was the importance of the physician-patient relationship imprinted on her mind at age five? "I don't know," she said. "I've never really thought of it in those terms. I can remember how I did love to see Dr. Char as a child and looked at her as a security blanket in what could have been a terrifying situation," she recalled. "If it made a big deal to me to see my doctor as a child of five or six, it humbles me even more to think what my relationship means to a patient after following her for years, delivering her children, going through life's trials. Some confidences are hard for a patient to share with even one person in a lifetime, let alone with someone new every few years when insurance changes. It's an awesome responsibility to think you hold a person's trust."

The Arkansas Medical Society (AMS) disagrees with economic credentialing and the implications it has on the future of health care in Arkansas. "Physicians need to take a stand against economic credentialing before it's too late," said David Wroten, AMS executive vice president. "Unfortunately, some physicians think this is just about ownership in hospitals, so they think it will never impact them. They're wrong. In other states, hospitals have adopted policies prohibiting ownership interest in other ventures such as outpatient surgery centers, imaging centers, diagnostic labs and many other services. Janet Cathey's case has far reaching implications for all physicians."

Wroten went on to question Baptist's reasoning for the policy. He said, "Baptist Health states that this policy is intended to preserve access for patients. Do you believe Janet Cathey's patients feel protected?" AMS

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Arkansas Foundation for Medical Care

Preventive services vital for children, state, providers

State rates similar to national; more improvement needed

BY ROBERT HOPKINS, MD, and SAMIYA RAZZAQ, MD

One of the most valuable benefits of modern society is the availability of preventive health care for children. Timely health supervision and immunization provide the basis of prevention and early detection of disease for children and adolescents. Ensuring that children receive these important services has long been a national and statewide priority, but important goals have yet to be reached.

Protecting the youngest and most vulnerable members of society is our duty, not only as physicians, but also as adults and Americans. Our children and our future, as well as our clinical practices and incomes, will benefit from increasing the provision of preventive services that can decrease suffering and developmental problems, conserve vital health care funds, and save lives.

The American Academy of Pediatrics (AAP) Guidelines for Preventive Pediatric Health Care[1] were developed to aid physicians in providing appropriate preventive services to the children and adolescents under their care. The Arkansas Medicaid program recommends and covers screening and immunization at intervals in parallel with the AAP guidelines.[2]

In Arkansas, vaccination and well-child visit rates for children on ARKids First A (traditional Medicaid) and ARKids First B (an expanded income eligibility Medicaid waiver program) are on par with national rates, according to data from the Arkansas Foundation for Medical Care. (AFMC calculated the childhood immunization HEDIS measure for Arkansas Medicaid for state fiscal year 2004 by randomly selecting a sample of 2-year-old recipients.) However, neither Arkansas nor the nation has met national goals.

Infants and toddlers

Current AAP guidelines recommend that children have at least six well-child visits (WCVs) by 15 months of age. Overall WCV rates in this age group improved over 2001, but rates have not increased significantly since 2002. According to AFMC's 2004 HEDIS measurement, more than 94% of the children on ARKids First A and B had at least one WCV by 15 months of age, and about half of these children had at least 5 visits. There was no significant difference in WCV rates between African-American and Caucasian children or between girls and boys.

The percentage of children with at least 1 WCV did not vary significantly between the two programs; however, a significantly smaller proportion of children covered under ARKids First A (Medicaid) had at least 5 WCVs compared to those in the ARKids First B program (52% vs. 61.4%).

According to the CDC's Healthy People 2010 standards, more than 90% of children should have completed their primary childhood immunization series by age 2. While children in the ARKids First programs do not yet meet this goal, the immunization rate is higher than in previous years (see Figure 1). Individually, MMR and Varicella met the national standard. Single vaccine rates for DTaP, IPV, Hib and Hep B were in the 80-89% range. For the first time, the combination rate (4 DTaP, 3 IPV, 1 MMR, 3 HBV, 3 HiB, 1 VAR) and all individual vaccine rates have surpassed the national average.

Ages 3 to 6

Annual "check-ups are recommended for children from 3 to 6 years of age. Rates for a WCV in this age group were 37.5% for ARKids First A and 27.2% for ARKids First B, according to AFMC's 2004 HEDIS measurement. The ARKids First A rate is higher than in any of the previous 3 years; the ARKids First B rate is not significantly different from prior yearly rates.

WCVs in this age group peaked at age 5; this coincides with the immu-

The Arkansas Foundation for Medical Care is the Quality Improvement Organization for Medicare and Medicaid in Arkansas. AFMC works collaboratively with providers, community groups and other stakeholders to promote the quality of care in Arkansas through evaluation and education. For more information about AFMC quality improvement projects, call 1-877-375-5700.

nization and screening requirements prior to starting kindergarten. The rate for African-American children in this age group exceeds that for Caucasian and Hispanic children. Central Arkansas had the highest rate (41.0%) for ARKids First A, and Northeast Arkansas had the highest rate (30.0%) for ARKids First B.

Ages 12 to 19

Adolescents (12-19 years) are expected to have a yearly assessment. It is encouraging that rates for ARKids First A (25.4%) and ARKids First B (16.45%) have increased over the past 3 years. However, rates for both programs are significantly lower than for each of the earlier childhood groups.

Females in this age group are slightly more likely than males to receive preventive care. African-American adolescents had higher rates of WCVs than did Caucasian and Hispanic teens. Central Arkansas showed the highest rate overall.

