The first and only IV formulation of acetaminophen available in the US

Improved pain relief, reduced opioid consumption

**Significant pain relief**
- OFIRMEV 1 g + patient-controlled analgesia (PCA) morphine demonstrated significant pain relief vs placebo + PCA morphine ($P<0.05$ over 6 h)
- OFIRMEV 1 g + PCA morphine showed greater reduction in pain intensity over 24 h (SPID24) compared to placebo + PCA morphine ($P<0.001$)

**Reduced opioid consumption**
- OFIRMEV 1 g + PCA morphine significantly reduced morphine consumption vs placebo + PCA morphine (–46% over 6 h, $P<0.01$; –33% over 24 h, $P<0.01$)
- The clinical benefit of reduced opioid consumption was not demonstrated

**Indication**
OFIRMEV is indicated for the management of mild to moderate pain; the management of moderate to severe pain with adjunctive opioid analgesics; and the reduction of fever.

**Important Safety Information**
OFIRMEV is contraindicated in patients with severe hepatic impairment, severe active liver disease or with known hypersensitivity to acetaminophen or to any of the excipients in the formulation. Acetaminophen should be used with caution in patients with the following conditions: hepatic impairment or active hepatic disease, alcoholism, chronic malnutrition, severe hypovolemia, or severe renal impairment.

Do not exceed the maximum recommended daily dose of acetaminophen. Administration of acetaminophen by any route in doses higher than recommended may result in hepatic injury, including the risk of severe hepatotoxicity and death.

OFIRMEV should be administered only as a 15-minute intravenous infusion.

Discontinue OFIRMEV immediately if symptoms associated with allergy or hypersensitivity occur. Do not use in patients with acetaminophen allergy.

The most common adverse reactions in patients treated with OFIRMEV were nausea, vomiting, headache, and insomnia in adult patients and nausea, vomiting, constipation, pruritus, agitation, and atelectasis in pediatric patients.

The antipyretic effects of OFIRMEV may mask fever in patients treated for post-surgical pain.

Please see Brief Summary of Prescribing Information on adjacent page or full Prescribing Information at OFIRMEV.com.

*Randomized, double-blind, placebo-controlled, single- and repeated-dose 24-h study (n=101). Patients received OFIRMEV 1 g + PCA morphine or placebo + PCA morphine the morning following total hip or knee replacement surgery. Primary endpoint: pain relief measured on a 5-point verbal scale over 6 h. Morphine rescue was administered as needed. tSPID24 = sum of pain intensity differences, based on VAS score, from baseline, at 0 to 24 h.

**References:**

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**INDICATIONS AND USAGE**

**OFIRMEV** (acetaminophen) injection is indicated for:
- the management of mild to moderate pain
- the management of moderate to severe pain with adjunctive opioid analgesics
- the reduction of fever

**CONTRAINDICATIONS**

Acetaminophen is contraindicated:
- in patients with known hypersensitivity to acetaminophen or to any of the excipients in the intravenous formulation.
- in patients with severe hepatic impairment or severe active liver disease.

**WARNINGS AND PRECAUTIONS**

**Hepatic Injury**

Administration of acetaminophen in doses higher than recommended may result in hepatic injury, including the risk of severe hepatotoxicity and death. Do not exceed the maximum recommended daily dose of acetaminophen.

Use caution when administering acetaminophen in patients with the following conditions: hepatic impairment or active hepatic disease, alcoholism, chronic malnutrition, severe hypovolemia (e.g., due to dehydration or blood loss), or severe renal impairment (creatinine clearance ≤ 30 mL/min).

**Allergy and Hypersensitivity**

There have been post-marketing reports of hypersensitivity and anaphylaxis associated with the use of acetaminophen. Clinical signs included swelling of the face, mouth, and throat, respiratory distress, urticaria, rash, and pruritus. There were no reports of anaphylactic reactions requiring emergent medical attention. Discontinue OFIRMEV immediately if symptoms associated with allergy or hypersensitivity occur. Do not use OFIRMEV in patients with acetaminophen allergy.

**ADVERSE REACTIONS**

The following serious adverse reactions are discussed elsewhere in the labeling:
- Hepatic injury
- Allergy and hypersensitivity

**Clinical Trial Experience**

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed cannot be directly compared to rates in other clinical trials and may not reflect the rates observed in practice.

**Adult Population**

A total of 1020 adult patients have received OFIRMEV in clinical trials, including 37.3% (n=380) who received 5 or more doses, and 17.0% (n=172) who received more than 10 doses. Most patients were treated with OFIRMEV 1000 mg every 6 hours. A total of 13.1% (n=134) received OFIRMEV 650 mg every 4 hours.

All adverse reactions that occurred in adult patients treated with either OFIRMEV or placebo in repeated dose, placebo-controlled clinical trials at an incidence ≥ 3% and at a greater frequency than placebo are listed in Table 1. The most common adverse events in adult patients treated with OFIRMEV (incidence ≥ 5% and greater than placebo) were nausea, vomiting, headache, and insomnia.

Table 1. Treatment-Emergent Adverse Reactions Occurring ≥3% in OFIRMEV and at a Greater Frequency than Placebo in Placebo-Controlled, Repeated Dose Studies

<table>
<thead>
<tr>
<th>System Organ Class – Preferred Term</th>
<th>OFIRMEV (N=402) n (%)</th>
<th>Placebo (N=379) n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gastrointestinal Disorders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nausea</td>
<td>138 (34)</td>
<td>119 (31)</td>
</tr>
<tr>
<td>Vomiting</td>
<td>62 (15)</td>
<td>42 (11)</td>
</tr>
<tr>
<td>General Disorders and Administration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Conditions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pyrexia*</td>
<td>22 (5)</td>
<td>52 (14)</td>
</tr>
<tr>
<td>Nervous System Disorders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Headache</td>
<td>39 (10)</td>
<td>33 (9)</td>
</tr>
<tr>
<td>Psychiatric Disorders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insomnia</td>
<td>30 (7)</td>
<td>21 (5)</td>
</tr>
</tbody>
</table>

* Pyrexia adverse reaction frequency data is included in order to alert healthcare practitioners that the antipyretic effects of OFIRMEV may mask fever.

Other Adverse Reactions Observed During Clinical Studies of OFIRMEV in Adults

The following additional treatment-emergent adverse reactions were reported by adult subjects treated with OFIRMEV in all clinical trials (n=1020) that occurred with an incidence of at least 1% and at a frequency greater than placebo (n=353).

Blood and lymphatic system disorders: anemia

General disorders and administration site conditions: fatigue, infusion site pain, edema peripheral

Investigations: aspartate aminotransferase increased, breath sounds abnormal

Metabolism and nutrition disorders: hypokalemia

Musculoskeletal and connective tissue disorders: muscle spasms, tismus

Psychiatric disorders: anxiety

Respiratory, thoracic and mediastinal disorders: dyspnea

Vascular disorders: hypertension, hypotension

**Pediatric population**

A total of 353 pediatric patients (47 neonates, 64 infants, 171 children, and 73 adolescents) have received OFIRMEV in active-controlled (n=250) and open-label clinical trials (n=225), including 59.7% (n=212) who received 5 or more doses and 43.1% (n=153) who received more than 10 doses. Pediatric patients received OFIRMEV doses up to 15 mg/kg on an every 4 hours, every 6 hours, or every 8 hours schedule. The maximum exposure was 7.7, 6.4, 6.6, and 7.1 days in neonates, infants, children, and adolescents, respectively.

The most common adverse events (incidence ≥ 5%) in pediatric patients treated with OFIRMEV were nausea, vomiting, constipation, pruritus, agitation, and alopecia.

**Other Adverse Reactions Observed During Clinical Studies of OFIRMEV in Pediatrics**

The following additional treatment-emergent adverse reactions were reported by pediatric subjects treated with OFIRMEV (n=355) that occurred with an incidence of at least 1%.

**Blood** and lymphatic system disorders: anemia

**Cardiac disorders**

**Gastrointestinal disorders**:

- abdominal pain, diarrhea

**General disorders and administration site conditions**: injection site pain, edema peripheral, pyrexia

**Investigations**:

- hepatic enzyme increased

**Metabolism and nutrition disorders**:

- hypoaalbuminemia, hypokalemia, hypomagnesemia, hypophosphatemia, hyperkalemia

**Musculoskeletal and connective tissue disorders**:

- muscle spasm, pain in extremity

**Nervous system disorders**:

- headache

**Psychiatric disorders**:

- insomnia

**Renal and urinary disorders**:

- oliguria

**Respiratory, thoracic and mediastinal disorders**:

- pulmonary edema, hypoxia, pleural effusion, stridor, wheezing

**Skin and subcutaneous tissue disorders**:

- pruritis edema, rash

**Vascular disorders**:

- hypertension, hypotension

**DRUG INTERACTIONS**

Effects of other Substances on Acetaminophen

Substances that induce or regulate hepatic cytochrome enzyme CYP2E1 may alter the metabolism of acetaminophen and increase its hepatotoxic potential. The clinical consequences of these effects have not been established. Effects of ethanol are complex, because excessive alcohol usage can induce hepatic cytochromes, but ethanol also acts as a competitive inhibitor of the metabolism of acetaminophen.

**Anticoagulants**

Chronic oral acetaminophen use at a dose of 4000 mg/day has been shown to cause an increase in international normalized ratio (INR) in some patients who have been stabilized on sodium warfarin as an anticoagulant. As no studies have been performed evaluating the short-term use of OFIRMEV in patients on oral anticoagulants, more frequent assessment of INR may be appropriate in such circumstances.

**USE IN SPECIFIC POPULATIONS**

**Pregnancy**

Pregnancy Category C. There are no studies of intravenous acetaminophen in pregnant women; however, epidemiological data on oral acetaminophen use in pregnant women show no increased risk of major congenital malformations. Animal reproduction studies have not been conducted with IV acetaminophen, and it is not known whether OFIRMEV can cause fetal harm when administered to a pregnant woman. OFIRMEV should be given to a pregnant woman only if clearly needed.

The results from a large population-based prospective cohort, including data from 26,424 women with live born singletons who were exposed to oral acetaminophen during the first trimester, indicate no increased risk for congenital malformations, compared to a control group of unexposed children. The rate of congenital malformations (3.9%) was similar to the rate in the general population. A population-based, case-control study from the National Birth Defects Prevention Study showed that 11,610 children with prenatal exposure to acetaminophen during the first trimester had no increased risk of major birth defects compared to 4,500 children in the control.
group. Other epidemiological data showed similar results.

While animal reproduction studies have not been conducted with intravenous acetaminophen, studies in pregnant rats that received oral acetaminophen during organogenesis at doses up to 0.85 times the maximum human daily dose (MHD = 4 grams/day, based on a body surface area comparison) showed evidence of fetotoxicity (reduced fetal weight and length) and a dose-related increase in bone variations (reduced ossification and rudimentary rib changes). Offspring had no evidence of external, visceral, or skeletal malformations. When pregnant rats received oral acetaminophen throughout gestation at doses of 1.2-1.7 times the MHD (based on a body surface area comparison), areas of necrosis occurred in both the liver and kidney of pregnant rats and fetuses.

In a continuous breeding study, pregnant mice received 0.25, 0.5, or 1.0% acetaminophen via the diet (35.7, 71.5, or 1430 mg/kg/day). These doses are approximately 0.43, 0.87, and 1.7 times the MHD, respectively, based on a body surface area comparison. A dose-related reduction in body weights of fourth and fifth litter offspring of the treated mating pair occurred during lactation and post-weaning at all doses. Animals in the high dose group had a reduced number of litters per mating pair, male offspring with an increased percentage of abnormal sperm, and reduced birth weights in the next generation pups.

Labor and Delivery

There are no adequate and well-controlled studies with OFIRMEM during labor and delivery; therefore, it should be used in such settings only after a careful benefit-risk assessment.

Nursing Mothers

While studies with OFIRMEM have not been conducted, acetaminophen is secreted in human milk in small quantities after oral administration. Based on data from more than 15 nursing mothers, the calculated infant daily dose of acetaminophen is approximately 1 — 2% of the maternal dose. There is one well-documented report of a rash in a breast-fed infant that resolved when the mother stopped acetaminophen use and recurred when she resumed acetaminophen use. Caution should be exercised when OFIRMEM is administered to a nursing woman.

Pediatric Use

The safety and effectiveness of OFIRMEM for the treatment of acute pain and fever in pediatric patients ages 2 years and older is supported by evidence from adequate and well-controlled studies of OFIRMEM in adults. Additional safety and pharmacokinetic data were collected in 355 patients across the full pediatric age strata, from premature neonates (≥ 26 weeks post menstrual age) to adolescents. The effectiveness of OFIRMEM for the treatment of acute pain and fever has not been studied in pediatric patients ≤ 2 years of age.

Geriatric Use

Of the total number of subjects in clinical studies of OFIRMEM, 15% were age 65 and over, while 5% were age 75 and over. No overall differences in safety or effectiveness were observed between these subjects and younger subjects, and other reported clinical experience has not identified differences in response between the elderly and younger patients, but greater sensitivity of some older individuals cannot be ruled out.

Patients with Hepatic Impairment

Acetaminophen is contraindicated in patients with severe hepatic impairment or severe active liver disease and should be used with caution in patients with hepatic impairment or active liver disease. A reduced total daily dose of acetaminophen may be warranted.

Patients with Renal Impairment

In cases of severe renal impairment (creatinine clearance ≤ 30 mL/min), longer dosing intervals and a reduced total daily dose of acetaminophen may be warranted.

OVERDOSAGE

Signs and Symptoms

In acute acetaminophen overdose, dose-dependent, potentially fatal hepatic necrosis is the most serious adverse effect. Renal tubular necrosis, hypoglycemic coma, and thrombocytopenia may also occur. Plasma acetaminophen levels > 300 mcg/mL at 4 hours after oral ingestion were associated with hepatic damage in 90% of patients; minimal hepatic damage is anticipated if plasma levels at 4 hours are < 150 mcg/mL or < 7.5 mcg/mL at 12 hours after ingestion. Early symptoms following a potentially hepatotoxic overdose may include: nausea, vomiting, diaphoresis, and general malaise. Clinical and laboratory evidence of hepatic toxicity may not be apparent until 48 to 72 hours post-ingestion.

PHARMACOKINETICS

The pharmacokinetics of OFIRMEM have been studied in patients and healthy subjects from premature neonates up to adults 60 years old. The pharmacokinetic profile of OFIRMEM has been demonstrated to be dose proportional in adults following administration of single doses of 500, 650, and 1000 mg. The maximum concentration \( C_{max} \) occurs at the end of the 15 minute intravenous infusion of OFIRMEM. Compared to the same dose of oral acetaminophen, the \( C_{max} \) following administration of OFIRMEM is up to 70% higher, while overall exposure (area under the concentration time curve [AUC]) is very similar.

The pharmacokinetic exposure of OFIRMEM observed in children and adolescents is similar to adults, but higher in neonates and infants. Dosing simulations from pharmacokinetic data in infants and neonates suggest that dose reductions of 33% in infants 1 month to < 2 years of age, and 50% in neonates up to 28 days, with a minimum dosing interval of 6 hours, will produce a pharmacokinetic exposure similar to that observed in children age 2 years and older.

NONCLINICAL TOXICOLOGY

Carcinogenesis

Long-term studies in mice and rats have been completed by the National Toxicology Program to evaluate the carcinogenic potential of acetaminophen. In 2-year feeding studies, F344/N rats and B6C3F1 mice were fed a diet containing acetaminophen up to 6000 ppm. Female rats demonstrated equivocal evidence of carcinogenic activity based on increased incidences of mononuclear cell leukemia at 0.8 times the maximum human daily dose (MHD) of 4 grams/day, based on a body surface area comparison. In contrast, there was no evidence of carcinogenic activity in male rats (0.7 times) or mice (1.2-1.4 times the MHD, based on a body surface area comparison).

Mutagenesis

Acetaminophen was not mutagenic in the bacterial reverse mutation assay (Ames test). In contrast, acetaminophen tested positive in the in vitro mouse lymphoma assay and the in vitro chromosomal aberration assay using human lymphocytes. In the published literature, acetaminophen has been reported to be clastogenic when administered a dose of 1500 mg/kg/day to the rat model (3.6-times the MHD, based on a body surface area comparison). In contrast, no clastogenicity was noted at a dose of 750 mg/kg/day (1.8-times the MHD, based on a body surface area comparison), suggesting a threshold effect.

Impairment of fertility

In studies conducted by the National Toxicology Program, fertility assessments have been completed in Swiss mice via a continuous breeding study. There were no effects on fertility parameters in mice consuming up to 1.7 times the MHD of acetaminophen, based on a body surface area comparison. Although there was no effect on sperm motility or sperm density in the epididymis, there was a significant increase in the percentage of abnormal sperm in mice consuming 1.7 times the MHD (based on a body surface area comparison) and there was a reduction in the number of mating pairs producing a fifth litter at this dose, suggesting the potential for cumulative toxicity with chronic administration of acetaminophen near the upper limit of daily dosing.

Published studies in rodents report that oral acetaminophen treatment of male animals at doses that are 1.2 times the MHD and greater (based on a body surface area comparison) result in decreased testicular weights, reduced spermatogenesis, reduced fertility, and reduced implantation sites in females given the same doses. These effects appear to increase with the duration of treatment. The clinical significance of these findings is not known.

OFIRMEM (acetaminophen) injection

Manufactured for:

Cadence Pharmaceuticals, Inc.
San Diego, CA 92130

Revised 11/2010

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U.S. PATENT NUMBERS: 6,028,222; 6,992,218
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Editor’s Notes

Clogged Pipelines Create a Physician Workforce Crisis in California

By Stephen Jackson, M.D., Editor

Having attended the CMA Legislative Day in Sacramento, I was both amused and disheartened by Gov. Jerry Brown’s address, which might best be described as a “barrel of laughs” by a comedian, reminiscent of the Laurel and Hardy convention I attended last year just a few steps from our esteemed State Capitol. Perhaps I needed a reminder of the fact that the jokesters in Sacramento linger on … and on … and on.

Upon studying the bills for which we were to advocate, I became even more aware that we should be seriously concerned for the adequacy of the (aging) physician workforce in California. Moreover, physicians are unevenly distributed, with the rural and poorer urban areas having the greatest shortfall (especially in primary care physicians—PCPs) yet, not surprisingly, with some excesses in more affluent locations.

Californians are beset with a “tsunami” composed of national health care reform that will add coverage to millions of previously uninsureds, baby boomers embarking on (or considering) retirement, and our nation’s and state’s recessions accompanied by California’s crippling and unresolved budget debacle. (In fact, one of the few to escape California’s epidemic of obesity is our state’s exchequer!) However, most prominent among the impediments to serious health care reform is the simple fact that the backbone of any health care system consists of sufficient and timely access to physician care. This truth notwithstanding, legislators and regulators, and certainly many gleeful allied health professionals, are not alarmed by the evolving paucity of physicians. Their solution is much more complicit to damaging our nation’s quality of care: expand the scope and independence of practice of non-physicians so as to “replace” or “fill the void” of the inadequate number and distribution of physicians. As we well know, this already has begun—witness the aggressive opt-out tactics of nurse anesthetist organizations; optometrists’ lobbying for more prescriptive and therapeutic entitlements; physical therapists seeking to de-link themselves from physician direction; psychologists’ attempts to enter the catacombs of prescriptive psychiatry; and podiatrists creeping toward “accessing” the full leg.
California’s culturally and ethnically diverse population is growing rapidly—and, importantly, aging—and the populations that have been identified as being traditionally medically underserved are the source of a disproportionate segment of that growth. But, as our large population of aging physicians—approximately 30 percent of our active physicians are older than 60, a figure larger than that of any other state—approaches retirement, the pipeline to replace them is being choked off at the medical school and residency levels, which I shall detail below. Heaped upon this clogged supply line is the financial debt with which medical students graduate (the average approaches $175,000, but this figure fails to acknowledge the actual massive costs of a medical education already contributed fully or in part by students and their families), one that prompts them to eschew the poorly compensated primary care specialties. As the supply/demand model of capitalism—with the push and pull among corporate America, government and unions—continues to hold significant sway over key decision-making processes, physician reimbursements have for the most part been rigidly controlled and limited without much, if any, recourse, especially in light of physicians’ prohibition from collective bargaining (one might want to read about a problematic response by some physicians on pages 91–92).

California has almost 120,000 actively licensed physicians, of which one third are PCPs, but only 56 percent practice more than 20 hours a week. The Council on Graduate Medical Education (not immune from erroneous pronouncements) recommends that states should have 60–80 PCPs per 100,000 population and 85–105 specialists/100,000. Although our state barely satisfies the former (and actually exceeds the latter), their distribution results in shortages of PCPs in three quarters of our counties, and even a shortage of specialists in almost half of them. Three quarters of our PCPs originate from out-of-state or foreign medical schools, international medical graduates comprising about one quarter of our state’s actively practicing physicians. Morally, one might consider that our society’s gains are other, less developed countries’ losses, but this assuredly does not apply only to medicine. Another challenge lies with the fact that our physician workforce does not reflect our state’s ethnic and racial diversity.

