EVERYONE'S WORST OBSTETRICAL NIGHTMARE

by Bruce A. Harris, MD, FACS, FACOG

Shoulder dystocia is a terrifying and often unexpected complication of vaginal or even on rare occasion Caesarean delivery, responsible for many obstetrical malpractice claims. Most claims allege a child's avoidable permanent disability caused by traumatic motor and sensory nerve damage to the brachial plexus. Some allege avoidable intrapartum fetal death, neonatal death or permanent central nervous system damage caused by intrapartum fetal anoxia, hypoxia, asphyxia or acidosis. A few allege avoidable maternal traumatic injury and subsequent disability. All injuries and disabilities are usually claimed to be secondary to obstetric mismanagement of labor and/or delivery. Only rarely is pediatric mismanagement of the newborn claimed.

The recognized though wildly inaccurate incidence of shoulder dystocia is 1.0% to 1.5% of all deliveries with 60% of these occurring in deliveries after 41 completed weeks gestation. Such estimates are extremely unreliable since definitions of shoulder dystocia differ widely and hospital medical records seldom code shoulder dystocia as a complication unless significant maternal or infant injury occurs.

My definition of shoulder dystocia is very simple: unusual difficulty in delivering an infant's shoulders. This obviously permits considerable latitude in interpretation but also serves as well as any other definition. Risk factors for shoulder dystocia have been listed as follows:

- Macrosomia [>4000 gm Estimated Fetal Weight (EFW) or birthweight above the 90th percentile]
- Maternal birthweight >8½ lbs.
- Previous shoulder dystocia and/or previous macrosomia
- Advanced maternal age (≥35 years)
- Multiparity (three or more prior deliveries)
- Maternal obesity (>90 kg or >198 lbs)
- Diabetes mellitus, especially gestational
- One or more elevated values on a three-hour glucose tolerance test
- Postdatism (gestation ≥42 completed weeks gestation)
- Delayed descent of the fetal head
- Prolonged second stage of labor
- Excess maternal weight gain (≥20 kg).[1,2]

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(Continued on page 21)

THE PRESIDENTIAL BOX

by Paul Sinkhorn, President

Shoulder Dystocia: A Medicolegal Babel

The more I read about shoulder dystocia and Erb's palsy, the more I'm filled with wonder.

I wonder why 50% of shoulder dystocia occurs in fetuses weighing less than 4000 grams.

If downward traction on the head and neck causes Erb's palsy, **I wonder** why all vaginally-delivered babies don't have Erb's palsy, since we use downward traction virtually every time we deliver a fetus. And **I really wonder** what happened to the four infants, reported by Ouzounian et al*, who experienced brachial plexus injury in their posterior arms, which weren't involved with downward traction.

If Erb's palsy only happens when there is too much traction, **I wonder** how much is too much.

I wonder why we can't predict brachial plexus injury: no one has yet successfully calibrated the force necessary to reliably cause this disability.

I wonder why >90% of brachial plexus injuries are transient.

I wonder why Caesarean doesn't reliably prevent Erb's palsy.

I wonder why a major risk factor for brachial plexus injury is delivering a prior baby with brachial plexus injury.

Prematurity and fetal growth retardation appear to be protective, yet some pre-term babies still exhibit Erb's palsy. **I wonder** why.

When I read about using the Zavanelli maneuver to replace the fetal head in the vagina, **I wonder** if we should pause to consider the two cases wherein the fetal spine was severed during the maneuver.**

Like most obstetricians, **I wonder** if there is an intrauterine component to brachial plexus injury.

For those who champion Caesarean delivery to prevent shoulder dystocia, **I wonder** if they have considered the morbidity of operative abdominal delivery or the inherent inaccuracy of estimated fetal weights.

The March, 2000, issue of *Contemporary OB/GYN* contains synopses of three shoulder dystocia malpractice cases. All three alleged negligent failure to perform Caesarean, a common theme in cases of this ilk. The first trial involved a patient delivered vaginally of a large baby. The mother had previously delivered a big baby and standard maneuvers for shoulder dystocia were used. The jury found for the physician. The second case involved the vaginal delivery of an eleven pound baby who developed Erb's palsy. A sonogram at 34 weeks estimated fetal weight to be eight pounds. The physicians settled for $450,000. The third case dealt with the vaginal delivery of a patient by a resident while the attending obstetrician was operating on another patient. The attending had intended to perform a Caesarean but fetal distress necessitated earlier delivery. The baby suffered Erb's palsy and the jury awarded $18 million.

These cases and countless others like them illustrate a hodgepodge of courtroom law and schizophrenic verdicts. Although awards tend to roughly parallel the degree of disability, one might as well flip a coin to predict the outcome of most of these malpractice actions. With a lack of strict criteria to define shoulder dystocia and enable its reliable prevention, isn't it patently unfair to hold an obstetrician responsible for brachial plexus injury, absent clear-cut negligence? Co-morbidities and associated conditions only serve to further muddy the already opaque waters.

There has been a slow but steady move toward redefining fetal asphyxia and cerebral palsy, and plaintiffs' attorneys have actually had to start making cogent cases to prove malpractice. **I wonder** if it's time for similar reform with brachial plexus injury.

*Obstet Gynecol 1997;89:139.

**Contemp OB/GYN Oct., 1999;p72.

THE WITNESS BOX

by Doug Daniel, Editor

"All pain is per se, and especially when in excess, destructive and even ultimately fatal in its action and effects...the great pain accompanying human parturition is no exception to this general pathological law."

James Young Simpson, MD (1811-1870)

Renowned Scottish obstetrician writing in London Medical Gazette and Lancet in 1847 who is credited as the first, in 1847, to utilize inhaled vapors of sulfuric ether as an intrapartum anesthetic, later preferring the increased safety of chloroform.

We gain two new members this month, one honorary and one not. Linn Parsons wrote the commentary on Laura Queen's domestic violence lead article last issue and Richard Litt joins through the recruiting efforts of Jon Hazen. You know Linn from last issue's author introduction in the "Witness Box". Dick did an internship at Grady Memorial in Atlanta, residency at Jackson Memorial-University of Miami in Florida, and has a private practice in Las Vegas. He's also a pilot. Welcome aboard!

If you're like Jon and have talked to someone about joining the Society, call 1-800-304-4728 to leave their name and address. I'll send them an information packet with a copy of the *Newsletter* plus an application for membership. Call the same number if you prefer they be personally contacted by phone.

There's an item in this month's "Hot Box" on abortion, euthanasia, iatrogenic narcotic addiction, professional discipline, medmal litigation, patient complaints, hospices and death with dignity. Don't ask how I got all these button issues into one editorial but there's guaranteed to be at least one aspect of it which will offend you, probably more. The reason it's in here at all is because recent state medical licensing board actions may immediately influence your care of terminal patients and eventually influence your practice of obstetrics.

For those of you attending the ACM this month in San Francisco, try to make it to the Society's membership meeting Sunday afternoon at 5:30 pm. *ACOG Today* gave us a nice plug on page 8 of their April 2000 issue by covering the membership meeting with Jef Raines' talk, Dan's Clinical Seminar and all three Luncheon Conferences. If this don't bring 'mu in nothing will. As I said in the last "Witness Box", we've got to show attendance for Dan's Clinical Seminar and the Luncheon Conferences.

The North Carolina Medical Board has seen fit to publish another article from the Society, this one on chaperones. Its another version of the letter I sent to the green journal which Dr. Pitkin printed as a letter to the editor. The article can be found in No. 4, 1999, page four of the Board's *Forum*. If you would like a copy, send me a SASE and you'll get one. Tom, yours is enclosed (Tom Gruszynski gets a copy of the current *Forum* with his *Newsletter*).

If anyone still thinks the Society's controversial public position and high profile on mandatory preemployment, routine and with cause drug screening for all healthcare workers, including physicians, is unfounded, consider this: Two class action lawsuits were filed the first of March against Georgetown University Medical Center in Washington, DC, potentially representing over 600 patients exposed by a Versed® and fentanyl-addicted X-ray tech to every communicable disease imaginable including AIDS between last September and February this year. Total damages claimed are $2.9 billion, $2 million per patient in compensatory damages plus another $600 million in punitives . A nurse caught the tech aspirating fentanyl from an X-ray patient's IV pump. Upon investigation and questioning he admitted using discarded needles and syringes to access patients' IV lines and filch their scheduled drugs to either self-administer or sell, replacing the volume with saline via the same needles and syringes. Now the hospital is trying to notify all potentially exposed patients, offering free testing for God-only-knows-what.

Larger questions loom on the horizon: If found infected, who's going to treat them? Who's going to pay for it? Will Georgetown try to dodge responsibility for potentially community-acquired infections or accept all discovered infections as nosocomially acquired? Crucial to the case will be the American Hospital Association's advocacy of universal preemployment drug screening by all hospitals. The tech faces criminal charges with possible fine of $250,000 and a maximum of ten years in prison. Just so you'll know, one of the lawyers represented Paula Jones in her Slick Willie case.

I have found a recently published book on the use of hypnosis in women's healthcare which seems to be pretty good. I need a book reviewer who has training, expertise or experience in clinical applications of medical hypnosis as they relate to the practice of obstetrics and gynecology. If any of you have such and would agree to review the book, please call me.

Speaking of books, the Society now has a lending library for its members. If you see a review in "The Book Box" and would like to read the book, let me know. There is at least one copy in the Society office and it can easily be mailed to you. The catch is you would have to return it, preferably within a month in case someone else was waiting to read it.

We are honored this month to publish a lead article by the likes of Bruce Harris. He's a recognized expert on Maternal-Fetal Medicine and more specifically shoulder dystocia, having written multiple articles and delivered untold lectures on the topic. The only area he and I disagree is episiotomies: he favors mediolateral and I'm a confirmed advocate of the midline, episioproctotomy without hesitation if needed, à lá Jim O'Leary. Bruce and I couldn't agree more on one point: either perineal incision must be properly performed and repaired by someone intimately familiar with pelvic floor anatomy plus considerable experience in its repair. See one, Do one, Teach one won't get it here. Most of the people I've monitored as physicians or midwives in or after training have been unusually ignorant of proper surgical technique for anal mucosal and sphincter repair, inept in identification of the external anal sphincter to the point of mistaking the superficial transverse perineal muscle for it, and unaware of the importance of and technique for reapproximating the levators ani. I've either been remarkably lucky or quite well-trained (by Dave Halbert currently of Hershey, Pennsylvania, thank-you-very-much-Dave), because midlines and episioproctotomies have been very, very good to me with excellent results for my patients and practically no complications such as dehiscence, pelvic prolapse, fecal or urinary incontinence, rectovaginal fistula, or dyspareunia. As I remember, all the rectovaginal fistulae I've diagnosed and repaired have been the product of someone else's delivery management. I am neither smart enough nor talented enough a gynecologic surgeon to be responsible for any of these benefits so it must be inherent in the procedure when properly performed.

Bruce is widely published in the peer-reviewed literature both as a sole author and as co-author with such icons as Louis Hellman. He's also received numerous teaching awards from his medical students and residents. He's a member of AOA and was recognized by the Republic of South Vietnam Department of Health in 1964 for his contributions there. In addition to previously editing *Women's Care Quarterly*, he has edited *The Alabama Perinatal Bulletin* since 1981 and is a Past President of the Alabama Perinatal Association. He is or has been a reviewer or member of the editorial board of *The Female Patient*, *Emergency Medicine Magazine* and *Obstetrics and Gynecology*. He is currently Charles E. Flowers, Jr., Professor of Obstetrics and Gynecology, Emeritus, and was previously Professor and Chairman, Department of Obstetrics and Gynecology, University of Alabama-Huntsville. Bruce earned his undergraduate and medical degrees from Harvard University, later serving between 1943 and 1948 a Medical Internship at Boston City Hospital, an Obstetrics and Gynecology Internship at Vanderbilt University Hospital in Nashville and another Obstetrics and Gynecology Internship at Johns Hopkins Hospital in Baltimore. He then spent two more years at Johns Hopkins, six months at Detroit Receiving Hospital, six more months at Johns Hopkins and a year at Kings County Hospital in Brooklyn as a resident in obstetrics and gynecology. Sit at his feet and learn.

Paul Sinkhorn's musings on shoulder dystocia in this month's President's Box make an excellent side dish for Bruce's lead article. I'm not sure but I think Paul has finally mastered haiku, the ancient Japanese poetic art form.

Ben Harer fills this month's "Book Box" with a review of Bill Hindle's excellent new textbook on diagnosis and treatment of breast diseases. Although setting a standard which will be difficult for most private offices to attain, it clearly discusses the importance of routine periodic physician and patient breast examinations, proper performance of these examinations, and proper performance of or referral for diagnostic procedures. Bill's description of a clinic providing one-stop-shopping for all breast diagnostic procedures in suspect cases with final results and recommendations for treatment available the same day before the patient leaves is obviously the wave of the future. Unfortunately some will read the book, decide they are instant experts, and try to reproduce Bill's results only to fail miserably. Others will recognize the need for additional training and technique, obtain same, recruit a qualified and properly trained staff, and greatly improve the quality of diagnosis and treatment of breast disease in their area. Due to the resources necessary to establish and operate these centers, most will probably be associated with Level III or larger Level II hospitals in large cities where patient volume will be adequate to insure adequate financial support. The discussions of diagnosis and treatment of non-malignant breast diseases will however be of interest to all practicing physicians.

