Dr Younes Bakri, who recently joined WVU Healthcare, is an internationally recognized leader in the field of gynecologic oncology. He is also well-known as the inventor of the “Bakri Balloon” – a device now used in Labor & Delivery units around the world. These medical balloons, inflated in the uterus, control excessive post partum bleeding, the number one cause of maternal mortality in many countries.

Dr Bakri brought his highly regarded skills and creativity to WVU when he joined the Department of Obstetrics and Gynecology and the Mary Babb Randolph Cancer Center as Senior Surgeon in Gynecologic Oncology. He welcomes consultations and patient referrals.

For more information or to refer patients to Dr. Bakri, call 304-293-4500

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**SEMINARS**

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Friday, Sept. 9  
Auditorium-Robert C Byrd Health Sciences Center of West Virginia University-Charleston Division  
Charleston, WV

**Nursing Research Conference**  
Thursday and Friday, Sept. 23-24  
Charleston Marriott Town Center  
Charleston, WV

**Nurse Anesthesia Conference**  
Saturday and Sunday, Sept. 25-26  
Charleston Marriott Town Center  
Charleston, WV

**APIC-WV Association of Professionals in Infection Control**  
Thursday and Friday, Sept. 30-Oct. 1  
Charleston Civic Center  
Charleston, WV

**Pediatric Acute & Critical Care Conference**  
Friday, Oct. 8  
Auditorium-Robert C Byrd Health Sciences Center of West Virginia University-Charleston Division  
Charleston, WV

**Vascular/Endovascular Conference**  
Friday and Saturday, Oct. 15-16  
The Greenbrier Resort  
White Sulphur Springs, WV

**WV Geriatric Society**  
Thursday, Oct. 21  
Stonewall Resort, Roanoke, WV

**American College of Physicians**  
Thursday through Saturday  
Oct. 21-23  
Stonewall Resort, Roanoke, WV

**Forensic Death Investigation**  
Monday through Thursday, Oct. 25-28  
Days Inn  
Flatwoods, WV

**WV Rural Health Conference**  
Wednesday through Friday, Oct. 27-29

**2nd Annual Jr. Fellows OB/GYN Symposium**  
Saturday, Nov. 6  
Charleston Marriott Town Center  
Charleston, WV

**WV Conference on Infectious Diseases**  
Thursday and Friday, Nov. 18-19  
Charleston Marriott Town Center  
Charleston, WV

**30th Cardiovascular Conference at Snowshoe**  
Friday through Sunday, Jan. 28-30, 2011  
Snowshoe, WV

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Sept. 2 and 15; Oct. 4 and 13

**Advanced Trauma Life Support (ATLS) – Provider**  
Sept. 13

**Advanced Trauma Life Support (ATLS) – Auditor**  
Sept. 13

**Advanced Trauma Life Support (ATLS) - Reverification**  
Sept. 14

**Basic Life Support (BLS) – Health Care Provider**  
Sept. 14 and 28; Oct. 12 and 26

**Pediatric Advanced Life Support (PALS) - Renewal**  
Sept. 16; Oct. 7 and 14

**Pediatric Advanced Life Support (PALS) – Provider**  
Sept. 22 and Oct. 27

**Sepsis Simulation**  
Sept. 1 and Oct. 13

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Sept. 20 and Oct. 25

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August 27-29

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“Health Information Technology: New Opportunities for Funding and Technical Assistance in HIT Adoption”

“The Race for Congress in 2010: Hear from the Candidates in West Virginia’s Key Congressional District Races”

“The Supreme Court Reviews the Med-Mal Cap: Will Reform Hold? Understanding the Impact of the Court’s Decision”

“Health System Reform: Understanding the New Law, Its Implementation and How to Prepare Your Practice for the Future”

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August 27-29
CMOM Course
Sept 10-11, 17-18

Cover photo courtesy of Joanne C. Sullivan
“Would you please tell me which way I ought to go from here?”

“That depends a great deal on where you want to get to,” said the Cat.

“I don’t much care where” — said Alice.

“Then it doesn’t matter which way you go,” said the Cat.

“— So long as I get somewhere,” Alice added as an explanation.

“Oh, you’re sure to do that,” said the Cat. “If you only walk long enough.”

_Alice In Wonderland_  
_Lewis Carroll_

The media is quick to assign special designation to a time period distinguishing the features of its visage. Thus 2010 had been the year of crises—to wit, energy crisis, healthcare reform crisis, environmental crisis, and an economic crisis. I intend to propose the decade of 2010 be declared the _Age of Entropy_.

One hundred and twenty years ago Rudolf Clausius was the first to proclaim the second law of thermodynamics that the energy of the universe is constant; the entropy of the universe goes to a maximum.

Our modern formulation of the second law of thermodynamics recognizes that the process going on in the material world has a built-in tendency toward molecular disorganization. The disorganization of mixed-upness is quantitatively measured by entropy.

If the entropic factors were the only principles involved, the surface of our planet would have decayed long ago into a homogenized, uninteresting uniform state. Fortunately, there is another principle less well understood which indicates that by doing work one can counter the disorganization of the second law and cause the organization of the system.

Usually lay people have a pretty good sense of what energy is, ordered or not. So they don’t have any problem grasping the first law of thermodynamics, which says that total energy, ordered plus disordered, is conserved, meaning that its numerical value does not change with time. But when it comes to the second law of thermodynamics, then people often have problems. This may be because there are many possible statements of the second law.

If you choose any two of them, they often sound like they are talking about completely different things. And often they also contain some technical-sounding notions, such as the word _entropy_ for instance. But entropy is simply a fancy word for “disorder”. It is a quantitative measure for this extremely common concept. And actually everybody knows the second law intuitively already. It is about order compared with disorder.

One easy-to-grasp statement, which is an accurate one, is the following. It concerns the time-evolution of an isolated system, which means a system lacking any kind of interaction or connection with the rest of the universe.

The spontaneous evolution of an isolated system never leads to a decrease of its entropy (= disorder). The entropy is always increasing as long as the system evolves. If the system eventually reaches equilibrium and stops evolving, its entropy becomes constant.

In other words, an isolated system, deprived of any help from the outside, is _incapable of putting its own affairs in order_. At best, it can let the level of disorder creep up very slowly. At worst the disorder will worsen rapidly until it becomes total, which is the equilibrium state, the state of maximum entropy.

And now I go to the _Chaos_ theory. Chaos theory asserts that when a system or species is under tremendous pressure and is about to collapse, some unexpected adaptation of evolutionary change emerges just before extinction or in the absence of this unanticipated change, the system falls into entropy or—simply caves in on itself.

_In chaos theory, “necessity is the mother of invention.”_

Our healthcare system—or “sick care system” as I call it—is arguably on the verge of collapse. There are those who are in denial and some who are anesthetized by their sense-of-entitlement mentality, but from whatever perspective you scrutinize the delivery of healthcare, it’s difficult to ignore the possibility that it’s in chaos mode.

_Quo Vadis?_
Typically, when you read about healthcare challenges, it’s only from one perspective—and more far-reaching than most of us realize. To find a solution and transform our healthcare system, we must first understand what we are facing.

Unhealthy Lifestyles and an Entitlement Mentality

There is an expanding awareness both within and outside the medical profession that the corporate transformation of the United States healthcare system augurs the demise of professionalism. In my premier commentary, I declared that the ethical basis of caring for the patient is shared decision making. This embodies responsiveness and embraces the core principles of the medical humanities.

Because our society has advanced from modernity to post-modern with the adoption of pluralism, relativism, and individualism as the new values and the economic context of the corporate transformation of the United States healthcare system which have greatly influenced the practice of medicine, with the ideas of market, profit and efficiency. Add to this the internet technology revolution and United States medicine is launched to hyper-modernity professionalism.

Reviewing Professionalism as set for by the American Board of Internal Medicine.

Professionalism is the basis of medicine’s contract with society. It demands placing the interest of patients above those of the physician, setting and maintaining standards of competence and integrity, and providing expert advice to society on matters of health.

A. Principle of primacy of patient welfare.

This principle is based on serving the interest of the patient. Altruism contributes to the trust that is central to the physician-patient relationship. Market forces, societal pressures, and administrative exigencies must not compromise this principle.

B. Principle of patient autonomy.

Physicians must be honest with their patients and empower them to make informed decisions about their treatment. Patients’ decisions about their care must be paramount, as long as those decisions are in keeping with ethical practice and do not lead to demands for inappropriate care.

C. Principle of social justice.

The medical profession must promote justice in the healthcare system, including the fair distribution of healthcare resources. Physicians should work actively to eliminate discrimination in healthcare, whether based on race, gender, socioeconomic status, ethnicity, religion, or any other social category.

The Ten Commandments to Maintain Professionalism

1. Commitment to professional competence.

Physicians must be committed to lifelong learning and be responsible for maintaining the medical knowledge and clinical and team skills necessary for the provision of quality care. More broadly, the profession as a whole must strive to see that all of its members are competent and must ensure that appropriate mechanisms are available for physicians to accomplish this goal.

2. Commitment to honesty with patients.

Physicians must ensure that patients are completely and honestly informed before the patient has consented to treatment and after treatment has occurred. This expectation does not mean that patients should be involved in every minute decision about medical care; rather, they must be empowered to decide on the course of therapy.

3. Commitment to patient confidentiality.

Earning the trust and confidence of patients requires that appropriate confidentiality safeguards be applied to disclosure of patient information. This commitment extends to discussions with persons acting on a patient’s behalf when obtaining the patient’s own consent is not feasible.

4. Commitment to maintaining appropriate relations with patients.

Given the inherent vulnerability and dependency of patients, certain relationships between physicians and patients must be avoided. In particular, physicians should never exploit patients for any sexual advantage, personal financial gain, or other private purpose.

5. Physicians commitment to continue to foster improvement in the quality of healthcare.

This commitment entails not only maintaining clinical competence but also working collaboratively with other professionals to reduce medical error, increase patient safety, minimize overuse of healthcare resources, and optimize the outcome of care.

6. Commitment to improving access to care.

Medical professionalism demands that the objective of all healthcare systems be the availability of a uniform and adequate standard of care. Physicians must individually and collectively strive to reduce the barriers to equitable healthcare. Within each system, the physician should work to eliminate barriers to access based on education, laws, finances, geography, and social discrimination.

7. Commitment to a just distribution of finite resources.

While meeting the needs of individual patients, physicians are required to provide healthcare that is based on the wise and cost-effective management of limited clinical resources. They should be committed to working with other physicians, hospitals, and payers to develop guidelines for cost-effective care.

8. Commitment to scientific knowledge.

Much of medicine’s contract with society is based on the integrity and appropriate use of scientific knowledge and technology. Physicians have a duty to uphold scientific standards, to promote research, and to create new knowledge and ensure its appropriate use.

9. Commitment to maintaining trust by managing conflicts of interest.

Medical professionals and their organizations have many opportunities to compromise their professional responsibilities by pursuing private gain or personal advantage. Such compromises are especially threatening in the pursuit of personal or organizational interactions with for-profit industries, including medical equipment manufactures, insurance companies, and pharmaceutical firms.
10. Commitment to professional responsibilities.

As members of a profession, physicians are expected to work collaboratively to maximize patient care, be respectful of one another, and participate in the processes of self-regulation, including remediation and discipline of members who have failed to meet professional standards.

The profession should also define and organize the educational and standard-setting process for current and future members.

Late Breaking News from the American Medical Association.

The American Medical Association’s 2007-2008 physician practice information is now in. The survey of 5,825 physicians in forty-two specialties revealed:

“Hospital leaders, take note. Your older, male physicians pose greater malpractice risks than your younger or female doctors, according to a report released by the American Medical Association. Ninety-five out of every 100 physicians practicing in the United States will be sued for medical malpractice sometime in their career, the report said.”

- Nearly 61 percent of physicians ages 55 and over have been sued, while just 15 percent of physicians under 40 faced liability claims.
- Male physicians were twice as likely to be sued (47.5 percent) as female physicians (23.9 percent) due to a variety of factors, including men’s concentration in higher-risk specialties, their longer work hours, and women’s fairly recent entry into the physician workforce.
- The number of claims per 100 physicians was more than five times greater for general surgeons and obstetricians/gynecologists than it was for pediatricians and psychiatrists.
- Physicians who provided most of their care in solo or single-specialty group practices were more likely to be sued (45 percent) than physicians who primarily worked in hospitals and multi-specialty group practices (40 and 37 percent, respectively).

Researchers also noted that busier physicians (those with higher levels of clinical activity) increased their risk exposure.

However, the authors cautioned that “high number of RVUs might also be indicative of less time per patient and ‘less attention to impersonal and/or technical aspects of care,’” and affect risk management activity through that avenue as well.”

The report also pointed out that the physician prevails 90 percent of the time in cases that go to trial, but that even the 65 percent of claims that are dropped or dismissed contribute to increased health costs. According to the report, average defense costs per claim range from a low of over $22,000 among claims that are dropped or dismissed to a high of over $100,000 for cases that go to trial.

THE FUTURE OF MALPRACTICE REFORM

Lifting from the August 2010 Green Journal on the article The Future of Malpractice Reform, the authors, Drs. Bishop, Klotman, Vladeck, and Callahan offer the following options:

The first option is proactive early disclosure programs that encourage physicians to openly communicate with patients when medical errors occur. Although critics argue that early disclosure programs might lead to increased litigation, these concerns have not been demonstrated in practice. In fact, anecdotal evidence from several successful early disclosure programs at the University of Michigan and the Veterans’ Affairs system suggests that patients are less likely to sue when errors are openly disclosed. The University of Michigan reports a decrease in claims from 136 in 1999 to 61 in 2006 after it instituted a proactive early disclosure policy.