Filling in the cracks

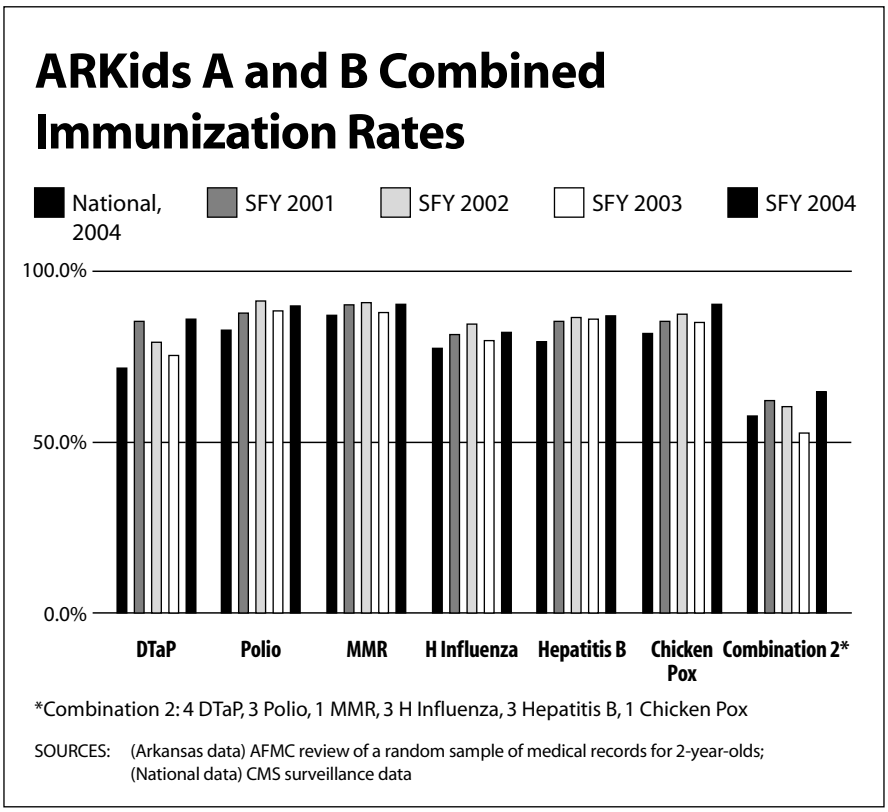
The difference in the health supervision visit rate between children and adolescents is striking. Regardless of ethnicity, well over half of young children had at least one WCV in state fiscal year 2004, while less than 25% of adolescents had a preventive care examination.

Getting adolescents to the office for preventive care can be a challenge. Also, limited experience, insufficient training and lack of screening tools can result in provider discomfort in screening and counseling adolescents regarding risky behavior. Using reminder/recall tools to get adolescents in to the medical office setting and providing tools and workshops[3] on screening this older age group may help increase preventive care at this critical stage of life.

Insurance coverage can determine the amount and type of medical care a child receives. In a study by Olsen, et al.[4], uninsured children were 15% more likely to have health care delayed when compared to fully insured children. Medicaid expansion programs, such as the ARKids First B program, can allow low-income families better and timelier access to health care. Primary care providers can help encourage families that might qualify to apply for the program so that more children can be covered.

Establishing "Wellness Clinics" or "Shot Clinics" on evenings and weekends can help working parents adhere to preventive care and immunization schedules without having to miss work. Sending reminders a few days before the scheduled WCVs and vaccinations may decrease the no-show rate.

These and other simple system changes could bring more children into the health care system while they are healthy and help them stay that way. The rewards for patients, families and providers will far exceed any effort and expense involved.



Dr. Robert Hopkins is an associate professor of medicine and pediatrics at the University of Arkansas for Medical Sciences and a clinical consultant for the Arkansas Foundation for Medical Care.

Dr. Samiya Razzaq is an assistant professor of pediatrics at the University of Arkansas for Medical Sciences.

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J. KELLEY **AVERY, MD**

Critical Review

The patient was a 23-year-old female with a troubling history of marked sexual promiscuity, multiple partners and treatment for vaginal infections. She was given birth control pills for about three months prior to this first visit to the OB/Gyn for care. Her pregnancy was diagnosed by the family care center in her area and she was thought to be about 13 weeks pregnant at the time. Due to the fact that she had no insurance, and in accordance with the agreement this center had with a major city specialist group, the patient was referred to the group for further prenatal and delivery services. A Pap smear was done by the physician at the family care center before her transfer and it was recorded as negative. On this first visit to the specialist, a small cyst was reported on the cervix which was thought to be a nabothian cyst. On the following visit this cyst was said to have enlarged but no biopsy or Pap smear was done. No further testing was done at any time during her pregnancy There was repeated reference to "friable cervix which bleeds easily" during the prenatal course.

The patient continued to complain of small amounts of vaginal bleeding following intercourse. This was repeatedly documented in the patient's record. No further diagnostic tests were done at this time, except for the six week post partum Pap smear which was "unsatisfactory due to blood." Protocol called for the examination by the specialist at three weeks post partum.

The patient delivered a healthy male infant and was examined by her OB/Gyn, as indicated by protocol, at three months post partum. The nurse at the family clinic did the indicated Pap smear at six weeks post partum but it was “unsatisfactory due to blood.” When the OB/Gyn specialist examined the patient at three months post partum there was found a friable mass at the cervical os, on which a biopsy was reported as adenoma carcinoma of the cervix. The patient was immediately referred to a specialist certified in gynecologic oncology. At a staging procedure, the cancer was said to be a stage 1-B2 with pelvic lymph node involvement. For the next two months, the patient was treated with concurrent chemotherapy and radiotherapy.

As usual, an early report was given that was more encouraging than was probably justified, given the pathology of this cancer. The patient continued to complain of abdominal and pelvic pain for which she was seen by her specialist. The pain was severe enough for her to need narcotics for its relief and multiple prescriptions were given for the drugs. A pelvic examination done under general anesthesia confirmed the presence of further pelvic node involvement. The prognosis was relayed to the family and the patient as very poor. Pain continued requiring increasing doses of narcotics.

The patient died just under a year after the "negative" Pap smear.

A lawsuit was filed within the appropriate time, charging delay of diagnosis of the cervical cancer and speculating that the result of treatment would have been different if the correct diagnosis had been made by the Pap smear at the initial visit to the family health clinic.

LOSS PREVENTION COMMENTS

Excellent expert witnesses were deposed by both sides in this case. The plaintiff witnesses contended that the chance of survival for this patient was significantly compromised by the failure to make the correct diagnosis at the beginning of this pregnancy. The nabothian cyst seen on the initial prenatal examination was not subjected to definitive study by smear or biopsy and should have been. The bleeding seen repeatedly during pregnancy should have been thoroughly studied and the cause discovered. Each of these occurrences were said to be deviations from the acceptable standard of care and each contributed to the patient's early demise.

The defendant position was essentially that even had the correct diagnosis been made eleven months earlier, the results would have been

the same and in addition, the father would have been denied a son by the necessary surgical abortion that would have followed the earlier diagnosis and the beginning of chemotherapy and radiation treatment. It is also worth noting that the physicians who took care of the patient throughout her pregnancy and post partum period were not brought into the suit as defendants.