What of the supply side? The 1980s projections of a physician oversupply by the year 2000 effected a concerted and successful effort by medical schools to cap their enrollment while the federal government froze graduate medical education funding. So, while the number of California medical school graduates has held steady (roughly 45,000 applicants for 1,100 places in our eight medical schools), we are burdened with the dismal rate of only 40 percent in-state matriculation for our homegrown physician aspirants. Physicians who are educated and trained in California want to remain here, and indeed,
we lead the nation (62 percent) in retention of medical school graduates. However, they represent only a quarter of California's physician workforce. We also retain 70 percent of our residents and fellows, accounting for 55 percent of our workforce. Importantly, California-born physicians who are educated or trained out-of-state do not return in appreciable numbers. Thus, we need to expand the capacity of California's medical schools. The clog: no money for this (or just about anything else) in the foreseeable future.

As for the residency and fellowship segment of our supply network, about 38,000 candidates applied for 25,000 residency slots nationwide in 2010. While this scarcity of slots is a national dilemma, the Golden State is more heavily affected because despite having 12 percent of the nation's population, we house only 8.3 percent of the nation's medical residency positions. In 2008, we had 25.1 residents per 100,000 population, distressingly less than the national average of 35.7/100,000. Again, any solution to unplugging the pipeline will be impeded by the financial realities of the federal and state budgets.

There now is a projected shortage of 17,000 physicians for California by 2015! Indeed, the trend is that retiring physicians are exceeding those entering the workforce. And, it may well be that our upcoming generation of physicians will sagely choose quality of life and lifestyle in preference to selfless (and potentially personally harmful) dedication to their professional lives, working fewer hours and retiring earlier than their predecessors. To their credit, they already appropriately have gained improved working hours and conditions in their postdoctoral training programs. Meanwhile, we must seek creative accommodations in practice that would retain physicians within the workforce for a fuller and longer period of time (read the stimulating opinion piece on “The Mommy Track” on pages 52–56).

Meanwhile, our state's population expanded 20 percent between 1995 and 2009 (7 million), far above the national average. In roughly the same period, those over age 65 grew by 22 percent, a predictably continuing trend. Furthermore, the regions projected to see most of this population expansion would be the South and Central valleys as well as the Inland Empire, which include some of the most medically underserved areas of our Golden State.

Medical student debt, the high cost of living in this state (ranked second nationally, and dominated by home prices), and the compensation disparity separating PCPs from other specialists combine to persuade many young physicians to choose the higher-paying specialties and avoid practicing in “impoverished” areas. Add to this the dismal Medi-Cal situation, where we have the fourth lowest reimbursement rate in the nation (56 percent of the federal Medicare rate) and are last in ranking of benefits paid per enrollee.
And do note that Medi-Cal would expand dramatically with federal health care reform. Assuredly, the death knell of physician workforce numbers would be sounded immediately if MICRA were to be disembodied.

Medicare is the largest source (70 percent) of graduate medical education (GME), equating to $8.4 billion in 2008. However, with the U.S. government’s freezing residency positions in 1997, our teaching institutions have not been able to secure further federal financial support to permit expansion of their residencies. The second largest GME source, the Medicaid (Medi-Cal) program, determines funding inversely based on the (higher than national) per capita income for California, and therefore is grossly underfunded, not to mention that such calculations fail to take into account our (nationally) above-average poverty rate. It is imperative that we build coalitions to aggressively advocate for better and more realistic GME funding.

The ASA is in the process of looking for solutions for our anesthesiology workforce issues, and soon should have results of surveys already conducted (such as anesthesiologists over 50 years old, our “senior,” “aging” colleagues), as well as plans for more comprehensive and well-designed studies in the future.

Furthermore, the ASA will have to deal effectively with the complexities not only of achieving, but also of maintaining ABA diplomate status (see the article on maintenance of state licensure on pages 59–62, as well as the article on MOCA in our last issue). Which leads me to sign off with the admonition that we must be mindful that simple “certification” already is an accepted “standard” of allied health professionals, and that conveniently constructed and easily obtained “doctorates” can further obfuscate truthful distinctions between physicians and those who disingenuously claim to be our equivalent.

This editorial has drawn heavily on another of the superb California Medical Association products, the “Issue Brief on the California Physician Workforce,” well researched and written by Mark Kashton and Christina Lee.

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**CSA Bulletin Cover for Volume 60, Number 2**

"Dunes at Morning"

The cover photograph of this Bulletin issue was taken in Death Valley in 2003 using a film camera. Even at dawn, footsteps in the sand were inescapable. The slide was scanned and the image was processed in Photoshop and Silver Efex Pro.

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We are honored today by a veritable panoply of distinguished visitors, whose names, in the interest of time, are projected on the screen. That the CSA has attracted such a turnout of ASA leaders from all over the country speaks volumes about how important CSA ideas and participation have become to the ASA. Let’s thank each of them for coming to San Jose to be with us.

Now, I’d like to acknowledge those who are most responsible for my standing here today. When I began my involvement with the CSA, I just wanted to participate in the work and have a chance to hang out with the stimulating characters I have come to know at the CSA and ASA, but these folk wanted more from me, and, after a while, bit by bit, I came to the hopeful realization that my ascending the leadership track would be good for the CSA and a stimulating journey for me as well. Steve Goldfien took me aside soon after I first attended a CSA Board of Directors (BOD) meeting and told me to read Sturgis, to study Krause’s “Death of the Guilds: Professions, States, and the Advance of Capitalism, 1930 to the Present,” and to join the CMA if ever I wanted to become a CSA leader. He challenged me with his ideas, and he involved me in the ASA Committee on Anesthesiologist Assistant Education and Practice, which he chaired. Steve Jackson nurtured my writing and craftily suggested topics for Bulletin articles, subjects with meat on the bone, the chewing of which plumped up my comfort with practice affairs and medical politics. I came to appreciate that taking on the task of elucidating complex issues is a process of discovery, and that you wind up understanding them much more deeply, often appreciating hidden subtleties, than from just reading about them or even studying them, and that writing makes you a more articulate speaker. Dan Cole made me believe that my passion and my probing approach to issues were talents that should be deployed in the service of elucidating gnarly issues confronting both the CSA and the ASA. Jim Grant and I just basically bonded years ago. He wrapped me in his warm optimism and clear thinking, encouraged me, and pushed me onward.

And then, there is my Debbie, my beautiful young wife of 30 years, my city girl from Pittsburgh, the mother of my remarkable daughter and son, my confidant and friend. She has her reservations about sharing me with the CSA, but she knows my heart in this and every matter, and she loves me enough to be here.
today to demonstrate her support. We all know that one year is really just a flash in time. Thank you in advance, Debbie. I love you.

As I look out upon the faces in this Grand Ballroom, I am proud and honored by the confidence you are showing in my ability to lead this venerable society during this tumultuous time in the history of American medicine.

So here am I, a community anesthesiologist, a reformed internist, on this path less traveled. We all are beset by distracting external considerations that conspire to have us forget what past ASA President Roger Litwiler declared so unequivocally just a few years back, “It’s all about the patient, because we have no other reason to exist!”

Common wisdom is that “it takes a village,” and we here together are that village. Indeed, it surely will take all of us, playing off each other; sharing perspectives, ideas, and strengths; strategizing; and then acting together, testing perhaps what some might declare to be the legal limits of collective action, to do what needs be done to save our patients and our profession from the “charlatans, poachers, and quacks” who are swirling around us, probing for weaknesses, wrapping themselves in the cloak of the FTC, trumpeting about “practicing to the full extent of their licenses,” and hoping to invoke the ill-advised antidiscrimination clauses in PPACA.

The spectrum of issues arrayed before us as anesthesiologists practicing in California is broad and deep, both unique to our state and also as local iterations of a national agenda. Almost everyone is this room has heard of them, but some folks have paid less attention. Please refer to our Web site for my list of 29 important topics on the table for national, state or internal CSA action. These are posted at www.csahq.org and will constitute a continually updated, prioritized list of key issues. Moreover, there soon will be an opportunity for each and every CSA member to comment upon each item, and even to add to the list [see the Web site update on pages 89–90]. For now, I will focus on just five particularly critical issues that will demand attention during my Presidential term, and give you the flavor of how I mean to move you who are the CSA to try to address them.

1. The nurse anesthetist opt-out is a manifestation of an insidious expansion of the scope of practice by advanced practice nurses. The rationale is that this maneuver intends to enhance “access to care,” but it seems clear that it would come at a cost of degrading quality. Misinformation and disingenuous distortions of the facts are deployed routinely through multiple vehicles within the media to bolster acceptance by legislators and the public.

Under my leadership, the CSA will develop a robust strategy of enhancing communication about what we as anesthesiologists do, and what makes our
role critical to safe and efficient perioperative, obstetric, pain, and critical care. We will author white papers, confront misinformation with facts clearly explained, wade out into the community to sponsor forums with various community groups, lobby lawmakers and regulators, and deploy lawyers and lobbyists as needed.

2. The recently enacted federal health care insurance reform legislation, the Patient Protection and Affordable Care Act (PPACA), has provisions that, if actually put into play, may well destroy anesthesiology as we know it. To start with, it is an unfunded mandate, largely to be “financed” on the backs of practitioners. This is despite our very low contribution to escalating health care expenditures, which are largely from increased procedures and tests, as well as from pharmaceuticals and changing national demographics—the baby boom maturing into the Medicare boom. Half of the increased “access” in PPACA will be by expanding “insurance coverage” to the uninsured through Medicaid. In California, we have a population of 37 million, with 6 million Medi-Cal enrollees, expected to grow to 9 million under PPACA in 2014, and an anesthesia conversion factor of $14 ($17 for OB), one of the lowest in the nation. At these rates, access is a pipe dream. Moreover, the “nondiscrimination” clause, which bars insurers and others from discriminating against categories of practitioners who render “equivalent” service, introduces a federal civil rights issue into what is properly an issue of scope of practice. And even worse than that, the Independent Payment Advisory Board (IPAB), which ought to be thought of as the “Independent Rate Setting Commission,” is populated entirely by all nonclinicians and has been set up to slash Medicare spending in ways that are non-negotiable and not appealable.

Under my leadership, the CSA will work with the ASA to analyze, understand, strategize, and then communicate to our members. There is a long and complex political story here, and ultimately only political action can save our patients from the devastating access problems that IPAB, if rolled out as scheduled, will surely produce.

3. Performance measurement is essential to improving quality. Pay for Performance (P4P) is one potential use of these measurements, and it comes in many flavors, many of which are fraught with unintended consequences. So on the one hand we must measure, and therefore construct appropriate and robust measures for our specialty, report our outcomes to a national clinical outcomes registry, and be benchmarked against each other in various ways. On the other hand, we must resist the inappropriate use of measures using poor data and unadjusted for risk, and be extremely wary of publicly reported outcomes. We all must become experts in understanding how and why measures are constructed, their pitfalls, their pros and cons.
Under my leadership, the CSA will educate its members and other relevant parties on why and what to measure and how to do it. We must educate, communicate, and exchange information with each other as this field continues to evolve. We will enlist the expertise of LPAD and EPD working together to try to bring clarity to a domain where there is now largely confusion and obfuscation.

4. Accountable care organizations (ACOs), proposed as one of the foundations of the coming brave new world of Obamacare, are being pushed as a major new vehicle to improve quality patient care while reducing redundancy and cost. The Center for Medicare and Medicaid Services has just published its rules on how ACOs should work to qualify for federal dollars, but commercial health care systems and hospitals have been strategizing and theorizing about this for quite some time. In some ways, this appears to me like a reinvention of HMOs, except that patients may drop in and drop out at will. Furthermore, there appears to be a shifting of financial risk within the next few years to physicians and the ACO entities, and away from an ultimate financial responsibility by the federal government. ACOs intend to foster competition between groups of doctors and institutions, and strategies being discussed touch upon corporate practice, foundation models, what some would consider kickbacks, and new systems of payment for medical services.

Under my leadership, the CSA will promote sharing of perspectives and approaches, and analyses by various experts, locally, around the state, and nationally. When necessary, we will illuminate what appear to be illegal arrangements. We will share with our members ways to prove the value of our (extended) services, and explore the concept of a potential surgical “home” as this idea and federal legislation to create it continue to be developed.

5. Advocacy—federal, state, and even local—is a cornerstone of advancing our agenda to promote an appreciation for what anesthesiologists do. If we anesthesiologists do not advance our specialty-specific concerns for our patients and our profession, and our suggested solutions, who will? It is not enough to assume that others who are more engaged will do what needs be done and financially support what needs be paid for. To do so, to continue to “punch the clock” and then go home to our families and our interests outside of medicine, is shallow, unprofessional, and ultimately self-defeating during these turbulent times when we all have targets painted on our backs. We are in this together, and we need each other’s energy and support. We must start with the doctor-patient relationship, and from that basis move to successively higher levels of political involvement. Sure, engaging marketing professionals may be one way to get some of our message out, but the best and worst public relations derive from our individual relationships with each and every patient and family.
Under my leadership, the CSA will cultivate an army of writers who will prepare white papers, letters to editors, opinion pieces, and scripts for media. We will charge the EPD with developing educational materials beyond its proven expertise in clinical topics, some perhaps related to patient interactions. We will bring the ASA Leadership Spokesman Training Program back to California to train more spokespersons. Now that we have sufficiently developed the infrastructure to support our Web capability, we will refocus on developing content. We will encourage district-level and even group-level political fund-raisers, refine our database of constituents and contributors, find new ways to enhance participation in GASPAC and ASAPAC, and port the ASA CapWiz system to California, to use it for state-specific issues. The latter is just now getting up and running.

Given these kinds of critical issues, what is the purpose of the CSA? What is its mission? Let's take a moment to reacquaint ourselves with our mission.

The California Society of Anesthesiologists is a physician organization dedicated to promoting the highest standards of the profession of anesthesiology, to fostering excellence through continuing medical education, and to serving as an advocate for anesthesiologists and their patients.

This is what the CSA is organized to do, but where would we like to be in a year from now, two years, five years? And what specifically can the CSA do for its members, of sufficient import for each to embrace membership? This is what we could define as the CSA Vision. While we have had sporadic strategic retreats of the BOD every few years, we do not now have a mechanism for ongoing strategic discussion. We do not now have a CSA Vision per se.

I hope to change that by having strategic planning—and therefore, a Vision setting—be a part of every BOD meeting. Between BOD meetings, our Executive Committee has the authority to act, and it does, sometimes meeting each month by teleconference—eight people doing much of the day-to-day and month-to-month decision-making for 4,000-plus members. Our plate is too full of critical issues to have this few people meet this infrequently. The BOD is not—and cannot—be engaged because, even though e-mail discussions are ongoing, it just does not meet often enough to maintain involvement of the district directors who constitute it. And if the Directors are not engaged, how can CSA members in the trenches become more engaged? This is something that must be changed.

Here is my Vision for the CSA. I would like the CSA to be the first and primary resource to which our members turn to become better informed on a broad range of practice affairs issues—white papers, discussions, sample policies—the disseminator of information and advice concerning regulatory requirements
President’s Page (cont’d)

and visits by accreditors, and how best to evolve our practices to survive economically. I want the CSA to be there for our members, to anticipate their needs, and for our members to look to the CSA as their organization that will help them, educate them, and do battle for them. And in return, I would hope that CSA members will give of themselves to the CSA, to share what they know and what they see in order to preserve and advance anesthesiology. I want our members to become more engaged and involved, beginning at the level of our local districts, with our District Directors and our Delegates and Alternate Delegates stepping up to do this work as a professional responsibility.

The following is a list of ideas to promote engagement and involvement:

- Gather and report information on changing local patterns of clinical practice.
- Coordinate local political action in the service of state or federal issues, including local lobbying.
- Construct a telephone/text chain list to mobilize for urgent action alerts.
- Recruit new CSA/ASA members by visiting nonparticipating groups and making presentations, engaging individual nonmembers and selling CSA membership to each.
- Recruit for GASPAC and ASAPAC by individual visits, presentations, and so forth.
- Participate in local activities sponsored by CMA components.
- Organize town hall forums to educate various lay groups about clinical anesthesia issues, better educating the public in what we anesthesiologists actually do.
- Organize educational meetings intended to stimulate civic engagement beyond just CSA activities—for instance, with the Alzheimer’s Foundation, the National Institute of Mental Health, and Global Humanitarian Outreach.
- Organize or participate in rendering clinical care to the uninsured or bringing care to patients in remote locations in California or nationally or internationally through various international programs.
- Organize local site visits for various government officials.
- Organize local dinner meetings for CSA district members, finding funding, speakers and venues.
- Cultivate a liaison with anesthesia residency programs, encouraging residents to visit community practices, and persuading faculty to participate in CME programs in the community.
President’s Page (cont’d)

District Directors need not themselves do all or many of these activities, but each is a service. Each is an educational opportunity. Each enhances the CSA.

So, the flavor of my strategic approach is to address this CSA Vision by enhancing the engagement and involvement of each and every CSA member. I also am charging a new task force with analyzing the effectiveness of how our BOD functions and recommending how to improve it expeditiously. I also believe in the importance of the HOD, and the importance of involving you, our delegates and alternate delegates, more deeply. Yes, we need to engage and involve all of you good folks beyond just one annual meeting.

And what about lobbying to place CSA members on ASA committees? At the ASA BOD, some years ago, there was a change from a House of Representatives to Senate model. We are 9 percent of ASA membership, and as such need to approximate that percentage of committee chairs and committee members, not the 3 percent or so (by my manual count) that we now enjoy. We know how to get more folks appointed, but it must start by your wanting to be involved.

We anticipate a busy and productive year. Many projects have already been set up, some already under way during Dr. Trivedi’s term, and some even ongoing from Dr. Hertzberg’s year at the helm. We build on what we have already in play and what we have already accomplished. We stand on the shoulders of those who came before us. My plan is to try to stimulate and to expand engagement and involvement of members at all levels, to make the CSA feel closer and more useful and more user-friendly for its members, to enhance communication, not only disseminating what the CSA leadership thinks members should know about, but also pulling content and priorities and enthusiasm from those who labor in the trenches, at the District level, a real two-way pipeline.

The woods are lovely, dark and deep.
But I have promises to keep,
And miles to go before I sleep,
And miles to go before I sleep.

“Stopping by the Woods on a Snowy Evening”
Robert Frost, 1874–1973

Thank you for being here. Thank you for listening. Thank you in advance for helping me serve you. Together, let’s work to reshape our CSA into the kind of professional organization that it can and should be.


Spring/Summer 2011
Summary of the Address of CSA President Narendra Trivedi, M.D., to the 2011 CSA House of Delegates

Just a year ago, I was addressing the House of Delegates with my dreams, hopes and promises, with my vision to take the CSA to next level of excellence. Today, I share with you the highlights of this past year. It has surely been a busy year, and I am proud and happy to say that we have achieved a lot.

History and Current Status of the Nurse Anesthetist Opt-Out in California

The CSA/CMA appeal of former Gov. Arnold Schwarzenegger’s (GAS) opt-out action is pending before the California Court of Appeal. Our case is very strong, and we are hopeful for a successful outcome. A summary of the history and recent activity in the opt-out litigation is warranted.

The requirements for an opt-out are that a hospital may be exempted from the requirement for physician supervision of certified nurse anesthetists (CRNAs) if the state (in which that hospital is located) has submitted a letter to the Center for Medicare and Medicaid Services (CMS) that is signed by the governor, and has consulted with both of that state’s Boards of Medicine and Nursing. Indeed, the letter from the governor must attest that he or she has consulted with those boards about issues related to access to and the quality of anesthesia services in the state, and has concluded that it is in the best interests of the state’s citizens to opt out and, importantly, that the opt-out is consistent with state law.

We all should note that the California opt-out request was decided behind closed doors within GAS’s office and without consultation with—or input from—any professional medical organization. The consultation with the Medical Board was only at the administrative level and not with the full board. Moreover, the letter addressed by the executive director of the board to the governor stated that California law and regulations require that a nurse anesthetist have physician supervision. The CSA continues to maintain that independent CRNA practice is contrary to the law of this state despite GAS’s action. At no time were issues of access and the quality of anesthesia services in the state addressed, as required by the federal regulation. In short, this action appeared to be a secret end run by GAS’s office to use the opt-out process to circumvent what we believe to be state law.
Chronologically, CMS received the GAS letter requesting that California be allowed to opt out of the Medicare physician supervision requirement and subsequently deemed it to be effective July 17, 2009. Following GAS’s action, the CSA along with the CMA filed a lawsuit in San Francisco Superior Court, and on October 8, 2010, San Francisco Superior Court Judge Peter Busch denied the CSA/CMA’s motion to require GAS to withdraw his action. The judge erroneously concluded that in the absence of a state statute specifically stating that physician supervision is required, the requirement for physician supervision does not exist. He ignored the long history of attorney general opinions, legislative counsel opinions and prior court cases/opinions that concluded otherwise. Over the objections of CSA/CMA legal counsel, Judge Busch adopted the proposed opt-out order drafted by attorneys for the governor and California Association of Nurse Anesthetists (CANA) that was far more overreaching than the points of law addressed in the lawsuit. In late January of this year, the CSA/CMA agreed to appeal that court decision. The appellate law firm Cole Pedroza was engaged as lead counsel. On January 31, 2011, the notice of appeal and writ petition was filed in the First District Court of Appeal. Because the case deals solely with the interpretation of existing state law, the appellate court’s review will be “de novo,” or entirely new. The CSA/CMA opening brief was filed on April 8, 2011. The current governor, Jerry Brown, and CANA will be filing their response brief on or before July 8, 2011. The CSA then will have at least 20 days to file a reply brief, and amicus briefs will be due 14 days after that final filing.