This month's "Suggestion Box" contains my thoughts on the benefits/complications of operative vaginal delivery via forceps or suction versus Caesarean section. It's always been a hot topic and it's going to get even hotter. More and more the tendency is to equate Caesarean section with vaginal delivery, it's essentially a toss-up as far as risks/benefits, so why not just section everybody who wants it. My point is that regardless of whether the obstetrical attendant utilizes major abdominal surgery or minor pelvic surgery to accomplish delivery, he's got to know what he's doing and be technically proficient. Otherwise the unnecessary complications will continue as will the lawsuits.

In this month's "Litter Box " I try to read the College's Committee Opinion tea leaves as now allowing retired physicians to function as medical expert witnesses. While many will disagree with my interpretation, it's pretty obvious there have been more than just semantic changes in the Opinion. It's also obvious to me that although perhaps not encouraging the use of these physicians as such, College policy now certainly allows it.

Reading a physician's curriculum vitae is usually like trying to read the New York City telephone directory white pages; boring, repetitive and seemingly never-ending. Not so Maurice Druzin's. This month he writes one of our most thought-

provoking articles yet on VBAC, putting Stan Zinberg's recent position editorials in perspective (see below). Maurice's professional and personal history is every bit as interesting. For starters he was born in Johannesburg, South Africa, the only such person I know. He earned his undergraduate and medical degrees during a combined six-year program at the University of Witwatersrand Medical School in Johannesburg, interned in general surgery and general medicine at Coronation and J.G. Strydom Hospitals in Johannesburg, then completed another rotating internship and obstetrics/gynecology residency in the US at St. Luke's Hospital in Denver followed by a maternal-fetal medicine fellowship in Los Angeles at LA County-USC Medical Center's Women's Hospital. He is currently Professor, Chief of Obstetrics and Associate Chair of the Department of Obstetrics and Gynecology at Stanford University Medical Center in California while serving as Chief of its Division of Maternal-Fetal Medicine and Director of its Perinatal Diagnostic Center.

Maurice has lectured literally around the globe, repeatedly been recognized with resident teaching awards, and is a member of APGO and CREOG in addition to an ABOG examiner for the past three years. He is widely published in medical peer-reviewed literature and textbooks both as a sole author and as co-author with the likes of Hon, Paul, Zuspan, Quilligan, Gabbe and Niebyl. He is an Editorial Reviewer for *Obstetrics and Gynecology*, *The American Journal of Obstetrics and Gynecology* and *The Journal of the American Medical Association.* He has also written for *The New York Times* and been interviewed on *Lifetime Cable Network* plus multiple other radio and television interviews.

Steve Klasko is the author whose book, The Phantom Stethoscope, was reviewed in the March issue's "Book Box". This month he tells us about his experience trying to integrate primary care into his department's obstetrics and gynecology residency. While apparently quite difficult and initially less than satisfactory, the effort now seems to be on the right track. Until the powers-that-be at CREOG change their collective mind again.

In his January 2000 inaugural "President's Box" our Fearless Leader, Paul Sinkhorn, enlightened us on the Internet's role in 21st Century healthcare. Now he returns with the rest of the story. Like everything else, the Internet's got good news and bad news for us. According to Paul, it seems the good more than compensates for the bad.

Some of you may remember the recent dust-up over the College's position on the "thirty minute rule" regarding "immediately" versus "readily" available obstetricians during VBACs. Others probably wish you could forget the whole thing. We covered the situation rather in detail ("Dancing in the dark on the head of a pin", *Newsletter,* Vol. 7, No. 5, November 1999, page 8), but it still ain't over. Stan Zinberg had another editorial in April 2000's *ACOG Today*, this time adding that the majority of comments received by his office on this subject have been supportive. Though still purposely vague on the nationwide minimum acceptable standard of care regarding maximum allowable delay in performing truely emergency Caesarean sections, the editorial clearly comes down on the side of decreasing decision to incision time. It's reprinted in this issue on page 37. One thing is obvious whether or not you support the College's position on this. Stanley Zinberg adheres to Harry Truman's two famous dicta, "The Buck Stops Here" and "If you can't stand the heat, get out of the kitchen." We need more like him.

Along the same lines, it seems the brouhaha over universal health insurance ain't over either. Last issue we reprinted John Queenan's series of four editorials from C*ontemporary OB/GYN* addressing this issue. His March 2000 editorial in the same publication continued exploring solutions to the problem of uninsured patients with some cogent answers to the opposition's criticisms. It's reprinted in this issue on pages 38 and 39.

As usual we encourage submission of letters to the editor, articles and guest editorials for publication consideration. Letters are subject to editing only for space requirements with articles and editorials typewritten and double-spaced. Free reprints of individual past *Newsletter* articles are available to members upon submission of a SASE, back issues for $10.00 each or $20.00 per volume of four issues. A 44 page monograph entitled "The Impaired Physician" and containing the complete series of articles previously published in the *Newsletter* is available for $20.00 including tax, shipping and handling, $15.00 to Society members. A new monograph entitled "The Ninth Commandment: Providing Effective Medical Expert Witness" is available for the same price.

All opinions expressed in *The Medicolegal OB/GYN Newsletter* are strictly those of the bylined authors and do not necessarily represent policies, opinions or recommendations of the American Society of Forensic Obstetricians and Gynecologists, its members, Board of Directors, Editorial Board, etc.

THE MAIL BOX

24 FEBRUARY 2000

Yo Doug,

Another great *Newsletter*! What do you do in your spare time?

Ben Harer

P.S.: Nice to see steady inroads at the ACM.

29 FEBRUARY 2000

Wassup Ben?

Thanks fa da shout. What spare time? It's also nice when people say complimentary things about you, especially people whose opinion and friendship you value and esteem.

The ACM is definitely starting to cook for the Society, but will continue only if some rather high expectations are met. A hundred at the Society membership meeting and fifty at the Caduceus meeting would be great, but if nobody shows at the Clinical Seminar we can't expect the College to continue allotting valuable time and space. At least one Luncheon Conference at each ACM will probably still be available for Impaired Physician topics because it's cheaper to buy ten uneaten lunches than cover the expenses of an unattended Clinical Seminar. There's still more than a possibility of a real mock trial next year and we hope to be involved. Everyone here at the ASFOG offices looks forward to a great year for the College with you at the helm and can't wait to attend your installation in San Francisco.

Doug

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09 MARCH 2000

Dear Doug,

Having just read your letter to the green journal (Daniel WD. Medical and Osteopathic Boards' Positions on Chaperones During Gynecologic Examinations. Obstet Gynecol 2000;95:317) and having retired from clinical gynecology after 37 years in private practice, I support in principle your advice but would like to make a practical observation. Though we had always offered in writing a chaperone on request, it was seldom requested and it was common to hear from the patient that if a chaperone was present, they would be most uncomfortable. I also believe the open discussion of sensitive issues which might need to take place during the exam for accurate evaluation would be stifled.

In 1992 my collections in Seattle were 95% of charges. For the next seven years my fee scale remained unchanged. When I retired in mid-1999 my practice volume and patient profile were the same as in 1992 but my collections were only 58% of charges!

By 1999 we had done everything possible to cut overhead expenses yet employee salaries and benefits had risen to 30% of overhead compared to 15% in 1992. Last year a close colleague with a prestigious reputation, over forty years in practice and known among his colleagues as "the doctor's doctor" took home less pay than his nurse. Had he hired another employee to meet the routine chaperone position you propose he would have worked for nothing. Of course this whole problem is due to the impact of attempts to "manage" healthcare costs in our area.

Educating physicians on proper behavior and the warning signs of a seductive patient is a more fruitful exercise than protecting the physician from their own sexual impropriety or the rare false accusation through a mandated chaperone for the thousands of exams which are not at risk.

Richard M. Soderstrom, MD

13 MARCH 2000

Dear Dick,

Thanks for your letter. I think we'll just have to agree to disagree on this one, but you're not the only one. I'll never discount the value of training physicians in identification and management of the seductive patient. For those so inclined to view their patients as fair game for personal sexual gratification there is no effective preventative training on or reasonably debating the bounds of sexual propriety in our professional relationships. Once caught their behavior can possibly be modified if they are so motivated but by then they may be facing jail time and permanent loss of license.

Your lucid explanation of the economic and quality of care impact mismanaged care has had on both physicians and patients is irrefutable and regrettable, but some of us like your friend have decided to leave entrepreneurial private medical practice rather than be treated like a slave by our paymasters. The fact that we couldn't financially afford to deliver the same high quality of care we had been trained in and provided for a number of years was just the icing on the cake.

There are some other considerations which may or may not have applied to your situation. Many of us work as salaried employees in clinics or as locum tenens replacements, thereby usually caring for patients who are strangers and don't want to specifically see us. The damage this does to the physician-patient relationship makes the perception of sexual impropriety much easier. I don't know what the California medical licensing board's position is, but several states I'm licensed in leave very little wiggle room, falling just short of mandating chaperone use for breast, genital and rectal examinations which are all part of our routine examination. I don't know who your medmal insurer was but if it was The Doctors' Company, the Chairman of their Board of Governors, Richard E. Anderson, MD, gave us permission back in 1998 to publish a piece he wrote on professional conduct which was published in the company's newsletter to its insureds in 1994 and again in 1996. He makes no bones about it, chaperones are necessary to good risk management.

As for patient reluctance to discuss sensitive topics in front of a nurse, I personally never discussed these issues while the patient was undressed, fearing it would only increase any feelings of embarrassment or shame on her part in addition to adding an unnecessary distraction for her and I. These conversations were always held with both of us fully dressed and sitting comfortably across from each other in my office, assured that the door into the hall was either slightly ajar or at least unlocked.

Everyone is responsible for their own conduct but considering our profession, the things we do to patients, and the untold damage to be done by an unjustified accusation, I still say "Just do it."

Doug

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28 MARCH 2000

Dear Doug,

While your most recent poll of the membership of ASFOG relating to universal health insurance may be of interest to some, I wish to suggest another subject closer to medicolegal issues. As many are aware, the age of "Political Correctness" is upon us and there are pressures to change our language accordingly. Specifically, some individuals believe the term "fetal distress" should no longer be used. According to some sources, phrases such as "failure to reassure fetal well-being" or "fetal intolerance to labor" should be used. The green journal does not allow the use of "fetal distress" in its articles and my own department's residents are told *never* to use those words. Whatever the verbiage used, fetal distress is a condition that when noted should prompt further analysis of the situation via fetal scalp blood sampling, vibroacoustic stimulation, etc. or conservative treatment such as placing the mother in the left lateral decubitus position, administering oxygen, and increasing intravenous hydration or prompt delivery via operative vaginal delivery/cesarean section. I consider it paranoia to allow the legal establishment to dictate our terminology. It is obvious that whatever terminology is used, the results are the same. I would

challenge anyone who might claim that the term "fetal distress" is more likely to prompt a malpractice suit than other comparable terms.

I have a fairly strong opinion on this because many of my colleagues are buying into this modern approach to obstetrical language. I am therefore curious to hear from other ASFOG members regarding this. Any comments?

Elliot M. Levine, MD

12 APRIL 2000

Dear Elliot,

Thanks for your letter. I couldn't agree more. One of my favorite books is considered by some to be a children's nursery book, full of anthropomorphic pigs and other farm animals. Called Animal Farm, it was recently presented as a made-for-television movie and was a treat to watch. Its author, George Orwell, meant it to be a satirical, metaphorical attack upon communism. He also wrote 1984, the better known chilling novel of totalitarian government under "Big Brother". One of the touchstones of 1984 was the government's introduction of Newspeak as its official language , substituting words with more benign associations for those which might encourage revolution or resistance among its citizens/slaves. Orwell was prescient in his vision of the Berlin Wall's destruction by civilian uprising and today's politically correct language.

If we don't use professional language which clearly and accurately describes our observations, diagnostic conclusions and therapeutic recommendations in terms laymen (juries and patients) can understand, instead obfuscating unpleasant realities and avoiding hard though easily understood terminology just because it might come back and bite us on the buttocks, we come across to these same laymen (juries and patients) as conniving con men whose only purpose is to avoid by deception the responsibility for our mistakes. I personally prefer to be taken as an educated and experienced professional who is honest, straightforward and whose advice has the ring of truth even if he does occasionally make an error.