Since the plaintiff case was almost entirely based on the alleged delay in treatment brought about by the failure to make an early diagnosis by the physicians in the family care clinic, the defense set up a test which consisted of a reading of the Pap smear slides by several cytologists who were in supervisory positions and who were not associated with this case. Ninety percent of the reviewing cytologists agreed with the initial reading, which was negative. The cytologist who read the smear had performed Pap smear examinations for about 25 years and had never had one of her readings proved wrong. She was very upset by this case and advocated settlement.

The two sides came together on the question of settlement and the law suit was settled within the six figure range. The reasoning was, in part, the fact that the baby survived and had to grow up without his mother.

This article was originally published in the September 2005 issue of Tennessee Medicine. Dr. Avery is a consultant with Stale Volunteer Mutual Insurance Company in Brentwood, TN. The Case of the Month is taken from actual Tennessee closed claims. An attempt is made to fictionalize the material in order to make it less easy to identify. If you recognize your own case, please be assured it is presented solely for emphasizing the issues in discussion.

AMS

Parsonage Turner Syndrome

STEVEN R. **NOKES, MD**
E. LEPHIEW **DENNINGTON, JR., MD**
MICHAEL T. **KING, MD**

History and Findings:

This 28 year old male presented with acute severe shoulder pain that had progressed to weakness. An MR scan revealed edema in both the supraspinatus and infraspinatus muscles characteristic of acute brachial neuritis (Parsonage Turner Syndrome).

Discussion:

Acute brachial neuritis was first described in 1943 by Spillane. Parsonage and Turner subsequently reported 136 cases, which thereafter became known as PTS.

The cause of PTS remains unknown, although a viral neuritis of the brachial plexus is most often complicated. A preceding infection occurs in 25% of cases and is reported following vaccination in 15%. Trauma as a cause is controversial.

Most patients present between the 3rd and 7th decades, but PTS has been reported from infancy to age 74. There is a striking male predominance.

Classically, PTS presents with sudden, acute, intense, burning shoulder pain quickly progressing to profound weakness. Over the coming weeks the pain diminishes and the weakness increases. The syndrome is self limited and strength increases over 2-3 months. Some patients may experience weakness for years. Typically, the longer the pain lasts, the longer the recovery.

Denervated muscles typically demonstrate diffuse increased signal intensity on T2 weighted images (made more conspicuous by the addition of fat saturation). This is felt to be secondary to increased extracellular water, probably due to an injury to the myelin sheath, which is also responsible for the nerve conduction delay.

Most commonly, the supraspinatus and infraspinatus muscles are involved (suprascapular nerve innervation). This should prompt a search for a suprascapular notch ganglion cyst, which can cause a similar MR appearance. The onset of symptoms is usually insidious with this entity.

PTS is uncommon, but not rare and is reported in 2 per 100,000 people.

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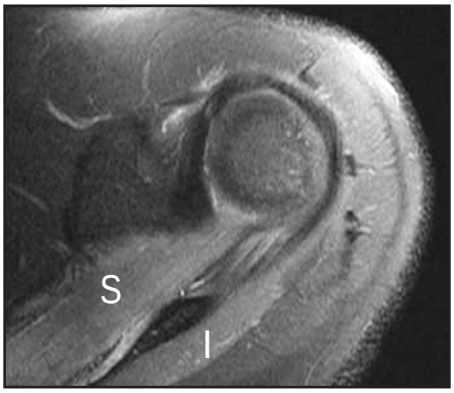
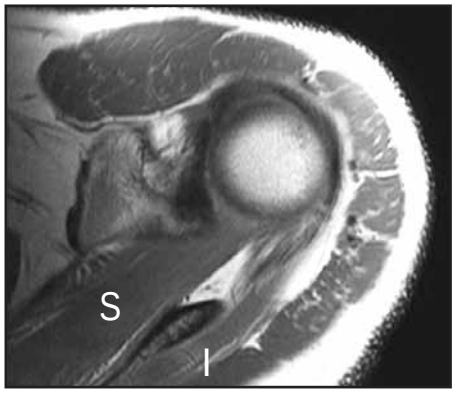


Figure 1a



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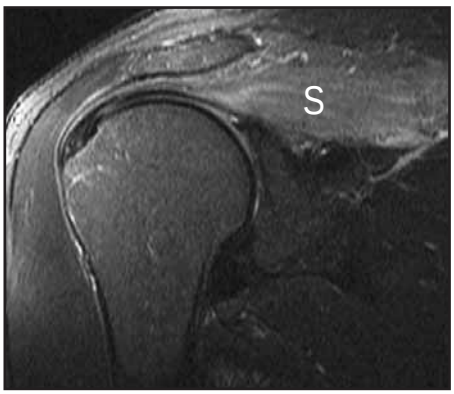


Figure 1c

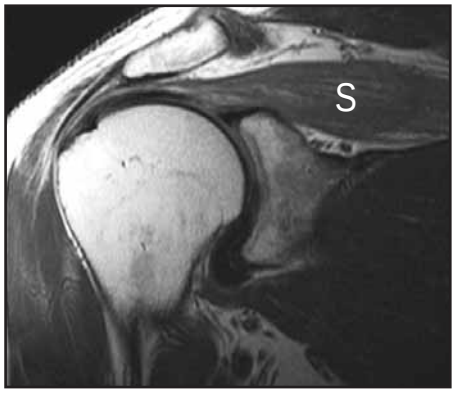


Figure 1d

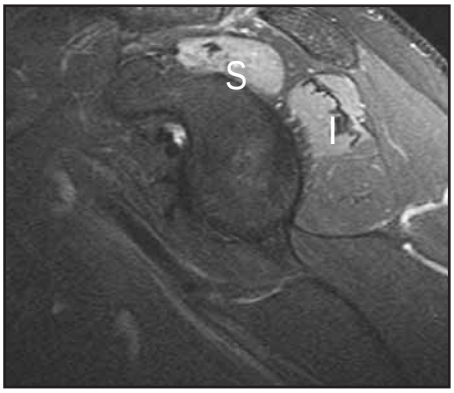


Figure 1e

Figure 1: Axial (a), coronal (c) and sagittal (e) T2 fat saturated FSE (2,500/63) and axial (b) and coronal (d) T, (600/20) images of the shoulder reveal increased (bright) signal in the supraspinatus (s) and infraspinatus (i) muscles, the findings are more conspicuous on the T2 weighted images.