A second solution is specialized health courts. In theory, health courts offer fairer judgments because neutral experts act as arbitrators. Awards would be based more on the presence of error, injury, and negligence and less on the severity of the outcome. Health courts also might eliminate problems of the current tort system, such as competing expert testimonies and conflicting guidelines, both of which are difficult to interpret by non- medically trained judges and juries.

Another model that should be considered by policy makers is a no-fault program for specific outcomes. In a no-fault system, compensation is based on whether an injury occurred regardless of the presence of negligence. Because the model eliminated punitive effects, it encourages open communication between patients and physicians, often shortening the time between the event and the compensation. The no-fault system has been successfully implemented in a number of European nations and is used in a limited capacity for birth injuries in Florida and Virginia.

Finally, the medical community bears a professional responsibility to better supervise its physicians. Because malpractice litigation is often unrelated to error and more often the result of poor physician communication, patterns of litigation should be used to identify physicians who are unprofessional and have poor physician-patient relationships. These physicians should be identified by hospital credentialing bodies and licensing organizations for intervention to improve their communication skills.

My own perspective—in today’s society and organizations, people work increasingly with knowledge, and less with skill.

Knowledge and skill differ in fundamental characteristics.

Skills change very, very slowly. Knowledge changes itself. It makes itself obsolete, and very rapidly. A knowledgeable worker becomes obsolete if he or she does not go back to school every two or three years.

This not only means that the equipment of learning, of knowledge and experience that one acquires is not sufficient for our present lifetime and working time.

People change over such a long time span. They become different persons with different needs, different abilities, and different perspectives and therefore need to reinvent themselves. If you talk of fifty years of working life—and this will be the norm—you have to reinvent yourself.

Managing the physician in the second half of life.

In my travels I have pointed out that the average age of the West Virginia physician is fifty seven and we need to be conscious of this reality.
As knowledge workers, physicians are able to work beyond the traditional service age, but they run the risk of becoming mentally consumed.

What is commonly called burnout is rarely the result of stress, but rather boredom on the job. When confronted, these talented individuals express satisfaction in their job, “but I have done it for so many years and I can do it now in my sleep. It no longer challenges me.” We need to set new goals in and out of our eminent pursuit to regain our true interest.

Curiouser and Curiouser

My grandchildren say their prescription is for us to return back to Alice.

“Alice never could quite make it out, in thinking it over afterward how it was that they began; all she remembers is that they were running hand in hand, and the Queen went so fast that it was all she could do to keep up with her and still the Queen kept crying “Faster! Faster!”

“Now! Now!” cried the Queen. “Faster! Faster!” And they went so fast that at last they seemed to skim through the air, hardly touching the ground with their feet, till suddenly, just as Alice was getting quite exhausted, they stopped and she found herself sitting on the ground, breathless and giddy.

The Queen propped her up against a tree and said kindly “you may rest a little now.” Alice looked around her in great surprise.

“Why, I do believe we’ve been under this tree all the whole time! Everything’s just as it was!”

“Of course it is, said the Queen, what would you name it?”

“Well, in OUR country, said Alice, still panting a little, you’d generally get to somewhere else – if you ran very fast for a long time, as we’ve been doing.”

“A slow sort of country!” said the Queen. “Now HERE, you see, it takes all the running YOU can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!”

THROUGH THE LOOKING-GLASS

Lewis Carroll

Finally, my patient who I call the Oracle of Sally’s Backbone and lives eight turns past the Round Bottom Hill said it best. In his parody of The Farmers Almanac he declares—

A rolling stone
Gathers no moss
A standing post
Is pissed upon

Eliot Wigginton edited the best anthology on West Virginia, The Foxfire Book, and in his preface he wrote—

“Those who cannot remember the past not only relive it; they tend to impose it, mistakes and all, on others.”

His book ends, as my year as WVSMA President ends, and is dedicated to the people of these mountains in the hope that, through it, some portion of their wisdom, ingenuity, and individuality will remain long after them to touch us all.

ANGIE...TURN OFF THE LIGHTS!
CCJ HAS LEFT THE BUILDING.

Carlos C. Jimenez, MD
WVSMA President
Many pundits opine Obamacare is a complex piece of legislation, difficult to understand and often vague regarding implementation/operational details. Not really. That is only the case if one assumes its primary goals are to contain healthcare costs, lower health insurance premiums and assure timely services for those in need.

If, on the other hand, one assumes the primary intent is to nationalize healthcare (which is consistent with the over 150 new federal boards and agencies created) it is an easy piece of legislation to understand. It follows precisely the blueprint outlined by former Senator Tom Daschle, originally selected to spearhead the effort, in his book, Critical – What We Can Do About The Health-Care Crisis. Daschle advised the legislation’s drafters to be intentionally vague, eschewing provision of clear specifics. He admonished them to focus on greatly expanding and centralizing federal government control, filling in any details after solidifying control.

Strategically, Daschle’s plan was adopted. However, to gain passage it became necessary tactically to provide - but disguise - a few details and pursue a delayed, indirect route to reach the primary objective, nationalization of healthcare. It is these disguises and diversions, couched in terms of laudable access and cost-containment goals, that often make the legislation difficult to comprehend.

From the onset, it was obvious that a single, government, tax funded plan that provided each citizen the same, specifically defined, medical benefits (and expenditure/service limits), was not a politically feasible option. Even, a subsidized, “public option” plan that incrementally would achieve this end was politically contentious.

Therefore, “plan B” was pursued, a confusing array of regulations and mechanisms (mandatory participation, elimination of benefit expenditure caps, prohibition of pre-existing condition exclusions and experience based rating, e.g., female vs. male, federal review of “rates” and “benefits”, etc.) to achieve this same end. Eventually, insurance companies or health plans, rather than compete, will simply “administer” the payments or services determined by the federal government at the specified rates - with every individual or employer assessed according to a government formula. How?

A healthy individual can enroll in a plan providing unlimited preventive and primary care (including lab and imaging) for $500 - $1,000/year. Even a high cost area like New York City offers a $750/year prepaid plan. Absent exclusions and caps, the premiums required to provide traditional health insurance (around $5,000-individual, $12,000-family) for any group must increase markedly for plans to remain solvent, unless they attract many new “low risk” subscribers. However, unless assessed huge “fines” (much higher than specified) why would a non-participant join a plan that will cost more, especially since they are assured they can join at any time if they suffer from a costly accident or illness? This is especially true if an employer offers a several thousand dollar or more cash option to the employee to purchase his or her own care or insurance. The end results will be higher premiums for the residual “high risk” insured group, declining employer coverage and more uninsured workers.

Children are a special subset (now, up to the age 26 years) where the employee, rather than employer, often pays most of the cost of family coverage (an additional $5,000 or more) and there is no employer or employee (parent) mandate. Under Obamacare, economically prudent parents might drop their family coverage, joining only if the child suffered from an expensive condition, e.g., accident, pregnancy.

For the proponents of nationalized healthcare, the crisis precipitated by such increasing premiums and the number of uninsured individuals - albeit messy and a few years later than they would have liked - will constitute justification for implementing a single government plan. The irony is that this government plan must limit benefits and apply caps or healthcare will consume the entire GDP within a few decades.

The same pattern is evident in other aspects of the legislation, such as delivery of preventive and primary care services. The intended “nationalized” model is
the federal qualified health center with “salaried” physicians.

In addition to public and private insurance reimbursements, such clinics receive direct federal and state payments to help care for the uninsured, as well as federal tort liability coverage for their practitioners. With the passage of Obamacare, some of the uninsured using these clinics will now seek private care reducing the service demand on such clinics. Coupled with the fact that these clinics will now receive insurance reimbursements for those previously uninsured, one would expect, as with hospitals that provide charity care, direct federal and state payments to such clinics would be reduced.

The opposite is the case. A large increase in direct funding will be provided to existing clinics. Coupled with federal tort liability coverage (worth $25,000 - $100,000 per physician per year) - and the refusal to include any meaningful tort reform relief for private physicians in the legislation - physicians in private practice arrangements are placed at a huge competitive disadvantage with such heavily government subsidized clinics. Primary care physicians can make as much net income, work fewer hours and avoid considerable administrative hassle working for such government entities - rather than individual patients - although the clinic’s and taxpayer’s cost per patient visit is likely higher because of the subsidies.

As for preventive care, the legislation has a twenty-fold increase in funding to train preventive medicine physicians and a $15 billion investment fund for federally determined public health initiatives. Since states and local communities are broke, the only entities that will be able to hire these physicians are the federal government in order to carry out the national initiatives it determines are meritorious.

Focusing on the correct primary goal, it all makes sense.

Letters to the Editor and commentary articles may be sent to Angie Lanham, Managing Editor at PO Box 4106, Charleston, WV 25364 or E-mail to angie@wvsma.com.

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Is Friday the Busiest Day for Late Preterm Delivery?

Sara Mola, MD  
Janet E. Graeber, MD  
Mark J. Polak, MD  
Panitan Yossuck, MD  
Pediatrics, West Virginia University School of Medicine, Morgantown

Abstract

Background: As a level IIIc NICU serving north central West Virginia, we have observed that many of our admissions of infants GA 33-37 weeks occurred on Friday.

Objective: To investigate the distribution of delivery days for infants with GA between 33-37 wk.

Design/Methods: Data of admitted infants are tracked through medical record from January 2002 to September 2006. The deliveries per day of the week (DOW) were compared.

Results: Of 1471 admission, the highest rate of delivery occurring on Fridays; lowest on Sundays. An unequal distribution of delivery DOW in infant GA 33-35 was observed, with the highest rate of delivery occurring on Wednesday. An unequal distribution of delivery DOW was also noted in infants with GA 36-37. However, Friday was noted as the most frequent DOW for delivery in this group.

Conclusions: This Friday delivery phenomenon suggests delivery practices that may affect premature delivery, their morbidity and increased NICU occupancy.

Introduction

Over the past decade, there has been a shift in the distribution of births toward earlier gestational age at delivery. There has been a 31% increase in preterm birth rate (<37 weeks gestation) since 1981, with preterm births accounting for 12.3% in 2003 vs. 9.4% in 1981. Very preterm birth rates (<32 weeks gestation) have remained relatively constant at approximately 2%, while infants born at 34 to 36 weeks accounted for 74.1% of singleton preterm births in 2002. This population, referred to as late preterm infants (34-36 weeks gestation) have been shown to have a greater incidence of morbidities such as RDS, hypoglycemia, hypothermia and hyperbilirubinemia compared to term infants. They have also been found to require longer lengths of stay in neonatal intensive care units, have higher rates of rehospitalization, as well as incur greater healthcare costs. There has been little data to assess the magnitude of morbidities and unique healthcare needs of this population, and even less has addressed the impact of the late preterm population on the healthcare system. By December 2007, American Academy of Pediatrics, the Committee on Fetus and Newborn published the clinical report that addresses the importance of this population, and proposed the guidelines for the evaluation and management of these infants after birth.

According to the 2006 Vital Statistics Report, the majority of neonates born in the U.S. in 2004 were born between Tuesday and Friday. As a level IIIc NICU serving north central West Virginia, the objective of our study was to investigate the distribution of delivery days and examine delivery practices for infants born between 33-37 weeks gestation admitted to our NICU in an effort to study the effect on morbidities of this population. We decided to include the 33 and 37 weeks gestation infants in our study even though by AAP definition they are not considered late preterm infants since these populations can be overlapped with the 34-36 wk gestation.

Our goal is to contribute to the data examining the risks associated with late preterm birth in an effort to better guide both pediatric and obstetric clinical management toward optimal outcomes in this unique population.

Methods

NICU data and demographics were tracked through Site of Care electronic medical record system (San Francisco, CA). All infants born between GA of 33-37 wks admitted to the NICU from January 1, 2002 to September 31, 2006 were identified. Each electronic medical record of this population was reviewed. Date of birth was collected and was plotted on a seven-day graph from Sunday through Saturday. The total numbers of deliveries per day of the week (DOW) were plotted as a percentage. Data comparisons were subsequently made between GA 33-35 and GA 36-37 wk. Chi-square Goodness-of-Fit test was then applied to identify an unequal distribution in each group.

Results

A total of 1471 NICU admissions for neonates born at 33 to 37 weeks gestation occurred between January 1, 2002 and September 31, 2006. All neonates born during that time period were identified and included in the study. Neonates with gestational ages 33-35 weeks accounted for 883 neonates admitted to our NICU during the study period, while neonates born at 36-37 weeks gestations accounted for 588 of those studied. There was an unequal distribution of delivery DOW in infant with GA 33-35 wk observed, p value= 0.003, with the highest rate of delivery occurring on Wednesday (16.53%). An unequal distribution of delivery DOW was also noted in infants with GA 36-37 wk, (p=0.000). But, the highest rate of deliveries in this group occurred on Fridays (19.05%). Of those in the GA 33-35 wk group 77.5% were inborn, while 57.5% of those born at GA 36-37 wk were inborn. An unequal distribution was significant in both groups (p=0.038.
for GA 33-35 wk, p=0.018 for GA 36-37 wk). Friday was the most frequent delivery DOW in both groups of infant (16.7% in 33-35 wk GA, and 18.9% in 36-37 wk GA).