It is unlikely that there will be any immediate change in anesthesia practice in California hospitals resulting from the opt-out. Physician-supervised anesthesia care is the standard of care in California. It seems unlikely that hospitals would readily take on the liability of independently practicing CRNAs. In the event of an adverse outcome, the hospital, not the surgeon, would be the deep pocket in a lawsuit. The longer term effects of the opt-out remain uncertain and are cause for grave concern for the quality of care that patients may receive in California in the future.

Advocacy

I have spent much of my term meeting with political leaders at the local, state and national levels. While attending the Republican Governors’ Association Convention as the ASA representative last November, I met informally with several of the governors to discuss health care issues that affect members of the ASA and CSA, most notably with Gov. Bobby Jindal from Louisiana and Governor-elect Nikki Haley of South Carolina.
As is often said, “all politics is local,” and much of my time was also spent meeting with state political leaders. During the year, I met with several U.S. congresspeople to discuss issues affecting anesthesiology in particular and medicine in general. I also organized a fund-raiser for Sacramento congressional candidate Dr. Ami Bera at my residence. I would like to recognize Drs. Paul Yost, Mark Zakowski and Stanley Brauer, who have worked very hard for the Legislative and Practice Affairs Division. I extend very special thanks as well to William Barnaby, Junior and Senior, for their ongoing leadership in advocacy.

**Membership**

I attended a meeting of the Board of Directors of the Anesthesia Service Medical Group and encouraged every member of this large group to join the CSA and actively participate in CSA activities and advocacy efforts for the profession. My special thanks go to Dr. Edgar Canada in this endeavor. I also attended a meeting of Kaiser anesthesiologists at Marino Valley Kaiser Hospital in order to update them on CSA’s initiatives and to encourage them to become CSA members. The entire group has agreed to apply for CSA membership; my special thanks go to Dr. Lawrence Robinson for his assistance in achieving this goal. I also met with leaders of the Osteopathic Anesthesiologists Society of California, who were enthusiastic about becoming active members of the CSA. During this year, the CSA has continued to see very high membership renewal rates and an overall increase in total members.

**Academic Section**

The CSA leadership held a meeting with all residency program directors in May. Dr. Samuel Wald is to be commended for the work he has done with the program directors. I have invited all academic chairs to take a more active leadership role in CSA activities, and indeed, some academic chairs are working with our new Committee on the Future of Anesthesiology.

**Resident Section**

This year, for the first time, I have appointed one resident from each residency program to a CSA committee. Having residents serve on CSA committees hopefully will increase both participation and active membership in the CSA once their residency is completed. We currently have 332 active resident members, 42 percent more than the previous year. I am working with Dr. Wald and the residency program directors to plan yearly meetings for all chief residents to meet and discuss issues affecting them. The CSA also will sponsor one resident to attend the ASA Practice Management meeting.
EPD Activities

I attended both the Hawaii fall and winter educational meetings, outstanding events that afforded me the opportunity to meet fellow anesthesiologists from our state and across the country. Special thanks to Drs. Ronald Pearl, Andrew Patterson and Adrian Gelb for organizing outstanding meetings. In all, these meetings are a reflection of the great leadership by Dr. Gelb and his EPD team.

New Era in Electronic Communications

This year has been extremely busy for our communications group. They successfully launched a new Web site, working tirelessly to overcome technical challenges. Following that, they continued to work on Web site enhancement, including social media initiatives and a mobile device interface. I want to thank Drs. Linda Hertzberg and William Feaster and the CSA staff for all of their great work.

Finance

The CSA has done very well financially in the past 10 years. I feel very fortunate to have been a part of these achievements as Assistant Treasurer, Treasurer and President. We now have a reserve of over $1 million. Please join me in congratulating our Treasurers, my friends Drs. Peter Sybert and William Feaster, for their leadership and expertise in finance.

“Future of Anesthesiology” Retreat

I would like to reflect on the theme of my presidency, The Future of Anesthesiology, for which we held a CSA Board Retreat in January. The retreat began with a presentation by Dr. Phillip Lumb on future practice models, followed by Dr. Neal Cohen on residents as our future, then Dr. Patricia Kapur on technological and other advances affecting our future. It concluded with Dr. Stan Stead on the economic impact of changes in the future, including compensation. Following this, there was a Board discussion. The Committee on the Future of Anesthesiology will make recommendations at the September 2011 Board of Directors meeting. My special thanks to Drs. Johnathan Pregler and James Moore for organizing a great retreat. The committee is working to anticipate future practice models and developments with patient care in order to help prepare physicians to meet coming changes in anesthesia practice, especially regarding the role of perioperative physicians.
Summary

As you can see, this has been a very busy year. We have been actively involved in many important issues and achieved great successes. I would like to take this opportunity to thank the CSA Executive Committee, which has consistently provided strong support and guidance, as well as the members of the BOD and Delegates to our House for your trust and support. I am very appreciative and thankful to my partners at Kaiser Permanente, who have always supported my needs.

I have made a few great friends at the CSA over the past 15 years of my involvement with the Society: Dr. Champeau, Dr. Goldfien, Dr. Airola, Dr. Canada, Dr. Mason, Dr. Cole, Dr. Jackson, Dr. Sullivan and a very special friend, Dr. Hertzberg. Thank you all.

And finally, I am so happy to have my family joining us today. My dad has always been there for me. My wife and both sons, Akash and Nick, always supporting, helping, and now at times advising me. Akash is working for Kaiser Permanente and also is a full-time Master’s student at USC, while Nick is graduating from UCLA and getting ready for medical school. Thank you both. Very, very special thanks to my wife Trupti, for her love and support, keeping me on track to do the right things in life, and in any responsibilities I have taken in life.

Thank you all for the opportunity to serve you, the CSA, and the specialty of anesthesiology.

Have You Changed Your E-mail Address Lately?

Please send CSA an e-mail with your new e-mail address or go online at the CSA Web Site, www.csahq.org, to update your profile if you wish to receive up-to-date information. The monthly Gasline newsletter is now sent by e-mail only.
On Your Behalf …
Legislative and Practice Affairs Division

Medi-Cal Payments to Physicians—A Dismal History and Uncertain Future

By William E. Barnaby, Esq., and William E. Barnaby III, Esq., CSA Legislative Counsel

The dreadfully low Medi-Cal payment rates, particularly for physician anesthesia services, have long been a source of frustration for California anesthesiologists. While the Medi-Cal program has grown in expenditures and caseload, payment rates have fallen further and further behind the inflationary increases in business costs of all caregivers—especially physicians. To make matters worse, Medi-Cal provider payment rates have been targeted for cutbacks whenever the state budget faces a deficit, or virtually every year of late.

The funding of Medi-Cal has followed a roller-coaster track parallel to the California economy. Downturns in the state’s economy have led to state budget deficits that, in turn, have prompted serious Medi-Cal spending cuts and reforms. It is not surprising that Medi-Cal comes in for close scrutiny whenever the budget needs to find large savings, because it is one of the state’s highest-cost programs.

For the 2011–12 fiscal year, Medi-Cal expenditures are expected to be $42.5 billion, to serve 7.7 million beneficiaries. That amount includes a $1.7 billion program reduction already enacted, including a 10 percent across-the-board provider-rate cut that may or may not withstand legal challenges. California ranks dead last in the amount spent per beneficiary, some 60 percent of the national average. Our state is also at the bottom in terms of rates paid to providers.

Medi-Cal began shortly after Congress passed the Medicaid Act in 1965. For the first several years, provider payments pretty much followed usual, customary and reasonable rates. Cost-of-living increases in Medi-Cal rates generally kept pace with inflation. In some years, the cost-of-living boosts were built into budget proposals of the administration in office.
In the early 1980s, California’s economy faltered. One of the first programs to feel the pinch was Medi-Cal. In 1982 a 10 percent rate cut was imposed on most Medi-Cal providers, including physicians. As the economy improved and state revenues picked up, Medi-Cal physician rates were raised 7.7 percent in 1984 and 5.3 percent in 1985. Thereafter, Medi-Cal rates remained stagnant for more than 15 years.

In 1992, economic troubles caused the biggest state budget deficit up to that time. Gov. Pete Wilson’s solution consisted of a combination of program reductions and a major tax increase. Medi-Cal followed the lead of Medicare in reducing by 9.5 percent payment rates for hospital-based physicians—anesthesiologists, radiologists, pathologists and emergency physicians. These reductions were restored in 1999 by a 10.5 percent hike for the same physician categories. Additionally in 1999, obstetrical anesthesia was granted a 21.8 percent increase as a result of a concerted campaign by the CSA.

With the dot-com boom in 2000, state coffers were flush. An across-the-board increase for Medi-Cal providers resulted in a 16.7 percent increase for all physician categories. There has been no upward adjustment of Medi-Cal rates since.

Instead there have several attempts to cut rates. In 2003, a 5 percent rate cut was partially blocked by a federal court injunction, and so it was only in effect for a few months. In 2008, a 10 percent reduction was part of the state budget deficit “fix.” It was blocked by a federal court injunction, which led to a number of appeals that continue to date. Three Medi-Cal rate reduction cases have been consolidated on appeal and are before the U.S. Supreme Court. They are expected to be reviewed by the high court in October.

In the past, it was possible for some providers to “cost-shift” to make up Medi-Cal payment shortfalls with reimbursements from private insurers. With the heavy penetration of managed care and stronger resistance from private insurers, the potential for cost shifting has lessened markedly. Some physicians may refuse to treat Medi-Cal patients, but that is not feasible for most anesthesiologists, the majority of whom work in hospitals that accept Medi-Cal patients.

As Medi-Cal rates lag farther behind, the cost of getting them up to more reasonable levels becomes greater. Medi-Cal physician payments are derived from a 50/50 combination of the state’s General Fund and federal matching dollars. The federal matching share is determined by a formula established many years ago, based on the average per capita income of a state’s residents.
Average income for Californians is among the highest of any state, so California’s Federal Medical Assistance Percentage (FMAP) ordinarily is 50 percent. The FMAP for some other states ranges upwards of 75 percent, so less state funding is required to improve payment rates. In those states, every state dollar spent on Medicaid rates brings back two or three federal matching dollars.

The state’s economic problems not only led to the underfunding of Medi-Cal, they also impacted the delivery of health care services in the private sector. As part of the 1982 budget cut and reform package, Medi-Cal was allowed to contract with acute care hospitals at a discounted rate. As the package was moving through the Legislature, private health insurers were successful in gaining the same authority. The power of this encouragement for the private sector to negotiate discounted rates may have taken a few years to be realized, but the penetration of managed care in California spiked upwards a few years later. A “reform” initiated for Medi-Cal had a huge and unanticipated effect on the entire health care system.

Until the California economy perks up and the chronic state budget structural imbalance is resolved, more equitable Medi-Cal payments are not likely. That it may take a while makes it all the more essential to fight against additional cuts that would further shred the tattered health care “safety net.” Before the recently approved 10 percent rate cut can take effect, it must be approved by the Centers for Medicare and Medicaid Services (CMS). The CSA is an active participant in the CMA-led coalition (Alliance for Patient Care) of more than 60 Medi-Cal provider and patient advocacy organizations. A strong effort is under way by the APC to convince CMS to deny the cuts as failing to meet federal standards for patient access and quality of care. Beyond CMS, more court challenges may yet occur.

Looking further ahead, the federal Patient Protection and Affordable Care Act could ultimately add as many as 2 million beneficiaries to the Medi-Cal rolls beginning in 2014, according to the nonpartisan Legislative Analyst’s Office. Who will render care for these additional persons and how the state General Fund will afford its share are two basic issues that make the financial future of Medi-Cal very uncertain.
At the California state level, there is a host of hot current issues, including former Gov. Arnold Schwarzenegger’s (GAS) decision to “opt California out” of supervision requirements for nurse anesthetists, attacks on MICRA, and the woes of the state budget.

**The Opt-out** The CSA, in partnership with the CMA and the ASA, has appealed a lower court’s ruling upholding GAS’s opt-out. We have a new and talented legal team whose goal is to protect patients by requiring nurses to be supervised by physicians.

**MICRA** The Consumer Attorneys of California have decided to alter MICRA’s limitation of pain and suffering payments to $250,000. Even with MICRA, the average award for damages for malpractice in California has risen much faster than the rate of inflation. Altering MICRA will have many deleterious effects on medical care, including making it harder to find a physician or clinic and raising the cost of health care. According to a 2008 report, repealing MICRA will increase the cost of health care in California by at least $9.5 billion annually, which translates into more than $1,000 per family of four. For more information, see www.micra.org.

**The State Budget** The state continues to be mired in a budget crisis. With our rejuvenated Gov. Jerry Brown at the helm, we have embarked on another interesting adventure trying to find resources meet our state’s obligations. Once again, the state and governor have proposed a 10 percent cut to Medi-Cal rates. The last time the state attempted this tactic, the courts reversed the cut because of evidence that reducing California’s already sub-market rate payments would harm access to care. The state of California has appealed the decision to the U.S. Supreme Court; however, a decision is not expected in the immediate future. Medi-Cal payment rates for physicians are among the lowest in the nation for Medicaid, and to decrease them further would force more physicians to leave the program and reduce access to care for millions of poor and unemployed Californians. Regardless of the impact, the state likely will approve these provider cuts, in order to pass a budget. Francisco Silva, CMA’s general counsel, said, “We are confident that the Supreme Court will get it right and affirm the 9th U.S. Circuit Court of Appeals’ ruling, which concluded that California’s move to lower Medi-Cal rates violated federal law.” Stay tuned.
LPAD Retreat

On January 7, 2011, an LPAD retreat was held. The goal was to identify ways to hone our message and to push our specialty and profession forward for the benefit of our patients and ourselves. Attendees were divided into groups to discuss the following: foundational issues for anesthesiology and medicine; common bonds among physicians in general and anesthesiologists in particular; issues that distract us from our mission; ways to encourage and enhance participation of anesthesiologists.

The overall concept of the retreat was to enhance and celebrate the anesthesiologist as a physician. Indeed, as a well-educated and dedicated professional standing as a crucial cog within the field of medicine, the anesthesiologist is an ideal choice to contribute to the debate on health care issues. Moreover, we can enhance the perception of our specialty and profession by becoming more involved in our community, and also by taking a more active role in the politics of federal, state, and of course, local government. Ultimately, all politics are local.

We actively encourage all CSA members to become involved. Some easy first steps are:

- Join the ASA grass roots campaign on the ASA Web site.
- Check the CSA Web site under “Advocacy” and follow the action alerts.
- Make an appointment and get to know your legislators (to find your legislators, use the easy link on the CSA front page). The best time to develop a relationship with your legislator is when you do not have to ask for something.

If you do make contact with your state or federal legislator, please let our CEO, Barbara Baldwin, know: bbaldwin@csahq.org. If you make contact with your federal legislator, be sure to send an e-mail to our ASA lobbyist, Manuel Bonilla: m.bonilla@asawash.org.

If you would like to attend a campaign fund-raising event for a candidate, please let us know. The ASAPAC or GASPAC may be able to support the candidate.

There are many ways to get involved through the CMA and local medical societies as well. Often, positions on local health care-related boards and commissions are appointed with input from the local medical society.

Our best weapon in the court of public opinion and in the arena of public policy is you. Please get involved and use your intelligence, experience and professionalism to impact those around you.
ASA Director’s Report

March Interim Board of Directors Meeting Focuses on Internal Governance Issues

By Mark Singleton, M.D., ASA Director for California

Since my last report for this Bulletin, which dealt with the activities of the October 2010 ASA annual meeting in San Diego, several events have occurred that merit the attention of my fellow CSA members.

**Education Summit** First, in mid-November, on the initiative of Dr. Arnold Berry, ASA Vice President for Scientific Affairs, a first-ever Education Summit was convened, with the purpose of developing ideas for educational activities that might be included in a three-year comprehensive education plan. The two-day conference covered four broad areas: practice management, maintenance of certification, quality and patient safety, and non-anesthesiologists. In addition to me, other CSA members invited to participate were Drs. Randy Steadman, Steve Jackson and Stan Stead. Dr. Dan Cole, a past CSA President, led the sessions on maintenance of certification. The discussions were imaginative and energetic and should lead to real innovation in ASA educational resources.

**Remediation Tools** Along similar lines, there has been ongoing discussion among several ASA committees and leadership about the need for a resource for anesthesiologists seeking tools for remediation of skills and knowledge—needed, perhaps, after a long absence from regular practice or when re-entering general practice after a narrowly focused period. With few options available, such practitioners have most often turned to the institution where they completed residency training, but this doesn’t always work out. Hopefully the ASA can develop a needed resource in this area.

**Deep Sedation** ASA members continue to debate whether non-anesthesiologists should be credentialed to provide deep sedation, despite the CSA’s existing policy statement and the approval of a similar Advisory by the ASA House of Delegates (HOD) in October 2010. We still argue about whether we should legitimize the ongoing administration of deep sedation (which sometimes becomes de facto general anesthesia) not only by ER and ICU physicians, but also by other sub-specialists whose practices are not centered in critical care. However, ASA President Mark Warner offered the following in his report, which was approved by the ASA Board of Directors (BOD) at its March 2011 interim meeting:
Anesthesiologists may lose relevancy to this issue if ASA is not willing to step forward and provide the education and training that we all believe is needed. I would like to ask our Committee on Quality Management and Departmental Administration (QMDA) to review this issue and develop an educational product on deep sedation. Therefore, I recommend that the Board of Directors approve the development of an educational product on deep sedation and adjust the 2011 budget by $60,000 to cover estimated expenses associated with up to three meetings of the development team.

The QMDA committee has begun to to work on this assignment.

**Staff Restructuring** Also generating considerable discussion at the ASA BOD meeting was a lengthy report, under Administrative Affairs, from the Administrative Council (AC—comprised of the elected ASA officers). Most important therein was a recommendation to radically remodel the ASA staffing structure at the highest level. Specifically, this proposal would dismantle the existing double Executive Vice President structure (one at Park Ridge and one in Washington) and replace it with one CEO at the Park Ridge office.

In the past several years the ASA staff at the Park Ridge office has undergone long-overdue growth and refinement as a result of the Organizational Improvement Initiative (OII) begun under the presidency of Mark Lema. It now supports membership and important projects of interest to ASA members like never before. (Admittedly, the Web site still has growth issues to overcome, but our own Dr. Christine Doyle, chair of the ASA committee on Electronic Media and Information Technology, is working diligently on this crucial matter.) Although the Washington office has lost several staff members recently, overall it has grown substantially with the addition of a number of new lawyers and other staff.

Because the AC’s recommendation represents a major change in structure and also calls into question the effectiveness of the current ASA staff model and performance, Dr. Warner made a special presentation to the BOD to provide a foundation for and understanding of the proposal to the BOD. The main debate that ensued was whether to immediately begin a search for a new CEO, as an alternative to having the current Park Ridge EVP, John Thorner, assume the position. Eventually the BOD approved the “one-CEO” proposal, which will go to the HOD in October.

**Committee Terms** Also in the AC report was a proposal to lengthen the traditional one-year term of first-time “adjunct” appointees (which are the
majority) to ASA committees. Because the process of committee selection begins soon after the October annual meeting, new committee members hardly have an opportunity to show merit, not to mention learn the activities of the committee, before being considered for a second year of service. The Bylaws Committee will be tasked with constructing language to allow a two-year initial appointment.

**Administration Fees** Another AC action item would increase the fees charged to “specialty” societies (the Society for Obstetric Anesthesia and Perinatology and others) to more accurately reflect the cost that the ASA incurs in administering them. According to testimony, the new fee structure (with higher costs for the proportion of non-ASA members of those societies) would be substantially less than “market rate” but more than is currently charged. This also generated impassioned debate.