Meet our **Members**

By Casey L. **Penn**

Clay W. Ferguson, MD

Clay W. Ferguson, MD, has a passion for many things. He delights in history, family medicine, and the people of Nashville, Arkansas. Although he grew up in Little Rock, Dr. Ferguson has always wanted to practice in the Nashville area. Since 2002, he has accomplished that goal through his private family medicine practice there. "I relocated to Nashville from Springhill, Tennessee. My mother and father are from the Nashville area, and I always hoped to one day come back and practice in Nashville," said Dr. Ferguson.

Dr. Ferguson's interest in medicine dates back to his college days in Arkadelphia. During that time, he worked as an emergency medical tech. "The opportunity to work with emergency room physicians in Arkadelphia led me to pursue a career in medicine," said Dr. Ferguson, who went on to attend medical school at UAMS.

His emergency room experiences served him well when from 1994-1997, he served on active duty in the U.S. Navy. Part of his service was that of battalion medical officer with the U.S. Marine Corps. One day, his emergency skills were duly tested when during a deployment to Albania, a marine was shot. "I was first on the scene to provide care and stayed with the Marine for the next 48 hours. I also worked closely with the Albanian physicians," recalled Dr. Ferguson, whose bravery and service in that instance won him a Commendation from the U.S. Navy.

After his service in the Navy, Dr. Ferguson completed his residency at Texarkana's Area Health Education Center – Southwest. He then entered private practice in Springhill, Tennessee, where he practiced until relocating to Nashville.

Dr. Ferguson is a Board Certified Family Physician through the American Academy of Family Physicians, and is working on his goals for the Nashville community. As part of his goal to provide quality care to people in his area, Dr. Ferguson is helping with efforts to establish a model community hospital in Nashville. He is part of a Howard Memorial Hospital Foundation Special Events Committee that is working to establish funds that will ultimately pay for a new hospital. "The cornerstone of any community is a strong hospital," said Dr. Ferguson. "We have a 25-bed community hospital that is sufficient for our current needs. However, the building is 65 years old and will not meet the needs in the near future. Right now we are working on constructing a new, critical access hospital.

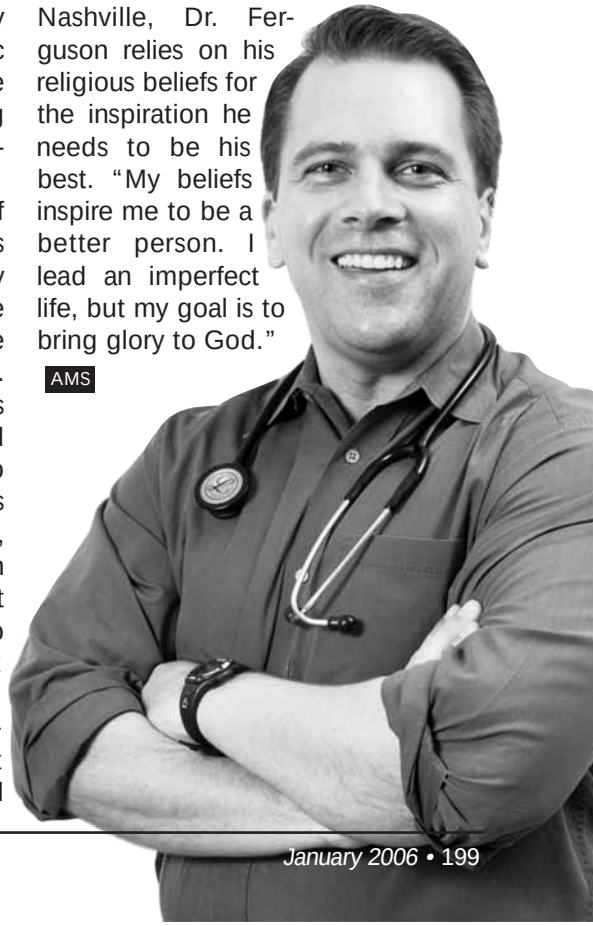
"I also look forward to establishing an indigent clinic, which will provide charitable care for our citizens in need. There are many people in this area who through their circumstances, have found themselves in need of quality, compassionate medical care. It is my hope that through the indigent clinic these people will be identified." The indigent clinic is still in early planning stages and will be a collaberative community effort.

Dr. Ferguson also enjoys a love of history, which he credits, in part to his father, John L. Ferguson, who recently retired from his post as Arkansas state historian. "My father encouraged the study of history at a young age. However, I grew to appreciate this more through my own research and collections," said Dr. Ferguson, who collects military artifacts. His hobby has led him to study historical architecture, particularly 19th Century and mid-20th Century designs of Frank Lloyd Wright and Fay Jones. "My interests are not so much limited to Frank Lloyd Wright and Fay Jones, but to the sweeping changes that encompass the 20th century – among them, technology, art and architecture." He also studies, and even participates in historical preservation and restoration. "I took the plunge in restoring a 1910 Colonial Revival house – an unfortunate consequence of watching too much HGTV. I foolishly have opted to live here for the past two years while restoring it [the house]."

Dr. Ferguson learns more about history from his own patients. He is thankful for the opportunity to treat and help all sorts of patients, but he is particularly captivated by the geriatric population. "I enjoy my geriatric patients. They have lived through a period of American history that interests me. They have taught me a lot about life in rural Arkansas," said Dr. Ferguson.

Everyone has something that keeps him going. For Dr. Ferguson, it's his Christian faith. As he works hard at caring for his patients, restoring a piece of history, and building a better health care community in Nashville, Dr. Ferguson relies on his religious beliefs for the inspiration he needs to be his best. "My beliefs inspire me to be a better person. I lead an imperfect life, but my goal is to bring glory to God."

AMS



Spine Bone Densitometry

in Asthmatic Children Treated with High Dose Corticosteroids: Correcting for Racial Discrepancies

S. Bruce **Greenberg, MD**; Pippa M. **Simpson, PhD**; Stacie M. **Jones, MD**;
Sharla **Holloway, BA**; Joanna J. **Seibert, MD**

Arkansas Children's Hospital and University of Arkansas for Medical Sciences

Key words: asthma, children, bone density, osteoporosis, corticosteroids

Abstract:

Purpose: Our hypothesis is that the use of standards based on Caucasian children will underestimate the incidence of abnormal bone density in African American children.

Materials and Methods: Eighty-two African American and 80 Caucasian asthmatic children classified as high-dose inhaled corticosteroid users comprised the study population. Bone mineral density measurements were compared to reference standards, based on Caucasians, to calculate Z-values. Regression analysis was used to compare Z-values derived from the race-specific and Caucasian standards for 32 African American children. The derived regression analysis equation was then applied to the entire African American population to determine the incidence of abnormal bone density.