For outborn delivery, the unequal distribution was significant in both groups (p=0.000 for GA 33-35 wk, p=0.003 for GA 36-37 wk), but Friday was the most frequent delivery DOW only in GA 36-37 wk (19.3%). The outborn delivery in GA 33-35 wk peaked on Thursday.

Method of delivery was also examined for both gestational age groups. Of those inborn neonates at GA 33-35 wk, 54.0% were born via vaginal delivery and 46.0% were born via C/S. For those inborn delivered at 36-37 wk, vaginal delivery accounted for 49.3% of births while 50.7% were delivered via C/S. Of those outborn neonates GA 33-35 wk, 46.2% were born via vaginal delivery and 53.8% via C/S. The similar finding was found in the outborn neonates at GA 36-37 wk, with 46.6% born via vaginal delivery and 53.4% delivered via C/S. There was no significant unequal distribution detected in either inborn or outborn via vaginal delivery in both GA 33-35 wk and GA 36-37 wk neonates.

For GA 33-35 wk delivered via C/S, there was significant unequal distribution noted in both inborn (p=0.014) and outborn (p=0.001) with Friday the most frequent delivery DOW in inborn, and Thursday, the most frequent delivery DOW in the outborn population. For those GA 36-37 wk delivered via C/S, unequal distribution was detected only in the outborn population (p= 0.006) with Friday as the most common delivery DOW. (Figure 1)

The reason for delivery per our record of the 33-35 wk was not complete and sporadic. In the inborn group with GA 36-37 wk, the indication for delivery was identified in 93.5% of the infants. Of these, the labor was induced with obstetrical indication in 24% of them. There was only one case that the obstetrical indication for induction was not recorded. The distribution in the day of the week was equal with the most frequent delivery on Tuesday. As for the outpatient infants with GA 36-37 wk, the indication of delivery was identified in 85%. Of these, 10% were induced with obstetrical indication. Two of the deliveries were induced without any record of obstetrical indication. Friday was found to be the most frequent delivery day for this group of infants.

**Discussion**

With the marked increase in the number of preterm deliveries occurring over the past 20 years, there has been a call for data examining the demographics, delivery practices, healthcare needs and outcomes in this patient population. Late preterm birth accounted for more than 70% of all preterm delivery in the US in 2005. As a level IIIC NICU providing services to WV and bordering states, the goal of this study was to examine delivery practices not only at our institution, but also at those outside referring hospitals requiring transfer for the optimal care of the late preterm infant. This was done in an effort to identify practices that may potentially contribute to the increased incidence of morbidities that affect this population and inspire further study on a larger scale to determine the optimal care for the late preterm infant. We included the infant with GA 33 wk through 37 wk in this study since these infants are likely to be delivered in the same fashion. The inaccuracy of pregnancy dating with marginal error up to three weeks in the third trimester that might contribute to the delivery of these infants was also considered.

As was demonstrated in the 2006 Vital Statistics Report, the majority of deliveries in our institute and surrounding referring hospitals occurred between Tuesday and Thursday.

**Figure I.**

Comparison of DOW in GA 36-37 wk between Inborn C/S vs Outborn C/S. Unequal distribution DOW was noted in the outborn C/S group, with the peak occurred on Friday, while the DOW in the inborn C/S was equally distributed.
Friday for both groups; accounting for 64.65% of all preterm admissions between 33-37 weeks. Sunday was the least busy day for preterm delivery accounting for 9.99% of all deliveries. The lower delivery rate on Saturday and Sunday could be explained by the effect of the “weekend” environment. Interestingly, the delivery rate on Monday was also lower than other weekdays.

The C/S rate at WVU Hospital, the perinatal referral center, is much higher than the overall C/S rate in 2004 which was the highest ever reported in the US; 29.1% of total births.6 The impact of elective C/S and elective induction with its increase in C/S due to failure of labor on late preterm birth has been recently discussed.7 Our study did not focus on the indication for C/S and induction because we found that the record data was not accurate. Many of our deliveries at 37 wk might have been “elective” C/S which was demonstrated from a previous study to have three times higher neonatal morbidities than elective C/S at 39 weeks.8

The majority of those neonates delivered at 33-35 weeks gestation were inborn (only 22.5% were outborn) which reflects the perinatologist coverage for this group of patients in our referral system. The percentage of out-borns in GA 36-37 week group rose to 42.3% which may indicate the more comfortable practice to deliver this group of late preterm neonates in our referring hospital system.

In the group with 33-35 weeks gestation, we did find an equal distribution for those who delivered vaginally in both inborn and outborn delivery. These equal distributions in vaginal delivery may be explained by the appropriate obstetric indication of delivery for this age group and possibly spontaneous onset of labor. As for C/S delivery in these gestations, there were unequal distributions in DOW in both inborn and outborn infants but with difference peaks. The inborn C/S infants GA 33-35 week gestation DOW peaked on Friday but the outborn group peaked on Thursday. Our perinatologists have no restriction on the day of operation once clinically indicated, so we were unable to explain why Friday is the peak DOW for the inborn C/S infant in our institute.

In the group with 36-37 week gestation, we noted the same equal distribution for those who delivered vaginally in both inborn and outborn delivery which again may be explained by the true nature of delivery which is expected to happen on any day of the week. An equal distribution in DOW was demonstrated in the inborn C/S infant at this gestational age group. This finding may indicate the true necessity of C/S under our perinatologist and obstetrician service. On the other hand, there was an unequal distribution among those C/S outborn infants which peaked on Friday. This notable difference in DOW distribution of delivery between the inborn and outborn C/S at GA 36-37 week may indicate the more common practice to deliver this group of neonates electively before the weekend arrives in the referring hospital. The “approaching term” at 36 week and “just term” at 37 week that lead to perception of mature physiologic and metabolic function in the infant might have been the primary factor contributing to the obstetricians comfort level to deliver these infants just before the weekend. This may suggest that even with the knowledge that C/S delivery is an independent risk factor for the development of RDS, there may not be recognition of the significant morbidity associated with delivery in this age group that eventually requires transfer for comprehensive neonatal care.

The causes for and delivery patterns of the late preterm infant are still unknown and require further research.9 It is our objective to identify delivery practices that may contribute to the morbidity of the late preterm infant and raise awareness about the unpredictable course of these groups of patient populations. Our data are presented from one single perinatal center and we speculate that the larger scale of data may demonstrate a similar practice and need to be explored. Also the fact that our perinatologist service has an elective operation on Friday might have significant impact on our neonatal intensive care census and acuity. If the elective operation at the end of the week is a common practice among perinatologist services, it may have enormous effect on the NICU status during the weekend in many perinatal centers. As demonstrated by review of our institution’s preterm population, more data is needed to address these topics in an effort to provide guidance toward optimal clinical management by both the pediatric and obstetrical teams and provide the best possible care for the patients and their families.

**Conclusion**

For infants admitted to our NICU with GA between 36-37 week, delivery occurred most frequently on Friday as compared to those born between 33-35 week where the DOW distribution peaked on Wednesday. Our data further demonstrated that Friday is the busiest day of delivery for the C/S, outborn, preterm infant of GA 36-37 week that encountered perinatal and neonatal morbidity necessitating admission to our neonatal intensive care unit. Whether the decision to deliver these infants just before the weekend contributes to their morbidity and...
the need for neonatal intensive care raises significant concern and warrants further investigation.

Acknowledgement

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References

Correlation Between MRCP and ERCP Findings at a Tertiary Care Hospital

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Abstract

Background: It is common clinical practice to obtain Magnetic Resonance Cholangiopancreatography (MRCP) prior to Endoscopic Retrograde Cholangiopancreatography (ERCP) to evaluate the biliary system. With recent improvements of MRCP, it is important to correlate the findings of these two studies.

Aim: To examine the correlation between MRCP and ERCP findings in patients at a tertiary care hospital.

Methods: A total of 165 patients were identified who underwent MRCP prior to ERCP at West Virginia University between July 1, 2004 and June 30, 2006 (98 females and 67 males). Patients’ demographic information and their laboratory values and diagnostic study outcomes prior to procedure were collected, entered into MS Access, and analyzed using SAS 10.0. Sensitivity, specificity, positive predictive value and negative predictive value were calculated. Two-tailed p-values of \( \leq 0.05 \) were considered statistically significant.

Results: Baseline demographic characteristics were comparable between male and female patients. Hepatobiliary and pancreatic duct results were grouped together. MRCP was 74.6% sensitive and 83.5% specific for cholelithiasis, 85.4% sensitive and 87.4% specific for strictures, 85.9% sensitive and 91.2% specific for obstruction, 92.4% sensitive and 93.5% specific for ductal dilatation, and 90.8% sensitive and 92.6% specific for detection of periductal masses. MRCP appeared to have more false negative results for choledocholithiasis and strictures and more false positive results for ductal dilatation and periductal mass detection compared with ERCP.

Conclusions: In patients with presentations suggestive of hepatobiliary and pancreatic disease, despite recent improvements in MRCP technique, the sensitivity and specificity of MRCP is still not close enough to that of ERCP for detection of choledocholithiasis, hepatobiliary and pancreatic ductal dilatation, periductal masses, or obstruction to be used as a substitute. Thus, ERCP remains the gold standard for visualization of the hepatobiliary and pancreatic tree.

Introduction

Endoscopic retrograde cholangiopancreatography (ERCP) is a procedure where a specialized side-viewing endoscope is guided into the duodenum and injection of contrast medium into the ampulla permits visualization of hepatobiliary and pancreatic ductal anatomy. Instruments can then be passed into the bile or pancreatic ducts for therapeutic intervention. ERCP requires very specialized biomedical equipment and extensive training and experience to realize optimal proficiency. In addition, sedation and possible anesthesia are required for the procedure. ERCP has long been considered the gold standard for evaluation and therapeutic intervention of the hepatobiliary and pancreatic tree with well studied indications and complications. In contrast, magnetic resonance cholangiopancreatography (MRCP) is a noninvasive technique and does not involve injection of contrast material into the hepatobiliary and pancreatic ducts. Therefore, the morbidity is lower than for ERCP. However, MRCP does not currently allow any therapeutic interventions to be performed, such as extraction of stones, insertion of stents, dilatation, or biopsies. Bright image artifacts from fluid within the duodenum, duodenal diverticula, or ascitic fluid can decrease sensitivity of MRCP. Areas of signal dropout can occur from surgical metallic clips, right hepatic artery crossing, or severely narrowed ducts, such as with primary sclerosing cholangitis. MRCP has lower resolution than direct cholangiography and can miss small stones (< 4 mm), small ampullary lesions, primary sclerosing cholangitis, and strictures. In addition, certain anatomic abnormalities can mimic bile duct obstruction or stones. Obstructing stones are generally easier to identify than nonobstructing small stones, which may not be distinguishable from sludge, mucin, or blood.

There have been several earlier studies comparing ERCP and MRCP. Several studies have even suggested that MRCP be utilized as the primary diagnostic tool to examine hepatobiliary and pancreatic anatomy and pathology. Recent technological improvements to MRCP may have improved the sensitivity and specificity of MRCP, which should be reassessed. Thus, the aim of our study is to correlate different pathologies between MRCP and ERCP. Considering ERCP as the gold standard (assuming 100% sensitivity and specificity in the hands of an experienced provider), we studied MRCP for sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) in the diagnosis of choledocholithiasis, obstruction, stricture, periductal mass and dilatation in the hepatobiliary and pancreatic ductal system.
Methods
Appropriate Institution Review Board (IRB) approval was obtained for this retrospective study. Inpatients and outpatients who underwent MRCP prior to ERCP from July 2004 to June 2006 at West Virginia University Hospital were identified from electronic medical records and included in the study.

Demographics and Laboratory Values
Patients’ demographic data including age, gender, weight, height, race and ethnicity were collected. BMI was calculated from height and weight. Indications for both MRCP and ERCP were identified. Pre MRCP and pre ERCP laboratory values including: total white blood cell count (WBC) in thousand/UL, hemoglobin (HB) in gm/dl, prothrombin time (PT) in seconds, International Normalise Ratio (INR), blood urea nitrogen (BUN) in mg/dl, creatinine (Cr) in mg/dl, total bilirubin (TB) in mg/dl, aspartate amino transferase (AST) in U/L, alanine amino transferase (ALT) in U/L, gamma glutamyl transferase (GGT) in U/L, alkaline phosphatase (ALP) in U/L, lactate dehydrogenase in U/L, amylase in U/L, and lipase in U/L were collected up to 30 days before ERCP and MRCP. Averages were calculated if more than one value existed. Coronary artery disease, hypertension, hyperlipidemia, diabetes mellitus and malignancy were considered major comorbidities.

MRCP, Ultrasound, and ERCP Data
Various radiologists from the Department of Radiology at West Virginia School of Medicine reviewed the MRCP images. Official reports were examined for information on choledocholithiasis, hepatobiliary and pancreatic tree obstruction, strictures, periductal masses and dilatation. If available, similar data was collected on pre-ERCP ultrasounds. Hepatobiliary and pancreatic tree obstruction was defined as any obstruction in the system secondary to mass, stone, or stricture. Ductal system dilatation was defined as a common bile duct diameter more than 6 mm or pancreatic duct dilatation above normal. ERCP reports were also reviewed. Cases that were misdiagnosed were reviewed examining both the MRCP and ERCP images.