**PPACA** Looming large on the horizon like an approaching storm are the unpredictable changes that have been set in motion by the Patient Protection and Affordable Care Act (PPACA) of 2010, with its decade-long shadow. (See pages 30–38 for an opinion on the implications of PPACA by Dr. Robert E. Hertzka.) The ASA has established a new ad hoc Committee on Health Policy, chaired by ASA Secretary Arthur Boudreaux, which is charged with the development of coherent and meaningful strategies to advance the interests of anesthesiologists and patients amid the potentially turbulent political times ahead. This committee will, of course, work closely with the ASA Washington office in policy development and advocacy.
We hate lawsuits. We loathe litigation. We help doctors head off claims at the pass. We track new treatments and analyze medical advances. We are the eyes in the back of your head. We make CME easy, free, and online. We do extra homework. We protect good medicine. We are your guardian angels. We are The Doctors Company.

The Doctors Company is devoted to helping doctors avoid potential lawsuits. For us, this starts with patient safety. In fact, we have the largest Department of Patient Safety/Risk Management of any medical malpractice insurer. And, local physician advisory boards across the country. Why do we go this far? Because sometimes the best way to look out for the doctor is to start with the patient. To learn more about our medical professional liability program and the other benefits that have made us the nation’s leading writer of anesthesiologists, call (800) 852-8872 or visit us at www.thedoctors.com.
Inside, Outside, All Around PPACA: We won’t know for sure whether or not it might work until 2014, but its fate will be determined in 2012

By Robert E. Hertzka, M.D.

Dr. Robert E. Hertzka, clinical anesthesiologist, CSA member, and past president of the California Medical Association (CMA), has been a longtime observer, participant and teacher of the political process. He has involved himself for decades in medical politics, including leading the effort that produced many of the CMA’s current policies on health care access. Dr. Hertzka currently serves on the American Medical Association (AMA) Council on Medical Service, which “recommends AMA policies and actions for consideration by the AMA House of Delegates on the socioeconomic factors that influence the practice of medicine.” He has been a passionate advocate for improved access to health care, chairing San Diegans for Health Care Coverage (California’s largest bipartisan coalition supporting increased health care access). Familiarity with the process and the details of the Patient Protection and Affordable Care Act (PPACA) is “right in his wheelhouse.”

PPACA as Another Unfunded Mandate

Not since the enactment of Medicare and Medicaid in 1965 has there been a piece of health care legislation that is as stunning in its breadth and sweep as is PPACA. Any physician who renders clinical care will be significantly affected by how well—or how poorly—this program rolls out.

First, consider that those of us who have been involved in the health reform efforts of the past 20 years or so appreciate that certain basic principles must be followed to expand health care access successfully. Chief among them is financial soundness: Does the program pencil out? Government programs that are “overpromised” but underfunded are not sustainable, and they burden physicians in particular because we are obliged to pick up the pieces when these programs fall short.
If you ponder government entitlements in health care that already exist, you will see that this is not just theory. Medicare payments to physicians have been essentially frozen for 10 years, while ever-increasing and now ominous cuts are threatened—the latest being in the 30 percent range at the end of 2011. Medicaid payments in California (Medi-Cal) have also remained static for everyone other than obstetricians and pediatricians for 25 years. Meanwhile, eligibility, enrollment, and the benefit package associated with both of these programs have expanded. It is much the same for military dependents; when I started in practice, what was then CHAMPUS was a good payer, but now the new version (TRICARE) is linked directly to Medicare.

Second, consider the PPACA provisions that purport to expand access to health care for 32 million people. At first blush, access for 32 million additional people by 2014 seems just wonderful. However, the reality beneath that “32 million newly covered” statistic is emblematic of the underlying problem. As proposed and touted, approximately half of those newly covered will be in an expanded Medicaid program, and the other half will obtain coverage from the new health exchanges in the context of an individual mandate. Even putting aside the very serious constitutional issues that have been raised about both the Medicaid expansion and the individual mandate, both of these access expansions, as currently structured, are at best highly problematic.

Examine the Medicaid expansion first. It is not widely known that Medicaid, which was originally designed in 1965 to cover all low-income people, has actually evolved into a program largely for low-income pregnant women, low-income children, AIDS patients, and a smattering of other eligibility categories, including low-income parents in some states. Contrary to popular belief, there is no inherent eligibility for nonelderly, childless adults—and as many as 32 million of the currently 50 million uninsured are in fact such childless adults.

Although some low-income adults do get some kind of “coverage” (in California through a County Medical Services program), they find themselves enrolled in a program that pays at abysmal Medicaid rates. So while they are “covered,” their access is actually limited to a smattering of primary care doctors and community clinics; access to specialists for Medi-Cal patients is virtually zero. Combining this limited access with the nature of very low-income adults produces a subpopulation that frequents the emergency room at a rate far in excess of otherwise uninsured individuals.

It is important to note that this demographic belies the public’s belief that it is the uninsured who are the ones who crowd our emergency rooms. In fact, many of the uninsured shun the emergency room—the waits are long and the
bills are huge. However, once very low-income individuals are given Medicaid eligibility and realize that they are essentially immune from being billed for any health care expense, study after study shows that relatively few establish any kind of steady, cost-effective primary care access; rather they tend to seek episodic care in expensive emergency rooms at a rate two to three times that of the uninsured.

Effective January 1, 2014, PPACA declares that all those below 133 percent of the federal poverty level (FPL, currently $11,000 for an individual, $14,000 for a couple, and $22,000 for a family of four) are immediately eligible for Medicaid. There are as many as 16 million people (half of the 32 million to which PPACA refers) at or below that income level, and this group makes up a large proportion of the uninsured.

But, more importantly, in the context of no real effort to improve primary care access other than (a) a two-year increase in primary care payment rates in 2013 and 2014 (really only one year because the eligibility increase does not occur until 2014); and (b) a series of proposals to deputize nurse practitioners as primary care providers equivalent to physicians, it is predictable that we will see a flood of new emergency room visits and very little new comprehensive care.

Bottom line: A major new adult Medicaid expansion (unlike pediatrics, which has adapted and adjusted to Medicaid over decades) does not represent true health care access, yet it is fully half of what PPACA purports to provide.

Joining in the Insurance Exchanges or Paying the Penalty

Moreover, access for the other half of the 32 million looks problematic as well. Unlike the dubious optimism that went into the proposed Medicaid expansion, the underlying principles here seem logical and coherent. The idea is to give uninsured individuals above 133 percent of FPL purchasing power by letting them buy partially subsidized private insurance through an insurance exchange, much like 5 million federal workers currently do. These millions of people will enjoy the purchasing power of a large group and cannot be discriminated against for any pre-existing conditions.

This looks great in theory—combining the “carrot” of subsidized health care premiums with the “stick” of a penalty if insurance is not purchased—but, as can be seen in Figure 1, the choices that people will probably make are likely to be different from what the Obama administration leads us to believe.
FIGURE 1
Penalties and Premiums for the Individual

<table>
<thead>
<tr>
<th>PENALTY: 2014/2016</th>
<th>PREMIUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>$16,000 (150% FPL)</td>
<td>$160/$400</td>
</tr>
<tr>
<td>$28,000 (250% FPL)</td>
<td>$280/$700</td>
</tr>
<tr>
<td>$44,000 (400% FPL)</td>
<td>$440/$1,100</td>
</tr>
<tr>
<td>$45,000 (&gt;400% FPL)</td>
<td>$0/$0</td>
</tr>
</tbody>
</table>

Penalties and Premiums for the Family of Four

<table>
<thead>
<tr>
<th>PENALTY: 2014/2016</th>
<th>PREMIUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>$33,000 (150% FPL)</td>
<td>$330/$825</td>
</tr>
<tr>
<td>$55,000 (250% FPL)</td>
<td>$550/$1,375</td>
</tr>
<tr>
<td>$88,000 (400% FPL)</td>
<td>$880/$2,085 (max)</td>
</tr>
<tr>
<td>$90,000 (&gt;400% FPL)</td>
<td>$0/$0</td>
</tr>
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Insurance subsidies will lower the cost of insurance for very low-income people to just 4 percent of income, but only to 8.05–9.5 percent for low to moderate incomes, and not at all for those above 400 percent of FPL (currently $44,000 for an individual and $88,000 for a family of four). Meanwhile, the penalties paid by individuals will only be 1 percent of income when this rolls out in 2014, rising to 2.5 percent of income by 2016. This may sound substantial, but it is in fact far below the levels seen in the successful individual mandate models of the Swiss and the Dutch, where the penalties for not obtaining health insurance exceed the cost of the subsidized premium. Furthermore, under PPACA, those who do not purchase insurance and then become ill can buy the same subsidized insurance at that time.

Ask yourself the following: will an uninsured individual scraping by on $16,000 a year really pay $640 for health insurance if the penalty for not doing so is only $160, and they can get the insurance later if they need it? Better yet, they could just work a bit less or report less income and get into the newly expanded Medicaid for free. How about an uninsured individual living on $44,000 a year? Will that individual really pay $4,180 for health insurance if the penalty for not doing so is only $440 and they can get the insurance later if they need it? Why would they?
PPACA (cont’d)

Protections for Individuals and Incentives for Employers

Next, consider the working insured, those who now buy insurance in the individual market and who are captive to the well-publicized abuses of individual underwriting. The authors of PPACA were so focused on improving the lot of this subpopulation and how they might or might not respond to various incentives and penalties that they seem to have forgotten everyone else, namely the 170 million currently insured through their employers, the vast majority of whom are in a secure albeit increasingly expensive situation.

To garner votes they needed from more centrist Democrat House and Senate members, PPACA’s authors limited the penalty on medium and large employers for failing to provide health insurance to only $2,000 per employee, far less than what most currently pay to provide it. This creates a substantial incentive for employers who currently provide insurance to stop doing so and just pay the fine, while sending their employees—by the millions—to the subsidized exchanges. For new and expanding companies, what is incentivized is never to provide health insurance in the first place. By 2014, many now believe that the number of people in the exchanges will not be just the 19 million projected by the Obama administration (the vast majority of whom will have been previously uninsured), but more like 55 million, raising the cost of the necessary subsidies by an additional $1 trillion.

C. Eugene Steuerle, a senior health policy analyst at the left-of-center Urban Institute, calls this arrangement “unworkable and unfair” (http://www.urban.org/publications/901386.html). What’s more, two-term Tennessee Gov. Phil Bredesen, a Democrat, has published a detailed analysis of how Tennessee will be able to cut its health benefit costs for its state workers by as much as 40 percent. In this analysis, state workers are actually kept whole by having their state benefit costs replaced by some increase in wages but, most importantly, by access to the substantial federal subsidies.

Combining a projection of tens of millions of workers—many of whom will be low-wage workers—being directed to the exchanges together with the weak penalties for not obtaining insurance gives rise to a stunning scenario. A recent nonpartisan analysis by McKinsey and Co., an international consulting company whose Center for U.S. Health System Reform is headed by Bob Kocher, former special assistant to President Obama, suggested that after PPACA’s implementation, we may still have as many as 40 million uninsured. This, together with as many as 20 million in a likely ineffective Medicaid expansion, gives us 60 million with little to no coverage—no better than where we are today—and after spending as much as $2 trillion!
Will PPACA Cost the Feds Less or More?

The Congressional Budget Office (CBO), a reputable source of information even if its director is chosen by political partisans, makes its projections based on assumptions that are provided to it. For projecting the costs of PPACA, the Democrats in Congress instructed the CBO to accept a long list of dubious assumptions, including: (a) Medicare physician payments would drop by 40 percent and stay there (actually making Medicare in the aggregate a worse payer than Medicaid); (b) $500 billion in cuts to other Medicare services, including $398 billion from hospitals, would be identified and successfully implemented; (c) the overall program costs would be estimated by using 10 years of taxation (some $500 billion) but only six years of subsidy payments. With this, the CBO projected $143 billion in “savings” over 10 years, and hence an even larger “cost” should PPACA be repealed.

By way of comparison, the truly nonpartisan Medicare actuary, an equally reputable source, quietly issued a report just a few weeks after PPACA became law in March 2010: PPACA would add to our overall national health expenditures by some $311 billion over 10 years. The report also stated that, if successful, the proposed cuts to hospitals could cause at least 15 percent of them to stop accepting Medicare patients in order to remain solvent.

So, we are left with two starkly different projections: (1) keeping PPACA in place will save us about $200 billion (CBO), versus (2) Medicare will likely not be able to cut physician payments by 40 percent, nor hospitals by $398 billion, and many millions of the currently insured will end up seeking care from the exchanges, ballooning the cost of the federal subsidies by an additional $1 trillion between 2014 and 2019 (Medicare actuary). The latter analysis suggests that repealing PPACA will actually save as much as $2 trillion over the next 10 years while leaving Medicare in better financial shape.

The Good in PPACA

Most of the various reforms to the private health insurance industry read like recommendations from a CMA policy manual. Conceptually, subsidized high-risk pools for people with pre-existing conditions, tax credits for small businesses to incentivize providing insurance to their employees, and additional relief for seniors with high drug costs all make perfect sense.

The caveat is that PPACA was written by politicians, not policy wonks, and so by design it front-loads as many “goodies” as possible to give its proponents political cover. Many of the “goodies” would likely be preserved in any form of an eventual “Repeal and Replace” effort. However, the core of the bill and its
$1 trillion cost (more like $2 trillion-plus if the critics are correct) is all about what begins in 2014. Even then, some may derive great benefit from the new health insurance exchanges, and some of the new Medicaid patients may find themselves in a better situation than they are today. Medicaid patients pay very little or nothing for their care, and therefore are at least protected financially.

**Does the Public Favor Repeal?**

The public knows little to nothing about the issues elucidated above, and yet polls show that upwards of 50 percent favor repeal now, a proportion that I predict would approach 60–70 percent if they did understand.

Beyond a growing distrust of government, many people seem to realize that there is probably not much in PPACA for them. The majority of people will actually end up paying more for the same, or less, coverage than they have now. Consider the various insurance reforms, most of which have been and remain quite popular. Having your uninsured children who still live at home stay on your policy until age 26 is a very reasonable idea, and it is projected to increase the cost of a family policy by a mere $135 a year. However, when you add in the ban on pre-existing conditions for children, the removal of lifetime payout limits on policies, the ban on rescissions, and all the other reforms, the cost of a family policy jumps by about $1,000 a year. This may be worth it, but my sense is that the 70 percent or more of the population currently insured believe that they will never derive much benefit from any of this.

**PPACA Increases the Cost of Private Insurance**

PPACA provisions will increase the cost of existing private insurance—to a significant degree—in at least five different ways:

- The various cuts and freezes in Medicare and Medicaid will accelerate what has already been substantial cost-shifting by physician and hospital providers to private payers.

- The weak individual mandate, even if not struck down by the courts as constitutionally excessive, will boost private premiums as all of those with major medical conditions will buy insurance (no more discrimination against those with pre-existing conditions) while many millions of the healthy will wait until they get sick.

- As a perk for (high-propensity voting) seniors, some $80 billion in mandated price reductions for brand-name drugs will go toward shrinking Medicare Part D’s so-called “donut hole.” Great for seniors, but the rest of
us will all pay that through our private premiums as Big Pharma will just cost-shift that $80 billion over to private plans.

• Various new direct taxes on the health care industry are also part of PPACA, including a tax on health insurers ($14 billion per year by 2017), a tax on pharmaceutical companies ($4 billion per year by 2017), and a new 2.3 percent tax on all medical devices. All of these costs—more than $20 billion per year—will again just be cost-shifted to private plans.

• Finally, contrary to conventional wisdom, the proposed transition of the health care system to one based on so-called accountable care organizations may not save money, at least initially. There appears to be a rather frenzied consolidation within the health care world—hospital systems pumping up their sizes and physicians aligning with them, all trying to get bigger, trying to avoid being run over by some very powerful national forces. The problem is that there is plenty of evidence that the larger the health system, the harder bargain they drive in negotiating payments, particularly with private insurers. Once again, this raises the cost of private insurance.

At the end of the day, commercially insured Americans, 170 million of them, will likely see their annual premiums for family coverage go up $2,500 a year or more just from PPACA provisions. Notably, CBO does not “score” this because none of this is a government expense.

2012 Will Determine the Fate of PPACA

The Republican-dominated House of Representatives, bolstered by the votes of some House Democrats, repealed PPACA by a wide margin earlier this year. The Democratically controlled Senate then defeated repeal along party lines, 51–47, with 2 not voting. However, even though outright “repeal” has been stalled, putting into play dozens of PPACA’s new boards, commissions, governmental units, and other entities has been made more difficult by a series of defunding votes by the House. This, in combination with at least 20 governors doing nothing to implement PPACA’s various state-level programs, makes ultimate PPACA implementation quite problematic.

In addition, by next year the Supreme Court will likely decide two separate issues: the constitutionality of the mandated Medicaid expansion and the constitutionality of the individual mandate.

Should PPACA be upheld, the 2012 presidential election will then likely be decisive, with the Republican nominee running against President Obama on a
platform of “Repeal and Replace.” Also, by that 2012 election, there will be a much more significant emphasis on the “Replace,” as voters will want to keep several of PPACA’s basic provisions, in particular the private insurance industry reforms.

Should Republicans re-take the White House in 2012, it seems almost certain that they would retain control of the House of Representatives, and likely could gain control of the Senate as well. If such a triple play were to come to pass, it would then become quite possible that PPACA could be replaced or significantly altered before the critical date of January 1, 2014—when the Medicaid expansion, the mandate to buy insurance, and the substantial subsidies are scheduled to begin.

One caveat for 2013 is that even in the most optimistic of Republican scenarios, they would not achieve a filibuster-proof 60 votes. However, most observers believe that if the Republicans take the White House and pick up five to 10 Senate seats, they would have done so at least partially on the basis of “repealing Obamacare,” and therefore the large number of Democratic senators elected with the Obama wave of 2008 (and up for re-election in 2014) would in fact support a “Repeal and Replace” process, provided that the “Replace” represented meaningful reform.

Finally though, all this is moot if President Obama is re-elected in 2012. In that scenario, PPACA will stand, and we will all watch what happens in 2014: will PPACA surprise its detractors and work successfully, or will it be the poorly designed, underfunded program that its critics believe it to be—leaving us with a health care insurance system that is acutely destabilized and thus even more problematic than what we have now?

Stay tuned.
Golden State
By Nikil Saval

The death foretold in the early months of the economic crisis was that of high finance. It has turned out instead to be California’s. Like the larger recession, the crack-up of the country’s wealthiest, most populous state has been long in the making. After many years of disguising its financial frailty with housing booms, California seems poised to collapse. The new governor, an old hand brought in like Cincinnatus to save the republic from danger, is currently confronting partisan gridlock in the state legislature over tax increases necessary to boost revenues. The state’s education system, once the envy of nations, drowns its students in tuition bills; the public employees’ pension fund, long used as an excuse to deny wage increases in favor of benefits to come, reneges on old promises; voters sick of legislative inaction (approval percentages are creeping toward single digits) voice hollow threats to legislators long settled into gerrymandered districts. The few remaining newspapers can’t afford to tell anyone what’s going on: they’re too poor.

Yet, flitting through this long slow disaster was the sense that the financial demise offered an opportunity; that what was left of the state could be reclaimed. While Gov. Arnold Schwarzenegger and the legislature both were considered by many to be disgraceful failures, wary and disenchanted citizens held both 2010 gubernatorial candidates in low esteem. No one had much faith that any elected official, individually or collectively—regardless of party affiliation—could or would do anything of selfless beneficence, free of special interest allegiances or the basest kind of political calculation, to help correct the moribund nature of the state’s financial situation. Power, at least a little of it, might be left lying in the streets. Who would pick it up? The usual wealthy interests, no doubt—those who could afford to capitalize on others’ financial distress, and those who could spend enough to push through balefully crafted ballot initiatives. The fragments of California’s once-famed left were resolved to try as well. However, by largely grouping behind former (and, as of January, current) Gov. Jerry Brown, they inadvertently resurrected a Janus-faced past: the frivolously rich California that prevailed when Brown originally took office in 1975, and the frivolously insolvent state that dominated when he left. California under Brown’s first tenure suffered a bifurcation point, and recalling what led to it and where we’ve come from since may yet help us understand the state’s current crisis.
In 1949, journalist Carey McWilliams called California “the great exception” among states: no textbook or precedent existed to explain its monstrous growth, its powerful labor movement, its superb educational system, or its abundance-creating, superexploitative farm system. “California has not grown or evolved so much as it has been hurtled forward, rocket-fashion, by a series of chain-reaction explosions,” he wrote. Every discovery or forward movement in California, such as the Gold Rush, historically seemed to coincide magically with national developments that turned it from a local incident into an “explosion.” The Gold Rush, for example, took place precisely when advances in transportation made a real “rush” of people possible, and with no prior claimants to the land, a “truly amazing democracy in production” prevailed. This had its terrible consequences: the Native American population in California, larger than elsewhere in the West, was exterminated with unprecedented speed. For better and for worse, the early Californians displayed an omnipotent confidence that, McWilliams suggested, could only be compared to a kind of gambling:

To understand the spirit of California, one really needs a sociology of what is called “good luck.” … Californians have traditionally been reckless and self-confident gamblers; they have never hesitated to make high wagers against heavy odds and, on more than one occasion, have staked the future of the state on a throw of the dice, a turn of the cards.