Results: The asthmatic Caucasian mean spine bone density was significantly less than the normal standards ($p < .001$), but the African American mean spine bone density was not, despite the high-dose steroid use. Using the Caucasian standards, Caucasians were significantly more likely to have abnormal bone density detected ($p < 0.015$). Regression analysis of the 32 children with available race specific standards resulted in the following equation: Z African American== Z Caucasian-0.86. The number of African Americans with abnormal bone density detected using the regression equation was not significantly different than the Caucasian children ($p > 0.12$).

Conclusions: Asthmatic African Americans treated with high-dose inhaled corticosteroids had denser bones than Caucasians. Caucasian standards can be adjusted using a regression equation.

Introduction:

High-dose steroid therapy is effective for the treatment of asthma in children. However, high-dose inhaled corticosteroids reduce bone accretion and can actually result in a decrease in bone density in children. [1, 2] Dual-energy bone absorptiometry (DEXA) is an accurate method of determining bone density, but standards to compare bone density in children are limited. Bone density is greater in African American than Caucasian children. [3] The use of standards derived from a Caucasian population could result in underreporting abnormal bone density in African American children. Our purpose was to correctly assess bone density in both asthmatic African Americans and Caucasians treated with high-dose corticosteroid therapy.

Patients and methods:

The study included 162 asthmatic children classified as high-dose inhaled corticosteroid users by the National Asthma Education and Prevention Program Clinical Practice Guidelines [4] who had spine DEXA performed at a tertiary pediatric hospital between February, 14, 1995 and August 29, 2001. The study included 82 African American children and 80

Table 1: Sex and race demographics in 162 children

Race	Number	Mean age (years)	Standard deviation (years)
Caucasian	80	9.6	4.6
African American	82	10.0	4.9
Male	88	9.8	4.6
Female	74	9.8	4.9

Table 2: Bone density Z-values using common standard

Race	Number	Mean Z-value	Standard deviation (years)
Caucasian	80	-0.57	1.19
African American	82	0.18	1.72

Caucasian children. The children ranged from one to 20 years of age (mean age 9.8 years, s.d. 4.7 years). The study included 88 males (47 African American and 41 Caucasian) and 74 females (35 African American and 39 Caucasian).

The classification of each child as a high-dose inhaled corticosteroid patient was determined by chart review of an asthma database. Specific drugs and doses vary for patients so the predominant drug preparation and dose for the year preceding DEXA was used to classify the level of corticosteroid use. Accurate assessment of oral corticosteroid use was not possible from chart review and thus was not captured.

The first spine DEXA was used for the study in children who had multiple examinations. DEXA examinations were performed on a Lunar DPX-L unit (Lunar, Inc., Madison, WI) between February 14, 1995 and September 14, 1999 on 96 children. DEXA examinations were performed on a Hologic QDR 4500 Acclaim Series Elite Unit (Hologic, Inc., Bedford, MA) between November 10, 1999 to August 29, 2001 on 66 children.

Bone densitometry measurements were normalized for age and sex by calculating Z-values based on the formula: Z = [measured bone density - expected bone density] /s.d. The expected bone densities constitute the standards and were provided principally by the Lunar and Hologic corporations. Lunar supplied normal values for spine bone density in children at least five years old. In addition, polynomial regression analysis modeled in terms of weight and sex was performed on DEXA examinations performed on 91 normal children of hospital employees aged eight days to 18 years at Arkansas Children's Hospital to extend the normal standards to include younger children. [5] The standards used for calculating Z-values on the Lunar unit were based predominantly on Caucasian children.

Children under 12 years of age or 75 pounds had spine DEXA examinations performed using a low dose pediatric technique on the Hologic QDR 4500 Acclaim Series Elite unit. A standard technique is used in older, heavier children. Spine DEXA Z-values were generated from standards supplied by Hologic. The automated values were complete for Caucasian children, but incomplete for African Americans. Racial specific spine bone density standards were available for 32 African American children.

Normal bone mineralization is defined by Z values greater than -1. Osteoporosis is defined by Z values -2.5. Osteopenia is defined by Z values -1 and greater than -2.5. For purposes of the study, abnormal bone density was defined as Z -1. Caucasian-based standards were used to calculate Z-values for all 162 children. Race-specific standards were used to calculate Z-values for 32 African American children. Regression analysis comparing the two sets of Z-values was performed to determine a regression equation that would correct Z-values for all African American children and the regression equation was then applied to all.

The Exact Fisher-Freeman-Halton test was used to compare the African American and Caucasian sub-populations to standards and the differences in the incidence of abnormal bone density. Linear regression analysis with a Pearson correlation test was used in determination of the effect of the variable race and to derive a formula correcting the common standard for African American children. The hospital institutional review board approved the study.

Results:

The mean Z-values and standard deviations for African American children and Caucasian children, using common standards derived from Caucasian children, are summarized in Table 2. The population of African American children bone density was not significantly different from the standards despite the exposure to high-dose steroids. Caucasian children's bone density was significantly lower than the standards ($p < .001$).

The number and percentage of children with abnormal bone density detected by comparing spine bone density to common standards are summarized in Table 3. Thirty-six percent of Caucasian children and only 20% of African American children had abnormal bone density detected using the common standards. The incidence of abnormal bone density in Caucasian children was significantly greater than African American children using the common standards ($p < .015$).

Spine bone density Z-values for 32 African American children were calculated using both a common standard and a racial specific standard for African Americans. The following equation was derived by regression analysis: Z African American = Z Caucasian- 0.86. The regression equation was applied to all African American children and the number with abnormal bone density re-evaluated. The results are summarized in

Table 3: Incidence of abnormal bone density using common standards

Race	Number	%
Caucasian	29	36
African American	16	20

Table 4. The incidence of abnormal bone density in African American children was 46% using race-adjusted measurements. The difference in incidence of abnormal bone density between African American children and Caucasian children in Table 4 is not significant ($p > 0.12$).