I once asked one of my residents to tell me what he saw on an EFM tracing inching across the L&D monitor. It was showing the start of mild though recurrent late decelerations which were initially infinitesimal but were increasing in intensity. Beat-to-beat-variability was failing. He got the rate right plus the frequency, intensity and duration of the contractions. Then he said, "It's a non-reassuring tracing." My response was that such terms, though perhaps used by some prominent authors of textbooks and articles, were for people who didn't know how to interpret EFM. I encouraged him to call them like he saw them, accurately describing the decelerations and acting accordingly. The tracing demanded intervention to either resolve an obviously deteriorating fetal situation or abort the labor by delivering the fetus from a hostile environment. I could just see an apoplectic Dick Paul somewhere out in California eavesdropping on our conversation and wondering why in the Hell people either didn't read his book or, if they read it, didn't believe him. I hope some of our members will reply.

Doug

THE HOT BOX

ON THE HORNS OF A DILEMMA: PART II

by Doug Daniel

There's an especially hot topic currently making the rounds of state medical licensing boards. Recently I received my copy of the Oklahoma board's newsletter. The front page was occupied by an article on disciplinary action taken against a physician for using less than what the board thought was adequate narcotic analgesia to relieve one of his nursing home patient's terminal pain. It's reprinted on page 40. There have also been medmal actions brought based upon negligence in providing inadequate pain relief to terminal patients.

It seems like only a few years ago state medical licensing boards were hauling physicians in for too loosely prescribing narcotics and other scheduled drugs. These cases still surface occasionally in reports of board's disciplinary actions. Over the past five to ten years several boards have sent their licensees letters advocating liberal though proper use of narcotics in terminal patients. Since boards' actions are complaint driven, all it takes is one of your patients writing in saying you withheld effective analgesia and they wouldn't treat their dog like that. Considering the dilemma often posed by laboring patients' demands for earlier or more effective narcotics and epidurals versus their obstetricians' concerns over fetal safety and prevention of prolonged labors or unnecessary operative vaginal deliveries and Caesarean sections, we could very well soon be reading our own name in public record summaries of board's disciplinary actions or as defendants on medmal subpoenas.

While comfort, including adequate dosing of narcotics, is the only thing we have to offer terminal patients, we are still responsible for preventing diversion of legitimately prescribed scheduled drugs for illegal purposes. This includes responsibility for and confidence in the person tasked with administering the drugs plus whatever security and documentation measures are in effect at the patient's nursing home, hospice, or oftentimes private residence. Your local pharmacist and his state board of pharmacy will help maintain a watch for inappropriate narcotic consumption but appropriately prescribed analgesia may still be diverted to other uses by any patient or anyone close to them.

I really don't think hysterical labor patients, terminal cancer patients or their cold and uncaring physicians are the problem here. Regulatory agencies both federal and state have over the years instilled a justified fear in physicians regarding the consequences of patients becoming addicted to over-prescribed scheduled drugs. But surely no one would knowingly withhold whatever narcotics were necessary to insure a relatively comfortable death for a terminal patient just because they were afraid the DEA would come knocking after a dissatisfied relative complained sweet old Grandma's doctor/dealer turned her into a junkie with a $20.00 a day morphine jones before she finally died of her ovarian carcinoma. On the other hand concern over narcotic-induced respiratory depression directly contributing to a patient's undesired premature demise is a legitimate concern, especially with Dr. Kervorkian's Traveling Death Show all over the media complete with still photos plus audio and video tapes while Dr. Jack himself is constantly in and out of the pokey or the courtroom.

At least there's one advantage to legalized euthanasia: you no longer have to worry about whether your terminal patients are getting too much or not enough morphine according to your board or the local plaintiff attorney leach. If someone is mentally competent and sincerely wishes to put an end to their suffering, I think we should be able to help them end their travail comfortably and safely without looking over our shoulder to see if the drughounds are closing in.

The biggest problem professionally when legalized euthanasia becomes a reality will be properly training those physicians who are willing to provide the service. We currently have the same problem with abortion. Since there are almost no obstetrics and gynecology residency programs still providing training in how to properly perform abortions, fewer and fewer qualified obstetrician/gynecologists are doing the work. In their absence any Tom, Dick or Harry with a medical license is filling the void, usually with poor to absent clinical judgment and frightening lack of surgical skill. Some of those I've personally observed or spoken with seem no better than the pre-Roe v. Wade lay abortionists. In both today's abortions and the future's euthanasias, patients will best be served by experienced, properly trained physicians with specialist credentials. I sure don't remember a lecture in med school about how to kill people.

On a more personal note, several years ago one of my closest friends confided she had been diagnosed with disseminated undifferentiated intraabdominal carcinoma, primary site unknown. She had spent her professional life as a dentist and psychotherapist, excelling in both and recognized by her peers around the world. Within a year she had undergone surgical staging, debulking and chemotherapy but was considered terminal. In a private moment I told her, "If there is anything, and I literally mean anything, that I can do for you, just let me know." I meant it. Although she lived in an adjoining state where I was not licensed, I was prepared upon her request to obtain a lethal dose of prescription narcotics and take them to her along with

syringes and needles, performing the injection and staying with her if asked to do so. She never asked and it's easy now to say I would have done it, but the reality is I don't know if I could have or not. There would have been no moral, religious, professional or ethical hesitation, only a selfish concern over what might happen to me afterward. Maybe someday it will get easier.

THE BOOK BOX

TOO MANY COOKS?

by W. Benson Harer, Jr., MD

Breast Care: A Clinical Guidebook for Women's Primary Health Care Providers
William H. Hindle, Editor
Illustrated. 464 Pages. New York:1999
Springer-Verlag
Hardback, $75.00

I've known and admired Bill Hindle for many years, but was surprised by his fondness for acronyms as a medical author and editor from LAC+USC BDC. Long recognized as our specialty's premiere expert on all aspects of female breast disorders, he has for years taught postgraduate courses plus given seminars and lectures on diseases of the female breast concentrating on diagnosis and treatment of premalignant and malignant conditions. Vicki Seltzer, ACOG Past President, wrote the following:

> "Dr. William Hindle has been one of the leaders in educating obstetrician-gynecologists about breast disease, having worked extensively both in training medical school students and resident physicians, and in providing continuing education courses for professionals already in practice."

Now Bill and his contributors have written a comprehensive account of how evaluation and treatment of breast disease is done at LAC+USC BDC, implying it easily can and should be done everywhere. The book is dedicated to Daniel R. Mishell, Jr., one of Bill's fellow residents at Harbor General Hospital/University of California back in the '50s and now his department chair.

In a detailed overview of the breast Bill provides useful statistics such as invasive breast cancer being the most common cancer in pregnancy and the second most common cancer in females overall (skin cancer is the first). Each year an estimated 180,200 new cases are diagnosed and 44,000 deaths recorded, a malignancy mortality second only to and soon expected to surpass that of lung cancer. Today the lifetime odds of a woman being diagnosed with breast cancer are 1:8, twice the risk in 1940. This incidence is almost twice that of all pelvic gynecologic cancers combined and has increased 1 to 2% per year over the past 40 years, only recently appearing to stabilize or perhaps even decrease somewhat. Unfortunately breast cancer's mortality rate has been essentially unchanged for over 50 years in spite of marked advances in patient education; earlier diagnosis; neoadjuvant and adjuvant therapies including radiation, cytotoxins and hormones; and less radical breast-conserving surgical procedures.

This is a superb book for medical students, residents and practicing physicians with limited knowledge of normal breast physiology, anatomy and disease. Bill clearly believes primary care providers, particularly obstetrician/ gynecologists, should be highly skilled in diagnosis and treatment of female breast problems. His text's sermon is discover, diagnose, treat and expect to cure breast cancer before it becomes clinically palpable (less than 1 cm in diameter) with a subsequent 90% 10-year disease-free survival.

Medicolegal points of interest for all clinicians, more especially medical expert witnesses, are included in a chapter specifically addressing these issues in addition to others scattered throughout the book. Those performing clinical breast examinations are encouraged to draw graphic representations in the medical record labeled right and left to represent size and location of all palpable abnormalities plus write a detailed description using the convention of position on a clock's face and orientation to the areola or nipple. Drawing a circle or recording precise measurements (X cm by Y cm) is considered evidence of a dominant breast mass, implying possible malignancy. Localized areas of vague diffuse nodularity or thickening should be described as such and represented in drawings with shading or crosshatching, but not with the sharply defined margins of a circle or precise dimensions. Legal precedents have recognized that within four months of a patient's initial presentation to her physician with symptoms or clinical findings, a persistent palpable dominant breast mass should have a final diagnosis or at least be undergoing active evaluation.

Recording specific diagnoses should be reserved until complete evaluation provides a final diagnosis, and any significantly abnormal diagnosis should be addressed by a proposed plan of treatment. Future return visit entries should address the status of the abnormality, i.e. resolved, unchanged, smaller, larger, etc.

Approximately 10% of breast cancers detectable by physical examination are not diagnosed by mammography and another 10% will present as a clinically palpable mass prior to the patient's next regularly scheduled screening mammogram. Therefore Bill stresses that a "normal" mammogram doesn't complete the evaluation of a palpable mass but instead recommends a sequence of physical examination, mammography and then either fine needle aspiration cytology, tissue core-needle biopsy and/or open surgical biopsy. Most important is that "diagnostic" mammography for patients with a palpable mass be differentiated from routine "screening" mammography by a notation on the requisition describing the abnormal physical finding and alerting the radiologist to its location.

The radiologists in Bill's clinic surprisingly do not contact patients with abnormal mammograms to advise them of their results unless specifically requested by referring physicians. This apparently is at variance with the Mammography Quality Standards Act passed by the US Congress which requires radiologists to formally notify all mammogram patients of their results, normal as well as abnormal. It can only be assumed that the clinicians provide this notification during the initial visit or at the follow-up visit.

Bill relies extensively on fine needle aspiration cytology instead of biopsy-based histologic examination of tissue for final diagnosis and treatment planning including mastectomy. This includes diagnosis of nonpalpable mammographic lesions. He does provide the caveats that an adequate cell sample must be obtained and the other two components of the diagnostic triad, mammography and clinical breast examination, must confirm the cytological diagnosis. He reports confirmation by histopathology in 99% of both benign and malignant lesions under these circumstances with better than 95% sensitivity and 90% specificity for carcinomas.

While this may be true in a dedicated, specialized breast clinic with highly trained and experienced personnel immediately available, it obviously may not be the case with general pathologists and radiologists performing diagnostic interpretations. More that a rare medmal tragedy has occurred when a breast was surgically removed only to find on permanent sections that the intraoperative frozen section diagnosis of invasive cancer was in error.

There are limitations to fine needle aspiration and Bill stresses these. Ductal carcinomas in situ cannot be reliably differentiated from invasive ductal carcinomas and well-differentiated ductal carcinomas may be easily missed by fine needle aspiration cytology, therefore a report describing "atypical ductal cells" should trigger a tissue biopsy. Neither can benign or malignant sclerosing lesions nor invasive lobular carcinomas be accurately diagnosed. Other conditions not definitively diagnosed by fine needle aspiration include atypical ductal hyperplasia, atypical lobular hyperplasia, hamartoma/fibroadenolipoma, lipoma, lobular carcinoma in situ, papillary neoplasms and sclerosing adenosis. Papillary lesions require open surgical biopsy and histologic examination for final diagnosis. Additionally, low-grade phyllodes tumors may not be distinguishable from fibroadenomas.

These distinctions become even more important when considering ductal carcinoma in situ. Most gynecologists consider carcinoma in situ to be a relatively innocuous disease, primarily based on experience with treatment and cure of relatively common cervical carcinoma in situ. This assumption holds true for lobular but not ductal carcinoma in situ of the breast. Progression of ductal carcinoma in situ to frankly invasive carcinoma is not completely understood but is considered preinvasive cancer with a 20-30% or better risk of becoming invasive if not adequately treated initially. Since histology and size determine whether these carcinoma in situ lesions are at low or high risk of recurrence with or without invasion, appropriate treatment usually consists of partial mastectomy with postoperative radiation and sometimes total mastectomy (especially with multifocal pathology).

There is an up-to-date chapter specifically covering gynecologic evaluation of women on tamoxifen post breast cancer in addition to others detailing its role in treatment. Breast cancer before, during and after pregnancy is also addressed in addition to lactation and benign breast diseases. There's another chapter on the controversy over the existence or absence of a causal relationship between oral contraceptives, hormone replacement therapies and breast cancer. A superb chapter discusses the application of evidence-based medicine to breast care. Quite interesting are chapters on plastic surgical breast reconstruction following cancer treatment and elective cosmetic breast surgery. There's even a chapter on alternative and complementary therapies for those into crystals, pyramids and auras.

With the exceptions noted below, Bill's textbook is readable and easy to understand with excellent drawings, clear photographs and even four pages of color photomicrographs. Unfortunately there are no accompanying photographs of physical examination findings or clinical presentations such as one finds in the better medical atlases and dermatology texts, but reproduction costs for these are phenomenal and would have considerably increased the book's very reasonable price.