California’s reputation for being irredeemably liberal began to take hold in the ’60s, when three groups, all in frequent conflict with each other, held sway over the image of the state: liberal administrators, students and labor. The last of these, relatively powerful ever since the Gold Rush, had developed its strength to the point that corporations tended to submit to its demands, and often suffered grievously when they did not. Professional administrators and politicians meanwhile sought to expand the public realm in prosperous California by any means necessary: agriculture would be heavily industrialized to feed the poor with cheap produce; under the auspices of a “master plan” for education, universities would be turned into tuition-free “multiversities”; cities would have their slums cleared for arenas, entertainment complexes, and mega-housing projects. Students, many of whom had served as Freedom Riders in the South, first demanded free speech rights, and then used these rights to demand others.

People moved to California in droves to join armaments industries; by the early ’60s, it had surpassed New York as the country’s most populous state. Gov. Pat Brown (1959–1967—Jerry Brown’s father) was given to peaks of liberal fervor, and on occasion he would enumerate all the state projects he planned to
complete: “We’ll build the water project, and we’ll build new universities and new state colleges and new community colleges, and elementary schools, too. We’ve got plenty of money and we’ve got to do it.” Optimism raged like an epidemic. California, journalist Peter Schrag wrote, “bought and developed thousands of acres of new parklands, nurtured public institutions that were unmatched anywhere on earth, and never thought that it had to make tough fiscal choices.” Meanwhile, the hippies in the north and the film industry in the south cemented the “out-there” reputation of the Left Coast, a phrase popularized in the ’70s.

Yet extraordinary and inimitable as California was supposed to be, it was equally supposed that the rest of the country would soon model itself after the state—the rule, rather than the exception. Boom cities like Houston and Atlanta would look less like Boston and New York and more like Los Angeles; public universities would successfully compete with Harvard and Yale for talent as Berkeley did with Stanford; farming would resemble the “factories in the fields” in the San Joaquin Valley. The left, too, would find its models in California, whether among the love-ins in San Francisco or the student tables at Berkeley. In all these respects, California was the harbinger of whatever utopian future the United States had in store: every outsider’s casual dismissal of its strangeness concealed a desire that the rest of the country might turn out to be, one day, just as strange.

All the conditions that nurtured a powerful left in California have virtually disappeared. Today, the educational plans of the ’60s administrators read like fables, while California’s legendary liberal consensus has unraveled to the extent that no Orange County conservative would identify with the Ronald Reagan who, as governor, signed into law the largest tax increase in California’s history. The collapse of California’s educational system is the sign of the state’s collapse more generally. Currently, California has an official unemployment rate of 11.7 percent (as high as 12.5 percent in rural California, according to the last available figure from 2009), and a budget deficit—even after two years of savage cuts—of $10.8 billion, with no easy solution to either problem in sight.

Fiscal crises, due to a careless article of the state’s 1879 constitution that until recently required a two-thirds majority for the passage of any budget, are familiar to Californians, but the current situation transcends all that. A crisis at least suggests a possible transformation; California’s problems seem terminal. Confidence—the attitude my shallow, beaming state supposedly lacks least—has all but disappeared. People have finally begun to believe in “bad luck.” California remains a harbinger for the country, only now it has come to represent not progress and creativity but social immobility, ecological catastrophe, and legislative hopelessness.
California’s problems have long been foreseen; only the will to face them honestly has been lacking. For one thing, the state, especially in the south, is running out of water. The Colorado River has been dammed and sucked out, and as the effects of climate change mount it yields ever less. The water problem is part of a larger demographic problem: too many people have moved into California, a place that, given its resource constraints, its seismic instability, and its tendency toward massive brush fires, is not amenable to having been so densely settled. The right manipulates this situation to the utmost, distracting people from these ineluctable problems with the specters of undocumented immigrants and public pension costs. The tactic does double duty: it creates a dynamic of “us vs. them” that makes people more unwilling to fork over tax dollars for public welfare, while painting the hapless left, itself only partly concerned with demographics and natural resources, as having little interest in and no solution for true issues.

Gov. Jerry Brown is troublingly familiar: governor from 1975 to 1983, mayor of Oakland from 1998 to 2006, and then the state’s attorney general. Residents of Oakland recall Brown’s mayoral tenure as one in which he shed the dreamy liberal image he had acquired as governor and embraced “realism” in urban policy as he unsuccessfully tried to remake Oakland in the image of the richer city across the bay. He encouraged the expansion of charter schools, enlargement of a seemingly unhinged police department, and speculative real estate development of the most reckless kind—most notably, the “Uptown Project,” a mixed-use complex of luxury condos that was intended to attract wealthy white residents to a majority black community. The promise of these development schemes didn’t last beyond the collapse of the dot-com bubble.

But Brown’s most telling and permanent misstep was his failure in his first term as governor to combat the unsustainable rise of property taxes, which led to the creation and passage of Proposition 13 in 1978. Property values in California, assessed every two to three years by county officials, rose to colossally high levels in the mid-70s, as millions of people bought and built homes in the expanding suburbs and exurbs. The corresponding tax rates, set by the municipality (not the county) in which the property was located, rose as well. Homeowners feared that their tax burdens would render them unable to afford their mortgage payments. Prop 13 (“The People’s Initiative to Limit Property Taxation”) was created by the hard-right Jarvis-Gann Taxpayer Association to exploit this specific dilemma in order to curb the growth of the California government. It rolled back property values to pre-1975 levels, allowed a maximum 2 percent yearly increase for inflation, and prohibited reassessments except in the case of property transfer or resale, while instituting a two-thirds majority requirement for raising other kinds of taxes. The night
the bill passed (by a huge margin), Jarvis celebrated it as a populist victory that heralded a general revolt. “Excessive taxation,” he said at the time, “leads to bankruptcy or dictatorship.”

Instead, it was Prop 13—a starkly ideological response to a real dilemma—that brought California near bankruptcy and instituted the budget crisis as a permanent structural problem. Almost immediately after it passed, all summer school classes were eliminated. Eventually thousands of state employees were laid off, and the state’s infrastructure began a slow decline. The decrease in state revenues was exacerbated in the ’80s when the Reagan administration cut federal funding to the states, and subsequent Republican governors (notably George Deukmejian, Pete Wilson, and Schwarzenegger) set about dismantling California’s once impressive public services.

There also were two less obvious, though no less momentous, consequences of Prop 13. One was the rapid increase in direct democracy initiatives, many of them conservative in intent, backed by wealthy entities and posing, like Prop 13, as “populist” circumventions of the supposedly out-of-touch legislature. Since 1978, voters have passed laws imposing legislative term limits, forbidding undocumented residents access to social services, instituting stricter sentencing laws for repeat offenders (the “three strikes” law), curbing bilingual education, and stripping same-sex couples of the right to marry. Twenty-two initiatives appeared in the 1970s; there were 45 in the 1980s, 62 in the 1990s, and 94 in the last decade. Such a “plebiscitary” democracy not only tends to favor rich special-interest groups (such as insurance companies, banks, oil refineries, utilities, realtors’ associations, and trial lawyers) who can afford the campaigns. It also makes private the act of voting on legislation. Because no one knows which item you check off in the polling booth, no one can hold you—unlike an elected representative—accountable for your vote.

The other consequence of Prop 13 was the extravagant growth of the California prison system. The prison fix made its first appearance during Jerry Brown’s difficult second term. As disappearing revenues destroyed his plans for growing the state, and with the state’s crime rate at an all-time high, Brown decided to replace two of the state’s legendary prisons, San Quentin and Folsom. His twin aims were to humanize these famously violent places for incarceration (in response to the antiprison activism of the 1970s) and to defuse the Republican strategy of using crime as a campaign issue. As it happened, neither worked.

Moreover, in 1976, the legislature passed the Uniform Determinate Sentencing Act, which excised the explicit goal of rehabilitation (replaced by “incapacitation”) from the law, while mandating longer sentences for certain
felonies. Most important, the California Public Works Board developed a new instrument for financing prison construction, called lease revenue bonds (LRBs). Unlike traditional general obligation bonds, which required approval by popular referendum and thus were legally backed by the state, LRBs were backed by a revenue stream supposedly produced by the project itself, in the form of rent paid by the developer. In other words, they had only the implicit backing of California's full faith and credit, and they cost the state more to issue because of the higher risk of nonpayment.

The notion that “crime” was a permanent problem served to make prison building irresistible. Beginning in 1982, 23 maximum-security prisons were built, at about $300 million each. By 2000, the prison population had increased by 500 percent. Prisons were shilled as job creators. Community colleges located near prison facilities, their tuitions already climbing higher than many could afford, began to offer prison-guard training degrees. The guards had a powerful union, and so those joining their ranks enjoy possibly the most secure career path in the state. Education increasingly resembled the prison system: it too relied on LRBs to finance endless expansion and construction. When Governor Schwarzenegger suggested that as a solution to the budget crisis, California should privatize its prison system, students in the increasingly privatized education system recognized the bitter parallel.

No amount of political nostalgia can bring us back to California's happy days—times, we should not forget, of tremendous class and racial struggle, educational turmoil, and violent wars abroad. Come to think of it, that sounds a lot like today—only with less money. And the money remains the key. California's future will rest in the hands of its voters, its 17-million-strong shadow legislature, who will determine whether the state and its programs are worthy of investment, or whether they should be driven into the ground. The signals thus far have been equivocal: Proposition 25, approved last November, decreased the required budget approval vote from two thirds to a simple majority, much to the jubilation of the Democrats, who have a substantial bicameral grip. Yet the two-thirds requirement for raising taxes enacted by Proposition 13 continues to guarantee the severely outmanned Republicans continued gridlock. Political parties, however, are not the same as politics. On the right, the Tea Party has displayed amply, in the way the antiwar left once did in California, how mass mobilization can drive political discussion. If the levels of discontent in California ever coalesce into a meaningful political expression, we will see it first in the crowds on the streets, in the placards and leaflets that advertise the way forward for a state that may still point the way forward for us all.

Nikil Saval is an associate editor at, and frequent contributor to, n+1, a print magazine of politics, literature and culture founded in 2004 and published three times yearly. Information on how to subscribe is at nplusonemag.com. Saval is a Ph.D. candidate in English at Stanford University.
From the CEO

Be Aware and Beware: PPACA Changes Are Coming to Medi-Cal

By Barbara Baldwin, MPH, CAE

So many elements of the health care reform act are troubling, and for California one of the most alarming is the broad expansion of Medi-Cal to cover populations not currently eligible for benefits. The Affordable Care Act (ACA) requires that all states phase in the expanded Medi-Cal/ Medicaid coverage by 2014, opening enrollment to a large segment of uninsured persons who, by virtue of their incomes, currently do not qualify. Additionally, if the individual mandate stands, then it is expected that more than 500,000 currently qualified uninsured persons will be added to the Medi-Cal population.

In the interim, Section 1115 of the Social Security Act allows the Secretary of Health and Human Services to approve state demonstration projects that may not fully meet Medicaid requirements, yet allows the states to use funds that otherwise are not permitted under federal rules. These project waivers are intended to promote development of new approaches to program design and administration. Under Section 1115, states have broad discretion to modify eligibility, benefits, cost sharing and provider payments.

The Henry J. Kaiser Foundation recently published a document, “Five Key Questions and Answers about Section 1115 Medicaid Demonstration Waivers,” which reports on how states are beginning to prepare for full implementation of ACA, only three years away. The Executive Summary can be found at http://www.kff.org/medicaid/upload/8196.pdf. In addition, a companion piece, “Key Facts on California’s Bridge to Reform Medicaid Demonstration Waiver,” focuses on the California experience and plan (http://www.kff.org/medicaid/upload/8197-FS.pdf). California received waivers in 2005 to develop alternatives to traditional fee-for-service payment. In 2010, at the five-year renewal point, the “Bridge to Reform” was approved. A precursor to transitioning to full Medi-Cal expansion in 2014, this California waiver allows for expansion to Medi-Cal low-income individuals who previously failed to qualify for Medi-Cal. However, because Section 1115 waivers mandate budget neutrality, the federal government will not pay more than it would have in the absence of a waiver. The state takes on the considerable risk for costs that exceed the amount allocated for the life of the waiver.
The “Bridge to Reform” has adopted a new set of acronyms coined in the ACA. The Limited Income Health Program (LIHP) includes two models: 1) Medicaid Coverage Expansion (MCE), which will cover nonpregnant adults ages 19–64 whose family incomes are less than 133 percent of the federal poverty level (FPL), currently $14,484 for an individual; and 2) the Health Care Coverage Initiative (HCCI), which will cover nonpregnant adults ages 19–64 whose family incomes are between 133 percent and 200 percent (currently $21,780 for an individual) of the FPL.

The state is preparing for implementation of Medi-Cal expansion with laws that enable it to comply with the new federal requirements. SB 208 (Steinberg) authorized pilot projects in which seniors and persons with disabilities can be shifted from Medi-Cal fee-for-service to Medi-Cal managed care plans as of June 1, 2011. AB 342 (Perez) permits counties to implement coverage for nonpregnant adults ages 19–64 whose incomes are less than 200 percent of FPL. AB 1629 (Perez) established the California Health Insurance Exchanges as an independent public entity. Pending is AB 43 (Monning), which will expand coverage to persons who are below 133 percent of the FPL. Given the condition of California’s budget and efforts to reduce Medi-Cal payments, many stakeholders are wondering how, when programs and funding are in place, all the newly covered beneficiaries will receive health care. Because physicians already are limiting and reducing their Medi-Cal caseloads due to current dismal payments, access to care will become an even more critical issue. Indeed, this is the elephant in the room that the ACA does not address; instead, it relies on the already economically beleaguered states to find solutions.

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The phone rang one recent Saturday, and on the line was a sweet-voiced young undergraduate from the East Coast university where my son is a junior. She was raising money for the university's annual fund drive. After I agreed to donate (thinking wistfully of all the money I already pay the school), she asked if I would mind answering a question. Not at all, I said. The rest of the conversation went like this:

Student: I see that you're a doctor. What specialty are you in?

KS: Anesthesiology.

Student: How is that? I'm thinking of doing premed, and I'm wondering what field to go into.

KS: You'll have lots of time to figure that out. Once you're in medical school, you'll rotate through all different areas, and eventually you'll find the field you really love. I was fascinated with pulmonary medicine and cardiology but loved being in the operating room, so anesthesia was the perfect fit.

Student: No, I mean how is anesthesia in terms of lifestyle? Like, I want to have kids some day and I want to find a specialty that will work out OK for that.

KS: That's the wrong way to approach that decision. You shouldn't pick a medical specialty that you aren't excited about just because you think it will be easier. That's a good way to have a very unhappy career.

Student: You have kids, right? Do you work full time? What are your hours like?

KS (growing testy): Yes, I have kids and I've always worked full time. In fact, my days at the hospital can be quite long, because it's impossible to predict how much time a major operation may take. And then there are emergency cases and night call.

Student: That's not what I was hoping to hear.

KS: If you want to be a doctor, be a doctor. If you want a hobby, open a bakeshop.
After I got off the phone, my husband looked at me with a bemused smile. “Boy, she really poked the rattlesnake, didn’t she?” he said.

Yes, she did. I do realize that times have changed. When I started medical school in 1979, women were a minority in the class, and we were determined to work just as hard and prove that we were just as capable as any of the guys. It was the same during residency. Duty hour restrictions, of course, were unheard of then. We were mindful of the fact that if we failed, the doors that were opening up for women in medicine might well close.

That fear was unfounded. It’s unthinkable now that medical school admissions officers would discriminate on the basis of gender. As of 2010, the Accreditation Council for Graduate Medical Education (ACGME) reported that 42 percent of all residents are female. We have the opportunity to be just as dedicated—or not—as our male colleagues. So what are we doing with all of our new opportunities?

Apparently my young friend on the phone wasn’t alone in taking “lifestyle” into account as she considers medical specialties. In a 2006 article looking at gender distribution among anesthesiology residents, Steven Rose and his colleagues at the Mayo Clinic commented, “Lifestyle issues are often cited as an important consideration in the selection of a specialty for residency training, and anesthesiology is often included in lists of specialties said to be associated with favorable lifestyles.”¹ (I must be doing something wrong; clearly I’m working much too hard.)

However, women are still underrepresented in anesthesiology compared to some other specialties. Only 36 percent of current anesthesiology residents are women, which is about the same as the percentage of women residents in nuclear medicine and emergency medicine.² It may be, Rose speculates, that the “patient-physician relationship” isn’t considered rewarding enough to attract women into anesthesiology.

We all know where the female medical students are heading these days to look for rewarding patient-physician relationships. They go into obstetrics-gynecology, where the ACGME reports that 79 percent of residents now are women. They’re also going into medical genetics (65 percent), pediatrics (63 percent), dermatology (62 percent), allergy and immunology (56 percent), family medicine (53 percent), anatomic pathology (53 percent), internal medicine/pediatrics (52 percent), and psychiatry (51 percent).² That’s fine, although the patient-physician relationship in anatomic pathology does seem questionable.
There is a problem, though, when so many women go into medicine and then decide to cut back to part time after their children are born—choosing the “mommy track.” You can tell this is a trend when The New York Times publishes a piece, as it did on April 7, headlined “The Doctor Is In…or Maybe She Isn’t.”

The loss in productivity of working part time during prime years occurs disproportionately among primary care doctors, and it has real consequences for the delivery of care. Any health care reform effort, like that in Massachusetts, sets its sights on improving access to primary care among poor, underserved populations. You can’t provide better access to care if the primary care doctors aren’t working.

In England, where 76 percent of young general practitioners are women, the severe national shortage of physicians is blamed at least in part on the “increasing feminisation of the workforce.” A spokesman for the British Medical Association presciently noted in 2001, “The newest recruits to general practice are not intending to follow the same full-time career path as their older colleagues.”

A case in point is Carol Cassella, anesthesiologist and novelist, whose latest book is “Healer” (reviewed in this issue; see pages 87–88). She initially trained in internal medicine and worked in primary care at a Seattle public health clinic, but tired of that and completed a second residency in anesthesiology. Now she works part time as an anesthesiologist. Cassella wrote recently, “When my children ask me if I want them to become doctors, I have to tell them truthfully that I could not go back to doing that work full time. I found it too emotionally exhausting.”

Her point of view is understandable, but two residencies add up to a great deal of postdoctoral training that isn’t being put to full use.

The fact is that the part-time route—the “mommy track”—is a choice for women in affluent families. Many have successful partners who make that choice possible. No doubt these women are sincere about wanting to spend time with their families, but I wonder how many of them fully considered the conflicting demands that medicine and motherhood would make before they accepted (and denied to others) sought-after positions in medical schools and residency.

Although it’s hard to know what the numbers are, clearly some women are deciding to take the “mommy track” a step further and give up medicine altogether. Naturally there’s a Web site devoted to this topic, www.womenleavingmedicine.com. Its manifesto states, “Women physicians have the right to nurture their families to the extent they desire,” and it offers “stories and resources for women...
physicians who have decided to quit medicine, for all kinds of reasons.” The blog comments are illustrative: “There is so much more that defines women who chose medical careers than a medical degree.” A young mother writes, “My 16-month-old deserves his mommy more than my patients.”

Yet amid the celebration of staying at home, there’s another side to the blog story. A cautionary note comes from a young woman who finished residency and now is home with her toddler: “Part-time work has been harder to find than I thought, and now, I’m increasingly being told that if I don’t do something, anything, I may never be hired.” The saddest post is from a former pediatrician: “Long story short, I’m now 56, divorced, and need a job. My youngest child just turned 18. Getting back into medicine is prohibitively expensive and the route is unclear. My biggest problem is how demoralized I am. I once had it all.” The message is clear; once you leave medicine, it isn’t easy to opt back in.

In fairness, male physicians are leaving clinical medicine too, although few of them choose the “daddy track.” Their motives appear to be different. Joseph Kim, physician and founder of the Web site www.NonClinicalJobs.com, lists money at the top of his list of reasons to leave clinical medicine, and writes, “Let’s face it. Some physicians love money. They may be good at their job, but they have a stronger passion for a higher salary.” Some physicians get MBA degrees so that they can go into hospital administration, become entrepreneurs, or work for pharmaceutical corporations. But they too are leaving years of clinical training behind.

Medical education and residency training are not financially self-supporting. Your tax dollars and mine help train the next generations of doctors. In 2008, hospitals with graduate medical education programs received $3 billion in direct support from Medicare to help cover stipends for residents, salaries for teaching physicians, and related overhead expenses. Are we expected to support the education of more doctors each year to compensate for those who don’t want to use their medical training to take care of patients? Or will we allow advanced practice nurses to do what should be our work?