Discussion:

Abnormal bone density is a well-known adverse response to high-dose corticosteroid therapy of asthmatic children. [1, 2] Effective therapies for patients with osteoporosis are available to prevent complications such as fracture. [6] DEXA provides accurate measurement of bone density in children as well as adults. Bone density normally increases with age in children and requires comparative standards to detect abnormal bone density. Males have greater bone density than females. African Americans have been reported by many authors to have greater bone density than Caucasians, [7-12] but some authors have not found a difference. [13, 14] Our study was in agreement with prior reports that African American children have intrinsically greater bone density than Caucasian children. Standards for children, especially African American, children may be incomplete.

The World Health Organization uses a Z-value of 1.0 to indicate osteopenia in post-menopausal women. We used the same standard for our study despite the difference in populations since we are unaware of any existing standard for children. The bone density values determined by the Hologic and Lunar corporations units are not identical. Normal reference standards are developed for both companies to allow Z-values to be calculated. Our study confirmed the association of osteopenia and osteoporosis with high-dose inhaled corticosteroid use in asthmatic children. Caucasian standards applied to African American children significantly underestimated the incidence of abnormal bone density in this population. Ideally, race specific standards should be available for all children to ensure accurate interpretation of spine bone density. If race specific standards are not available, the regression equation: ZAfrican American= ZCaucasian-0.86 can compensate for standards derived from Caucasian children.

Table 4: Incidence of abnormal bone density using race specific standards

Race	Number	%
Caucasian	29	36
African American	38	46

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Anesthetic Management of Down Syndrome: A Review

SHIREEN **MOHIUDDIN, MD**; JAMES F. **MAYHEW, MD, FAAP**

Key Words: Anesthesia, Syndrome, Down Syndrome

Introduction

Down syndrome is the most common congenital abnormality found in children, with an incidence of 6.3 per 10,000 live births. [1][1] These children have numerous medical concerns and therefore present many challenges to the anesthesiologist. [1] Anesthesia and surgery may carry a higher risk for people with Down syndrome than than for those who do not have Down syndrome. [1] This is a review of Down syndrome containing important concerns for the anesthesiologist.

Respiratory System and Airway

Children with Down syndrome have a high incidence of abnormalities of the respiratory system most commonly related to their mid-face hypoplasia. Obstructive sleep apnea (OSA) is frequent [3] and results from a large tongue, mid-face hypoplasia, large tonsils and adenoids, as well as a short, broad neck. These factors predispose patients with Down syndrome to early airway obstruction during inhalation induction. The mid-face hypoplasia also predisposes the induction and difficult anesthesia mask fit. An increased incidence of subglottic stenosis is also a common finding. [3] Because of this subglottic narrowing, there is often a need for an endotracheal tube of a smaller size than may have been predicted. A leak pressure of less than 20 Torr is indicated to help reduce postoperative subglottic edema. [4] Thirty to forty percent of these children will have postextubation stridor following prolonged ventilation, opposed to 2% in other children. [5] Therefore, a short course of steroids prior to extubation may be beneficial. [2]

Postoperative recovery is often complicated by upper airway obstruction and pulmonary problems such as Atelectasis. Postoperative respiratory tract infections also occur more frequently in these children and they require close vigilance for adequate treatment. [6.7] Up to 23% of children with Down syndrome have a history of recurrent respiratory infection due to a relative immune deficiency. [6]

Cardiovascular System

Congenital cardiac lesions are frequently found in up to 40% of children with Down syndrome. [8] The most common lesions include ventricular septum defect, atrial-ventricular canal deficits and atrial septum defect. Fifty percent of adults with Down syndrome have mitral valve prolapse and 10% have aortic regurgitation. [8] Children with Down syndrome have clinically high pulmonary vascular resistance [9] due to L→R shunts, which increase pulmonary blood flow and may result in pulmonary hypertension. The presence of higher PVR may also result from chronic hypoxemia secondary to frequent respiratory tract infection, upper airway obstruction and OSA. [10]

When compared to other groups, children with Down syndrome undergoing cardiac surgery have a higher mortality and morbidity rate. [11] The duration of their stay in the ICU as well as their total hospital time tends to be longer than for other children undergoing similar surgery; furthermore, many patients with Down syndrome also need longer amounts of time with postoperative ventilation. [11]

Central Nervous System

All children with Down syndrome have a mild to severe degree of mental retardation; however, despite their decreased IQ, they are generally friendly and gregarious. Abnormal muscle tone and hypotonia is found in up to 75% of children with Down syndrome. Hypotonia of the airway affects the patient's ability to maintain an adequate airway following anesthesia. Epilepsy occurs in 14% of these children. [12] Strabismus is also common (50%) and requires surgical correction. [13]

Immunity and Hematology

Children with Down syndrome have an increased susceptibility to infections, particularly of the respiratory tract. This is believed to be related to a relative immune deficiency. [14] Polycythemia is found in the neonatal period, and leukemia is 20 times more common in children with Down syndrome than in the general population.

Endocrine System

There is an increased incidence of hypothyroidism, and up to 40% of adults with Down syndrome are found to be hypothyroid. [15,16] Although children in this group appear to have a lower incidence than in the adult,

preoperative thyroid function studies are not needed on a routine basis. If a child with Down syndrome is found to be hypothyroid, treatment should be initiated with thyroxine. This therapy appears to have little or no impact on intellectual performance. [17]

Gastrointestinal System

The association of duodenal atresia with Down syndrome was first described in 1949. [18-20] Hirschsprung disease and gastroesophageal reflux are more common in children with Down syndrome. These children often present for emergency surgery secondary to obstruction. [21]

Atropine in Down Syndrome

Early studies suggested that children with Down syndrome are sensitive to the mydriatic and heart rate response to atropine; [22-24] however, more recent studies have not supported this finding. [25,26]

Atlantoaxial Instability

There is a high incidence of atlantoaxial instability in Down syndrome. [27,28] The incidence varies from 12% to 32%. This instability is secondary to laxity of the transverse atlantal ligament, which is responsible for holding the odontoid peg closer to the anterior arch of the atlas. Subluxation of this joint may predispose to spinal cord compression. The normal atlantoaxial interval (the distance between odontoid peg and anterior arch of atlas) on a lateral cervical spine X-ray is <4.5 mm. Patients with distance <6 mm are asymptomatic, but patients having >7 mm are almost always symptomatic. [29] Hamstring tightening and abnormal gait, universal clumsiness, walking fatigue or new preference for sitting games, suggest cervical cord compression and needs immediate evaluation. Physical signs which are often present when there is cord compression include hyperreflexia, clonus, quadriparesis, exterior plantars, neurogenic bladder, hemiparesis, ataxia and sensory loss; when these symptoms present, farther further evaluation is mandated.