Statistical Analysis
Data was entered into Microsoft Access. SAS 10.0 was used to analyze the data. Descriptive statistics were calculated for all the demographic data, pre-MRCP and pre-ERCP laboratory values.

Table 1: Descriptive statistics of the subjects

<table>
<thead>
<tr>
<th>Variables</th>
<th>All (N = 165)</th>
<th>Male (N = 67)</th>
<th>Female (N = 98)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years</td>
<td>59.7 (23 – 84)</td>
<td>59.63 (31 – 81)</td>
<td>58.21 (23 – 84)</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>146 (88%)</td>
<td>57 (85%)</td>
<td>89 (90%)</td>
</tr>
<tr>
<td>Non-White</td>
<td>19 (12%)</td>
<td>8 (15%)</td>
<td>11 (10%)</td>
</tr>
<tr>
<td>BMI</td>
<td>31.67 (21.4 – 38.7)</td>
<td>29.32 (21.4 – 35.9)</td>
<td>33.34 (24.5 – 38.7)</td>
</tr>
<tr>
<td>Co-morbidities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HTN</td>
<td>91 (55%)</td>
<td>39 (58%)</td>
<td>52 (53%)</td>
</tr>
<tr>
<td>CAD</td>
<td>67 (41%)</td>
<td>31 (46%)</td>
<td>36 (37%)*</td>
</tr>
<tr>
<td>DM</td>
<td>100 (61%)</td>
<td>33 (49%)</td>
<td>67 (68%)*</td>
</tr>
<tr>
<td>Hyperlipidemia</td>
<td>95 (58%)</td>
<td>40 (60%)</td>
<td>55 (56%)</td>
</tr>
<tr>
<td>Malignancy</td>
<td>37 (22%)</td>
<td>16 (24%)</td>
<td>21 (21%)</td>
</tr>
</tbody>
</table>

BMI=Body mass index, HTN=Hypertension, CAD=coronary artery diseases, DM=diabetes mellitus, *= p value <0.05

Table 2: Mean laboratory values for all the subjects who had MRCP before ERCP

<table>
<thead>
<tr>
<th>Variables</th>
<th>All (N = 165)</th>
<th>Male (N = 67)</th>
<th>Female (N = 98)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WBC (thousand/UL)</td>
<td>7.92 (4.02)</td>
<td>8.19 (4.20)</td>
<td>7.75 (3.91)</td>
</tr>
<tr>
<td>HB (gm/dl)</td>
<td>12.28 (1.92)</td>
<td>12.66 (1.87)</td>
<td>12.02 (1.93)</td>
</tr>
<tr>
<td>PT (in seconds)</td>
<td>15.20 (3.54)</td>
<td>15.42 (3.59)</td>
<td>15.05 (3.51)</td>
</tr>
<tr>
<td>INR</td>
<td>1.59 (0.68)</td>
<td>1.64 (0.62)</td>
<td>1.55 (0.49)</td>
</tr>
<tr>
<td>BUN (mg/dl)</td>
<td>12.87 (8.82)</td>
<td>13.45 (10.01)</td>
<td>12.49 (7.99)</td>
</tr>
<tr>
<td>CR (mg/dl)</td>
<td>1.00 (0.37)</td>
<td>1.04 (0.44)</td>
<td>0.96 (0.30)</td>
</tr>
<tr>
<td>TB (mg/dl)</td>
<td>3.93 (2.01)</td>
<td>3.02 (2.3)</td>
<td>4.54 (3.71)</td>
</tr>
<tr>
<td>AST (U/L)</td>
<td>83.54 (52.59)</td>
<td>83.98 (55.91)</td>
<td>83.24 (50.81)</td>
</tr>
<tr>
<td>ALT (U/L)</td>
<td>103.76 (87.39)</td>
<td>90.37 (75.63)</td>
<td>106.8 (78.51)</td>
</tr>
<tr>
<td>ALK (U/L)</td>
<td>233.76 (137.39)</td>
<td>212.25 (119.50)</td>
<td>248.51 (124.06)</td>
</tr>
<tr>
<td>GGT (U/L)</td>
<td>273.24 (175.05)</td>
<td>287.80 (142.75)</td>
<td>263.06 (151.21)</td>
</tr>
<tr>
<td>LDH (U/L)</td>
<td>201.89 (188.79)</td>
<td>203.00 (162.76)</td>
<td>201.14 (173.03)</td>
</tr>
<tr>
<td>AML (U/L)</td>
<td>120.41 (96.57)</td>
<td>143.54 (87.27)</td>
<td>105.99 (98.06)</td>
</tr>
<tr>
<td>LIP (U/L)</td>
<td>161.41 (122.72)</td>
<td>190.98 (106.48)</td>
<td>144.86 (131.85)</td>
</tr>
</tbody>
</table>

WBC = White blood cell count, HB = Hemoglobin, PT = Prothrombin time, INR = International Normalise Ratio, BUN = Blood urea nitrogen, CR = Creatinine, TB = Total bilirubin, AST = Aspartate amino transferase, ALT = Alanine amino transferase, GGT = gamma glutamyl transferase, LDH = Lactate dehydrogenase, AML = Amylase, LIP = Lipase.
Sensitivity, specificity, PPV and NPV were also calculated. A two-tail p-value of 0.05 or less was considered statistically significant.

**Results**

A total of 165 patients were identified who underwent MRCP followed by ERCP at West Virginia University Hospital from July 2004 to June 2006. Of these, 98 (59%) were female and 67 (41%) were male (p<0.001). The average age was 59.7 years (male 60.1 years vs. female 58.9 years, p=0.41). Most, 146 (88%), were Caucasian. The average BMI was 31.67 (female 33.34 vs. male 29.22. p<0.01). 123 (75%) patients had at least 2 or more medical comorbidities (Table 1).

Analysis of pre-MRCP and pre-ERCP laboratory values found that total bilirubin (4.54 vs. 3.02), ALT (106.8 vs. 90.37), and alkaline phosphatase (248.51 vs. 212.55) were significantly higher in females than males (p<0.01), but both amylase (143.54 vs. 105.99) and lipase (190.98 vs. 144.86) were significantly higher in males than females (p<0.01) (Table 2). However, there was no significant difference between laboratory values prior to MRCP or ERCP (Table 3). On average, labs were drawn 4.9 days prior to MRCP and 5.2 days prior to ERCP (p > 0.05).

The average time difference between MRCP and ERCP was 3.4 days. The most common indications for both MRCP and ERCP were elevated liver enzymes alone (ELE), ELE with abnormal right upper quadrant ultrasound (RUSG) results, and possible hepatobiliary or pancreatic mass on imaging (Table 4). Various findings from ultrasonography, MRCP, and ERCP are presented (Table 5). Out of 165 patients, 158 (96%) underwent therapeutic intervention during ERCP (stone/sludge extraction, stricture dilation, or papillotomy).
Table 7: Sensitivity, specificity, PPV and NPV of MRCP in different diagnoses (N = 165)

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Sensitivity (%)</th>
<th>Specificity (%)</th>
<th>PPV (%)</th>
<th>NPV (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choledocholithiasis</td>
<td>74.6</td>
<td>83.5</td>
<td>92.7</td>
<td>94.6</td>
</tr>
<tr>
<td>Hepatobiliary/pancreatic stricture</td>
<td>85.4</td>
<td>87.4</td>
<td>93.1</td>
<td>94.2</td>
</tr>
<tr>
<td>Hepatobiliary/pancreatic obstruction</td>
<td>85.9</td>
<td>91.2</td>
<td>90.6</td>
<td>93.7</td>
</tr>
<tr>
<td>Hepatobiliary/pancreatic dilatation</td>
<td>92.4</td>
<td>93.5</td>
<td>85.1</td>
<td>89.2</td>
</tr>
<tr>
<td>Hepatobiliary/pancreatic periductal mass</td>
<td>90.8</td>
<td>92.6</td>
<td>78.2</td>
<td>86.5</td>
</tr>
</tbody>
</table>

Table 8: Sensitivity, specificity, PPV and NPV of MRCP in different diagnoses in males (N = 67)

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Sensitivity (%)</th>
<th>Specificity (%)</th>
<th>PPV (%)</th>
<th>NPV (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choledocholithiasis</td>
<td>75</td>
<td>86.2</td>
<td>91.2</td>
<td>95.9</td>
</tr>
<tr>
<td>Hepatobiliary/pancreatic stricture</td>
<td>84.6</td>
<td>88</td>
<td>92.2</td>
<td>93</td>
</tr>
<tr>
<td>Hepatobiliary/pancreatic obstruction</td>
<td>94.2</td>
<td>91.8</td>
<td>91</td>
<td>93.2</td>
</tr>
<tr>
<td>Hepatobiliary/pancreatic dilatation</td>
<td>94.2</td>
<td>92.9</td>
<td>83.9</td>
<td>90.1</td>
</tr>
<tr>
<td>Hepatobiliary/pancreatic periductal mass</td>
<td>88.6</td>
<td>90.2</td>
<td>80.7</td>
<td>87.1</td>
</tr>
</tbody>
</table>

Table 9: Sensitivity, specificity, PPV and NPV of MRCP in different diagnoses in females (N = 98)

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Sensitivity (%)</th>
<th>Specificity (%)</th>
<th>PPV (%)</th>
<th>NPV (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choledocholithiasis</td>
<td>74.3</td>
<td>81.9</td>
<td>92.7</td>
<td>93.5</td>
</tr>
<tr>
<td>Hepatobiliary/pancreatic stricture</td>
<td>85.9</td>
<td>89.9</td>
<td>94.1</td>
<td>94.6</td>
</tr>
<tr>
<td>Hepatobiliary/pancreatic obstruction</td>
<td>86.5</td>
<td>92.6</td>
<td>90.9</td>
<td>92.1</td>
</tr>
<tr>
<td>Hepatobiliary/pancreatic dilatation</td>
<td>91.6</td>
<td>91.8</td>
<td>84.2</td>
<td>91.4</td>
</tr>
<tr>
<td>Hepatobiliary/pancreatic periductal mass</td>
<td>91</td>
<td>93.1</td>
<td>76.6</td>
<td>85.4</td>
</tr>
</tbody>
</table>

More patients underwent ultrasonography 1-15 days prior to MRCP versus ERCP (68% vs. 32%, p < 0.001). Using ERCP as the gold standard (assuming 100% sensitivity), the sensitivity of ultrasonography for various diagnoses was calculated (Table 6). The sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) for various diagnoses was also calculated for MRCP using ERCP as the gold standard (Table 7). When these sensitivity results were re-calcualted by gender, no statistical significance was found between males and females for each diagnosis (Tables 8 and 9). Based on these results, MRCP over-diagnosed ductal dilatation and periductal masses and under-diagnosed choledocholithiasis, strictures, and obstruction of the ducts.

Discussion

Despite the existence of multiple imaging tests, including endoscopic ultrasonoud, computed tomography and magnetic resonance imaging, the accurate detection of hepatobiliary and pancreatic pathologies remains difficult. MRCP, introduced over a decade ago, is considered the most accurate noninvasive imaging study for the pancreatic and hepatobiliary system. ERCP is considered the “gold standard” for evaluation of hepatobiliary and pancreatic anatomy and has the advantage of allowing an increasing number of therapeutic interventions but the disadvantage of increased morbidity and mortality. Although previous studies have compared MRCP with ERCP, new techniques such as use of heavily T2-weighted sequences on imaging has improved the accuracy of MRCP. Thus, the accuracy of MRCP in comparison to ERCP should be reexamined.

At our institution, the cost of an MRCP is $2380 (costs obtained from our billing department). The cost of an ERCP is $5213 ($1165 physician costs, $693 anesthesia costs, and $3355 hospital costs). Therefore, if MRCP can be used in lieu of ERCP in cases where there is no clear-cut indication for ERCP, there is a potential savings benefit of $2833 per patient, not counting additional savings in patients who require hospitalization post ERCP for pancreatitis or other complications.

Based on our results, it appears that the recent improvements in MRCP have not significantly altered its overall accuracy. Our overall sensitivities for detection of stones, strictures and obstructions in the hepatobiliary and pancreatic tree appear in concordance with other studies published in the literature. The significantly higher BMI in females versus males in our study population is consistent with existing knowledge of different hepatobiliary and pancreatic diseases that warrant MRCP or ERCP. Our results were comparable between males and females. Although our study is strengthened by the large number of included patients, there is a potential for bias, as the gastroenterologist knew about the MRCP results prior to ERCP. There is also lag time bias given the two year study period. However, this bias is evenly distributed both for MRCP and ERCP. Although sludge extraction was considered a therapeutic intervention in ERCP,
sludge is not detected on MRCP. One radiologist interpreted the majority of the MRCP, which can skew the data.

Our study finds that choledocholithiasis continues to be under-diagnosed in MRCP. Small stones (< 4 mm diameter) are difficult to visualize on MRCP.16,17 Although stones larger than 4 mm are readily seen, it is difficult to differentiate them from filling defects such as blood clots, tumor, sludge, parasites, flow artifacts, biliary air, or pseudostones at the ampulla. Since the sensitivity for small stones by MRCP decreases with an increase in section thickness, careful examination of thin source images with newer MRCP techniques increases diagnostic accuracy. However, ERCP remains the gold standard for detection of small stones. In addition, MRCP continues to be less sensitive for diagnosis of stricture and obstruction compared to ERCP. Although MRCP can provide information about the larger ducts of the hepatobiliary system, when we examined the misdiagnosed cases of strictures by MRCP in our patient cohort, it was evident that MRCP was not able to detect strictures in smaller ducts. Our data shows that MRCP over-diagnosed masses and hepatobiliary and pancreatic ductal dilatation. This may be due to the recent changes in MRCP technique such as specially improved signal intensity and thin sequencing. Several technical pitfalls interfere with MRCP interpretation.18 Low union of the cystic duct and common hepatic duct with both ducts running in parallel for a significant distance may mimic common bile duct dilation. The role of MRCP in the diagnosis and management of bile duct malignancy is not yet defined. MRCP has a lower sensitivity for detecting subtle peripheral ductal abnormalities in the liver. In addition, the subtle mural irregularities seen on ERCP may not be detected with MRCP.