Bill's style as an editor reminds me of a generous high school football coach who lets everyone on the team get playing time once the game's outcome is assured. Consequently there are 42 chapters by 36 contributors, some only two pages long but others almost completely duplicating previous chapters written by authors from other specialties. Contributors are primarily current or prior staff members at Bill's clinic plus others trained by him so there's little controversy or disagreement. Any book with 36 contributors presents a challenge to editing for uniform style and smoothly flowing text, but Bill is more than equal to the task.

It was disturbing that the institutional politics at LAC+USC Medical Center allow only excision of confirmed benign lesions by anyone except Breast Surgery Clinic general surgeons. This is unfortunate since there is little difference in the surgical technique for excising lesions obviously benign and those histologicly or mammographicly suggesting cellular atypia or suspicion of early cancer except wider margins, option of frozen section and an immediate definitive surgical procedure, or possibly the need for general anesthesia. This is not the case everywhere as one of the obstetrician/ gynecologist contributors practicing in a rural area performs all breast surgical procedures except those that are cosmetic. In my opinion, if you can properly perform an excisional biopsy of a benign lesion, you should be able to do the same with a malignant one.

There were also a few disappointments. I would have liked to see a chapter on stereotactic needle biopsy techniques or at least an explanation of why Bill's clinic doesn't use it. I became sold on it six years ago and my patients really like it. It's fast and almost painless with accuracy matching open surgical biopsy at only a fraction of the cost, stress and cosmetic scar. In my experience it has been the best diagnostic alternative when mammography has demonstrated a nonpalpable lesion.

You may have recognized the acronym for Los Angeles County/University of Southern California Medical Center in the above opening paragraphs, but perhaps not BDC (Breast Diagnostic Center). You certainly wouldn't be expected to recognize BI-RADS (Breast Imaging - Reporting And Data System). Every chapter is filled with acronyms, most of which are defined with the initial usage but some are simply accompanied with instructions to look them up in the book's lexicon. Even when initially defined, there are so many different acronyms I was forever flipping to the back in order to fully understand the text. For those unfamiliar with the everyday jargon of LAC+USC BDC, it would have been nice to have fewer acronyms. It will be even more of a problem for others, like myself, who use their favorite medical texts as reference books, looking up specific topics only to find discussions filled with indecipherable acronyms.

Overall this is a well-written, straightforward, comprehensive basic text on the female breast's function, physiology, anatomy and diseases both benign and malignant. I only hope the second edition contains fewer acronyms and a chapter on stereotactic biopsies. These changes would improve an already excellent book while adding only a few pages, greatly increasing the readers' QOL (Quality Of Life).

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THE SUGGESTION BOX

TO PULL OR NOT TO PULL

by Doug Daniel

You've heard some of my sea stories about serving on Guam in the United States Naval Reserve Medical Corps before, so stop me if you've already heard this one. We had a relatively busy service out there with about 45,000 active duty and dependents, many pregnant, on island until 90,000 Vietnamese refugees suddenly showed up in 1973 for a prolonged surprise visit. Every Commander and below medical officer on island had to pull MOD (Medical Officer of the Day) duty at the hospital unless on his tenant command's watchbill in some other capacity. While this may sound like a grave responsibility equivalent to having one's finger on The Big Red Button, it essentially involved working the ER nights, weekends and holidays seeing toddler DOAs with vomitus aspiration and patients with athlete's foot, physical assault injuries, fractures and dislocations, gunshot wounds, MIs, MVA trauma, acute bacterial endocarditis, appendicitis, pharyngitis, vaginitis or whatever other -itis walked in and couldn't or didn't want to wait to make a clinic appointment. If attached to the hospital you were MOD about once a month in addition to your department's own call schedule.

OB call ranged from "port-and-starboard" (one-in-two) to one-in-five and it was rare we didn't have to go in, oftentimes four or five times a night and sometimes only able to get a couple of hours sleep in L&D if any at all. So we asked the CO (Commanding Officer) to exempt our department from MOD duty since nobody else spent nearly as much time at the hospital as we already did. CO refused.

Several of our colleagues tried to help out. The radiologist, a very sensitive and dedicated fellow just out of residency, had brought his pregnant wife with him and she was to deliver on-island. Dr. Roentgen lived next-door to our Chief of Service. Every time the Chief was on call Dr. R knew exactly how many trips to the hospital were made and for how long, so he also asked the CO to take us off the MOD schedule and offered to double his own MOD call. CO refused.

Two of the family practitioners not assigned to the hospital, one a young flight surgeon attached to the Naval Air Station and the other an older civilian contractor working in the General Medical Clinic at the Naval Station, voluntarily offered to take OB call one or two times a month in addition to MOD call and we welcomed the help. Both were pretty good in managing uncomplicated labors and vaginal deliveries, occasionally using outlet forceps.

One night I got a call from the flight surgeon. "I've got one at plus two complete and pushing for about two hours. I put the blades on a couple of times and pulled as hard as I could but the kid just won't come. Hows about coming down and putting the blades on yourself and delivering her." I immediately told him I'd be right down and urged him not to attempt another forceps delivery.

When I walked into the delivery room he asked if I was going to reapply the forceps and try an operative delivery. "I don't know. The EFM tracing looks pretty good so let me examine her first."

She had a cephalic presentation palpable at about plus two station but it was all caput, the biparietal diameter barely through the pelvic inlet. Not only that but the caput was so firmly wedged into the pelvis I could neither get my index and middle fingers between the head and cervix, one of my absolute criteria before even attempting to apply forceps, nor displace the head cephalad. For the icing on the cake the vertex was so deformed by severe caput there was no way to determine its position with confidence, another of my absolute criteria before attempting to apply forceps. I called the OR crew and the flight surgeon helped me do a primary Caesarean section.

I was thankfully surprised there were no maternal or fetal injuries. Fortunately the newborn had no serious head injuries, but afterward I was really glad I hadn't even considered an application of forceps, much less a trial. Even if I had successfully accomplished an operative vaginal delivery, any fetal head or maternal pelvic trauma would have been mine. Try to remember this little story if you ever find yourself in a similar situation.

More to the point, there was recently an excellent lead article in *The New England Journal of Medicine* entitled "Effect of Mode of Delivery in Nulliparous Women on Neonatal Intracranial Injury" (December 2, 1999, Volume 341, Number 23, page 1709) accompanied by an unusually astute editorial on page 1758 by Thomas J. Benedetti, MD, FACOG, of the University of Washington School of Medicine in Seattle. The authors (Towner, Castro, Eby-Wilkens and Gilbert) used a database of 583,340 live-born 2500 to 4000 gram singleton infants born to nulligravidas between 1 JANUARY 1992 and 31 DECEMBER 1994, culled from all birth and death certificates in the California Office of State Health Planning and Development and then

confirmed by hospital discharge records' ICD-9 and CPT codes. They questioned the conventional wisdom that vacuum extractors and forceps were directly responsible for the increased fetal injuries seen subsequent to their use in expediting vaginal delivery.

Two-thirds of deliveries meeting inclusion criteria were spontaneous vaginal deliveries without forceps or vacuum extractor assistance. The remaining one-third were operative vaginal deliveries or primary Caesarean sections. Operative vaginal deliveries were classified as by forceps alone, by vacuum extractor alone or a combination of both. Sections were classified as prior to or after onset of labor. Those after onset of labor were subclassified as with or without prior attempt at operative vaginal delivery. Those with prior attempt at operative vaginal delivery were further subclassified as after failed forceps, after failed vacuum extractor or after both. Their conclusion:

> "The rate of intracranial hemorrhage is higher among infants delivered by vacuum extraction, forceps, or cesarean section during labor than among infants delivered spontaneously, but the rate among infants delivered by cesarean section before labor is not higher, suggesting that the common risk factor for hemorrhage is abnormal labor."

The numbers came out as follows:

Total deliveries studied		583,340.
Spontaneous vaginal deliveries		387,799.
Operative deliveries		195,541.
Vaginal		78,116.
Forceps		15,945.
Vacuum extraction		59,354.
Forceps and vacuum extraction		2,817.
Caesarean section	117,425.	
Antepartum		33,008.
Intrapartum		84,417.
No attempted operative vaginal delivery		82,075.
Failed operative vaginal delivery *(Includes failed forceps, failed vacuum extraction, plus both failed forceps and failed vacuum extraction)*		2,342.

Compared to spontaneous vaginal delivery (SVD), vacuum extraction delivery (VED) increased the relative risks of subdural or cerebral hemorrhage, brachial plexus injury, convulsions, central nervous system (CNS) depression and mechanical ventilation but did not increase the relative risks of intraventricular or subarachnoid hemorrhage, facial nerve injury or feeding difficulty. The relative risk of any one or more of the four studied intracranial hemorrhages occurring was more than doubled (2.2) but occurrence rates were low at 1:860 for VED and 1:1900 for SVD.

Compared to SVD, forceps delivery (FD) almost trebled the relative risk of subdural or cerebral hemorrhage (2.9) and increased the relative risks of facial nerve injury, brachial plexus injury and mechanical ventilation. Compared to VED, FD increased only the relative risk of facial nerve injury but by a factor of almost 10 (from 1.7 to 13.6 compared to SVD) without increasing the relative risks of intracranial hemorrhage, facial nerve injury or feeding difficulty.

Compared to SVD, the combination of vacuum extraction and forceps to effect vaginal delivery (VEFD) increased the relative risks of subdural or cerebral hemorrhage, intraventricular hemorrhage, subarachnoid hemorrhage, facial nerve injury, brachial plexus injury, convulsions, CNS depression and mechanical ventilation. Compared to VED, VEFD increased the relative risks of subdural or cerebral hemorrhage, subarachnoid hemorrhage, facial nerve injury and brachial plexus injury. In VEFDs the relative risk of intracranial hemorrhage was 7.4 times greater than in SVD and 1.7 times greater than in VED. When compared to FD alone, VEFD more than doubled the relative risk of subdural or cerebral hemorrhage (from 9.8 to 21.3 compared to SVD) and more than trebled the relative risk of subarachnoid hemorrhage (from 3.3 to 10.7 compared to SVD).

Compared to SVD, Caesarean Section (CS) in general increased the relative risks of subdural or cerebral hemorrhage, intraventricular hemorrhage, convulsions, CNS depression, feeding difficulty and mechanical ventilation as did intrapartum CS. Compared to VED, intrapartum CS increased the relative risks of convulsions, feeding difficulty and mechanical ventilation but not the relative risk of intracranial hemorrhage, essentially the same compared to SVD (2.1) as both VED and FD. Compared to SVD, CS in general not surprisingly lowered the relative risk of brachial plexus injury to 0.4.

Compared to SVD, antepartum CS increased the relative risks of CNS depression, feeding difficulty and mechanical ventilation but the relative risk of intracranial hemorrhage was the same. Compared to SVD, antepartum CS relative risk of intracranial hemorrhage was the same but decreased to 0.3, 0.2 and 0.3 compared to VED, FD and intrapartum CS respectively.

Compared to SVD, intrapartum CS without preceding attempt at operative vaginal delivery increased the relative risks of subdural or cerebral hemorrhage, intraventricular hemorrhage, convulsions, CNS depression and feeding difficulty. Compared to VED, relative risks were increased for convulsions, feeding difficulty and mechanical ventilation. As in VED, intracranial hemorrhage in intrapartum CS without preceding attempt at operative vaginal delivery occurred twice as often as in SVD.

Compared to SVD, CS after failed attempt at operative vaginal delivery by vacuum, forceps or both increased the relative risks of subdural or cerebral hemorrhage , facial nerve injury, convulsions, CNS depression and mechanical ventilation. Compared to VED, CS after failed attempt at operative vaginal delivery increased the relative risks of subdural or cerebral hemorrhage, convulsions and mechanical ventilation. Intracranial hemorrhage occurred 5.7 times as often as in SVD, 2.6 times as often as in VED and 2.9 times as often as in intrapartum CS without preceding attempts at operative vaginal delivery.

So what does all this mean? First of all the overall risk of intracranial hemorrhage was relatively low but equally increased by VED, FD and intrapartum CS, greater with a combination of two, more especially all three. To quote the authors,

> "...The frequency of intracranial hemorrhage in infants born by cesarean delivery during labor with no attempt at operative vaginal delivery did not differ significantly from the frequency in infants born by cesarean delivery with no labor and those delivered spontaneously. These findings suggest that the method of delivery is not necessarily the primary factor associated with intracranial hemorrhage...
>
> "We are unaware of any study that has conclusively demonstrated that vacuum extraction is safer than forceps delivery or vice versa. In our study, the only substantial difference between them was that forceps delivery was associated with a higher rate of facial nerve injury. This injury is caused by the pressure of the forceps blade on the facial nerve, and it is usually transient.
>
> "Since both vacuum extraction and forceps delivery involve placing an instrument on the head of the fetus, one would intuitively think that intracranial hemorrhage could be associated with vacuum extraction or forceps delivery but not with cesarean delivery. However, our study showed that cesarean delivery performed during labor, with or without a previous attempt at operative vaginal delivery, was associated with a higher rate of intracranial hemorrhage than was spontaneous vaginal delivery, whereas the rate of hemorrhage associated with cesarean delivery without labor did not differ significantly from the rate associated with spontaneous delivery.
>
> "Since cesarean section delivery during labor was associated with increased rates of intracranial hemorrhage and other complications, a substantial proportion of the morbidity associated with operative vaginal delivery may be due to an underlying abnormality of labor rather than to the procedure. Most cesarean deliveries in nulliparous women are performed because of an arrest of labor, and operative vaginal deliveries are often performed after a long second stage of labor. Thus, the underlying risk factor may be a long, dysfunctional labor. Another confounding factor may be the position of the fetal head in the maternal pelvis. Operative delivery is often required when the head of the fetus is not descending through the pelvis correctly, because of either an oblique position or poor flexion. Thus, an intracranial injury associated with any type of operative delivery may be due to dysfunctional labor rather than to the operative intervention."