The Committee on Sports Medicine of American Academy of Pediatrics in 1995 [30] and Special Olympics Committee in 1982 [31] recommend that children with Down syndrome have cervical spine X-rays prior to participation in any sporting event, and that evidence of increased laxity will stop further athletic participation in events sponsored by these organizations. This atlantoaxial instability is of concern to the anesthesiologist because manipulation of the head during surgery may increase the risk of spinal chord compressions. However, there is some debate about the routine use of neck X-rays in children with Down syndrome. X-ray criteria for atlantoaxial instability are not predictive of a tendency to dislocation [32]. Davidson noted that dislocation was preceded by neurological signs and symptoms (28/31 cases). Some authors [33-35] suggest that X-rays are mandatory in all children, while others [6, 36] suggest that unless there are abnormal neurologic findings, the avoidance of forced flexion and the extension or rotation of the patient's neck under anesthesia should be sufficient. If there are neurologic symptoms prior to surgery, then preoperative X-rays and orthopedic and / or neurosurgical referrals are mandatory.

Conclusion

In conclusion, preoperative management of a child with Down syndrome should take into account the presence of multidisciplinary diseases and the increased risk for perioperative complications.

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PEOPLE + EVENTS

Obituaries

LITTLE ROCK – **Dr. FRANK GUS KUMPURIS,** one of Little Rock's outstanding surgeons, died on November 2, 2005. He was born on June 15, 1917, the son of the late Gus and Katherine Kumpuris.

He is survived by his wife, Kula Makris Kumpuris of Little Rock; two sons, Dean Kumpuris, MD and his, wife Mary of Little Rock, and Andrew G. Kumpuris, MD and wife, Nancy, of Little Rock; one daughter, Katherine Ann Trotter and husband, Scott of Little Rock; and eight grandchildren. He was preceded in death by one granddaughter, Anne Kumpuris, who died in 1997.

Dr. Kumpuris was a graduate of Tulane University and Tulane University Medical School and was the chief surgical resident at St. Mary's Hospital of the Mayo Clinic. He was a Fellow of the American College of Surgery and was the Chief of Surgery at St. Vincent Infirmary in Little Rock. Dr. Kumpuris was owner of Bensky Furs of Little Rock and was co-owner of MK Distributors of Pine Bluff. He was appointed to the University of Arkansas Board of Trustees by Governor Bill Clinton and also served on the board of the Arkansas Symphony and was president of the Parent and Alumni Board at Washington and Lee University. Dr. Kumpuris was an active part of the congregation of St. Mark's Episcopal Church for half a century, donating his time, talents and funds. He was an excellent golfer, an avid duck hunter and enjoyed traveling with his wife, Kula. Frank helped countless people pursue their dreams.

The family would like to acknowledge the loving care of St. Vincent's HomeCare, especially Pat Sims, Dorothy Jackson and Renee Modica, as well as Arkansas Hospice. Memorials in lieu of flowers should be made to St. Mark's Episcopal Church in Little Rock, Easter Seals of Arkansas or to the charity of choice.

PINE BLUFF - **Dr. M.C. Milligan** was born in Manila, Arkansas, on April 25, 1932, to Clyde Milligan and Hettie Hutton Milligan. He attended the University of Arkansas, Fayetteville and the University of Tennessee College of Medicine, where he graduated in 1957. In June of 1953 he married Elva June Waddell, his high school sweetheart. After medical school, he entered the United States Army where he did a one-year rotating medical internship and served until 1961. Dr. Milligan settled in Campbell, Missouri, where he practiced medicine until entering a residency in radiology at Baptist Memorial Hospital in Memphis, Tennessee, in July 1962. After finishing his residency, he became an instructor in the Department of Radiology at UAMS, where he practiced until his retirement.

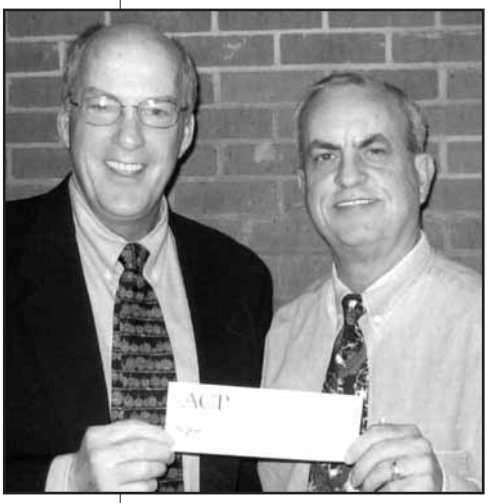
After retirement he became interested in wildlife photography, becoming accomplished enough to have numerous photographs published in national publications including Nature Photographer Magazine and Natural History Magazine, with several photography-related articles published in Nature Photographer Magazine.

Dr. Milligan is survived by his wife, Elva June Waddell Milligan, and three children, Monte Brent Milligan of Pine Bluff, Dr. Michael L. Milligan of Hot Springs and Leanna Milligan Johnson of Dickson, Tennessee. He is also survived by three grandchildren. He was preceded in death by his parents, one son, Patrick W. Mill-igan, and two sisters, Betty Milligan Huitt of Cheyenne, Wyoming, and Patsy Milligan Shownes of Paragould, Arkansas.

Dr. Milligan was a member of the American College of Radiology, American Medical Association, the Arkansas Medical Society, Alpha Omega Alpha Honor Medical Society and is a founding member of The North American Nature Photography Association.

Any memorials should be made to the charity of your choice.

Awards & Recognition



AMF Receives Donation

Patrick Savage, MD, *(right)* Secretary-Treasurer of the Arkansas Chapter of the American College of Physicians (PHC) presents a donation check for $1,000 to J.R. Baker, MD, the Medical Director of the Arkansas Medical Foundation (AMF). The AMF is a 501 (c) tax-exempt corporation founded by the Arkansas Medical Society to fund the; activities of the Physicians Health Committee of the AMS. The AMF and the PHC serve the AMS, the Arkansas State Medial

Board, and the public the in identification, intervention, arranging for treatment and re-entry of physicians with dependency as well as psychological, psychiatric and organic impairment issues. The AMF is also involved with education of Arkansas physicians and the public in the field of addiction medicine and related topics. The AMF may be contacted at its Little Rock office at (501) 224-9911,arkphc@aristotle.net or by Dr Baker's cell phone (501) 940-8863.