False positive findings in MRCP usually result in unnecessary diagnostic workup including ERCP that can ultimately lead to increased morbidity and higher costs. On the other hand, false negative findings in MRCP can delay diagnosis of hepatobiliary and pancreatic pathologies, resulting in further disease progression, increased medical costs, and multifactorial complications. Given our results, we would suggest use of ERCP without prior MRCP in cases where laboratory values or other imaging studies strongly suggest an abnormal hepatobiliary or pancreatic process such as stone, stricture, or obstruction. For those patients, MRCP would only add cost if it leads to ERCP, and may result in morbidity if a false negative result delays a necessary ERCP. However, in cases where patients present with right upper quadrant abdominal pain without laboratory values or imaging studies suggestive of an obstructive hepatobiliary or pancreatic process, we would recommend an MRCP to determine whether ERCP is necessary, since an unnecessary ERCP in those patients may increase the morbidity and hospital costs. In addition, suspected periductal masses should also be evaluated by MRCP prior to ERCP, both to delineate potential hazards (such as vascular involvement of the mass, which may increase ERCP morbidity and mortality) as well as to ascertain the size and location of the mass. Also, medical centers where ERCP is not available may opt to perform MRCP prior to patient transfer.

Conclusions

The main advantage of MRCP is that it is a noninvasive technique. Although it only provides diagnostic information, negative MRCP results can decrease use of ERCP, which carries higher cost and morbidity. It can be concluded from this study that if there is a high index of suspicion for hepatobiliary and pancreatic disease based on abnormal laboratory values (high ALT, TB, ALK) and/or USG results, MRCP sensitivity and specificity is not close enough to that of ERCP to be used as a substitute study. Thus ERCP should be the sole test performed in those patients. Despite recent improvements in MRCP techniques, ERCP remains the gold standard for diagnosis of hepatobiliary and pancreatic tree disease.

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An Estimate of Meperidine Usage in West Virginia Hospitals

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Abstract

Purpose: Meperidine (Demerol®) is a synthetic opiate that has been utilized for decades. Nonetheless, its safety and efficacy profile relative to other opiates have led many to advocate against its use. We attempted to estimate current usage of meperidine by hospitals in West Virginia.

Methods: Pharmacists at each hospital in West Virginia were surveyed by telephone. They were asked to estimate meperidine use as a proportion of all opiates prescribed. Of those hospitals with meperidine available on formulary, 47% reported the presence of documented policies or practices designed to limit meperidine usage.

Results: 64% of hospitals in West Virginia report low usage of meperidine (≤10% of all opiates). Of those hospitals with meperidine available on formulary, 47% reported the presence of documented policies or practices designed to limit meperidine usage. When used, meperidine is most commonly administered in connection with surgical procedures.

Conclusions: Many West Virginia hospitals are limiting meperidine usage, in apparent accordance with guideline recommendations. However, traditional patterns of usage for certain indications remain.

Introduction

Meperidine (Demerol®) is a synthetic opiate that was first produced in 1939, and has been commonly used ever since. However, the toxicity of meperidine and its major metabolite, normeperidine, is such that several national health care policy organizations have advocated significant restriction of its use, especially in the elderly.1-3 As is typical of any opiate, meperidine produces sedation, nausea, vomiting, constipation and respiratory depression. However, as a synthetic opiate, it has additional properties not characteristic of other opiates that impact its side effect profile. Meperidine has anticholinergic effects. These are additive with the opiate effects and may manifest as an increased risk of delirium4,5 and a more intense intoxicated feeling.6 Meperidine also inhibits the reuptake of serotonin. Thus it has a greater potential to produce serotonin syndrome than most other opiates when used in conjunction with other serotonergic agents. Finally, and most specifically, meperidine is metabolized in part to normeperidine, a neurotoxic compound. Accumulation of normeperidine is associated with anxiety, myoclonus and seizures. The seizures are not an opiate effect, and thus are not reversible with opiate antagonists such as naloxone. Accumulation of the compound is hastened by the presence of either hepatic or renal dysfunction. Elderly patients appear to be more sensitive to the adverse effects, and as a result meperidine has been listed as an agent to avoid in patients over the age of 65.3

Usage of meperidine in hospitals historically was very high. For instance, in a secondary analysis of data collected from 1991-1993 by 35 hospitals in the Philadelphia area, 69% of hospitalized pain patients who received opiates received meperidine, compared to 27% receiving morphine and 6% fentanyl.7 In order to determine the current status in West Virginia, we surveyed all the hospitals in the state, attempting to estimate their usage of meperidine as a proportion of all opiates prescribed. In those hospitals reporting use of meperidine, we attempted to ascertain patterns of usage as well.

Methods

A standardized questionnaire was formulated to retrieve the information from each hospital or inpatient care facility. A telephone encounter form was used to record the answers to the core questions of the article. The questionnaires included:

I. Name of hospital/facility. Date and time. Position of interviewee.

II. Is meperidine (Demerol®) on your formulary?

III. Are there specific restrictions or auto stop dates on meperidine?

IV. What types of physician are using meperidine?

V. In what department/areas of your facility is it used most often and its location?

VI. What are the different dosage forms that are available in your facility? (e.g. IV, PO, Patient Controlled Anesthesia [PCA])

VII. What percent units of usage does your facility use of meperidine compared to other C-II opiates?

A list of all hospitals and inpatient care facilities was obtained from the West Virginia Hospital Association website. (http://www.wvha.com; accessed 7/30/08) Contact information was also provided for each facility as well as hospital profiles which included numbers of beds and services offered. Initial contact was made by telephone to each inpatient pharmacy. The clinical director was requested at first and if unavailable the director of pharmacy or a staff pharmacist was interviewed. The process began with a brief description of the interviewer/location and the reason for the call. A small overview of
the article and its intended use was also described without any bias for or against the use of meperidine. After verbal consent was obtained the standardized questions where initiated. The interviewer remained consistent and neutral to all answers given. One interviewer was used during the entire collection process. Total collection time spanned over a 2 month period in August and September of 2008. Upon completion, the results were subjected to a descriptive analysis.

Results

Of the 68 hospitals listed by the West Virginia Hospital Association, 58 provided responses to our telephone survey. One of those responses covered four hospitals under the same management, so 61 of the 68 hospitals are represented. The remaining seven hospitals ranged in size from 22 to 80 beds, and appear comparable to the other small to medium size hospitals that did respond. The estimated proportion of meperidine use out of the total opiate use is presented in Table 1. The locations of usage within the hospital are noted in Table 2. The most common service for usage was in surgery or recovery. Other services noted were consistent with traditional usage practices. All of the hospitals carried the injectable form of meperidine. However, only 17 hospitals had oral dosage forms available. Similarly, only 9 hospitals had meperidine available by PCA.

Discussion

Meperidine has a tradition of use for several conditions, most of which have little, if any, evidence of clinical superiority when compared to alternative agents. It frequently is used for postoperative pain and shivering. However, studies suggest that it has a shorter duration of action than either comparator opiates or comparator NSAIDs.8 It also has a higher risk of postoperative delirium than other opiates when used in elderly patients.5,9 A systematic review of agents for the prevention of shivering concluded that meperidine was indeed effective for this indication.10 However, it also concluded that clonidine and tramadol appeared similarly effective. Many physicians utilize meperidine for preoperative sedation and procedural analgesia. In the context of endoscopic procedures, meperidine may offer certain benefits over other opiates. Specifically, meperidine has significant anticholinergic activity, which may reduce secretions. Furthermore, with this short term use, there is less concern of accumulation of metabolites. However, head to head trials have not generated significant differences between meperidine and other sedatives.11,12 Also, there are case reports of patients suffering seizures following even low doses of meperidine.13 Another procedure wherein meperidine is frequently used is the reduction of acute fractures or dislocations. Once again, head to head trials show no benefits when compared to fentanyl14 or intraarticular lidocaine.15 Meperidine has long been the opiate of choice for patients with acute biliary colic or pancreatitis. This is based on a perception that meperidine has less effect on increasing the sphincter of Oddi pressures, at least when compared to morphine. At the manometric level, data generally support this.16 However at the clinical level, there is no evidence from controlled trials to suggest superiority of meperidine in pain relief or time to resolution of the flare. Furthermore, other agents, such as tramadol, may be superior to meperidine in terms of its manometric effect on the sphincter of Oddi.16 Finally, meperidine is frequently used in obstetric settings. Part of this frequency is based on perceptions that meperidine may increase uterine contractility. When directly tested however, length of labor was proven to be no different with meperidine than when patients

<table>
<thead>
<tr>
<th>Usage Rate</th>
<th>Number of Hospitals</th>
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<tr>
<td>Not on formulary</td>
<td>12</td>
</tr>
<tr>
<td>≤ 10%</td>
<td>27</td>
</tr>
<tr>
<td>10.1-20%</td>
<td>8</td>
</tr>
<tr>
<td>20.1-30%</td>
<td>9</td>
</tr>
<tr>
<td>&gt;30%</td>
<td>5</td>
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<table>
<thead>
<tr>
<th>Service</th>
<th>Number of Hospitals</th>
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<tbody>
<tr>
<td>Surgery/PACU</td>
<td>37</td>
</tr>
<tr>
<td>ER</td>
<td>27</td>
</tr>
<tr>
<td>OB</td>
<td>13</td>
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<td>GI</td>
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Table 1. Reported proportion of meperidine use relative to all opiates by hospital

Table 2. Services reported as frequent users by hospital
were given placebo. Multiple head to head trials have suggested that meperidine is not superior to alternatives, and may offer a higher incidence of nausea and sedation in the mother. Furthermore, adverse neonatal effects have been reported, including respiratory depression.

Because of the lack of therapeutic evidence and the documented potential for toxicity, several entities have recommended limitations on the use of meperidine. Meperidine is explicitly listed as a medication to avoid in patients over the age of 65. Use of meperidine in patients with hepatic or renal dysfunction is discouraged due to the risk of normeperidine accumulation. Due to the relatively poor bioavailability of meperidine, roughly 40-60%, the use of oral versions is discouraged in any patient. If needed, meperidine doses should be limited to 600 mg/24 hours and less than 48 hours total duration. Because of these proscriptions, use of PCA forms of meperidine is discouraged, as they are easily surpassed.

Our survey indicates that many hospitals in West Virginia have implemented restrictions on the use of meperidine. Anecdotally, eight respondents noted that such efforts had been made in the past unsuccessfully. Taken together, the majority of hospitals thus have attempted restrictions. Over and above these, 72% of hospitals have stopped using oral dosage forms, and 85% have eliminated the use of meperidine PCA. We therefore conclude that significant strides have been made toward guideline-suggested usage.

Usage for some indications remains strong, however. These tend to follow the long-accepted uses for meperidine, with peri-procedural use being most commonly followed by acute use in fractures or abdominal pain. Continued use of meperidine is not unique to West Virginia. A survey of 12 midwestern hospitals of varying size revealed that over half (56.8%) of elderly hip fracture patients received at least one dose of meperidine, with meperidine accounting for 31% of all opiates administered to this population, in whom the drug is not recommended. Similarly, in two New York hospitals, roughly 12.5% of elderly surgical patients received meperidine. On the other end of the age continuum, one study reported that in children who received opiates for procedural sedation for reduction of severe fractures, 54% of children received meperidine when treated by general emergency medicine physicians. This contrasts with 1% of children receiving meperidine when treated by Pediatric emergency medicine physicians. Regardless of current usage, the success of a number of hospitals in curtailing the use of meperidine should serve as both an impetus and reassurance to current users as they reassess the safety and utility of this drug in the future.

This survey has several important limitations. We did not attempt to obtain any patient specific data. Therefore, we cannot attempt to assess whether or not usage was actually outside of guideline recommendations. Also, very few hospitals provided exact numerical percentages of use. Almost all of the numbers are based on estimates by pharmacists at the respective hospitals. Thus, recall bias is unavoidable and potentially large. It is not clear whether the bias would be higher or lower predominantly. Furthermore, even with an accurate perception, pharmacists could be additionally biased by working closely with specific departments who might have atypical usage patterns. We attempted to minimize this by speaking with pharmacy directors or clinical coordinators preferentially. Persons in these positions should have a better overall view, but these individuals were not available at all sites.

In conclusion, our survey indicates that many hospitals in West Virginia have relatively low utilization rates of meperidine. While still frequently prescribed, national trends toward reduced use of meperidine appear to be continuing. This is corroborated by very low rates of meperidine overdose fatality in West Virginia, when rates for essentially all other prescription opiates have risen dramatically. That being stated, further reductions are quite feasible. There are at least 26 hospitals in West Virginia that do not have a formal program in place to promote appropriate use of meperidine, as suggested by guidelines. Furthermore, given the potential for misuse and confusion, elimination of oral and PCA forms of meperidine in the minority of hospitals that still use these seems a reasonable goal. If these steps were taken, it would go a long way toward ensuring that meperidine was utilized in the safest manner possible.