Benedetti's editorial comments go the heart of the matter.

> "The most important finding...is that successful vaginal delivery with the use of either vacuum extraction or forceps appears to carry no excess risk of neonatal intracranial hemorrhage, as compared with cesarean section during labor...(A) substantial portion of the morbidity previously thought to be a function of operative vaginal delivery may actually be due to the process of labor."

He also addresses the unusually high incidences of death and intracranial hemorrhage reported in the study. The Food and Drug Administration (FDA) in 1998 estimated the risk of death in vacuum extraction deliveries to be 1 in 19,000, risk of serious injury 1 in 25,000.[1] The California data report death risks of 1 in 5000 for SVD, 1 in 3333 for VED and 1 in 2000 for forceps, four to ten times those of the FDA. While ACOG also estimates the risk of serious injury in VEDs as 1 in 25,000[2], the California data reports the risk of intracranial hemorrhage alone as 1 in 1900 for SVD, 1 in 860 for VED and 1 in 664 for forceps using ICD-9 and CPT codes on hospital discharge records for 98% of the state's births.

Benedetti sums up as follows:

> "...(I)t appears that attempts at vaginal delivery with the use of either forceps or a vacuum device, if successful, carry no procedure-specific risk of fetal intracranial injury. When the chances of successful operative delivery are thought to be low, however, it should probably not be attempted, nor should repeated attempts at vaginal delivery be made if either vacuum extraction or forceps delivery has failed."

Well, it just goes to show you. It's always something. If its not one thing it's another. If you're not a responsible, well-trained, experienced, technically talented obstetrician who understands the basic concepts of EFM, spends as much time on L&D as your patients in labor, frequently reviews their EFM strips during labor, and exercises good clinical judgment, you'll probably do more harm than good with either blades or suckers and should strictly limit your operative delivery instruments to cold, finely-honed Bard-Parker steel scalpels and big, blunt bladder retractors like the general surgeons do.

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1. Center for Devices and Radiological Health, FDA Public Health Advisory: need for caution when using vacuum assisted delivery devices; Rockville, Maryland: Food and Drug Administration, May 21, 1998.

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THE LITTER BOX

TO GOD'S EAR

by Doug Daniel

The College released a Committee Opinion in April 1999 entitled " Ethical Issues Related to Expert Testimony by Obstetricians and Gynecologists", replacing a previous 1987 Opinion on the same topic. Most of us are one way or the other mired in today's morass of litigation so it seemed prudent to compare the two opinions and note significant changes, if any.

The two documents are almost identical, but there are some interesting nuances. In 1987 the following statement was made:

> "Finally, witnesses who testify authoritatively should have *current* experience and *ongoing* knowledge about the areas of clinical medicine they are discussing."

To me this implied a bias against retired physicians functioning as medical expert witnesses, a position long opposed by the Society. The 1999 update puts a somewhat different spin on the question of the retiree's role:

> "Witnesses who testify as experts should have knowledge and experience that are relevant to obstetric and gynecologic practice at the time of the occurrence and to the specific areas of clinical medicine they are discussing."

The College has apparently loosened the requirements for ethical medical expert witnesses and seems to now allow the retiree to utilize his expertise accumulated over years of practice for the benefit of plaintiffs and defendants.

Unfortunately the 1999 document omits quotation of the American Medical Association opinion on medical expert witnesses. It was not at variance with the College's opinion but in some ways more clearly defined our role.

Both 1987 and 1999 Opinions list six principles or guidelines for medical expert witnesses, and there's a telling omission in the latest version as represented below.

> "The physician should have ~~current~~ experience and ~~ongoing~~ knowledge in the areas of clinical medicine ~~about which he or she is testifying~~ that enable him or her to testify about the standards of care that applied at the time of the occurrence that is the subject of the legal action."

As above, this seems to now recognize that retired physicians are not per se disqualified from acting as medical expert witnesses.

This is simply one more example of the Society waving from the platform while the train pulls out of the station. I'm not so delusional as to think our espousing the probity of retired physicians serving as medical expert witnesses in any way influenced the College's change of language, but at least we raised the question and advocated an equitable position.

EVERYONE'S WORST OBSTETRICAL NIGHTMARE, Continued From Page 1

While not exclusive of other rare conditions which also may also increase the risk of shoulder dystocia, these risk factors are additive and synergistic. Therefore Caesarean section is justifiable even in the absence of other obstetrical indications if three or more of these are present.

Medical records usually aren't complete. In reviewing cases alleging obstetrical malpractice I have found recordkeeping to be consistently poor. Factors such as those listed above are frequently ignored or simply missed, allowing plaintiff attorneys to argue that the defendant was careless or negligent. Of particular concern is the absence of clinical pelvimetry measurements and descriptions of pelvic architecture in prenatal physical examinations. Many simply note "adequate pelvis" without more specific measurement or description. Every initial prenatal physical examination should record the pelvic inlet's diagonal conjugate and the outlet's transverse diameter as well as the pelvic configuration. Without such documentation plaintiff attorneys can easily contend the defendant persisted in attempting vaginal delivery despite ignorance of whether his patient's pelvis could accommodate passage of her fetus.

Vaginal delivery should be possible in the absence of other contraindications if the diagonal conjugate is at least 11.5 cm and the bi-ischial diameter is at least 10.0 cm with normal or flat ischial spines. The bisacromial diameter of a 3500 gm fetus is approximately 12.4 cm. The fetal scapulae and shoulders normally fold anteriorly toward the midline during passage through the maternal pelvis. Attempts to force passage of a 12.4 cm diameter object through a 10.0 cm diameter opening should always give one pause.

Diagnostic studies are an essential part of good prenatal care and routinely include CBCs, urinalyses, immunologic screenings, metabolic screening for diabetes mellitus and antepartum fetal heart rate testing. Obstetrical ultrasound evaluations should be added for high-risk patients such as those described above. Abnormal results require intervention either with resolution or follow-up and further testing. Diabetes screenings with a one-hour postload blood sugar of ≥135 mg/% ***require*** a three-hour glucose tolerance test to evaluate probable diabetes mellitus. Abnormal glucose metabolism identifies prenatal patients at substantial risk for fetal macrosomia with its associated fetopelvic disproportion and shoulder dystocia.

Level III obstetrical ultrasound near term or early in spontaneous labor may be helpful in determining whether or not to consider a trial of labor for a diabetic patient. Always remember that even in the best of circumstances actual birthweight may be 10% more or less than EFW by ultrasound. An EFW ≥4250 gm is frequently considered justification for Caesarean section. Regardless, a fetal abdominal circumference ≥1.5 times the fetal head circumference or a mean chest diameter 14 cm or more greater than the biparietal diameter is strongly associated with shoulder dystocia.

All obstetrical ultrasounds performed at or after 37 completed weeks gestation should include the following fetal measurements:

1. Amniotic Fluid Volume (at least one ***umbilical cord-free*** pocket ≥ 1.0 cm ***in two perpendicular diameters***)
2. BiParietal Diameter (BPD) (≤9.5 cm)
3. Femur length
4. Abdominal circumference
5. Head circumference
6. Mean chest diameter
7. Estimated Fetal Weight (EFW)

Shoulder dystocia can never be completely eliminated, but the following checklist will certainly decrease your chances of having to manage one.

- Remain aware of all your patient's risk factors.
- When at risk for shoulder dystocia obtain the above fetal measurements via ultrasound at or near term.
- **You Or An Equally Qualified Obstetrician Should Be Constantly In Attendance During Labor!** A skilled and experienced obstetrician can always manage a labor and its delivery, especially in the presence of identified risks or complications either expected or unexpected, better than any other physician or nurse.
- Elective Caesarean section may be the preferred route of delivery with EFW ≥4250 gm on ultrasound.

4 **Do Not Be Hasty Or Impatient!** Prolonged maternal expulsive efforts in the second stage of labor can eventually show the fetal scalp at the introitus or even distend the perineum. This is certainly a tempting situation for operative vaginal delivery via vacuum extractor or forceps. Unfortunately it may only be due to marked scalp edema with a grossly deformed caput. The bony skull may not have even negotiated the ischial spines. In such a case the head can sometimes be delivered with operative assistance but the shoulders often become impacted. To avoid this scenario watch the internal EFM closely and if reassuring, don't try to initiate operative delivery until the fetal skull has crowned and the scalp is visible ***between*** contractions ***without*** spreading the labia. If the patient can't spontaneously extrude the baby to this point or if the EFM suggests fetal compromise, it's a lot safer to start the emergency Caesarean section for which you should have already prepared.

Some of our fellow physicians frequently attend cardiopulmonary resuscitations but thankfully most of us only infrequently attend births complicated by shoulder dystocia. In order to effectively manage medical emergencies it is critical that every member of the healthcare team be formally trained in accepted techniques and regularly have their performance evaluated in supervised practical drills. In-service nursing education on management of shoulder dystocia is rarely done yet periodic evaluation of Basic Life Support (BLS) skills is mandatory in most hospitals. Those working in ICUs, CCUs and EDs already are required to be skilled and current in Advanced Cardiac Life Support (ACLS) and Advanced Trauma Life Support (ATLS).

Considering the continuing lack of effective preventative measures and the oftentimes tragic consequences of shoulder dystocia, there's no reason to approach it any differently than cardiopulmonary arrest. We should be intensively training and regularly evaluating our obstetrical residents, L&D nurses and attending obstetricians in both avoidance and proper management of shoulder dystocia.

There are several important actions, maneuvers and procedures which can be considered a management algorithm when faced with a shoulder dystocia.

1. **Do Not Pull On The Head!**
2. **Do Not Try To Rotate The Head Without Simultaneously Rotating The Shoulders!** Serious fetal neurological and traumatic injury can result if you do manage to rotate the head while the shoulders remain locked.
3. Start a timed record of events. Ideally your delivery room will be staffed with enough personnel to dedicate one to this responsibility. The delivery room should be equipped with a large electronic elapsed time indicator preprogrammed for one minute alarms. Someone must be responsible for recording the sequence of events in relation to elapsed time. This has always been a routine part of cardiac resuscitation. Shoulder dystocia is no less a medical emergency or potential legal disaster.
4. Call for help immediately and start preparations for an emergency Caesarean section. You will definitely need an operative assistant, pediatrician and anesthesiologist.
5. Order a stat crossmatch for at least four units.
6. Drain the maternal bladder if it is distended.
7. Cut a generous, wide mediolateral episiotomy or extend the existing episiotomy to its maximum limits. Mediolateral episiotomy provides much more room and does not carry the risk of subsequent anal sphincter dysfunction, rectovaginal fistula or fecal incontinence attributed to midline episiotomy, fourth degree extensions and episioproctotomy.
8. Place your dominant hand into the vagina to locate the posterior shoulder. If it is not already in the pelvis consider the following, not necessarily in this order.
    a. Zavanelli maneuver - Displace the delivered head cephalad and back into the uterus, then perform emergency Caesarean section delivery.[3]
    b. Emergency laparotomy - Open the abdomen, transversely incise the lower uterine segment and then reattempt vaginal delivery. Transverse incision of the lower uterine segment allows the anterior shoulder to spontaneously pop through the wound. An assistant can then possibly deliver the posterior arm and shoulder followed by the anterior shoulder and the rest of the baby.[4]
    c. Emergency Caesarean section - Same as emergency laparotomy except an assistant pushes from below while the surgeon pulls from above, displacing the delivered head cephalad and back into the uterus. The infant is then delivered abdominally.
    d. Emergency symphysiotomy - As a last resort, surgically divide the symphysis pubis and perform vaginal delivery. This requires prompt operative orthopedic repair afterward.