Perhaps we need to take a more active role in guiding young premedical students before they apply to medical school. At 21, many are not prepared to make a decision as profound as the one to become a physician. Certainly there are those who know from an early age that they want to be doctors. They play with plastic doctor kits and junior microscopes, read books about great medical discoveries, and volunteer in hospitals as soon as they’re old enough. These students are ready when the time comes to go straight to medical school.
Other college students, however, may not truly be ready to make the commitment that medicine deserves. They may not understand the financial realities of clinical practice, and how difficult it may be to combine medicine and motherhood. Undergraduates who are ambivalent, or already looking for ways to work less, should be encouraged to take some extra time. They should find jobs, see the real world, talk with working physicians, and decide from a more mature vantage point if the life of a physician is what they really want.

Despite reduced payments and infinite paperwork, medicine is a noble profession. It shouldn’t be either a hobby or an overused steppingstone to a more lucrative nonclinical career. In the simplest terms, patients need us to take care of them. We have an obligation to do the work we promised to do when we wrote those essays for our medical school applications. If a young college student is already drawn to the “mommy track” before she’s seen her first patient, maybe medicine isn’t her true vocation. Maybe next year’s place in medical school should go to someone—male or female—more dedicated to patient care.

References


An interview by David Cameron, Director of Media Relations, Office of Communications and External Relations, Harvard Medical School

Atul Gawande, M.D., MPH, is a surgeon at Brigham and Women’s Hospital; Associate Professor of Surgery, Harvard Medical School; and Associate Professor in Health Policy and Management, Harvard School of Public Health—all in Boston, Mass. He received his B.A.S. from Stanford University, an M.A. in politics, philosophy and economics from Oxford University, his M.D. from Harvard Medical School, and an MPH from the Harvard School of Public Health. He is director of the Global Challenge for Safer Surgical Care of the World Health Organization. A staff writer for The New Yorker magazine since 1998, he recently published “The Checklist Manifesto: How to Get Things Right” (Picador, 2011).


Atul Gawande: Though it seems almost ridiculous in its simplicity, we’ve found that a checklist can save lives. And two recent studies—in the Veterans Administration system and in the Netherlands—have confirmed the substantial mortality reductions we observed when teams are trained in the principles the checklist embodies. What’s intriguing are those principles. Checklists are memory aids. But, designed well, they also foster teamwork. Doctors don’t love to use them at first. I know I didn’t, and I was running the World Health Organization’s program that was testing them. But no matter how routine an operation is, the patient never seems to be. The checklist made our team discuss each patient’s medical and surgical issues before starting. And in the first month, that conversation alone saved a patient’s life. We’ve since caught unrecognized drug allergies, confusion about medications, errors on biopsy specimen labels, and equipment failures.

The evidence is: any hospital or surgical staff that operates on patients without a team checklist is endangering them.

DC: What’s the most daunting part of being a surgeon?
AG: The complexity. Although there are procedures that we do over and over again, we perform many types of operations only a few times a year. Surgeons need to be able to handle both the routine and the anomalous. Beyond surgery, medicine as a whole has become extremely complex. Science has enumerated more than 13,000 diagnoses—ways the human body can fail—and found ways to help with nearly all. But these involve more than 6,000 drugs and 4,000 medical and surgical procedures, and those numbers are growing. The volume and complexity of knowledge has exceeded our capacities as individual clinicians.

DC: How can medical professionals cope with such complexity?

AG: You probably think I will say: checklists! But it’s deeper than that. What fascinates me about checklists are the values the best ones implicitly contain—humility, discipline, teamwork. Medicine’s traditional answer for how professionals should cope with complexity is through training and technology. But we also need the humility to acknowledge that we as individuals will fail at our tasks no matter how smart or experienced we are. We need to believe that discipline in our processes is one way to overcome such failures. And we need to understand that our colleagues, no matter their station or experience, are key assets for helping us maintain vigilance and caring, identify problems, and solve them.

DC: What was the most telling lesson you learned through your research?

AG: Even as they groaned about—or even opposed—having to incorporate the basic checklist into their routine, 93 percent of the surgical staff members we surveyed said they would want their surgeons to use it.

DC: What’s next on your checklist?

AG: It’s getting long. By the end of 2010, about 30 percent of U.S. hospitals will have adopted the surgical checklist, and we’re working to bring it to the rest and to improve the effectiveness of adoption around the world. The stakes are high: Globally, more than 7 million people a year are left dead or disabled following surgery, about 500,000 in our country alone.

We’re now testing crisis checklists for the operating room and, in South India, a WHO Safe Childbirth Checklist. We’ve also worked with a Boeing safety engineer to design a Checklist for Checklists—which we’ve posted at www.projectcheck.org—to help others effectively design their own checklists. And there’s much more work to be done. The knowledge exists about what great care requires. It’s a matter of putting it into practice.
Maintenance of Licensure: What Anesthesiologists Should Know

By Rebecca S. Twersky, M.D., MPH

In the context of the historic and sweeping changes affecting the nation’s health system following passage of the Patient Protection and Affordable Care Act (PPACA), the professional community is seeking ways to reduce the high cost of medical care, variations in medical practice, lapses in quality resulting in potentially preventable medical harm, and health care disparities. In April 2010, the Federation of State Medical Boards (FSMB) unanimously approved the report of the Advisory Group on Continued Competence of Licensed Physician (http://www.fsmb.org/MOL.html), which was the culmination of nearly 10 years of exploring methods and processes for determining the ongoing competence of licensed physicians and osteopaths.

Under the current system for renewal of licensure, physicians are required by most state medical and osteopathic boards to self-report their participation in continuing medical education (CME) activities. FSMB’s proposed system, known as Maintenance of Licensure (MOL), will require physicians to participate in continuous quality improvement and lifelong learning that is objectively measured and relevant to their clinical practice. This process would be assisted by objective data. Once fully implemented, MOL will result in significant and demonstrable actions that produce improvement in patient care and practices.

In February 2010, during the term of Alex Hannenberg, M.D., as ASA president, an ASA Ad Hoc Committee on Maintenance of Licensure was formed to explore the implications of MOL on the ASA membership and to determine whether any actions should be taken. The members of the committee were selected from ASA members who are familiar with state medical boards and the Maintenance of Certification (MOCA) process. The Ad Hoc Committee was chaired by Rebecca S. Twersky, M.D., MPH, ASA Section Chair on Professional Standards. Members include: Arnold Berry, M.D., MPH (VP Scientific Affairs, Chair, Ad Hoc Committee on Educational Planning); Daniel Cole, M.D. (ASA Director from Arizona, American Board of Anesthesiology [ABA] Director, and member MOCA committee); Mark A. Eggen, M.D. (Minnesota Board of Medical Practice, member FSMB, member, American Board of Medical Specialties—ABMS—Health and Public Policy Task Force); Cynthia Lien, M.D. (ASA Section Chair on Education and Research, ABA Director, and Chair of the ABA Examinations Committee); and Carol Rose, M.D. (member, Pennsylvania State Medical Board). The Ad Hoc Committee extensively reviewed the FSMB publications and guidelines and summarized to the ASA leadership the key findings and recommendations and their implications for anesthesiologists.
Maintenance of Licensure (cont’d)

MOL’s program is based on the same six general competencies model (medical knowledge, patient care, interpersonal and communication skills, practice-based learning, professionalism, and systems-based practice) deployed by the ABMS. It includes the following three major components of lifelong learning in medicine:

1. **Reflective Self Assessment** (What improvements can I make?)
   Physician participation in an ongoing process of reflective self-evaluation, self-assessment and practice assessment, with subsequent successful completion of appropriate educational or improvement activities. This can be demonstrated by continuing medical education (CME) and should include a specific proportion devoted to practice-relevant and performance-CME. It should be completed annually.

2. **Assessment of Knowledge and Skills** (What do I need to know and be able to do?)
   Physician demonstration of the knowledge, skills and abilities necessary to provide safe, effective patient care within the framework of the six general competencies as they apply to his/her individual practice. (A secure exam is not required for MOL but could be one of the acceptable methods for documenting competence.)

3. **Performance in Practice** (How am I doing?)
   Physician demonstration of accountability for performance in his/her practice using a variety of methods that incorporate reference data both to assess performance in practice and to guide improvement.

Physicians will need to comply with the second and third components every five years. State medical boards (SMB) and osteopathic boards will consider those individuals who are involved in the ABMS maintenance of certification (MOCA or the equivalent for osteopathic) to have fulfilled all three components of MOL.

The FSMB is committed to providing state medical boards with guidance and support so that the entire community of state medical and osteopathic boards can move toward fully implementing MOL within 10 years, without its being overly burdensome or creating barriers, either for patient care or for physician practice. The MOL Implementation Group developed recommendations to enable state boards to implement MOL programs, and it submitted its final recommendations to the FMSB at its annual meeting in April 2011.
The AMA has endorsed MOL, and FSMB envisions that through a good program design, SMBs should be able to institute an MOL program in a phased implementation completed within 10 years. However, there are additional challenges for SMBs that are not faced by specialty certifying boards. Unlike MOC, this will impact every licensed M.D. or DO in the country, and therefore must address a more heterogeneous physician population. MOL relies upon financial resources and support that are in short supply at this time, and is also subject to variable state laws and regulations that may require changes in the medical practice act.

During the public comment period for the FSMB Implementation Group draft report, ASA President Mark Warner, M.D., reiterated the ASA’s support for the concept of physicians engaging in a culture of continuous professional development, quality and practice improvement, and lifelong learning. The ASA envisions its role as a facilitator for anesthesiologists in meeting these requirements. Because SMBs are not likely to want to make decisions on a physician’s completion of requirements, there would be a need for a third party that could implement documentation for MOL and then notify state boards of a physician’s completion.

How does this affect anesthesiologists? How does it affect ASA members?

There are approximately 45,000 board-certified anesthesiologists (not all are actively practicing, not all are ASA members). Seventy-three percent (32,754) of ABA board-certified anesthesiologists (Diplomates) hold lifetime—non-time-limited (NTL)—certificates; only 3.5 percent of them are voluntarily enrolled in MOCA (compared to 1 percent for internal medicine). As baby boomers retire, the number of NTL Diplomates should become less. However, under MOL any physician desiring to maintain license—regardless of how active he or she is, even in an administrative role—would need to participate in a MOCA or equivalent process. Currently only 27 percent of ABA Diplomates are time limited and are enrolled in MOCA. It is also estimated that 32 percent of active physician ASA members are not board certified/board eligible (BC/BE). The impact therefore could be sizable for the ASA.

The ASA currently has a collaborative relationship with the ABA whereby it develops educational products and electronically submits to the ABA confirmation that the MOCA candidates have completed these materials. Recently the ABA has taken the position that they would like to work with ABMS to report to state boards on anesthesiologists’ completion of required education products supplied by ASA. This suggests a significant change in their policy because this would entail facilitating the process for Diplomates.
as well as non-Diplomates. The ABA will be conducting a feasibility study in the near future. Because ABA has no plans to produce education products to meet MOCA requirements, the ASA will continue to produce MOCA- or MOL-related materials.

The ASA has developed a variety of educational products that satisfy the needs of ABA Diplomates who are involved in the MOCA process and that could satisfy the three components of MOL as well; the organization will continue to develop others. In the future, our National Anesthesia Clinical Outcomes Registry, through the Anesthesia Quality Institute, will be available for anesthesiologists to augment their participation in the three MOL-required components. It would be hoped that the ASA and/or the ABA could become that “trusted agent” for FSMB and its state/territory boards for all anesthesiology MOL activities. The ASA could also serve as a third party for attestation and for providing documentation directly to the SMB (or through the ABMS as the conduit), thereby taking the burden off the SMBs. This process would serve not only board-certified Diplomates who are participating in the MOCA process, but also anesthesiologists who are not board-certified as well as those with NTL board certification but who do not participate in MOCA.

An area for future consideration is the role of the ASA in providing an alternate pathway for non-BC/BE candidates or those holding NTL certificates not wishing to seek MOCA. Criteria for an ASA alternate pathway might consider a “MOCA-lite” structure, patterned after the ABA MOCA but without a high-stakes exam. It would be necessary, though, to preserve a distinction between a physician who has completed MOCA and one who completes just MOCA-lite (without an exam) for purposes of MOL, so as not to diminish board certification. Assuredly, physicians who are MOCA-eligible but hold NTL certificates should not view MOCA-lite as equivalent. How the ABA’s new position will impact this process remains to be seen.

The ASA continues to express to FSMB its interest in collaborating with the ABMS and the handful of SMBs that are positioned to engage in the upcoming pilot programs. The Ad Hoc Committee will continue to monitor the progress and make further recommendations to the ASA leadership as needed.
Over the 165 years since the discovery of anesthesia, new inventions and drugs related to the practice of anesthesia have grown to a sizable number. Forced-warm-air blankets, cerebral function monitors, pulse oximetry and laryngeal mask airways are recent examples. Private enterprise, legal patent protection and royalties have been good for the specialty of anesthesia and for individuals with new ideas.

However, for every success story there are probably 10 innovations that fail. Failure can be financial or scientific or both. Some ideas are doomed to failure because they are not founded upon sound physiology. Other ideas are completely valid and eventually successful, but the financial reward does not accrue to the individual with the original idea. Horace Wells and William T. G. Morton are examples. Both individuals came up with original ideas, but neither one profited from his innovation, even though their ideas had profound effects on the practice of medicine.

Richard C. Gill had original ideas that eventually developed into the widespread use of muscle relaxants during general anesthesia. It has been 70 years since the publication of Gill’s book “White Water and Black Magic,” and it seems appropriate to look back on his original ideas and the rewards that came to him as a result of his ambitious project of exploration into the treacherous depths of the South American jungle.

Figure 1: Richard C. Gill and his wife Ruth Gill at their hacienda outside Baños, Ecuador, circa 1931. Gill arranged package tours from New York City for parties interesting in visiting Rio Negro—the “First Dude Ranch in South America.” Copyright material from the Guedel Library, printed by permission.
Gill was educated to be an instructor in English. Having a penchant for adventure, he worked briefly on a whaling station in the South Georgia Sea, then secured a position in Lima, Peru, working as a salesman for a rubber company. After the 1929 stock market crash, Gill lost his position and spent the next few years attempting to establish the first South American dude ranch in Ecuador, just east of Banos. As he was returning to the United States in 1934, he fell from his horse and suffered a severe neurological complication that resulted in a prolonged convalescence, accompanied by chronic painful muscle spasms.

His neurologist, Dr. Walter J. Freeman (eventually of ice-pick lobotomy fame—see *CSA Bulletin*, Spring 2008, pages 56–60), suggested that his spasms might be alleviated by small doses of the deadly arrow poison curare. However, in 1932, Ranyard West had published an article (Proc Roy Soc Med 25:1107, 1932) on the use of curare in spastic diseases, which concluded that it was of very little benefit and had undesirable side effects. Numerous investigators had also tried curare, without success, as therapy for tetanus, convulsive disorders and muscle spasms. So by 1936, when Gill was planning his proposed adventure, successful clinical use should have seemed very unlikely.

Nonetheless, Gill spent the next few years planning a costly and ambitious expedition into the tributaries of the Amazon River in order to extract a large quantity of curare and other jungle remedies that, he hoped, could be developed into commercial products. The expedition eventually started off in May 1938.

During his 1938 expedition, Gill and his wife faced risks from tropical diseases as well as from the Jivaro Indians. In the 1930s the Jivaro were known to murder strangers. Gill was suave, persuasive and confident. He understood the natives’ culture and respected their beliefs. Even though he was still partially crippled from his spastic condition, the couple returned to the U.S. in December 1938 with 75 specimens of jungle remedies and 25 pounds of crude curare. However, Gill was unable to interest the medical profession in any of his “black magic” remedies. This is not surprising given the economic and political climate of the late 1930s. The threat of war with Germany and Italy was on the minds of the American populace, and the Great Depression still had a negative influence on economic activity. Capital was essentially nonexistent, and innovations such as Gill proposed would have seemed reckless to most investors.

Gill captured his adventure on 16 mm film, some in color. On his return he had it edited into a one-hour film, “White Water and Black Magic,” which he used on his lecture tours. It is a fascinating account of this very first step on our 70-year-old journey into the wondrous realm of muscle relaxants. Upon Richard Gill’s death, his widow donated the films to the Guedel Center. In 2002, the
Health Sciences Library at California Pacific Medical Center, on behalf of the Arthur E. Guedel Memorial Center Archives, received a grant from the National Film Preservation Foundation to clean and preserve Gill’s original 16 mm film. It can now be seen on DVD, by appointment, at the Guedel Center.

For 10 months after his return, Gill must have thought his entire adventure was a total waste of energy, time and money. Luckily for him, Abram E. Bennett (a psychiatrist who was a friend of Walter Freeman) wrote a short note to Squibb and Co. in October 1939: “I think we are onto something with curare.” He had found a use for the drug in the prevention of bone fractures during Metrazol-induced convulsive therapy for schizophrenia. Thus by the time Gill’s book “White Water and Black Magic” was printed in 1940, many of Gill’s apprehensions had been assuaged, and he was highly confident that his plant therapies would succeed.

However, even though Harold Griffith in 1942 demonstrated the use of curare in anesthesia, Gill was unable to gain any significant economic return from a more widespread demand for the drug. Squibb and Co. had Gill’s supply of the plant product, but within a few years other drug companies had procured the drug from alternative sources in South America. A major development came through the effort of the French chemist Daniel Bovet, who studied the molecular structure of curare and devised the synthetic drugs decamethonium and gallamine (Flaxedil). These agents were introduced in 1949, and thus the demand for the plant product slowly abated.

Gill was essentially a businessman motivated by a potential for profit that never materialized. He might have thought himself an anthropologist, but subsequent studies on the Jivaro Indians of Peru and Ecuador revealed the naïveté of his opinions. Michael Harner, considered the authority on the culture of the Jivaro in the mid-20th century, did not even mention Gill’s experiences in the extensive bibliography of his 1957 book entitled “The Jivaro: People of the Sacred Waterfalls.” Gill was also an amateur ethnobiologist/ethnobotanist, but his enthusiasm for the remedies of the native population was apparently overly optimistic. “White Water and Black Magic” contains an extensive discussion of jungle therapies for several diseases, but none of these has found acceptance in the 70 years since.

By 1946, Burroughs Welcome had produced the pure alkaloid, Intercostrin (their trade name for curare), and Gill and Squibb lost the lead in commercialization of the agent. However, a closer look at material in the Guedel archives reveals Gill’s unremitting search for a more lucrative breakthrough. From our perspective as anesthesiologists, it seems that he did achieve an important clinical breakthrough, but alas, he was not a clinician and his letters reveal that
he considered the applications of curare in the field of anesthesia as having limited potential. His more abiding interest was in using curare and other jungle drugs as medication for other diverse ailments that would have a wider use in the general population. Gill was convinced that there was an important use for curare, perhaps particularly in treating anxiety states associated with muscle tension.

Together with the chemist George I. Dundee, Gill formed a new company called Cugill Laboratories with headquarters at 3839 El Camino Real in Palo Alto (Figures 2 and 3). (The building is still there, but it has been redesigned into an in-and-out oil change business.) Cugill’s product, called Tubalex, was made with curare, peanut oil, beeswax and cholesterol. The Guedel archival papers contain Gill’s correspondence with the FDA to obtain approval for the distribution of Tubalex, but in 1956 Richard Gill died, and the product expired with him. Thus, as with Wells and Morton before him, Richard Gill’s struggle to succeed did not lead to financial success, but the end result was an enormous benefit to our profession. Most historians of our specialty agree that without Gill’s persistence in promoting the use of curare paste, our use of paralytic agents would have been delayed by several years, perhaps decades.
Gill’s foresight and intelligence are evident in the following passages from the preface to “White Water and Black Magic”:

The part played by doctors and research men in the development of curare therapy is, of course, incalculably important. The story probably will be told more than once in the years to come, as curare comes to occupy the vital place in the medicine of the future which I am sure it is going to take. …

“Functional” exploring is a valuable thing. The particular corner of the wilderness world of the tropics which I happen to know fairly well still has a number of major contributions to make to civilized society. The jungle pharmaceutics which I have been lucky enough to study off and on for a good many years is not, as a lot of people assume, purely a matter of superstition and primitive quackery. Savages are apt to know a good many things we do not, and their “magic”—which I have tried to explain as a part of their life-pattern—is usually founded upon substantial verity. The function of exploration, it seems to me, is to discover those verities and whenever possible contribute their values to civilization.
What Has Happened in California Since the Diversion Program Closed?

By Lee T. Snook, Jr., M.D., CSA Delegate, District 8, Member of the Board, California Public Protection and Physician Health, and Tom Specht, M.D., CSA Physician Health and Well Being Committee, Member of Work Group on Physician Health

The CSA has recently joined in support of California Public Protection and Physician Health, Inc. (CPPPH), a new, independent organization. This support reflects not only a long-standing dedication to physician health but a recognition that anesthesiologists are disproportionately affected by addiction disease due to exposure and access to the drugs that are core to our profession. Anesthesiology represented 13.9 percent of all physicians in the now defunct California Physician Diversion Program, the most of any specialty. Thus, we want to let our colleagues know of the promising development of a physician health program for California.