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West Virginia Physician Honored

Dr. Rano S. Bofill, MD of Man, a member of the WVSMA since the 1970s was recently honored with three separate awards, bestowed upon him by two associations. The Tri-State Fil-Am Association of West Virginia, Kentucky and Ohio (WV, KY & OH) honored him as “Most Outstanding Filipino-American of WV, KY & OH” and “Outstanding Filipino American of WV, KY & OH for Music.” He was honored again by the Bisaya Medical Association in the USA with the award, “Outstanding Visayan Filipino American of America.” Dr. Bofill has participated in many musical activities which include, nursing home sing-alongs throughout the United States, hosted karaoke sing-alongs and DJ dancing for the WVSMA Midwinter Clinical conferences during the 1990s and composed theme songs for several associations. His Elvis tributes and donations of trophies at musical events are among his other activities.

Pathology Meeting Raised Funds for Local Charities

The Seventeenth Annual Seminar in Pathology, sponsored by United Hospital Center, was highly successful in raising funds for local charities. One hundred thirty six pathologists and cytotechnologists attended this annual event. It was held at the Sheraton Station Square Hotel in Pittsburgh on April 28 thru May 2, 2010. Participants came from all around the country including, Alaska, California, Washington, Oregon, Texas and Idaho. Attendees came from Norway (Europe), Canada and Guam.

Since its inception, the annual event has benefited local charities with donations over $600,000. This seminar was organized and directed by Chinmay K. Datta, MD, PhD, Chief Pathologist at the United Hospital Center. Bruce C. Carter delivered the introductory speech on May 1, 2010 with an emphasis on Health Access Free Clinic and Camp Catch Your Breath which is an asthma camp for young children.
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I was completing my specialist training in haematology at The Manchester Royal Infirmary when, on a rare sunny day, I visited a friend in Liverpool. Thumbing through a journal, he suddenly said “Why don’t you apply for this job? You’ve kept saying that you want to go to America.” And that’s how I came to meet Jack.

Two weeks after my application, a letter arrived, a letter with an American postage stamp. Enclosed was a two-page missive containing some quaint phrases, but the nub of the matter was that I was being offered a position at West Virginia University. But some logistics remained, mainly procuring a visa to work in the United States. Jack somehow convinced Mr. Jennings Randolph, senior senator for West Virginia that my presence was imperative to enhance the health of veterans, and that’s how I found myself at the Veterans Administration hospital in Clarksburg, West Virginia. Jack drove me from Morgantown to Clarksburg and accompanied me on a house-hunting tour. We finally settled on a two-bedroom apartment at the exorbitant rent of ninety dollars a month.

When a vacancy arose at the University hospital a few months later, I asked Jack if I should apply for the position. “Don’t,” he said, “the Chief of Medicine knows all about you and he will call and offer you the position.”

“But what if he doesn’t and I lose my opportunity?” I asked.

“You won’t,” he responded, “Just do as I say.”

Several weeks later, I was asked to see Doctor Edmund Flink, then Chief of Medicine.

“There is the possibility of a vacancy arising in the Department later this year,” he said, continuing “I wondered if you would be interested.”

I didn’t quite know the appropriate response – I was, after all, not an experienced job-hunter, and so mumbled something that indicated my “interest” in being a faculty member at the University hospital.

“I suppose you can handle the usual hematologic problems we see including the anemias and bleeding disorders, and, of course, the leukemias, lymphomas and multiple myeloma. I expect you are comfortable reading peripheral blood films and bone marrow specimens.”

By now, I had become a little bold.

“Probably at least just as well as the fellow next to me,” I replied, “I like to think I am better than most but not as good as a few.”

Within a year, I was recognized as the Outstanding Clinician of the Year. Appreciating my teaching abilities, Jack ensured that I had maximum contact with residents and medical students.

One day, he turned to me and said “You need an American postgraduate degree. I have signed you up for a Masters degree in Advanced Pharmacology.”

“Jack!” I expostulated, the only pharmacology I learned was in medical school and that was eons ago. And what about the time commitment?”

“Don’t worry,” Jack replied, “I’ll cover your clinics and attending responsibilities. You’ll do it.”

And I did.

Jack’s care of patients was exemplary, but more so was his interest in the comfort and welfare of patients’ families. As a neophyte faculty member, I learned much by simply watching him interact with patients. Jack learned that a very ill patient with sizeable assets had no will or trust in place. He arranged for an attorney to come to the patient’s bedside and made sure that plans were set in place for the disposition of the patient’s estate. That was Jack.

“There is an international hematology symposium in Sao Paulo and we are going to submit five abstracts. So you have some work to do.”

I noted wryly that the first person plural had metamorphosed to the second person singular. It was hard work, but all five abstracts were accepted.

Jack’s interest in his fellows and residents extended far beyond the bounds of the hospital. He took an interest in our families – and our cars.

“Go see Shorty Anderson if you want car maintenance. He is rough the way he talks, but he is scrupulously honest. The larger his bill, the happier I am because I know that he has corrected defects that could well have let me down in the middle of nowhere. I have never been stranded with a breakdown, and this I attribute to Shorty.”
We were frequent visitors at Jack’s home. On one occasion when my wife and I had to keep an appointment, Jack’s wife baby-sat for our year-old son. When a new fellow fresh from the tropics lost his way in the hills of West Virginia, Jack ploughed his way through foot-deep snow in his 4-wheel drive vehicle trying to locate his lost sheep. This was well before the days of mobile and car telephones, which most of us could not afford anyway. It turned out that all street and direction signs were covered with snow and our new colleague found himself hopelessly lost. How Jack found him—he probably sniffed with the snout of a St. Bernard – we never knew.

A year later:
“We need to write a book on hematology case studies. We see so much good stuff here. You need to put together some of the more interesting patients we have seen. I noted again the change from ‘we’ to ‘you.’ The book was published and ran into a second edition before we parted company.
“It’s time you were promoted,” he said a year later. I’ll put you up for promotion but there are some things you must do. This time, I did not resent his use of the second person singular. I “did” what had to be done and was duly promoted.

And then, out of the blue one day, “Will you be a referee for me?”

“Jack!” I almost yelled, “What’s happening?”
“It’s time for me to move on and I am applying for a Deanship at another University.”
“But why me?” I asked. “Who is better than you to describe how I have nurtured you and helped you advance in your career? You speak well and you write well. You are, to my mind, the ideal referee. Do you agree?”

“Of course,” I responded, as though there was any doubt.

When Jack moved on, I mourned the loss of a senior colleague, a friend – and a mentor par excellence.

FRATERNITY

BY ALVIN D. WATNE, MD, FACS

This paper is in follow-up to a paper presented at the May 3, 1980 (30year)1 spring meeting the West Virginia Chapter of the American College of Surgeons on the occasion of the presentation of the John O. Rankin presidential gavel that passed each year to the new President of the West Virginia Chapter. Dr. Rankin, a Wheeling orthopedic surgeon, was elected as Chapter’s first Vice President in 1951, and served as Governor of the West Virginia Chapter 1955 through 1961. On the gavel is an inscription, “To John O. Rankin, founding member and leader, West Virginia Chapter of the American College of Surgeons, distinguished surgeon, loyal colleague and staunch friend, in gratitude for years of unwavering service from your friends, the Fellows of the West Virginia Chapter of the American College of Surgeons”.

The American Medical Association was founded in 1847. The American College of Surgeons was founded May 5, 1913. It was the brainchild of one man, Franklin H. Martin. An initial objective outlined by Dr. Martin for the American College of Surgeons was to provide a forum where surgeons could discuss problems based on practical surgical experience in addition to listening to literary treatises based on “theoretical deductions”.

In August 1932, Dr. R.J. Wilkinson of Huntington wrote to Dr. Franklin Martin suggesting an idea that West Virginia should consider having a combined meeting with the Fellows of the American College of Surgeons and the American College of Physicians. Dr. Martin (the ACS) replied, “There is no objection to the West Virginia Fellows of the American College of Surgeons having a local Chapter meeting. Fellows of the College have organized local chapters in several states. You understand this chapter should be Fellows of the American College of Surgeons and should NOT include Fellows of the American College of Physicians.”

On January 14, 1933 a second letter was sent to Dr. Martin by Dr. Ben Golden of Elkins, WV with carbon copy to Dr. Ben O. Robinson of Parkersburg. “We of West Virginia have, at present, some problems facing us, and I believe it is a good thing to keep the members of the College together. Our industrial situation is going to cause some
trouble ere it is ironed out. There will probably be some feeling arise between the profession and the mine operators. This, of course, will have to reflect on the “company” doctor. .. so that for some time to come things will be uneasy. The Fellows of this state have developed a fine spirit of cooperation; therefore, I hate to see any opportunity lost whereby this can be continued”.

For approximately 20 years the efforts died, and it was not until January 19, 1951 when Dr. H.P. Saunders, Associate Director of the American College of Surgeons, wrote to Dr. William R. Laird of Montgomery, WV. Dr. Laird was Governor of the West Virginia Chapter, stating “you are aware of the enthusiasm of the Board of Governors of the College concerning the organization of local chapters where they do not already exist. This enthusiasm of the Governors is shared by the Board of Regents, and I have been authorized to assist in the organization these chapters. It is highly desirable that the chapters be essentially uniform in organization, except for minor deviations which may be necessary to accommodate local situations peculiar to certain areas. Consequently it is the desire of the College that each chapter should adopt uniform bylaws, except for possible minor differences to suit local situations, and that after adopting these bylaws, the chapter apply to the College for a charter. These charters will be issued on approval of the Regents. The decision as to whether one chapter should be organized for an entire state, province, county or district, or whether a region should be subdivided for smaller chapters, depends on advice from the area concerned, but our present information indicates that it would be well to have ONE CHAPTER to include the entire state of West Virginia”.

Then Dr. Laird [Governor] replied on January 23, 1951, “There is a great deal of enthusiasm in West Virginia about establishing this Chapter of the American College of Surgeons. I have already discussed the matter with Dr. Myers. Before long, you will be hearing from us.” The State Chapter was formed on July 19, 1951, when the Fellows of the American College of Surgeons gathered at the Greenbrier Hotel during a meeting of the West Virginia State Medical Association. During that meeting, Dr. William R. Laird of Montgomery, WV had chaired the meeting and Dr. Hugh A. Bailey of Charleston was elected President, Dr. W.W. Scott of Williamson, Secretary. The counselors were Dr. Henry M. Hills, Jr. of Charleston, Frank Langfitt of Clarksburg, and Dr. John O. Rankin of Wheeling. The officers subsequently met on November 29, 1951 and at that time Dr. John Rankin was elected Vice-President in addition to his duties as counselor. They posted the first meeting for the first week in April 1952 at the Greenbrier Hotel. Dr. Laird from Montgomery provided a $250.00 check that was to be used for the “three best surgical papers written and presented by the residents from approved hospitals in the state.”

A charter was granted by the Board of Regents of the American College of Surgeons, Chapter 29, granted the 19th day of July, 1951, stating the “organization of Fellows under this Charter shall be known as the West Virginia Chapter of the Fellows of the American College of Surgeons”. To paint the picture of that bright and optimistic July, room rates at Greenbrier Hotel were $19.00 double occupancy/ American Plan. A new Ford was $1100.00; this included automatic transmission and “as sound as a dollar” meant respect, not laughter!

Fraternity is a word with derivation in Latin: L Fraternitas; a brotherhood, from L. Fraternas; brotherly, from Frater, a brother.

The true distinction of a fraternity is that unlike any other form of social organization, the members of a fraternity freely associate as equals for a mutually beneficial purpose. The mutually beneficial purpose in the organization is a free union apart from the institutions of government and religion. The members willingly transmit information and knowledge to fellow members to benefit and enhance the practice of the profession with no copyright or patent to limit the information’s use. Fraternities can be traced from trade unions or guilds that emerged in England and Alexis De Tocqueville (1830) referred to the American fraternity as ‘democracy in America’. Our West Virginia chapter is based on the bond between physicians that causes us to gather. We identify ourselves as a member of an elite group which is not based on biologic sex, power, money, intelligence, experience, race, religion, or cult, but rather on having endured or experienced a mutual process that is the meaning of surgery. It is not necessary in our interface to say “I did nine cases yesterday”, but rather each of us recognizes in the other what it means to a surgeon.

It is at this point in time after 60 years of robust fraternity that we must prepare for the future as an organization that is current, relevant, and educational but most importantly a venue for fellowship that cares about the human condition. It was the fraternity of surgery that originated our chapter, and it is that same fraternity that will keep us together for generations to come.

The Delegation Report

Annual AMA House of Delegates Meeting

June 12-16, 2010—Chicago

The 2010 American Medical Association House of Delegates meeting was held this year at the Hyatt Regency Hotel in Chicago, Illinois. Representing the West Virginia State Medical Association were Drs. Joseph Selby, James Felsen, Carlos Jimenez, Hoyt Burdick (OMSS Delegate), Shaun Spielmon (RFS Delegate), our Executive Director and State Senator, Evan Jenkins and twenty-five medical students from the West Virginia University School of Medicine and the Joan C. Edwards School of Medicine at Marshall University.

The Organization of State Presidents and Executives (OSMAP) met on June 11. Topics of discussion included state and national healthcare concerns.