9. If the posterior shoulder is already in the pelvis, do the following in this order.

   a. Try McRoberts' maneuver. Encourage the patient to hyperflex her thighs while supine or on her side, thereby rotating her pelvis posteriorly, decreasing the lumbar lordosis and increasing the inlet's capacity. Then encourage expulsive efforts during uterine contractions.[5]

   b. If McRoberts' maneuver fails, try Gaskin's maneuver. Encourage the patient to get up on her hands and knees ("on all fours") but not in the knee-chest position. Then proceed as with McRoberts'. Caution is necessary in the presence of prior epidural analgesia or saddle block anesthesia since there may be a complete or partial motor blockade of the lower extremities in addition to the desired perineal sensory blockade.[6]

   c. If Gaskin's maneuver fails, attempt to release the trapped posterior shoulder. Use the Woods' screw maneuver by rotating the fetal shoulders, not the head, into either diagonal position using gentle but firm displacement of the posterior scapula laterally toward its shoulder, coincidentally folding the shoulders anteriorly over the chest. Then encourage expulsive efforts during uterine contractions and if the fetus does not spontaneously advance, continue scapular displacement during expulsive efforts as if advancing a screw.

   d. A variation of this, called the second Rubin maneuver, identifies the most easily accessible shoulder and manually displaces it anteriorly toward the fetal chest. This usually folds both shoulders across the anterior chest, thereby decreasing the bisacromial diameter but possibly fracturing either or both clavicles.[7]

   e. Have an assistant apply suprapubic (not fundal) pressure.

   f. Intentionally fracture the clavicle. This is not as easy as it sounds because the fetal clavicle at term is rubbery and quite flexible. I've tried to do it on occasion but without success. On the other hand, spontaneous descent through the pelvis can fracture a clavicle as can pelvic manipulations attempting to resolve the impaction.

Some consider Zavanelli's maneuver, said to first have been successfully attempted by Dr. David Gunn while a senior obstetrics and gynecology resident at Vanderbilt, to be the preferred approach if initial efforts at vaginal delivery indicate little chance of success without maternal or fetal trauma. I prefer not to consider it except immediately before emergency laparotomy and transverse incision of the lower uterine segment. The absolute last resort is symphysiotomy.

Residents attending my shoulder dystocia lectures frequently ask how much time they have to go through this algorithm. Umbilical artery pH decreases 0.04 logarithmic units each minute after delivery of the head until the delivery is completed. Normal intrapartum arterial cord blood pH should be about 7.30 in the absence of other causes of fetal compromise. Thus you have seven to ten minutes before the pH falls below 7.0, proportionately less if the baseline is below 7.30. Permanent neurological damage to the central nervous system is unlikely without acute asphyxia for up to ten minutes or an arterial cord blood pH of ≤7.00. Your worst response is panic and hasty or ill-advised interventions which probably won't succeed but will injure mother and/or baby.

Two other frequent questions are whether all Erb's palsies (brachial plexus palsies) are related to shoulder dystocia and whether shoulder dystocia always results in Erb's palsy. Brachial plexus injury may occur intrapartum prior to delivery and has been reported in the absence of shoulder dystocia, even after Caesarean section.[5,8,9] According to Gherman et al,

> "As many as 50% of all brachial plexus injuries may be attributable to unavoidable intrapartum or antepartum events and not to actual management of the shoulder dystocia. Even if it is present, shoulder dystocia should not be considered as causative for brachial plexus injury among those neonates with fetal macrosomia or prolonged second stage labor. Before actual recognition of the shoulder dystocia, a significant degree of stretch may have already been applied to the fetal brachial plexus...An *in utero* insult...may be etiologic. Because there is no currently accepted method to objectively quantify 'excessive' lateral traction, the mere occurrence of brachial plexus injury should not be taken as *prima facie* evidence of medical negligence."[10]

Shoulder dystocia definitely does not always produce Erb's palsy. Many obstetricians know from personal experience that shoulder dystocia frequently is successfully resolved without maternal or newborn injury using appropriate maneuvers calmly and carefully executed.

Shoulder dystocia can never be entirely prevented. Even when every effort is carefully and thoughtfully made and all risk factors considered, shoulder dystocia and subsequent Erb's palsy can still occur. Baskett and Allen state the majority of shoulder dystocias occur in the absence of previously identified risk factors.[11] The College's position is that "...most cases of shoulder dystocia cannot be predicted or prevented".[12]

Macrosomia has for years been regarded as a warning of potential shoulder dystocia. According to Delpapa, "Our results do not support Cesarean delivery or early induction as a means of preventing infant morbidity when fetal macrosomia is diagnosed by ultrasound."[13] Lipscomb et al point out that "Vaginal delivery is a reasonable alternative to elective Cesarean for infants with estimated birthweights of at least 4500 gms."[14] According to Morrison et al, "Macrosomia and subsequent shoulder dystocia cannot be predicted: therefore it is not feasible to prevent brachial plexus injury by prophylactic Cesarean section."[15] It is additionally well known that well over half of all shoulder dystocias occur in infants weighing less than 4000 gm. Finally, Rouse et al have observed that "At least 222 Cesareans and $690,000 are required to prevent one permanent brachial plexus injury" since most newborn acute brachial plexus injuries spontaneously resolve over time with minimal if any permanent nerve deficit.[16]

Although shoulder dystocia and Erb's palsy can still occur even with good obstetrical management of labor and delivery, proper obstetrical care requires using these procedures and processes plus proper medical recordkeeping with extensive documentation. To do otherwise exposes us to often unwarranted allegations of professional negligence. There is currently no diagnostic modality available to accurately predict birthweight or fetopelvic disproportion. If and when such is available, other variables such as the unpredictable efficiency of uterine contractions, distensibility of the birth passage and ability of the fetus to conform to the pelvic configuration will still remain.

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WAS CRAIGIN RIGHT AFTER ALL?

by Maurice L. Druzin, MB, BCh, FACOG
Yasser El-Sayed, MD, FACOG

"Vaginal Birth After Caesarean section (VBAC) will become passé." In September 1999 a colleague made this statement after attending a lecture on the relative risks and benefits of VBAC. For the past fifteen years he has taught in a large hospital's busy residency training program, enjoying an excellent academic and clinical reputation. His comment is validated by obstetricians at two local community hospitals within ten miles of each other who recently decided to no longer offer VBACs. This was prompted by their experience of four ruptured uteri during attempted VBACs within twelve months, all the more impressive considering both hospitals are covered by the same eight or ten obstetricians who between them have only 60-80 deliveries a month. They agreed than VBAC was unsafe without immediate access to emergency Caesarean section including 24/7 in-house obstetrician, anesthesia and operating room staff.

The crux of our problem may be the infrequency of serious VBAC complications which, combined with years of overly enthusiastic and unjustified promotion, lulled us into a false sense of security. So convincing have VBAC's proponents been that many healthcare insurers had the audacity to dictate obstetricians' clinical treatment by demanding trial of labor for all pregnant policyholders previously delivered by Caesarean section. This intrusive and paternalistic approach was finally rejected categorically by the American College of Obstetricians and Gynecologists (the College) in 1999.[1]

This aura of safety has allowed VBAC patients to be treated as if they were not at significantly increased risk of serious complications, resulting in a casual approach to their care. Midwives and family physicians without Caesarean or operative vaginal delivery privileges have for several years routinely managed VBAC patients' prenatal and intrapartum care, supposedly justified by their hospital's requirement for obstetrician backup and the "30 Minute Rule" advocated by the College for an emergency Caesarean section's elapsed decision to incision time. Recent data on uterine ruptures and fetal outcomes in VBACs seem to demand a much more rapid response.

The original strict criteria to justify VBAC trials of labor have been gradually loosened and their limits extended because uterine rupture has been and remains a relatively uncommon event. There has also been a determination on the part of various interested parties to lower our nation's Caesarean section rate. Attempts to eliminate unnecessary and potentially dangerous surgeries are laudable but cost-cutting must not cloud sound clinical judgment. The obstetrician whose managed care contract is threatened because his Caesarean section rate exceeds an arbitrary benchmark will have a strong economic incentive toward vaginal delivery. We should all be ashamed that we have allowed the managed care industry to so undermine our specialty's care.

Edwin Bradford Craigin (1859-1918) was born in Colchester, Connecticut, earning an undergraduate degree from Yale and an MD in 1886 from the College of Physicians and Surgeons of Columbia University in New York City. He later was appointed Professor of Obstetrics and Gynecology at Columbia in addition to practicing at New York's Sloan Maternity and City Maternity hospitals, afterward appointed Director of Sloan Maternity Hospital. He persuaded Sloan's trustees to build an adjacent gynecology facility and in 1910 the two were combined into Sloan Hospital for Women with separate obstetric and gynecologic medical staffs.

On 12 MAY 1916 when Craigin lectured the Eastern Medical Society of the City of New York on "Conservatism in Obstetrics", only classical Caesarean sections were performed in the United States and these very rarely. Not until 1926 would Scottish obstetrician John Martin Monro Kerr publish an article on his innovative Caesarean section incision of the lower uterine segment.[2] A portion of Craigin's lecture was reported as follows:

> "One thing must be born in mind, viz., that no matter how carefully a uterine incision is sutured, we can never be certain that the cicatrized uterine wall will stand a subsequent pregnancy and labor without rupture. This means that the usual rule is, once a Caesarean section always a Caesarean. Many exceptions occur...The general rule holds, however, that we cannot depend on a sutured uterine wall, whether it is done in a Caesarean section or a myomectomy, hence I believe that the extension of a Caesarean section to conditions other than dystocia from contracted pelvis or tumors should be exceptional and infrequent."

The authors neither believe Craigin's dictum to hold true today nor VBAC to be passé. We do however believe it is time for a serious reassessment of VBAC's acceptable risks and implementation of some changes in its management. Obstetricians should honestly admit the known serious risks of VBAC both to ourselves and our patients, integrating currently available clinical evidence on VBAC's success rate into our informed consents and paying particular attention to the increased risk of complications associated with failed trial of labor compared to elective Caesarean section.

We should also resist economic pressure to achieve a mythically ideal Caesarean section rate. Cost/benefit data must be interpreted carefully and with skepticism. The increased costs both financial and human of failed trial of labor and/or uterine rupture, either alone or together, may more than exceed any potential savings.

Let's stop ignoring or denying some hospitals' inability or refusal for purely financial reasons to deliver appropriate obstetrical care and instead develop reasonable clinical guidelines which maximize VBAC safety, not continue to push its safety envelope. Even a well-equipped labor and delivery suite with 24/7 in-house coverage by both a qualified obstetrician capable of independently and safely performing emergency Caesarean section plus an anesthesiologist, each readily or immediately available, has difficulty beginning an emergency Caesarean section within thirty minutes of decision.

Most importantly, we must always exercise sound clinical judgment and concern for our patients' welfare without outside economic pressure from third party payors.

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Editor's Note: *The section on Drs. Craigin and Kerr was abstracted from On the Shoulders of Giants: Eponyms and Names in Obstetrics and Gynaecology by Thomas F. Baskett, FACOG, previously reviewed in the* Newsletter*, Vol. VI, No. 4, OCTOBER 1998.*

OBSTETRICS, GYNECOLOGY AND FAMILY PRACTICE:
TROPICAL AQUARIUM OR KETTLE OF PIRANHAS?

by Stephen K. Klasko, MD, FACOG, MBA
William L. Miller, MD, AAFP, MA

The primary care initiative in obstetrics and gynecology residencies has gone through many cycles. Two years ago the Association of Professors of Obstetrics and Gynecology (APGO) and the Council on Resident Education in Obstetrics and Gynecology (CREOG) decided their residents should be trained as primary care physicians, unleashing a storm of debate with both private and public arguing of its pros and cons. Residency training program directors realized last year that the primary care training issue had transcended the philosophical and now posed real life implications for their programs. A new wave of denial and manipulation swelled but primary care education was obviously here to stay despite questions such as "Does the surgical ICU rotation count as primary critical care?"

The authors presented an abstract entitled "Primary Care: The Next Generation - First Contact" in which a survey was given to patients, family practitioners and alumni of Lehigh Valley Hospital's obstetrics and gynecology residency. Patients were queried as to their expectations of a good primary care physician. They were asked to describe the medical, emotional and social attributes of the ideal patient-physician encounter in light of their last three visits to primary care physicians. They were then asked to contrast that ideal with their last three visits to specialist physicians including obstetrician/gynecologists. Finally they were asked to list the key components in a primary care physician's training.

Family practice physicians were asked to compare their practice to other specialists' including clinical differences as well as any quantitative differences between patient encounters. Didactic, clinical and evaluative differences between family practice and obstetrics/gynecology residencies were then explored.

The obstetrician/gynecologist residency alumni generalists were asked for which aspects of primary care their residency education least prepared them. They were given the opportunity to review several elements of ACOG's (American College of Obstetricians and Gynecologists) primary care initiative and then respond based on their residency experience. They were finally shown key factors in a family practice residency and asked to compare these with their own residency.

THE TROPICAL AQUARIUM

Armed with these results we hoped to create a tranquil, cooperative partnership between our family practice and obstetrics/gynecology residencies, the goal of the primary care initiative. We foresaw an innovative, comprehensive program which would incorporate the care, evaluative and clinical encounter components of a primary care residency into a traditional procedure-oriented obstetrics and gynecology curriculum.