When the Medical Board of California voted in June of 2007 to end its nearly 25-year-old Diversion Program, the California Medical Association (CMA) responded quickly by convening a Work Group on Physician Health. Our purpose was to establish a legislatively authorized, independent nonprofit entity to assume leadership for the state in matters related to physician health. As we look back and realize that we have been working on this for over three years, we are reminded again that nothing is easy in a state with the size and diversity of California.

In 2009, the work group succeeded in creating CPPPH. It has a small board, with a newly appointed Executive Director, Sandra Bressler, who while at CMA was known for her many efforts to preserve the Diversion Program. CPPPH also works with a top-notch clinical advisory committee. To underwrite some of the costs of starting the new organization, donations—over $100,000 thus far—have been received from all sections of the medical community including the CSA, other specialty societies, the CMA, county societies (and their foundations), the California Hospital Association, and some of California’s liability carriers. Recently, individual donors have contributed as well.

In both 2008 and 2009, bills were introduced into the Legislature to secure funding from physician licensing fees for a new physician health program. The first one passed both houses but the governor vetoed it. The second did not advance because the governor had not changed his mind, and we knew what its fate would be.
Now, CPPPH’s funding partners are pursuing a new legislative effort. SB 742 (Lee) has been introduced as a placeholder for our renewed efforts to secure the authority to receive funds from licensure fees from all California licensed physicians and to get legislative recognition for establishment of a statewide program. The new statewide program being designed by CPPPH will serve as a central entity that can provide physicians and other consumers (hospitals, well-being committees, treatment providers) with a comprehensive resource for evaluation tools and service referrals, as well as individual case consultations, information about education and treatment, monitoring programs and testing services. Once permanent funding is in place, an expanded full-spectrum physician health program standardized to evidence-based data on physician treatment outcomes will become possible.

Private organizations and programs emerged when the Diversion Program closed, and they provide some of the needed services, but there is a broader need. The programs are not coordinated or widely accessible, and there is significant concern that some physicians who need ongoing support and monitoring are continuing to practice without such aid and supervision.

CPPPH is designing a physician health program that includes both a wellness component and all the elements necessary to assist those who are responsible for assuring safe and quality patient care. It will have methods to encourage prevention and identification of mental, physical and addiction illness among physicians that are amenable to treatment. Physicians suffering from addiction and/or mental illness who have participated in the formal monitoring aspect of physician health programs similar to the one envisioned by CPPPH have an approximately 75 percent recovery rate after an average of 5 years of program monitoring. Treatment will be required but not provided directly by the program.1 More details of the ideal program can be viewed on the CPPPH Web site (http://cppph.org/ideal-physician-health-program-for-California/).

Our efforts will proceed in stages. Parallel with the immediate legislative effort we are also working to expand our well-being network with consultation services for all who request them. We plan to identify standards and guidelines for all elements of the program, including for the providers of physician health services. With permanent funding from licensure fees, we expect to create a stable, solid organizational structure capable of assuming responsibility for a robust statewide physician health program. We anticipate coordinating the provision of monitoring services where needed and offering a wide range of options to preserve and restore physician health over any physician’s lifetime. With the new administration in Sacramento, with hard work, and with the continued support from the medical community and our state agencies, we will get there by 2013.
You can learn more about our organization’s plans and progress at our new Web site, www.cppph.org. We particularly urge you to explore new policy statements from two organizations central to CPPPH’s mission: the Federation of State Medical Boards—the organization that represents the 70 medical and osteopathic boards of the United States that are responsible for licensure and discipline—and the American Society of Addiction Medicine, which has published 11 policy statements, each of which provides a comprehensive discussion of an aspect of physician health programs. You can access them from the CPPPH home page; see “For guidelines and other documents written for hospital medical staff committees, follow this link.” You may also contact us at CPPPHInc@gmail.com.

For a study and conclusions on the effectiveness of 16 physician health programs across the United States that included 904 physicians consecutively admitted to one of the 16 programs from September 1995 to September 2001, see: BMJ 2008;337;a2038 doi:10.1136/bmj.a2038

ABA Numbers for Reporting CME credits!

CSA will report CME credits earned to the American Board of Anesthesiology. These credits will be counted as Lifelong Learning and Self-Assessment activities toward your Maintenance of Certification in Anesthesiology (MOCA) requirement. In order to report these credits, doctors need to provide their ABA number. To obtain an ABA number, visit www.theABA.org and create a personal portal account.
Pediatric Anesthesia CME Program

Module 4

This is Module 4 of CSA’s Pediatric Anesthesia Continuing Medical Education Program (CME). To receive CME credit, submit your registration page, answers to the questions, and the evaluation to the CSA office by mail or fax (650) 345-3269. Your CME certificate will be mailed to you. Alternatively, the full text of each module will be accessible through the CSA Web Site, www.csahq.org, in the Online CME Program section. Instructions to complete Module 4 online are given in the information pages. After completing the assessment, print your CME certificate. Members will need their usernames and passwords to do the modules online.

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All faculty participating in continuing medical education activities sponsored by the CSA are required to disclose any real or apparent conflict(s) of interest related to the content of their presentation(s) or any of the industry sponsors of the meeting. In addition, speakers must disclose when a product is not labeled for the use under discussion or when a product is still investigational.

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Dr. Singleton has no relevant financial relationships with any commercial interests.
Pediatric Anesthesia (cont’d)

Registration/Instructions

Method of Participation: The physician will read and study the materials and complete a quiz and an evaluation of the module. Some modules may have slides available online. To register for and complete this module: Complete the registration page, complete the test questions and the evaluation that can be found after the article, and submit your quiz to the CSA office by mail or fax (650-345-3269). Your CME certificate will be mailed to you.

Estimated Time to Complete the Module: One hour

Please check the box on the registration page acknowledging that you have read everything in these introductory pages.

Availability

Module 4: Neurotoxicity of Anesthetic Agents in the Developing Brain

Release Date: June 14, 2011
Expiration Date: June 14, 2014

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The California Society of Anesthesiologists (CSA) is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians. The CSA Educational Programs Division designates this pediatric anesthesia program for \textit{AMA PRA Category 1 Credit(s)™} (1 credit per module). Physicians should claim credits commensurate with the extent of their participation in the activity.

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Objectives
Upon completion of this activity, participants will be able to:

- Define the risks of an anesthetic procedure for long-term cognition based on review of the currently available human literature of anesthesia-induced developmental neurotoxicity
- List the most important proposed mechanisms of anesthesia-induced developmental neurotoxicity
- Inform parents of whether their child might be at risk for anesthesia-induced developmental neurotoxicity

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Neurotoxicity of Anesthetic Agents in the Developing Brain

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Greg Stratmann did his transitional internship and residency in anesthesiology at the University of California, San Diego, followed by fellowships in pediatric cardiac anesthesia and intraoperative transesophageal echocardiography at UCSF. As a highly esteemed researcher since the early days of his anesthesia training, he has been the recipient of numerous awards and honors, ranging from first prize in the CSA Resident Research Competition to the Ellison C. Pierce, Jr., MD, Research Award from the Anesthesia Patient Safety Foundation. Boarded in TEE, he is a member of the cardiac anesthesia subgroup at UCSF, performing both adult and pediatric cardiac anesthesia as well as anesthesia for heart and lung transplants. He also administers anesthesia for a wide range of pediatric surgeries. He is acknowledged as a world expert in the field of anesthetic-induced developmental neurotoxicity and widely published in this arena. In addition to his varied other clinical teaching functions, he has mentored numerous graduate and medical students in their research in the neurosciences, as well as serving as a reviewer for at least seven medical and anesthesia journals. One of his hobbies in his “spare time,” unrelated to his obvious interest in brain injury, is serving as the team physician for the University of San Francisco collegiate boxing team (with which he also trains as a boxer) and as a ringside physician for boxing tournaments.

From the Chair
By now most readers of this Bulletin are aware that recent research findings have suggested the possibility of previously unsuspected vulnerabilities of the immature, developing human brain to anesthesia. Questions subsequently have arisen, prompted largely by investigators at
the Food and Drug Administration (FDA), as to the toxicity and long-term cognitive effects of virtually every commonly used anesthetic agent in infants and young children. This is indeed a “hot topic” and one that surely will gain attention in the media and among parents. This excellent module, authored by Dr. Greg Stratmann, who is a principal investigator and expert in this field, presents an overview of the three major areas of study directed at addressing this question—human cohort studies, histological and behavioral investigations in animals, and research on mechanisms at the cellular level.

We administer anesthetics with the belief that, in appropriate doses and exposures, the effects are fully reversible and free from lasting harm. We may need to challenge our assumptions.

Mark Singleton, M.D., Editor

Introduction

For over 150 years of anesthetic practice, it was believed that as a general anesthetic wears off, the brain will return to the same state as before the anesthetic. We are now beginning to understand that this basic premise of anesthetic pharmacology may be false. In 2003 Jevtovic-Todorovic presented her sentinel findings that a combined anesthetic (midazolam, nitrous oxide and isoflurane) administered to 7-day-old rats for six hours kills neurons in the developing brain and causes long-term impairment of brain function.¹ These researchers also showed that long-term potentiation (a form of synaptic plasticity often considered the electrophysiological correlate of learning and memory) in the hippocampus (a key anatomic location in the brain for learning and memory) was impaired. They further demonstrated a progressive deficit in spatial recognition tasks administered both four weeks and four and a half months after anesthesia.¹ Immediate concern mounted about whether or not these phenomena might apply to humans. Subsequently, the histological data were reproducible not only in rodents but in virtually every species tested, including primates, further heightening the degree of concern about anesthesia in the immature human brain.²⁻⁴ An FDA advisory committee meeting in 2007 concluded that no change in clinical practice is justified based on available data.⁵

It is uncertain if it will ever be feasible to test whether anesthesia kills neurons in the brains of children. However, this may not be entirely necessary. A focus on anesthesia-induced neurodegeneration seems appropriate if some aspect of brain function in humans was changed permanently by anesthesia, and if a causal link between neurodegeneration and long-term brain function could be demonstrated in animals.
Anesthesia and Brain Function in Humans

Until recently, speculation as to whether or not developmental anesthetic neurotoxicity might exist in humans occurred mostly on the basis of studies that were not specifically designed to address this question. Since 2009, six publications have appeared that were designed to shed light on whether or not anesthesia in humans might impair brain function long-term.\textsuperscript{6-11} Unfortunately, for a number of reasons discussed below, the issue is still far from being resolved. The power of studying a prospective cohort must be balanced against the lead time for data to become available.\textsuperscript{12} For example, if enrollment into a randomized, controlled trial of regional versus general anesthesia for pediatric surgical procedures were completed today, then data of remote neurobehavioral outcomes would not be available for years, maybe decades. Given the urgency with which data on developmental neurobehavioral end points after anesthesia in humans are sought, a long lag time is, arguably, unacceptable. Thus, an ideal combination of lag time and design strength would be prospective analysis of a retrospective cohort. To date, no data exist using this approach.

Wilder studied if anesthesia administered to children under 4 years of age were associated with learning disabilities between ages 5 and 19.\textsuperscript{6} A cohort of 5,357 children born in Olmsted County, Minn., between 1976 and 1982 was assessed for the presence, type and duration of anesthesia prior to age 4. Anesthesia administered for both surgical and diagnostic procedures was included in the analysis. The school district in which the study was performed routinely administered reading, writing and mathematics aptitude tests as well as intelligence tests. In this study, learning disability was defined as performance on standardized achievement tests below a certain predicted score that was based on the child's IQ. If any of three different definitions used by the school district to identify disabled learning applied, then the primary outcome of this study—learning disability—was considered to be present, and study follow-up ceased at this point. Eleven percent of children underwent at least one anesthetic prior to age 4, of which 24 percent underwent more than one anesthetic. Learning disabilities were more common in those children that underwent more than one anesthetic, and cumulative anesthetic duration of greater than two hours was a risk factor for learning disability. Learning disability was not more common if only one anesthetic exposure occurred before age 4.

Because children requiring more than one anesthetic were sicker than those requiring only a single anesthetic, the authors performed a subgroup analysis of children requiring more than one anesthetic with an ASA physical status 1
and 2 (while excluding those with ASA physical status 3 and 4), but the association between learning disabilities and anesthesia persisted. Methodological advantages of this study include that studying a birth cohort does not bias surgical procedures and co-morbidities in the same way that recruitment of a cohort of patients from an academic center might. Further, controlling for IQ seems like a reasonable approach to controlling for one of the strongest confounders of a child’s ability to learn. General methodological drawbacks included retrospective analysis of a retrospective cohort studying an outcome variable that is available rather than one chosen prospectively.

Learning disability is a very nonspecific outcome because many underlying pathologies may impair a child’s ability to learn—for example, motivation, attention, intelligence, sensory neural problems, or other more specific functional abnormalities, all of which may have relevance to anesthetic developmental neurotoxicity. Further drawbacks include that the anesthetic almost uniformly administered to the study cohort was halothane/nitrous oxide, which is now an outdated anesthetic in most pediatric anesthetic practices. Reporting the cumulative incidence of learning disabilities requires that follow-up is stopped when learning disability is detected: once a child meets the criterion for learning disabilities, it is assumed that learning disabilities persist and never resolve. This makes it impossible to comment on the true prevalence of the outcome. It is possible that children with learning disabilities at some point may have a change in performance that places them back into the normal range, an event that could not be captured by the study design. On the other hand, it is possible that anesthesia-associated learning disability may progress, as has been suggested for anesthesia-induced neurocognitive dysfunction in animals,1, 13, 14 but this study6 was not able to detect progression of cognitive disability.

The same group later reported that general anesthesia for cesarean delivery does not increase the cumulative incidence of learning disabilities in the same birth cohort of children—that is, a brief general anesthesia during late fetal life is not associated with later cognitive problems.7 This is consistent with their earlier study6 because cesarean delivery required one rather short anesthetic. Unexplained is the finding that children born by cesarean delivery under regional anesthesia had a lower cumulative incidence of learning disability than those born by vaginal delivery.7

Kalkman approached the problem from a different angle, arguing that anesthesia is mostly administered to tolerate a surgical procedure.8 Therefore, in order to draw conclusions about the effects of anesthesia versus surgery on cognitive outcome, an unanesthetized control group undergoing surgery would be required, or anesthesia would have to be administered to children who don’t
need it, neither one of which is ethically feasible. Based on the assumption that there is a distinct period of vulnerability to the effects of anesthesia on neurodevelopment, as suggested by animal studies using histologic outcomes, Kalkman hypothesized that children anesthetized during the period of vulnerability (earlier in life) should have a worse cognitive outcome than children anesthetized beyond a defined period of vulnerability. They defined the period of vulnerability in humans as younger than 2 years of age. This design used children anesthetized when older than 2 years to serve as controls. They used scores from the Child Behavioral Checklist to identify behavioral abnormalities, and they found that children undergoing the same (urological) procedures who were under 2 years of age tended to have a higher incidence of clinically deviant behavior than children older than 2 years old. The difference was even more pronounced between children undergoing anesthesia at less than 6 months of age compared to those more than 2 years old. However, neither effect was pronounced enough to reach statistical significance, which would have required thousands of children.

Moreover, the validity of defining the period of vulnerability in humans as being younger than 2 years of age is not known. A rodent study suggests that the period of vulnerability to the outcome of interest—the long-term cognitive effects of anesthesia—may extend beyond 2 years of age in humans, and consequently, Kalkman’s estimate of the anesthetic effect on behavior might, if anything, be an underestimate.

Another study investigated whether hernia repair at age 3 years or less is associated with subsequent behavioral and/or developmental disorders. A set of 383 Medicaid records listing procedure codes related to hernia repair was compared to a control set of 5,050 age- and sex-matched Medicaid records not listing these procedure codes. The behavioral outcome was defined as a diagnostic code for unspecified delay or behavioral disorder, mental retardation, autism, or language and speech disorder. If the behavioral outcome preceded the surgery, then the record was excluded. After controlling for age, sex, race, and the presence of confounding diagnoses at birth, procedure codes indicating the occurrence of hernia repair were more than twice as likely to be associated with the behavioral outcome codes as compared with when procedure codes for hernia repair were absent. The study design did not allow for assessing the type, frequency and duration of the anesthetic in either the hernia repair or the control group. Nor was it possible to exclude children in the control cohort who did not have an anesthetic for surgeries other than hernia repairs.

Recently, the academic performance of a national cohort of Danish 15–16-year-old children (n=2,689) who had undergone inguinal hernia repair between 1986 and 1990 at the age of 1 year or less was compared to a random sample of
14,575 age-matched controls.\textsuperscript{10} When important confounders such as gender, birth weight, and parental age and education were controlled for, there was no evidence that the relatively brief (presumed to be 30–60 minutes) general anesthetic had affected academic achievement scores. All of the above confounders more strongly affected academic achievement than surgery plus anesthesia. In light of the fact that children in this study were younger than 12 months of age, they might be considered to have been more sensitive to the effects of anesthesia than the significantly older children of the other studies. However, these reassuring results cannot exclude deficits in more particular cognitive domains. It is understood that the effects of longer anesthetic durations were, likewise, not detectable with this study design. Furthermore, the anesthetic duration was short and, based on animal studies,\textsuperscript{10} it might have been predicted that brief exposure to anesthesia might not be a problem.

Another human trial was designed to test if a causality exists between anesthesia at less than 3 years of age and cognitive performance in children.\textsuperscript{11} Here, 1,143 pairs of monozygotic twins were investigated, and it was hypothesized that if anesthesia, and not the underlying disease, caused cognitive disabilities, then the exposed twin of a pair should have a higher incidence of underachievement than the unexposed twin of the pair. Most pairs in this study consisted of twins that were either both exposed or both not exposed to anesthesia. However, 71 twin pairs (15 percent) were discordant (one twin exposed, the other not exposed to anesthesia). Anesthesia was administered mostly for surgical procedures. On a nationwide test given when the children were 12 years of age, exposed twins had similar achievement scores as unexposed twins. There was also a similar incidence of cognitive problems, as assessed by a teacher questionnaire. The study concluded that the combination of anesthesia and surgery was not the cause of the cognitive problems. If these results can be duplicated, then they would make a convincing argument that neither anesthesia nor surgery is a problem for the cognitive development of children.

In summary, the human literature is controversial as to whether or not anesthesia in infancy causes the most worrisome feature of developmental anesthetic neurotoxicity, namely, cognitive problems later in life. Furthermore, it is unclear as to what the period of vulnerability to anesthetic neurotoxicity is. We do not know if there is a safe anesthetic technique or duration. The specific cognitive deficit caused by anesthesia, if any, that may underlie outcomes such as learning disability has not been defined. None of the studies, alone or in combination, forms a basis for guiding our clinical practice.

**Animal Studies**

Animal models of anesthesia further our understanding of the phenomenology, pharmacology, and mechanisms of anesthesia-induced neurocognitive...
dysfunction. Implicit in the concept of a mechanism is the concept of causality, and the mechanism of anesthesia-induced cognitive dysfunction—or decline, as the case may be—is a lot less clear than previously thought. There are three cellular phenomena that would qualify as a mediating mechanism of anesthesia-induced cognitive decline—neurodegeneration, synaptogenesis, and hippocampal neurogenesis.

**Neurodegeneration**

Overwhelming experimental evidence indicates that anesthesia causes neurodegeneration in a variety of animal species, including primates. Yet, whether or not anesthesia-induced neurodegeneration also happens in humans is not nearly as important as whether or not anesthesia causes cognitive decline in humans. When anesthesia was first shown to cause both neurodegeneration and cognitive decline in rats, a causal link between the two outcomes must have appeared so plausible that it was not as rigorously scrutinized as other, less intuitive potential mechanisms may have been.

If months after anesthesia the brain of a formerly anesthetized human or animal were indistinguishable from a brain that was not exposed to anesthesia, then it would be difficult to argue that anesthesia caused the brain to become dysfunctional. Applied to neurodegeneration, this means that several months after anesthesia, causality between anesthesia-induced neurodegeneration and anesthesia-induced cognitive dysfunction would be difficult to accept unless neurodegeneration had somehow altered the brain of anesthetized animals. If the neurons destroyed by anesthesia resulted in a detectable gap in the brain, or if the neuronal number were different from unanesthetized animals, then a reasonable argument could be made that neurodegeneration qualifies as a potential mediating mechanism for the cognitive outcome.

The most compelling evidence that acute neurodegeneration causes lasting neuronal deletion comes from two rat studies. These results would be strengthened if it could be demonstrated that the total number of neurons (as opposed to the neuronal density) decreased long-term, but this research has yet to be performed. The results would be stronger yet if animals with a proven learning and memory deficit suffered neuronal deletion, and strongest, if those animals with the worst brain function were those with the greatest degree of neuronal deletion. Again, such experiments have not yet been carried out.