The House of Delegates adopted the following six new AMA policies:

1. Formulate legislation for a new Medicare payment option that would allow patients and physicians to freely contract. This policy is concerned with access to care in the wake of the 21% Medicare payment cuts.
2. Develop model state legislation to prohibit the use of shackles on pregnant women unless they pose a flight or safety risk.
3. Support personalized medicine to enhance patient care.
4. Educate the public on antibiotic resistance and encourage the development of new treatment options.
5. Educate communities of color on skin care protection and the need for cancer screening.
6. Encourage development of a partnership of physicians, nurses, and attorneys to help identify and resolve patient care issues.

Policies were also adopted to strengthen physician workforce issues in order to meet burgeoning healthcare demands. A shortage of 129,000 to 159,000 physicians is anticipated by 2025.

The Federal Commission chair, Jon Leibowitz personally assured the group that he will work to help physicians successfully participate in the new healthcare delivery system without running afoul with antitrust laws.

In his final speech to the House of Delegates, AMA President, Dr. James Rohack expressed disappointment with Congress’ continuing Band-aid fix to the SGR dilemma.

Dr. Cecil Wilson in his induction speech appealed to the House of Delegates and all physicians to support the American Medical Association.

Dr. Michael Maves, the American Medical Association’s Executive Director, appealed for support of the organization’s efforts to maintain and enhance the quality of care.

Newly elected members of the Board of Trustees were announced on the final day of the annual meeting. They are:

- Dr. Stephen Permut, a family physician from Philadelphia
- Dr. Barbara McAnemy, an oncologist from New Mexico
- Dr. Carl Sirio, a critical care physician from Pittsburgh

The president-elect of the American Medical Association is Dr. Peter Carmel, a pediatric neurosurgeon from New York and New Jersey.

Constantino Y. Amores
Chair, WVSMA Delegation

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We invite you to join our organization which consists of members who manage the daily business of healthcare providers. Our objectives are to promote educational opportunities, professional knowledge and to provide channels of communication to office managers in all areas of healthcare.

We currently have eleven chapters in West Virginia.

Visit us on our website for more information or contact: Toni Charlton – President at 304-670-7197 or Donna Lee - State VP Membership at 276-322-5732.
WESPAC is the West Virginia State Medical Association’s bipartisan political action committee. We work throughout the year with elected officials to make sure they understand the many facets of our healthcare system.

WESPAC’s goal is to organize the physician community into a powerful voice for quality healthcare in the West Virginia Legislature. We seek to preserve the vital relationship between you and your patients by educating our legislators about issues important to our physicians.

WESPAC contributions provide critical support for our endorsed candidates. Your contribution can make the difference between a pro-physician/patient candidate winning or losing.

To make a contribution to WESPAC, please call Amy Tolliver at (304) 925-0342, ext. 25

2010 WESPAC Contributors

The WVMSA would like to thank the following physicians, residents, medical students and Alliance members for their 2010 contributions to WESPAC. These contributions were received as of June 23, 2010:

Chairman’s Club ($1000)
Patrick P. Dugan, MD
Dana Olson, MD

Extra Miler ($500)
David A. Bowman, MD
James L. Comerci, MD
Generoso D. Duremdes, MD
Michael A. Kelly, MD
Michael A. Stewart, MD

Dollar-A-Day ($365)
Greenbrier D. Almond, MD
Edward F. Arnett, MD
D’Ann E. Duesterhoeft, MD
Michael O. Fidler, MD
William L. Harris, MD
Sushil K. Mehotra, MD
Prasadarao Mukkamala, MD
Stephen R. Powell, MD
L. Blair Thrush, MD
John A. Wade, Jr., MD
R. Austin Wallace, MD
Mark D. White, MD

Campaigner Plus (> $100)
Kenneth J. Allen, MD
Kamalesh Patel, MD
Finbar G. Powderly, MD
Richard A. Rashid, MD
Syed M. Siddiqi, MD
Diane E. Shafer, MD

Campaigner ($100)
Moutassem B. Ayoubi, MD
Rano S. Bofill, MD
William H. Carter, MD
Patsy P. Cipoletti, MD
W. Alva Deardorff, MD
John E. Dudich, MD
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Ignacio H. Luna, Jr, MD
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Ophas Vongxaiburana, MD
Syed A. Zahir, MD

Donor
Luis A. Almase, MD
Lynn Comerci,
Douglas W. Midcap, DO
Kathleen Mimnagh, MD
Babulal M. Pragani, MD

The WESPAC Board currently has vacancies for which we are soliciting nominations. If you know someone who would be a great addition to the Board please contact our Director, Amy N. Tolliver, MS at amy@wvsma.com or (304) 925-0342. Self nominations are encouraged.
Each month, the WVSMA tracks the number of MPLA suits filed in each county throughout West Virginia. Below is a chart summarizing the case filings from 2003 to June 2010. Please note the annual total for 2005 was significantly impacted by the large number of suits brought in Putnam County that year, most of which related to one physician. Year-end total filings 2003-2009 were 315, 130, 273, 154, 174, 178, and 205 respectively.

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Gynecologic Oncologist and Children’s Disgestive Diseases Specialist Join WVU

Younes Bakri, M.D., has joined the West Virginia University Department of Obstetrics and Gynecology as director of gynecologic oncology. He is the inventor of the Bakri S.O.S. Tamponade Balloon, a device that is used around the world for temporary control or reduction of postpartum hemorrhage. He is a participant in the Global Women’s Health Program, in collaboration with Duke and Harvard universities, in the areas of maternal mortality and malignant placenta tumors.

Dr. Bakri earned a United Nations Relief and Work Agency scholarship to study medicine at the University of Alexandria Medical School in Egypt. He did his residency in obstetrics and gynecology at Hahnmann University Hospital and a fellowship in gynecologic oncology at Thomas Jefferson University Hospital, both in Philadelphia.

Prior to joining the staff at WVU, he served as director of gynecologic oncology at the Western Michigan Cancer Center in Kalamazoo. Dr. Bakri is board certified in gynecologic oncology and obstetrics and gynecology.

Brian Reidel, M.D., has been named chief of pediatric gastroenterology and nutrition for the West Virginia University Department of Pediatrics.

Dr. Reidel received his medical degree from Vanderbilt. He went on to complete his residency in pediatrics and a fellowship in pediatric gastroenterology and nutrition at his alma mater.

Prior to joining the staff at WVU Children’s Hospital, he served as interim division director of pediatric gastroenterology, hepatology and nutrition at Monroe Carell Jr. Children’s Hospital at Vanderbilt.

A fellow of the American Academy of Pediatrics, Dr. Riedel is board certified in pediatric gastroenterology and pediatrics.

Bonnie’s Bus Provides Mammograms in State

Bonnie’s Bus, the WVU MBR Cancer Center’s 40-foot long mobile mammography screening unit, is once again making stops around the state, offering digital mammograms to women in rural areas.

The goal for 2010 is to make at least 60 site visits throughout West Virginia with a focus on communities that have the highest breast cancer mortality rates.

During its first year on the road, Bonnie’s Bus travelled 9,000 miles, visited 20 counties in West Virginia, and provided nearly 400 digital mammograms.

Bonnie’s Bus represents a statewide partnership of women’s groups, clinicians, public health professionals and other community leaders to help reduce the number of deaths from breast cancer in West Virginia. Women are referred to local physicians for followup care, if a problem is found during screening.

MyWVUChart Electronic Medical Records Now Available at WVU

West Virginia University Healthcare patients now have online access to their health records via MyWVUChart.

Patients’ test results, hospital admissions, clinical documentation, current health issues and health trends are available. Lists of medications, allergies, and immunizations are also online.

“WVU Healthcare is proud to be one of the first healthcare facilities in the country to provide this service to our patients.” Kevin Halbritter, M.D., vice president of medical staff affairs and chief medical information officer, said.

More than 3,000 patients regularly access their electronic health records online. All primary care departments are now using MyWVUChart.

The system is secure, and all personal information is encrypted for privacy.
The Comprehensive Lung Nodule Program at the School of Medicine, Cabell Huntington Hospital and the Edwards Comprehensive Cancer is the first program in the Tri-State to offer electromagnetic navigation bronchoscopy (ENB), a minimally invasive option to locate, biopsy and plan treatment for peripheral lung lesions.

Marshall pulmonologists use the new SuperDimension inReach® System, which combines GPS-like positioning technology with a catheter-based system that can access natural airways inaccessible to traditional bronchoscopes. Previously, patients with spots on their lungs typically had more limited treatment options, such as major surgery to remove a section of the lung, bronchoscopy (which does not reach lesions deep in the lung), needle biopsy or watchful waiting.

“We are pleased to offer a minimally-invasive alternative for patients who have lesions on their lungs that are hard to reach or cannot tolerate a more invasive procedure,” said Dr. Imran Khawaja. “This is an option that will help many patients.”

ENB is typically performed in an outpatient setting.

The manufacturer notes that although 1 in 500 chest x-rays shows a peripheral lesion, 65% of traditional bronchoscopes cannot reach them. “More invasive diagnostic techniques are then necessary, posing a greater potential for complications such as pneumothorax,” the company said on its Web site.

Dr. Robert Nerhood Retires; Successors to His Leadership Posts Named

Dr. Robert C. Nerhood has retired as senior associate dean for clinical affairs and chair of the Department of Obstetrics & Gynecology.

“Bob Nerhood has provided outstanding service and leadership to the medical school in both roles, and his dedicated and effective leadership has built a strong foundation for those who will succeed him,” said Dean Charles H. McKown Jr., MD.

A member of the school’s full-time faculty since 1992, Dr. Nerhood has been active in his specialty and in professional affairs generally. His leadership activities have included serving as chair of the American College of Obstetrics and Gynecology District IV Perinatal Committee, ACOG’s West Virginia Section, the West Virginia Perinatal Task Force, and the Cabell Huntington Hospital Board of Directors.

Dr. McKown said Dr. Joseph Werthammer will assume the position and responsibilities of senior associate dean for clinical affairs, and Dr. David Jude will become interim chair of the Department of Ob/Gyn. “Dr. Werthammer brings to his new position extensive administrative experience in integrating clinical practice and successful medical education, and Dr. Jude has shown highly capable and dedicated performance as vice chair of ob/gyn,” he said.

A member of the faculty since 1981, Dr. Werthammer is director of the pediatrics clerkship and medical director of the neonatal intensive care unit at Cabell Huntington Hospital.

Dr. Jude, who joined the faculty in 1993, is the Zacharias Professor for Education in Obstetrics and Gynecology, as well as director of the ob/gyn residency program.
Learning from the 2009 H1N1 Pandemic and Looking Forward

By Cathy Slemp, MD, MPH

The spring outbreak of novel H1N1 flu virus, its resurgence in fall 2009, and the associated efforts to mitigate its impact offered health systems and communities incredible opportunities to learn. The virus first identified in the US in April 2009 spread across the country in weeks. While ultimately proving less deadly than anticipated, its impact was substantial nonetheless, being highly visible and resulting in a significant number of hospitalizations and deaths among younger and working age populations—very different from typical seasonal flu virus where 90% of hospitalizations and deaths are in persons 65 and older.

Many successes were seen across the state and nation during the spring and early fall. Public education messages and dissemination of information about the situation not only raised awareness, but truly impacted public practice of disease prevention: people changed hand hygiene, practiced new methods of respiratory hygiene, and stayed home when ill as they had never done before. Public health demonstrated the ability to communicate messages in a time of change and adapt recommendations related to both treatment and community mitigation as more was learned about the virus.

Vaccine was developed in the predicted timeframe, with first product arriving five months from virus identification. Limited and unpredictable supply chains, however, became the challenge every community faced for weeks to months, leading to great frustration nationwide. In West Virginia, the rapid drop in manufacturer-predicted supply and the unpredictability of flow triggered a major strategy change. Originally, a more private sector focus overlaid by public vaccination clinics was envisioned. This shifted to a more public sector focus with vaccine distribution to private sector partners wherever possible until supply became more stable. This approach used available vaccine quickly for the most part, avoided “start and stop” supplies in provider offices and provided somewhat greater equity of access, especially among vulnerable and uninsured populations statewide, but it also frustrated many public and private sector providers alike. Despite this, and with vaccine supply often being the limiting factor, it is estimated that 400-500,000 West Virginians have now been vaccinated against the 2009 H1N1 virus. Supply is now plentiful and at least one product (Sanofi multi-dose vials) remains viable into 2011.

Overall, West Virginia’s H1N1 vaccination rates are proving above regional and national averages (for target populations: WV: 36.9%; HHS Region 3: 33.0%; US: 33.2%). That being said, coverage rates among individual target populations vary widely, likely impacted by a variety of factors. West Virginia efforts effectively reached unprecedented levels of children through schools, public clinics, and provider offices (estimated H1N1 vaccine coverage 6 months - 17 years: WV: 47.3%; US median: 36.8). Unpublished data suggests that between 40 and 50% of healthcare workers in West Virginia took the H1N1 vaccine. Nationally, employer requirements and recommendations for healthcare worker H1N1 flu vaccination correlated strongly with increased worker vaccination rates (requirements: 8 fold increase; recommendations: 4 fold increase compared to organizations with neither requirements nor recommendations).