Patients listed not feeling rushed (87.5%) and their physician caring about them as a person (82.9%) as important, consistent with the differentiating factors between residency programs. A majority (79%) of patients also thought it important that a primary care physician respond to the community's needs. Family practitioners said their ability to interact with other non-physician providers (89%) and address the psychologic and emotional needs of geriatric patients (76%) were differentiating factors. Organizing and managing their daily clinical encounters in anticipation of surprise and difficult patients were also key factors for 68% of the primary care physicians. Eighty-seven percent of obstetrician/gynecologists thought their residency least prepared them to handle business and time management aspects of a primary care practice while 69.4% felt unprepared to handle chronic medical illnesses.

Analyzing the survey results and comparing our hospital's obstetrics and gynecology program to its sister family practice program found the amount of time spent with patients and their families plus the evaluative techniques of the patient visit clear differentiating factors between the two departments. Techniques such as review of videotaped patient encounters, paired precepting and shadowing are necessary training aids in today's family practitioner residency.

Careful examination of the patient care and clinical encounter aspects of an obstetrics and gynecology residency program as compared to a family practice program shows adding internal medicine and family practice rotations to existing obstetrics and gynecology curricula is only a small part of primary care training. Residents instead need to concentrate on time management and patient visit aspects of primary caregiving, until now unaddressed in our national discussions.

Based on the survey results we included the obstetrics and gynecology residents in a paired precepting program with shadowing by nutritionists, social workers and behavioral scientists to teach primary care issues while developing patient interaction and time management skills. Patient interactions were videotaped and reviewed with the residents by behavioral therapists and/or family practice faculty, focusing on the clinical encounter, how they managed their time, interaction with the staff and other primary care issues. This occured during obstetrics and gynecology residents' family practice rotations but we plan to extend these methodologies to continuity care clinics by merging the family practice, obstetrics and gynecology clinics. Some urogynecology and geriatrics research projects have also been combined. A mentor has been assigned to each resident and we are working toward a true paired-precepting model**.**

A community-oriented primary care curriculum for the obstetrics and gynecology residents was developed in conjunction with pediatrics, family practice and community medicine to incorporate or expand established projects. It additionally involved residents in previously established projects' activities and growth. Most successful of these has been an outreach program entitled Casa Guadelupe which provides our Latino population women's and children's health services.

A new geriatric program was developed to teach obstetrics and gynecology residents the knowledge, attitudes and skills necessary for good elderly patient care. It was based in our ambulatory geriatric evaluation service, a multidisciplinary clinic which evaluates and treats patients' declining ability to function in day-to-day activities as well as provides consultative services to families and caregivers. To provide an awareness regarding the special needs of geriatric patients and the community in general, residents were assigned to the Nexus for Geriatric Planning, a local alliance of healthcare physicians, social workers, consumers, families and community leaders who determine the needs of our elderly population in the Lehigh Valley Area and then actively advocate appropriate services.

Allocation of time reflects one's priorities. By investigating how various physicians organize or manage their patient encounter time we found family practitioners to be much more creative than obstetrician/gynecologists. Family practitioners used the following questions to prioritize their time:

How will I plan this day in the office?

How will I know what is going to happen during a given patient visit?

When will I think family?

Miller classified clinical encounters as routines, dramas, transition ceremonies or maintenance ceremonies.[1] Routines were habitual performances of ordinary, established, predictable tasks such as uncomplicated prenatal visits. Dramas were the more time-consuming clinical encounters involving conflicts, intense emotions or both, i.e. chronic pain patients or those with premenstrual dysphoric disorder. Transition ceremonies or new dramas were those well-known but unpredictable schedule-busters and hidden time bombs that occasionally plague every physician's appointment calendar. The management key was buying time while allowing a drama to unfold.

Obstetrics and gynecology residents are now taught to provide transitional support, lessen anxiety, and reconnect the patient with her family until a longer appointment, often with her family, can be scheduled for later. This protects her from harm while allowing the office to run on schedule. We have all encountered patients who made their appointment for a routine yearly check-up but presented with a major sexual or social crisis. Maintenance ceremonies occur after the drama has concluded and the patient has reached a functional state. Crises resolution can end on either a friendly or despondent note depending on the nature of the situation. Underscoring these different approaches to time management may modify obstetrics and gynecology residents' behavior to the benefit of both their patients and families.

In response to the alumni obstetrician-gynecologists' concern that their traditional residency had not prepared them for the business and time management aspects of clinical practice, an optimistic future curriculum was added to the program through an innovative partnership with Ortho-McNeil to ensure, by preparing them to be leaders as opposed to followers in healthcare reform, twenty-first century trainees not only survive but flourish.

Primary care has been incorporated into the standardized core curriculum for obstetrics and gynecology beginning with the clinical encounter and its classification. Residents learn about the different kinds of patient encounters and the practice implications of each. Select primary care and family practice topics include pharmacotherapeutics, adult medical care, adult surgical care, care of the elderly, care of children and health promotion plus prevention, nutrition and behavioral science. Interdepartmental primary care grand rounds presentations are soon to be sponsored by family practice, medicine, obstetrics and gynecology, pediatrics, and psychiatry on a rotating basis. Topics such as immunizations (pediatrics), eating disorders (psychiatry), and delayed puberty (obstetrics/gynecology) relating to all five specialties will be featured.

The first, second and fourth years of our obstetrics and gynecology residency each includes a two month family practice rotation. First year residents concentrate on inpatient family practice activities the same as first year family practice residents. The second year rotation focuses on office experience using the family practice faculty's private clinics. Residents gain an understanding of

what family practitioners do on a daily basis and how to manage specialist consultant relationships with them. Fourth year rotations are as obstetrical consultants in the offices of family practitioners who provide prenatal care and delivery services. This experience focuses on management issues in ambulatory medicine and primary care. All clinical encounters involve the shadowing, paired precepting and videotaping methodologies discussed above.

THE KETTLE OF PIRANHAS

Our departments' newfound bliss was then interrupted by an unexpected problem. The family practice and obstetrics/gynecology residents were sharing part of their training but still seemed to be practicing in two different worlds. We wondered whether this was an outgrowth of our departments' differing faculties and program expectations or a function of their selection biases.

For three years we asked each of our obstetrics and gynecology residency applicants about their consideration of alternative speciality training programs using the following two questions.

1. What would have been your second choice if you hadn't matched with an obstetrics/gynecology residency program this year?
2. What medical discipline would you least want to enter?

One hundred and fifty-six applicants were interviewed. One third (52) said family practice would have been their second choice. Another 15% (24)said primary care disciplines such as pediatrics and internal medicine would have been their second choice. Over half (81) said they would have entered another surgical specialty, most likely orthopedics, general surgery or urology. Over 60% (98) responded that psychiatry would have been their least desirable specialty. It is most interesting that 23% (36) chose primary care residencies such as family practice, internal medicine or pediatrics as their least desirable option.

We then entertained the possibility of a culture clash between our primary care residents and surgical residents. The authors, respectively Chairs of the Departments of Obstetrics/Gynecology and Family Practice at Lehigh Valley Hospital in Allentown, Pennsylvania, administered a survey to all their residents to explore these differences. Surveys were completed by sixteen obstetrics and gynecology residents and 17 family practice residents with, not surprisingly, a 100% response rate.

According to the results we apparently underestimated the importance of cultural differences between our two disciplines by concentrating on curriculum, didactics and clinical rotations instead of residents' expectations and values. Family practice residents were confused by expectations that they speak the language and live the life of a surgeon when on obstetrics rotations. Likewise the obstetrics/gynecology residents were confused by their strange new world when on family practice rotations. We had underestimated the power of silos, tradition and vertical integration as well as the difficulty of integrating personality traits and professional priorities of two very different faculties.

Both departments' residents perceived a biopsychosocial emphasis to family practice versus a biomedical emphasis to obstetrics. Obstetric residents' objective question to their patients of "Does that feel better?" was changed to the more sensitive "How does that make you feel?" by family practice residents. All agreed that the obstetrics and gynecology training program had a more structured curriculum with well-defined educational objectives while family practice training focused on social factors and self-growth.

Residents said four changes would underscore the obstetrics and gynecology department's commitment to primary care:

Increasing the emphasis on relationship skills including psychosocial care for women, interviewing and how to spend more time with patients

Increasing training in how to manage uncertainty

Integrating primary care training with the reality of an obstetrician/gynecologist's office practice

Extending obstetrics/gynecology residency to five years while providing a true primary care focus.

Below are the word associations residents used to describe their cultural differences.

PRIMARY CAREGIVER SURVEY RESULTS

What words come to mind when you compare the best family physicians with the best obstetrician/gynecologists?

	Family Physician Comments		Obstetrician/Gynecologist Comments	
	Family Physicians	Obstetricians	Family Physicians	Obstetricians
Time Management	Slow, efficient, flexible	Efficient, rigid, structured, fast	Poor, slow, methodical	Efficient, good, effective
Family Focus	Primary issue, high priority, center of relationship,	Ignored, rare, distant	Central, primary, very important	Minimal, less important, inherent to obstetrical issues
Residency Culture	Supportive, pleasant, society of equals	Harsh, unsupportive, authoritarian	Touchy-feely, weak, coddled, relaxed	Tough but effective, results oriented, intense, demanding

CONCLUSION

So what will it take to provide a successful primary care orientation for future obstetrics and gynecology residents? Certainly more than just adding internal medicine or family practice to rotation schedules; probably creating a training program more responsive to patient and community needs. The fact is that despite positive patient perceptions obstetrics and gynecology residency programs' ability to provide primary care physicians is being questioned by managed healthcare plans and other medical disciplines. Our survey data and anecdotal experience suggests much of this skepticism is due to traditionally opposing concepts between our specialties regarding time management and the patient encounter.

It is possible there are two distinct groups of residents within our obstetrics and gynecology programs, the first viewing their training as in a surgical specialty allowing more patient contact than others and the second perceiving it as in primary care with some surgery thrown in for good measure. The challenge is to communicate to both that an obstetrics and gynecology residency blends women's specialty services and primary care into an individualized, longitudinal, competency-based curriculum intended to prepare them for the demands and needs of twenty-first century patients.

This all has led to new efforts at integrating our two residencies. Among the most successful has been allowing family practice and obstetrics/gynecology residents to mix both socially and educationally before their clinical rotations together. An unexpected dividend was realized when an obstetric resident and family practice resident became roommates. Seeing themselves as socially connected and not just residents of differing medical disciplines provided far-reaching benefits. Faculty cultural sensitivity training and shared faculty development via feedback and management discussions were also helpful. Another useful tool has been sharing faculty in areas such as medical informatics, pharmacy, research, nutrition and community health. We now have a more fully integrated ambulatory health service which allows one-stop-shopping for patients and cross-disciplinary learning for residents.

Our survey ended up asking more questions than it answered but still provided a framework for understanding, recognizing and overcoming our cultural differences. The key question for the Department of Obstetrics and Gynecology seems to be: Do we really want to be primary care physicians or only primary access physicians knowledgeable about primary care problems? For the Department of Family Practice: Are we obstetricians simply because we like delivering babies or because we think in order to provide total care we must be involved in every part of our patients' and their families' lives? Our keepers may want our cages closer together but we are truly different animals.

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WHAT A TANGLED WEB WE WEAVE

by C. Paul Sinkhorn, MD, FACOG

In last January's President's Box I addressed the meteoric rise of the medical Internet. What I didn't mention was that until recently it lagged behind the entrepreneurial Internet in pushing e-commerce's and e-information's envelope, but I'm not sure that's still true. A large percentage of web searches now involve health-related topics and the marketplace is responding. I am unable to open any current medical journal or newspaper without seeing multiple references to medical web sites. Internet home pages such as **msn.com** have physician and hospital locators as well as articles on health issues and recent medical advances. Microsoft® has even allied with **WebMD.com** to share content including columns authored by physicians and other healthcare professionals. The explosion of readily available information is beyond belief. Web pages (individual pages within a site) in current circulation number many hundreds of millions.

Since Gutenberg's invention of movable type in the mid-1400s, knowledge has been less and less the prerogative of civilization's elite. The dissemination of technical or other specialized information has empowered people through the ages. Our open society harnessed atomic energy to the steam turbine electric generator 50 years ago but now is forever enslaved by the threat of thermonuclear war. As a result our Internet-based society must bear the burden of having plans for atomic bombs posted on uncensored web sites.

Knowledge pollutes the predictability of tyranny. History is littered with regimes which attempted to restrict the exchange of information between its citizens. The brutally enforced censorship of the Soviet Union crumbled with the Berlin Wall, and the personal computer played an important role. With the raised fist of anarchy replacing the iron hand of Communism, Russia today resembles our 18th century western frontier. The power of accessible information can topple kingdoms and may push the revolutionary pendulum too far to the other side. Communist China faces a similar threat as it tries to restrain newly-annexed Hong Kong's freewheeling capitalism.