New Treatment for Breast Cancer

A breast cancer treatment, developed by UAMS surgeon V. Suzanne Klimberg, MD, has been shown in a clinical trial to reduce the need for repeat surgery following lumpectomy by 86%.

Dr. Klimberg is the principal investigator of a multiphase clinical trial for the new procedure called Radiofrequency Ablation (RFA)-Assisted Lumpectomy. The findings of the study were presented recently at the American College of Surgeons 91st Annual Clinical Congress in San Francisco.

Senator Wooldridge Awarded

State Senator Tim Wooldridge from Paragould recently received the Arkansas Hospital Association's (AHA) Statesmanship Award for 2005.

Wooldridge was selected to receive the award in recognition of his contributions to and leadership on Arkansas hospital and healthcare issues.

"I am flattered to receive this award," Wooldridge said. "I am especially proud because of the lofty, noble work of hospitals in delivering excellent healthcare to citizens of our state," Wooldridge said.

Wooldridge, who is running for Lieutenant Governor, served four terms in the Arkansas House of Representatives before being elected to the state senate in 1999. He chairs the Revenue and Taxation committee, and is a member of the Agriculture, Forestry and Economic Development committee; the Senate Interim Committee on Children and Youth; the Efficiency Committee, the Arkansas Legislative Coun-cil; and the Legislative Joint Auditing Committee.

Physician Recognition Award

We would like to congratulate the following AMS members who received the AMA Physician Recognition Award for their participation in continuing medical education (CME) opportunities.

In November: **Drs. Katherine Baltz, Jay Holland and Kenneth Martin** of Little Rock; **Dr. Lawrence Bigongiari** of Texarkana; **Dr. Charles Craft** of Greenwood; **Dr. Shailaja Pulisetty** of Newport; **Dr. John Redwine** of Fayetteville; and **Dr. David Taylor** of Jacksonville. AMS

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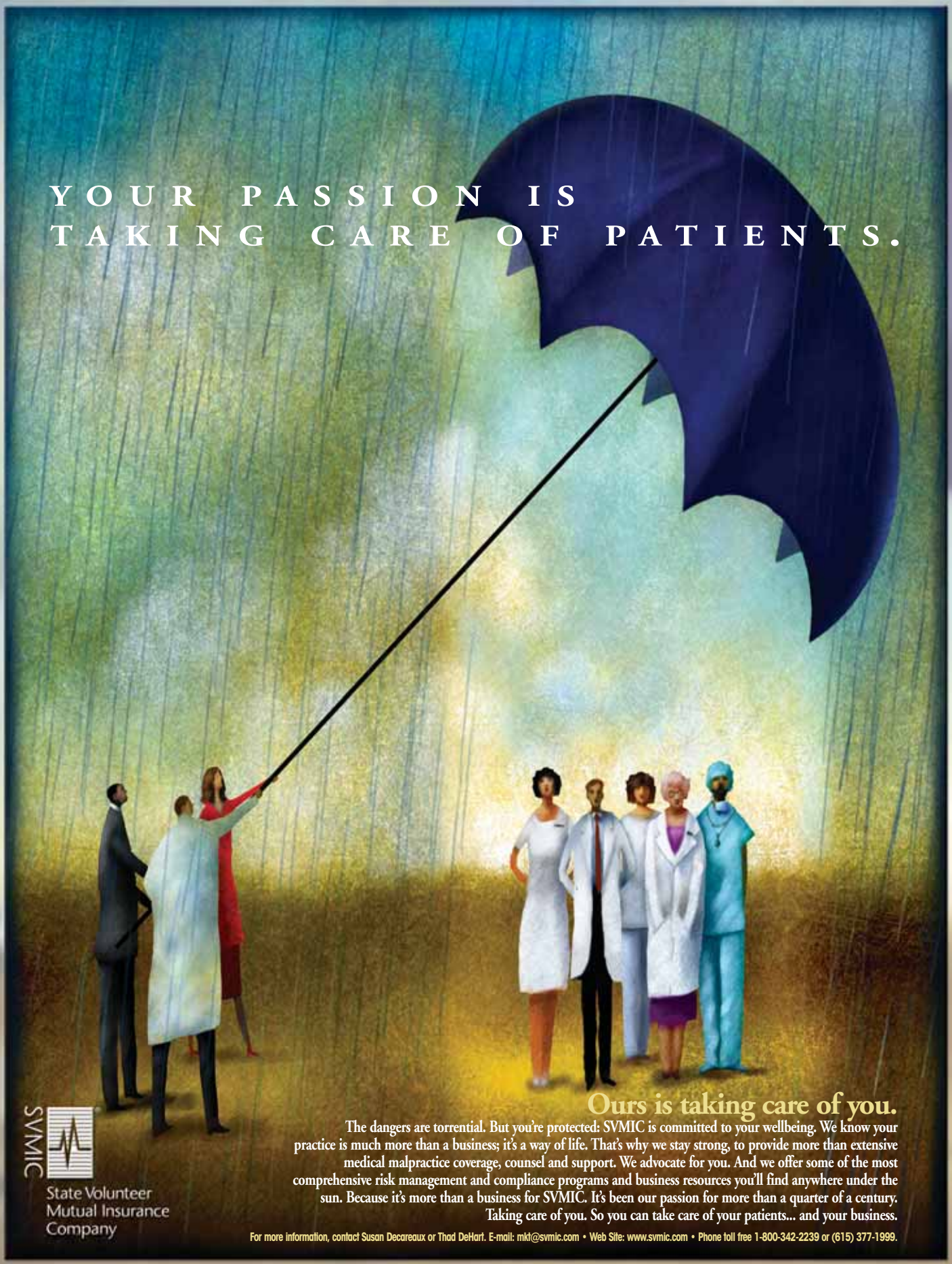
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The dangers are torrential. But you're protected: SVMIC is committed to your wellbeing. We know your practice is much more than a business; it's a way of life. That's why we stay strong, to provide more than extensive medical malpractice coverage, counsel and support. We advocate for you. And we offer some of the most comprehensive risk management and compliance programs and business resources you'll find anywhere under the sun. Because it's more than a business for SVMIC. It's been our passion for more than a quarter of a century. Taking care of you. So you can take care of your patients... and your business.
For more information, contact Susan Decareaux or Thad DeHart. E-mail: mkt@svmic.com • Web Site: www.svmic.com • Phone toll free 1-800-342-2239 or (615) 377-1999.
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