While adults with chronic disease had the highest rates of death from the H1N1 virus, vaccine coverage rates were not as high (estimated WV 25.4%; US: 25.2%). Vaccination rates for pregnant women have proved difficult to assess through phone surveys due to small numbers. Low rates based on West Virginia Immunization Registry reporting (~20%), however, are concerning and may present an opportunity for significant advancement come fall 2010. In time, a better understanding of both coverage levels, health provider flu vaccine communication to pregnant women, and reasons why pregnant women who did not get vaccinated opted out will be available through the Pregnancy Risk Assessment and Monitoring Survey (PRAMS) data now being collected across the state.
Beyond pediatric vaccination, healthcare worker vaccination and levels far above national averages, other successes included, strong and productive school-university-public health partnerships in many communities, some counties with second dose rates for children 9 and under reaching 90+ percent, and new and effective public health partnerships with pharmacies for antiviral distribution and vaccine administration. Reaching young adults (19-24 yrs); getting a handle on coverage among pregnant women; and the fact that many adults ages 25-64 with chronic disease (the group at highest risk of death from the 2009 H1N1 virus) never sought vaccine proved challenging. Finally, statewide second dose coverage rates for children 9 and under statewide remain at only ~60%, meaning many children whose parents think they are protected remain susceptible. An NIAID study suggested the second dose of H1N1 vaccine boosts the protective effect from ~25% to 100% in children 6-35 months and from 55% to 94% in children 3-9 years of age.4

Communications proved critical to response. Many ways to disseminate information to the public were utilized – schools, healthcare settings, websites, TV, radio and community forums. Use of social media proved effective for many younger populations across the country and public health needs to continue expanding use of these media for sharing health information.

Communication with healthcare providers was multifaceted and remains an area for improvement. Methods used included faxed health alerts, association email messages, websites, conferences, media, and national professional associations. Many healthcare providers disseminated current, up to date scientific information to patients. Yet, anecdotes of providers making recommendations not based on current science or expert opinion were not uncommon, e.g., recommending pregnant women not be vaccinated despite science showing they were at serious increased risk of disease complications, hospitalizations and death. Much misinformation among both providers and the public circulated about nasal spray vaccine, a vaccine that shows both good efficacy and ease of administration for otherwise healthy persons 2-49 years of age. Finally, there clearly remain many areas for research and development – more reliable point-of-care test methodologies, advances in vaccine development, and better ways to more accurately predict vaccine supply and timing.

Looking ahead to the upcoming flu season, the 2010-11 trivalent seasonal flu vaccine will include the 2009 virus as its H1N1 component. The Advisory Committee on Immunization Practices has expanded flu vaccine recommendations to be universal. Communities and providers are encouraged to build on lessons learned and partnerships created. Whether a pandemic or a typical flu season, influenza remains our most common vaccine preventable disease in West Virginia and the nation causing tens of thousands to die, hundreds of thousands to be hospitalized and millions to miss work and school. Vaccine has proven itself safe and effective, but only works when used. Making flu vaccination the norm for you, your workforce, your patients, your family, and helps mobilize your community to do the same.

Think through now what you can do to impact vaccine uptake next flu season.

Dr. Slemp serves as the West Virginia State Health Officer and directs the Center for Threat Preparedness, Bureau for Public Health, WVDHHR.

2. WVDHHR. WV Statewide Immunization Information System (WVSIIIS) data; Preliminary CDC data.
A Symbol of Work to Do

From Weirton to Welch and Martinsburg to Matewan and all points in between, the West Virginia Medical Insurance Agency provides insurance consulting and services to physicians in 38 West Virginia counties.

The Agency was formed in 2004 and with the hiring of Steve Brown as agency manager, has endeavored to go anywhere in the state to provide “valued assistance” for its clients. The Agency currently represents in excess of 300 doctors and has expanded its services to include workers’ compensation insurance, businessowners (BOP) protection designed especially for medical practices, and individual and group health, life, vision, dental, and disability insurances in addition to its original focus, medical professional liability insurance.

As a symbol of the Agency’s efforts to go statewide, the Agency exhibits in its office an embroidered wall hanging created by the West Virginia State Medical Association Alliance. The wall hanging is a collage of logos or seals representing 17 regional medical component societies of the West Virginia State Medical Association.

“We are honored to have the wall hanging in our office, but it is more than an exhibit to us,” says Steve Brown, agency manager. “It represents or symbolizes what we do. Our motto is “meeting the needs of physicians”; what is understood in that statement is we serve physicians’ needs throughout the state,” added Brown.

“Being a native West Virginian, I take pride in the fact that I have literally worked in every county of the state” said Brown, and “It is now my goal to have Agency clients in every county.”

In the first year or two of the Agency’s operation, its business was concentrated in three areas of the state: Ohio County, the Eastern Panhandle, and Mercer County. “The target was then established to fill-in the middle of the state,” said Brown. He also added, “I truly enjoy the state and seeing it change each year; so traveling in the state is a labor of love for me.”

The Agency continues to travel the state attending medical component society meetings when asked and when the West Virginia State Medical Association President makes presidential visits to the various component society meetings. “I have attended meetings of at least 18 medical component societies over the six year period I have been with the Agency, some numerous times,” said Brown. “During the time I have made presidential visits with six different WVSMA Presidents: Doctors Terry Elliott, Elizabeth Spangler, Joseph Selby, Austin Wallace, Stephen Sebert, and Carlos Jimenez, and I’ll hopefully attend more with Dr. John Schmidt after he becomes WVSMA president in August” he added.

The Alliance’s wall hanging maintains a place of special significance to the Agency and incorporates the objectives of the West Virginia State Medical Association. “It is very attractive, a conversation piece, and a symbol” said Brown. “It keeps me mindful that we have work to do to accomplish the goals we have to serve physicians throughout West Virginia,” added Brown.

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Steve Brown, agency manager, and Dave Mueller, physician services specialist, discuss service plans for physicians throughout West Virginia.
The WVSMA remembers our esteemed colleagues...

Robert Howes Jr., MD

Dr. Robert W. Howes Jr., 82, of Parkersburg passed away Monday, June 21, 2010, at his residence.

He was born in Parkersburg, a son of the late Robert W. Howes Sr. and Martha L. Stout Howes.

Dr. Howes was a Navy veteran of World War II and had served the Parkersburg area for many years as a practicing physician.

He is survived by three daughters, Jan L. Bell of Charlotte, N.C., Susie H. Kirby of Smyrna, Ga., and Joy H. Patterson and husband, Gil, of Roswell, Ga.; two sons, Robert W. Howes III and Mike S. Howes, both of Parkersburg; three sisters, Catherine Howes Stone of Charleston, Jo Fauber of New Martinsville, and Georgianna Wigal of Virginia Beach, Va.; eight grandchildren; and three great-grandchildren.

In addition to his parents, he was preceded in death by his wife, Wilda Jean Caplinger Howes in 2008; one brother, Scott N. Howes; and one sister, Marty McCoy.

A guestbook for sharing online condolences is available at www.vaughanfh.com.

Elvin Kreider, MD

Dr. Elvin Groff Kreider, 72, a resident of Philippi passed away Thursday, Aug. 27, 2009, at his residence.

He was born Jan. 19, 1937, in Paradise, Pa., a son of the late Paul and Mary (Groff) Kreider.

He was united in marriage June 30, 1962, to Maribeth (Messner) Kreider, who survives.

Also surviving are two daughters, Brenda Witmer and husband, Gerald, of Harrisonburg, Va., and Karen Markle and husband, Brian, of Reston, Va.; two sons, Kenny Kreider and wife, Kim, of Morgantown and Steve Kreider and wife, Becky, of Philippi; one brother, Lloyd Kreider of Strasburg, Pa.; six grandchildren, Autumn, Adam, Ben, Sophie, Levi and Riley.

Dr. Kreider was a graduate of Eastern Mennonite College and earned his medical degree from Temple University in Philadelphia, PA. He has worked as the primary pediatrician and allergist in Philippi for over 30 years, with his medical practice based in Myers Clinic.

Dr. Kreider also assisted as instructor in the PA Graduate program at Alderson-Broadus College. He was a founding member of the Philippi Mennonite Church in Philippi and enjoyed family times, hunting and spending time outdoors.

The family wishes to express a special thank you to the staff of Ruby Memorial Hospital, Hospice Care staff for the kindness and care shown, and prayers, thoughts and all other assistance provided by friends and family. Condolences may be expressed to the family at www.wrightfuneralhome-services.com.

C. Carl Tully, MD

He wanted to be a “people doctor” and in 1953 he began to realize his dream when he opened his practice in South Charleston.

Dr. C. Carl “Doc” Tully passed away on July 3, 2010, at the age of 97. He was born June 22, 1913, in Charleston to the late Christopher Columbus and Eva Lena Lanham Tully. He is survived by his beloved wife Margaret Ann Tully; two sons, C. Carl Tully Jr. and wife Faye of Bradenton, Fla., and Richard R. Tully and wife Janet of LaGrange, Ky.; five grandchildren, Chris Tully, Karen Staten, Debbie Tully, Kara Waite and Amanda Fulmer; nine great-grandchildren; and loving sister, Kathleen Ryder of South Charleston.

Carl graduated from Charleston High School in 1931 and attended West Virginia Tech and Morris Harvey College while working for the U. S. Postal Service and Charleston Fire Department.

After enlisting in the U. S. Army during World War II, he attended West Virginia University and finished medical school at the University of Virginia in 1947. He served as a
commissioned officer at the U. S. Marine Hospital in Baltimore, Md., from 1947 through 1948. During the Korean War, he was called back to active duty with the U. S. Army from 1951 through 1953.

In order to keep his two sons, as well as other boys in the neighborhood, involved in constructive activities, Dr. Tully organized and coached the first little league and pony league baseball teams in South Charleston. He also started a neighborhood football league. He was also chairman of the committee that designed and built Little Creek Park.

During his twelve years of service, including two years as president, with the Kanawha County Board of Education, he orchestrated the construction of four high schools and one junior high school in Kanawha County.

He became a specialist in family practice and in 1974 West Virginia University enlisted his help to head up a new family practice program at Thomas Hospital. After retiring from the family practice program, Dr. Tully served as the medical director at St. Francis Hospital for eleven years. He further served in training emergency medical technicians for Kanawha and surrounding counties. He retired from St. Francis and became an associate director for the West Virginia Workers’ Compensation Commission for two and one-half years.

He was president of the WV Division of the American Cancer Society and a fifty-year member of the Scottish Rite, and Beni Kedem Shrine. Dr. Tully has received numerous awards and certifications, including a Distinguished West Virginian Award, for his service and contributions as a “people doctor”, 1993 Family “Doc” award from the American Academy of Family Physicians, and in 2002 South Charleston Auxiliary Gym was dedicated to Dr. Tully “who dared to dream”, and the 2006 Alumni of the year from Morris Harvey College.

The family has asked that, in lieu of flowers, memorial contributions be made to the WVU School of Medicine, P. O. Box 9100, Morgantown, WV 26506-9100, or Charleston University, 2300 MacCorkle Avenue, S.E., Charleston, WV 25304.

Online condolences may be sent to www.wilsonfuneralsandcremations.com.

Ernest M. Walker, Jr., MD

Dr. Ernest M. “Ernie” Walker, Jr., MD, PhD, 66, of Huntington, husband of Dr. Sandra McCullough Walker, EdD, passed away Friday, June 11, 2010, at his residence in Huntington, WV. Dr. Walker was born August 24, 1943, in Roseboro, NC, a son of Mildred Howard Walker, of Buies Creek, NC and the late Ernest Marshall Walker, Sr. He graduated from Campbell College (A. A. 1962), University of North Carolina (B.A. 1964; M.S., 1967), Medical University of South Carolina (PhD, 1967; MD, 1974; residency in Clinical and Anatomical Pathology, 1977). Dr. Walker devoted his career to academic medicine, serving on the faculties of the Medical University of South Carolina and the University of Arkansas for Medical Sciences before joining the faculty of the Joan C. Edwards School of Medicine in 1992. At Marshall, he was a professor of pathology, serving more than five years as the chairman of the Department of Pathology. In addition to providing clinical services, teaching and mentoring, he was active in research on heavy metal toxicity and iron overload. He developed a patented approach to treating iron overload using acetaminophen, and was the author of eight chapters in medical texts and over 250 peer-reviewed scientific articles. He served on Marshall’s faculty Senate and was a member of the university’s Cell Differentiation Development Center. Dr. Walker was a member of several professional societies in pathology and clinical sciences including the College of American Pathologists and the American Association for Clinical Chemistry. He was a past president of the Association for Clinical Scientists, a member of its Scientific Council, and vice-chair of its Therapeutics and Toxicology Section. He was honored as the association’s Clinical Scientist of the year in 1991. He also belonged to the Medical honorary Alpha Omega Alpha and the collegiate honor society Phi Kappa Phi.

Additional survivors include a daughter and son-in-law; Laura (Captain Steven Vance Thompson) Walker Thompson of Raleigh, NC; and a son, Ernest Marshall Walker, III of Buies Creek, NC; two grandchildren; Heather LeeAnn Thompson and Emily Lauren Thompson.

In lieu of flowers, donations may be given to Campbell University, www.campbell.edu or the Memorial Baptist Church, www.memorialbaptistchurch.net.
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**Format:** All articles may be submitted by email or on CD. Microsoft Word is preferred, but other programs are acceptable. All tables or figures should be created separately from the body of the manuscript as .tif, .jpg or .pdf files in a high resolution format with corresponding file names such as, Table 1, Figure 1, etc. Legends should be included for all tables and figures.

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