Programs exist to filter web content but are inherently flawed, their algorithms incapable of differentiating the intricacies of English or circumventing the human mind bent on subversion. While an Internet monitor set to recognize the words "skin" or "naked" may filter out a few sexually explicit sites, it cannot distinguish between these and a dermatology web site or one keyworded to naked truth. Conversely, a trip to **WhiteHouse.com** will even shock most gynecologists.

The only real limitation on today's Internet is available bandwidth. Those of us who regularly surf the net frequently encounter long waits while downloads try to jam many bytes of data through existing copper-wire telephone lines. You may have discovered cable modems or Digital Subscriber Lines (DSLs), but even these occasionally become overloaded. Technology will eventually triumph but until then we must wait one or two minutes for a single complex page to download. Just as DSLs raised the information highway's speed limit by a factor of 30, even faster technologies will be developed for legacy data pipes. As we speak worldwide consortiums are laying fiberoptic cables capable of channeling data at 180 megabits per second, 3000 times faster than your poky 56K modem. Tomorrow's information will literally travel at the speed of light. Imagine MedLine searches completed in milliseconds or the entire text of Williams' Obstetrics including photos written to your hard drive in minutes. Patients already have more free medical information at their fingertips than any physician will read.

Americans tend to be impatient, with unreasonably lofty expectations of our medical care system. Dennis Streveler, a senior strategist at Healtheon Corporation, claims the Internet will "become a sort of central nervous system for healthcare". His column in the December 1999 issue of *California Physician* characterized this change as fiercely resisted by some physicians while embraced by others "who know that personal care is what healthcare is all about".

> "I'm going on record as saying that I will never again choose a PCP who refuses me to be able to communicate with him or her by e-mail when I need advice, want to get a prescription filled or make an appointment. Of course, I fully expect that my e-mail will be triaged and answered by the appropriate party in the office....An empowering era has been thrust upon us, signaling the demise of the ***patient*** patient."

Our patients now have the opportunity to become experts on certain diseases, particularly their own. Tom Ferguson, editor of *The Ferguson Report: The Newsletter of Online Health*, observes,

> "A doctor may have a working knowledge of 50 conditions and be able to treat, with some consultation, another 200. A patient only needs to know about one."

We will be challenged to keep up with our patients' questions like never before. Sometimes I am relentlessly cross-examined by these Internet-empowered patients. While pleased they take responsibility for their health care and remembering the intoxication of newly acquired wisdom, I deplore pop knowledge masquerading as legitimate medical tenet.

Occasionally a patient will become adamantly defensive if I question her independently acquired information, apparently valuing unattributed opinion over formal medical education, training and experience. When this happens I listen openly, debate fairly, offer references and try to use logic when counseling a misled patient. If she can cite the web so can I. It is certainly reasonable to supply patients with web bookmarks for physician-audited sites dispensing authoritative, scientifically sound information.

I also have a considerable advantage over any Internet source. I meet patients face-to-face, giving me the opportunity to form a bond of trust which can ultimately withstand any threat electronic quackery might pose.

So what does all this have to do with forensic obstetricians and gynecologists? A lot. Internet-armed patients' cutting-edge knowledge creates loftier expectations. Every attorney with Internet access can research all relevant medical literature on a potential medmal case in less than an hour, including multiple medical expert witnesses' opinions and immediate analysis of strengths and weaknesses. There's nothing wrong with that and medical expert witnesses should welcome better prepared attorney clients. However, that means we have to be better prepared as well and that's not easy considering we have to be conversant with much more of our specialty's literature than ever before. Like the patient who has become an expert on her specific illness, her attorney can likewise become an expert on a specific obstetrical or gynecological topic. Lawyers today expect and are entitled to more from their medical expert witnesses than in the past. We can similarly expect a more sophisticated cross-examination. What's a forensic obstetrician/gynecologist to do?

We have computers, too. A recent American Medical Association (AMA) survey found that an increasing number of physicians are using the Internet. Our extensive medical knowledge will assist us when we go online since we will be better prepared, wading through the detritus to find pertinent articles and data bolstering our opinions. We will then be better armed to refute other medical expert witnesses' baseless opinions or junk science presented as medical fact. All concerned should welcome the introduction of scientific truth into medical malpractice courtrooms.

The practice of medicine on the Internet raises much more troubling issues. There are an estimated 20,000 health sites currently on the web. What assures the accuracy of information available to our patients? It's not much of a stretch to imagine yourself a medical expert witness against a celebrity web doctor. The October 18, 1999, issue of *American Medical News* reports that talk-show doc Dean Edell, an ophthalmologist, has inked a fifteen-year deal with **Healthcentral.com** for use of his name plus help in creating and marketing the site's medical content.

Even highly-respected former Surgeon General of the United States C. Everett Koop came under fire in mid-1998 shortly after opening his web site. With more than 5 million hits per month **DrKoop.com** has become a wildly popular Internet destination for surfers seeking health information. Not only is there canned information but visitors can ask physicians' advice. An exposé in *The New York Times* criticized Koop for taking money from site advertisers such as pharmaceutical manufacturers, and *Yahoo! Internet Life* magazine (*YIL*) reported his interest in the site to be worth $50 million, quoting Koop as saying,

> "I realized there were two messages that were very important to my patients. One was: Take charge of your own health....The other was: There is no prescription that I can give you that is more valuable than knowledge....The Internet is invaluable in this."

YIL also reported fourteen healthcare institutions paid $40,000 each for the privilege of being described as the "most innovative and advanced...across the country". Koop maintained the site made several changes in response to *The New York Times* article, adding that he is now 83 years old and his $50 million is only paper money. "If I were going to sell out to someone for money, I would have done it long ago on [the issue of] tobacco." He believes the biggest problem in healthcare is uninsured patients, with the Internet possibly the only reasonable solution. "E-mail can bring doctors and patients much closer," says Koop. "There will be a new relationship between doctors and patients, with the Internet as an intermediary and educator." Although he agrees that people may follow incorrect or dangerous Internet advice, Koop believes this is analogous to the availability of good and bad physicians, both of whom have always been around. He feels the problem "will sort itself out" and is a proponent of "branded" web sites which would assure medical content conform to established ethical and medical standards.

Branded health sites may never become a reality. Besides, don't patients already spurn brand name pharmaceuticals for unregulated over-the-counter herbal and holistic medicines? It's impossible to prevent people making flawed decisions but we all know what will happen if a judgment-impaired web-surfing patient suffers harm after taking advice from an Internet medical site. Her web browser will soon be searching for the keywords attorney, plaintiff and medical malpractice.

What will the complaint allege? For starters how about failure to obtain a complete medical history, failure to examine before treating and failure to obtain proper informed consent? Maybe the advising physician is not licensed to practice in the

patient's home state. What if the cyberdoc prescribes or even provides medications across state lines and serious harm or death results? The attorneys general of Michigan, Kansas and Missouri have already brought actions against Internet clinics and pharmacies. It's not hard to imagine every federal agency from the DEA to the FBI battling state authorities for jurisdiction in regulation, enforcement and litigation. Why think small? Telemedicine crosses international borders as easily as state lines.

Health law attorney Wayne J. Miller authored an excellent review of the liability risks associated with medical web sites in the Winter 2000 issue of *California Physician*. Miller specializes in Internet medicine and that alone speaks volumes. He recognizes the risk exposure inherent in medical web sites and advises they have legal counsel throughout site planning and implementation. He specifically decries e-mail as inappropriate for on-line medical consultations because it is often neglected or answered sporadically. It also limits information available to both the physician and the patient. According to Miller, California law requires telemedicine consultations be conducted in real-time through two-way video and audio links. Any web site providing diagnosis and treatment cannot base its services only on patient questionnaires and must make in-person follow-up available. Finally, cyberdocs are expected to comply with all 50 states' medical practice laws.

Another specter raised by Miller is fee-splitting. If a physician gains patients through on-line commerce and receives compensation either indirectly through equity investment or directly from patient billing and collection, he is subject to state and federal self-referral and anti-kickback legislation. Direct payment from the site may violate the federal prohibition against corporate practice of medicine.

These legal opinions notwithstanding, an AMA survey found 27% of responding physicians have a web site promoting their practice and providing patient education. I'm one of them. Those who haven't made the transition certainly have access to lots of advice. I get offers for web site design assistance every month. Last week I got a brochure from Aspen Publishers advertising *E-Healthcare*, a book guaranteed to provide "Internet strategies and e-solutions that help reduce overhead costs, find new business and improve patient care!" Chapter headings included "Meet the Empowered, Interactive SuperNet Woman", "e-Communication and Interactive e-Care: The Next Generation of Disease Management", and of course "e-Health and the Law".

I didn't see a chapter on "How to shorten patient waiting times" but one might be helpful to **Americasdoctor.com.** Marilyn Chase's August 23, 1999, *The Wall Street Journal* column found 36 people logged-in ahead of her in the virtual waiting room for the site's Physician Chat Room. "Just like a real doctor's office, without the old magazines!" Chase finally got to converse e-chat-style with AmDoc 8 who spoke in generalities about treatment of migraine headaches with the disclaimer that "(b)ecause I cannot evaluate your medical problems on-line, I cannot discuss your case." Maybe AmDoc 8 had previously enjoyed a telelaw consultation with attorney Miller.

David Toub, MD, discussed his own experience with medical chat sites in the August 1999 issue of *Medical Economics*. He initially expected general medical questions on his web health forum but was surprised to receive twice as many requests for medical diagnoses or second opinions. It's easy to see how a well-meaning physician might be tempted to dispense a little free medical advice in such a situation but he reminds us that this could create a de facto doctor-patient relationship, recommending instead the use of disclaimers and avoidance of online referrals. "Medical Web sites are thriving because patients no longer have easy access to physicians," according to Toub.

American Medical News in its November 22-29, 1999, issue reports on the phenomenon of virtual house calls. Health Hero Network markets Health Buddy, an electronic device that monitors cardiac patients for congestive failure by transmitting weight, diet and medication usage data via telephone to a monitoring site. Similarly, Alere Medical, Inc., has developed an electronic scale that monitors cardiac patients. The University of Southern California has a pilot program for homebound multiple sclerosis patients allowing physician contact via the Internet. It's hard to criticize obviously good intentions and undeniably these patients benefit from expert medical care they might not otherwise receive, yet critics fear the loss of face-to-face interactions may erode the physician-patient relationship plus encourage dangerous diagnostic and therapeutic shortcuts.

Perhaps the scariest medical Internet problem is record confidentiality. A fair amount of medical information is provided via e-mail even though such transmissions may be easily intercepted. Several recent articles such as Kevin Taylor's "The Clinical Email Explosion" in the January 2000 issue of *The Physician Executive* and Cheryl Moyer et al's "'We Got Mail': Electronic Communication Between Physicians and Patients" in the December 1999 issue of *The American Journal of Managed Care* attempted to define guidelines for medical e-mail usage. Several start-up companies like **ehealthline.com** in addition to larger concerns such as PCS Health Systems and Healtheon-WebMD are moving rapidly toward on-line collection of, maintenance of and provision of access to confidential medical and pharmaceutical records by physicians and patients. Some propose that patients should be able to access and edit their medical record on-line. According to Dennis Streveler of Healtheon,

> "The 'working medical record' that each of us uses to become our own most important caregiver will be with us on the 'Net, in our pockets, or both. We will share the data as we see fit, and the whole notion of a 'personal health record' will help mitigate the patient confidentiality battles which no doubt will rage over the next five years."

Only the most prescient forensic obstetrician/gynecologist can foresee the results if patients are given access to alter the very record upon which medical diagnosis and treatment depend. Who would be the defendant in *that* medmal case?

Technical experts believe data encryption with 128- or 160-bit algorithms, providing virtually infinite coding possibilities, will make confidential Internet storage and transmittal of medical information a reality. But it is still sobering to consider a hacker selling medical information to plaintiffs' attorneys, overzealous journalists or insurance companies bent on underwriting only the healthiest, genetically pure lives. In spite of the above no one realistically believes the electronic medical record is avoidable. As J. Arthur Gleiner, MD, Primetime Software Vice President notes in the January 2000 issue of *The Physician Executive*,

> "One thing seems certain. The first organization to successfully realize a significant amount of the potential benefit from electronic medical records will have a huge competitive advantage in its marketplace."

Electronic medical records will occur because there's money to be made.

I hope you've found the above stimulating. I enjoy considering the boundless possibilities of Internet medicine but at the same time keep a critical eye toward its excesses. I'm no longer surprised when today's curious news blurb becomes tomorrow's headline. For example, Alternative Technology Resources and Healtheon have developed a joint venture for referring uninsured patients to doctors who will accept discounted cash payments equal to large health insurers' usual and customary fee schedules. **Medicineonline.com** is planning a surgery reverse-auction, allowing a patient to advertise her desired surgical procedure on the Net for competitive bidding by surgeons. Caveat emptor.

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