An important prediction required by the concept that anesthetic neurodegeneration is responsible for later cognitive dysfunction is that interventions preventing anesthesia-induced neurodegeneration also prevent anesthesia-induced long-term neurocognitive sequelae. Examples of such ameliorating
interventions include melatonin, lithium, dexmedetomidine, inhibitors of the p75 neurotrophin receptor, hypothermia, and bumetanide. All of these agents or conditions have been shown to prevent anesthesia-induced neurodegeneration, by various suggested mechanisms that are not well understood. Bumetanide failed to rescue the functional deficit conferred by infantile anesthesia and it is not known if any of the other interventions are more effective.

**Synaptogenesis**

If anesthesia-induced neurodegeneration does not cause anesthesia-induced neurocognitive decline, then what does? It is possible that the age-dependent anesthetic effects on synaptogenesis can have functional relevance independent of whether or not they cause neuronal apoptosis. In order to make this claim it would have to be demonstrated that these effects persist until the time of neurocognitive testing, and that an intervention that prevents the anesthetic effects on synaptogenesis also prevents the anesthetic effect on cognitive function.

**Hippocampal Neurogenesis**

Another possible mechanism is an anesthetic effect on postnatal hippocampal neurogenesis. Postnatal neurogenesis occurs only in two brain areas, one of which is the hippocampus. Inhibition of hippocampal neurogenesis is sufficient to impair learning and memory, in a manner similar to that effected by anesthesia. Of particular interest in this regard is the time course of the deficits. Neurogenesis is exquisitely sensitive to brain irradiation, and children who underwent brain irradiation developed progressive cognitive decline over a number of years. The deficit caused by anesthesia is hippocampus-dependent and appears to progress. Isoflurane has been shown to impair neurogenesis, and these effects do persist until the time of neurocognitive testing. If anesthesia does indeed induce neurocognitive decline, then interventions that restore neurogenesis should rescue the behavioral phenotype.

**Which Anesthetic Is Safest?**

This question is beginning to be addressed in comparative toxicity studies in animals. Human studies have not addressed this issue, and given the controversy as to whether or not functional sequelae of anesthesia in infancy even exist in humans, the argument might be made that comparative studies are not yet indicated. In animal models, where anesthetic developmental neurotoxicity has been clearly demonstrated, these studies hold the caveat that anesthetic equipotency is vitally important for interpretation of comparative results. Minimal anesthetic concentration (MAC) is used to express anesthetic potency and anesthetic depth, but unlike with adult rodents, MAC in immature rodents is not a stable anesthetic concentration, but rather decreases steadily with...
increasing duration of anesthesia. This makes comparative studies of volatile anesthetic agents a challenge. Moreover, it is not known if MAC also is unstable in human neonates and infants. The situation becomes even more complex when an inhaled agent is to be compared with an intravenous drug because of the daunting challenge to achieve constant plasma and brain concentrations of the drugs. Furthermore, it is not known if MAC for intravenous agents changes with time in immature animals.

Conclusion

Knowledge of developmental anesthetic neurotoxicity is rapidly accumulating, but clarity about the mechanisms or the significance of this phenomenon for human pediatric anesthesia is not emerging. A change in clinical anesthetic practice is unwarranted based on the currently available human literature, but also, such action probably never should be based solely on animal studies. More research is urgently needed in order to determine if anesthesia impairs brain function in humans, what the specific deficit is, and how it can be prevented and/or treated. This will require both human trials and good translational animal models.

References


Questions

1. The question of whether anesthetic agents may cause harmful effects on the developing brains of infants and children:
   a. Has been answered by combined results of animal and human studies
   b. Is a current focus of the FDA
   c. Should be of little concern to parents because results from the animal studies are not relevant to humans

2. The existence of anesthesia-induced neurodegeneration in humans would be supported by demonstration of (Choose one: a, a+b, a+c, b, b+c, c):
   a. A permanent change in human brain function following anesthesia
   b. A causal connection between neurodegeneration and long-term brain dysfunction in animals
   c. Ketamine or isoflurane increasing the size of the hippocampus
3. The 2009 Minnesota study (Wilder, et al) of children less than 4 years old who were anesthetized for either surgical or diagnostic procedures showed that:
   a. Learning disabilities did not occur in children who were anesthetized after 4 years of age
   b. Cumulative anesthetic duration of greater than two hours was a risk factor for learning disability
   c. Learning disability was more likely in those who received even one anesthetic, and increased with more anesthetic administrations

4. Potential drawbacks of the Wilder et al study include all of the following except:
   a. Learning disability is a nonspecific outcome because several underlying pathologies may impair a child's ability to learn
   b. Retrospective studies like this one are inherently invalid
   c. Temporary learning disabilities that may have later improved or normalized would not be detected
   d. The majority of anesthetics were halothane, which has virtually disappeared from modern anesthetic practice

5. In a separate study, these researchers also showed that general anesthesia exposure for cesarean delivery, but not regional anesthesia, is associated with cognitive dysfunction later in life.
   a. True
   b. False

6. In an attempt to determine the period of vulnerability of the developing human brain to harmful effects of anesthesia in children undergoing similar urologic procedures, and assuming that the period of vulnerability ceases at the second year of life, it was found that (Choose one: a, b, or a + b):
   a. Children anesthetized under 2 years old tended to have an increased incidence of clinically deviant behavior, compared with children older than 2 years of age (the “controls”)
   b. This difference was statistically significant only for children anesthetized at an age of less than six months

7. Neurobehavioral outcomes may require study duration of many years, making the length of time required for purely prospective studies prohibitive to meet the urgent questions that have been identified.
   a. True
   b. False

8. A recent study in Denmark of a large sample population of 15–16-year-old children who had general anesthetics for repair of an inguinal hernia at the age of 1 year or less demonstrated adverse effects on academic achievement compared to controls.
   a. True
   b. False
9. An investigation of monozygotic twins that focused on cases where one received an anesthetic, while the other did not, showed that:
   a. Achievement scores for the exposed twin were worse than those for the nonexposed twin
   b. Incidence of cognitive problems was the same for both the exposed and the nonexposed twin
   c. Because most twin pairs were either both exposed to anesthesia or not exposed to anesthesia, discordant pairs did not account for a statistically significant sample

10. Cellular phenomena that may qualify as a mediating mechanism of anesthesia-induced cognitive decline are (Choose one: a, b, c, or all of the above):
   a. Neurodegeneration
   b. Synaptogenesis
   c. Hippocampal neurogenesis

**Evaluation of Module 4**

As part of the CSA Educational Programs Division's ongoing efforts to offer continuing medical education, the following evaluation of this program is requested. This is a useful tool for the EPD in preparing future CME programs.

1. How well were the learning objectives of this program met?
   - Very Well 5
   - Average 3
   - Not Well at All 1

2. How relevant was the information in this program to your clinical practice?
   - Very Relevant 5
   - Average 3
   - Not Relevant 1

3. How would you rate this program overall?
   - Excellent 5
   - Average 3
   - Poor 1

4. Did you detect any commercial bias in this module?  Yes  No

**Neurotoxicity of Anesthetic Agents in the Developing Brain**

*By Greg Stratmann, M.D., Ph.D., Associate Professor, Department of Anesthesia, University of California, San Francisco*

This fourth module in the Pediatric Anesthesia Bulletin and Online CME Program is now available in this issue. You may complete the module by taking the assessment and faxing a copy to the CSA office at 650-345-3269, or you may go online and take the module in the Online CME section of the CSA Web site (http://www.csahq.org).
Pediatric Anesthesia (cont’d)

Registration

Complete this form, the test, and the evaluation, and mail or fax to the CSA office at 951 Mariner’s Island Boulevard #270, San Mateo, CA 94404 or FAX to 650-345-3269. The CSA CME Bulletin courses also are available on the CSA Web site at www.csahq.org.

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☒ I acknowledge I have read the Introductory Information about Module 4.
Book Review: “Healer” by Carol Cassella, M.D.

By Audrey Shafer, M.D.

Anesthesiologist-writer Carol Cassella wrote a blockbuster first novel, “Oxygen,” about a single woman anesthesiologist’s personal and work struggles, and the mystery behind a devastating outcome for a pediatric patient. How to follow the success of the first book? Cassella has jumped right in with a second novel two years later, equally as thoughtful and engrossing as her first.

Although the protagonist again is a female physician in the Pacific Northwest, the central character in “Healer” (Simon & Schuster, 2010), Claire, is an “internist” (who did not complete her residency due to complications of pregnancy), mother and wife. Abruptly transplanted from Seattle to a small rural town in eastern Washington state and needing to practice medicine for the first time in years, Claire finds her only opportunity in a public health clinic with limited pay and resources.

The story centers on a domestic financial crisis: Claire’s husband has leveraged and lost the entire family fortune on the latest product from his pharmacologic oncology company. In order to pay off debts, the family’s luxurious home in Seattle has been sold precipitously and the family uprooted to a dilapidated country house ill equipped for winter weather. Moreover, Claire’s daughter Jory is in the middle of her high school freshman year, and her teen angst and self-centered attitudes are put to the test in her new environment.

Some of the strongest scenes are between mother and daughter. Claire learns the delicate balance between her duties as a rural physician and her need to be available as a mother when flashes of opportunity appear in her daughter’s life.

Claire’s inexperience and poor Spanish make her wonder if she can rise to the challenge of working in a general medicine clinic. However, just as Claire matures into a competent and effective clinician, Jory begins to grow up and expand her horizons; indeed, so does the family as a whole. Tellingly, the cover of the book depicts a single crocus pushing its way up from the snow, serving as both a harbinger and a symbol of growth and renewal for Claire and her family.

Before Cassella became an anesthesiologist, she studied English and worked in publishing; after medical school, she trained first in internal medicine. In a thoughtful “Mind to Mind” essay in the January 2011 issue of Anesthesiology, she describes how, as a young internist, she was “committed to working in public health, to being a first-line physician,” and she joined the staff in a clinic that served a large number of Seattle’s immigrants and uninsured.1 Her
burnout from the production pressures of primary care led her to a new career in anesthesiology, but Cassella's experience in public health serves her well in the new novel.

The disadvantages of the immigrant worker population, compared to those Americans such as Claire's family who have access to opportunity, expand the story from one about a comfortable family made less comfortable to one that probes the consequences of American health care inequities and the class system within our borders. Cassella avoids heavy-handed proselytizing and the result is a page-turning read with a nuanced look at family dynamics and social issues.

Audrey Shafer, M.D., is a professor of anesthesia at Stanford University School of Medicine; VA staff anesthesiologist, Veterans Affairs Palo Alto Health Care System; and director, Arts, Humanities and Medicine Program, Stanford Center for Biomedical Ethics.

The CSA is excited to be working on a number of new developments for the Web site (www.csahq.org) while simultaneously improving the existing features. Visitors will notice that small changes are occurring on a regular basis and two areas have already undergone significant improvement. More growth and exciting new features are coming soon.

We are currently working toward the launch of our new “CSA Online First” feature. This will be an ongoing series of blog-style articles written by CSA members on topics of importance to the field of anesthesiology. The timeliest of these pieces will go out via e-mail to the membership, while others may be posted online only. In addition, there will be a feature area for the “CSA Online First” blog, where members will be able to add comments and to interact with one another and the authors. In the interim, “CSA Online First” articles will appear as CSA News items on the home page.

Another engaging area of the CSA Web site is the recently launched “CSA Grassroots Network,” which can be found under “Advocacy.” This feature facilitates easy involvement in advocacy initiatives: Users can look up legislators, follow legislation and votes, and take action by writing directly to legislators or the media about key issues, all via the CSA Web site. When action to reach out to representatives is required, users will receive an e-mail containing alert information, along with letter templates and talking points to facilitate person-alized communications to legislators. The CSA Grassroots Network is one of many advocacy initiatives that the Society undertakes to ensure that lawmakers are aware of the interests of anesthesiologists.

Many members already make excellent use of the Member Groups (formerly ListServ) offered by the CSA. Recently, a number of new “Open Groups” have been launched, where members can join in discussion of a range of topics including “Professional and Practice Affairs,” “CDPH Survey,” “Legislative Issues,” and more. There is also a range of “Governance Groups,” including one for each district (members are automatically enrolled in the one for their district), designed for communications on CSA business. Each Member Group has a single, group e-mail address for sending and replying to messages. Messages can be sent to groups via e-mail, but are also available on the Member
Groups’ pages on the Web site. The CSA encourages all members to make use of the “Open” and “Governance” groups to engage in CSA business and stimulate discussion on relevant issues.

The much anticipated mobile interface for the CSA Web site is now complete and available on any smart phone. To access the CSA Web site on a smart phone, go to www.csahq.org. You will automatically be directed to the mobile site, which features a streamlined menu format and interface easily viewed on mobile devices. The mobile interface allows users to conveniently access the full functionality of the CSA Web site from anywhere.

The “Professional and Practice Affairs” area of the CSA Web site is undergoing transformation to improve the quality, diversity and ease of access to information. A task force made up of members from the Legislative and Practice Affairs Division (LPAD) and the Committee on Professional and Public Communications (CPPC), headed by Dr. Mark Zakowski, is working with Merrin McGregor, CSA’s Manager of Communications and Electronic Media, to restructure this important area of the site, as well as to add content to it. The new structure will include links to appropriate information, guidelines, statements, and policies on the ASA Web site, as well as links to information of interest to anesthesiologists from other organizations. In addition, the CSA’s own policies, articles, and archives will be reorganized and updated to improve user-friendliness for members. The task force plans to have the larger, structural improvements in place over the next several months, with an ongoing focus on keeping resources current and meaningful for members.

The CSA is very enthusiastic about these enhancements to the Web site, which will continue to enrich the services the Society offers to its membership. If you have suggestions to offer regarding the Web site and its content, please e-mail Linda Hertzberg, M.D., at lhertzberg@csahq.org or Merrin McGregor at mmgregor@csahq.org.

The CSA is pleased to welcome Merrin McGregor as its new Manager of Communications and Electronic Media. Merrin brings a wealth of experience in education, marketing, communications and public relations, and the use of Web- and print-based tools in these areas. Since her arrival several months ago, she has been engaged in the ongoing development of and work on the newly updated CSA Web site, as well as working closely with leadership on communications initiatives.
Incredible Billings and Reimbursements Brought to Public Notice: Aetna has lawsuits pending against six physicians in New Jersey for medical bills that the insurer calls “unconscionable.” Allegedly, $57,000 was billed by an out-of-network cardiologist for a bedside consultation for a noncritically ill patient for which the physician previously had charged $220, and $59,000 for an ultrasound examination for which Aetna routinely reimburses in-network physicians $74! Moreover, the same cardiologist allegedly charged $56,600 for an out-of-network cardiac catheterization. He allegedly also raised his charges for cardiac stress tests tenfold over a two-year period, and sevenfold for electrocardiograms.

These allegations bring into focus the issue of what pricing limits, if any, insurers can impose on “out-of-network,” noncontracted physicians. Another example was an alleged charge for a cesarean delivery of $30,000 (ten times more than the allowed in-network reimbursement). That physician reportedly received $5 million from Aetna in 2010, a fourfold increase from the $1.4 million of the previous year. And yet another physician, an internist, allegedly billed $9,000 for a critical care consult, a dramatic increase from $500 he billed for the same service a year previously, and almost 50 times the meager amount paid by Medicare. Aetna claims it paid him almost $4 million in 2009, twelve times more than in 2008.

Aetna alleges that the defendant physicians violated the New Jersey Board of Medical Examiners’ rules against excessive billings, and is seeking triple damages under the state insurance fraud laws prohibiting filing false or misleading claims. Note that Aetna’s net income for 2010 increased 38 percent to $1.77 billion!

Have these physicians committed unethical acts? Should consumers and purchasers of health insurance be outraged? Should one consider the injustices and avariciousness associated with insurers’ refusal to reimburse what ethically and morally bound physicians would consider fair and reasonable compensation? And, should one consider the egregious inadequacies of the “physician networks” provided by insurers? Are those inadequacies the result of the unwillingness of insurers to appropriately and justly reimburse physicians, knowing that they cannot “collectively bargain”? What should the just and reasonable reimbursement figure be? Who determines such, and how is it arrived at? Have the carriers calculated that it is more profitable, immorality
aside, to bully the large majority of physicians whom they “control” (under the cover of the federally illegal status of collective bargaining) into submitting to egregiously low reimbursements, while acceding to the outrageous demands of the few physicians who are bold enough to charge equally immoral huge fees?

The chief medical officer of Health Advocate Inc. (Pennsylvania) asks whether greedy carriers will ever agree to offer physicians an “acceptable, unbiased judgment as to what a reasonable and customary reimbursement rate is?” Why is there no successful outcry against insurance companies’ excessive profits (for their executives and shareholders) that are extracted from physicians and hospitals? How immoral is it for these insurers to retain such large percentages of health care premiums for profits, monies that never are employed for the care of their insureds? Indeed, we have a broken health care system even for the insured, not to mention the dilemmas faced by the uninsured.

In 2007, New Jersey physicians complained to the New Jersey Department of Banking and Insurance about Aetna’s imposition of caps on some out-of-network reimbursements. The physicians prevailed, and Aetna was fined $2.5 million and ordered to pay out-of-network physicians enough to supposedly protect patients from being balance-billed beyond co-pays. In 2009, the attorney general of New York investigated Aetna, United Healthcare, Cigna and WellPoint for underpaying out-of-network physicians by manipulating a database used to calculate payments. Aetna settled for $90 million and United Healthcare had to pay $350 million!

*Adapted with commentary from article by Peter Waldman, Bloomberg Report, 2011.*
or granted immunity for their testimony, and therefore would be protected from criminal prosecution, but their licenses to practice could be at risk, as the Illinois Medical Practice Act permits suspension or revocation of state licenses if the “doctors” engage in “dishonorable, unethical or unprofessional conduct ... or share or split any professional fee or other source of compensation for professional services with anyone in exchange for a referral.” Nayak allegedly did not receive any federal funding at the centers.

Nayak allegedly is a fund-raiser for—and donor to—Jackson. Allegedly, in 2008 Nayak, cooperating with authorities, told investigators that then Representative Jackson had asked him to approach then Governor Blagojevich with a $6 million offer of campaign money in exchange for a Senate seat appointment. Blagojevich’s brother allegedly testified that he had been the person approached and turned down the $6 million offer. However, a Blagojevich appointee, Rajinder Bedi, accused Nayak of laundering hundreds of thousands of dollars through him in an alleged check-cashing scheme.

Adapted from an article by Natasha Koreckian and Dave McKinney, Chicago Sun-Times, April 12, 2011.

Sutter Health Accused of Fraudulent Anesthesia Billing Practices:
A whistle-blower lawsuit recently joined by the state of California alleges that the nonprofit health network Sutter Health has engaged in fraudulent billing practices for anesthesia services by submitting third-party payors with “false and overblown bills.” The amount of this alleged fraud runs in the hundreds of millions of dollars over the past decade. The intervening motion filed in California Superior Court by Insurance Commissioner Dave Jones alleges that Sutter Health commonly charged as much as $5,000 for anesthesia services that should have qualified for a reimbursement of approximately $250. According to the motion, the “charges so far exceed actual costs that it is clear Defendants are actually double billing for costs captured in the anesthesiologist’s bill or in other revenue codes, or are simply billing for services not actually provided.” The suit was initially filed in 2009 by health care auditor Rockville Recovery Associates against Sutter Health and co-defendant Multiplan, Inc. (a third-party company), after it allegedly uncovered billing discrepancies while conducting an investigation requested by Guardian Life Insurance of America.

Sutter Health denies the allegations and claims that the supposedly high billings reflect the costs of meeting California’s earthquake retrofit regulations, advances in technology, and treating patients who could not afford health care insurance. Moreover, Sutter claims that because the reimbursement rates reflect negotiated contracts with health insurers, they should not be considered to be
fraudulent. However, Jones replied that Sutter Health has clauses in its payor contracts that preclude insurers from challenging the reasonableness of its bills.

*Adapted from an article by Irene Tsikitas, Outpatient Surgery, April 2011.*

**Hospital Suspends Surgeon’s Privileges in Portland, Ore.:** Providence Portland Medical Center suspended the surgical privileges of a neurosurgeon, Vishal James Makker, apparently because of his exceedingly high rate of multiple spinal-fusion surgeries, the highest identified in the U.S. for Medicare patients in 2008–2009, and ten times the national average. The surgeon, who operated on some of his patients as many as seven times, claimed that he acted in the best interests of his patients. Both the FBI and Oregon’s State Medical Board are investigating this matter. In 2006, the Oregon board forced Dr. Makker to enter remedial training for what it called unnecessary surgeries as well as for allegedly billing for procedures that he didn’t perform! But this story involves even greater ethical and moral issues to be addressed because the distributor of the spinal implants, Omega Solutions of Fresno, Calif., allegedly will pay surgeons to use its medical devices. A document reviewed by The Wall Street Journal allegedly revealed that the company enters into partnerships with surgeons who agree to use their devices, and in return pays them “dividends” based on the number of surgeries that they perform. Of further interest, the product representative in Providence Hospital allegedly is a female friend of Dr. Makker. Physician-owned distributorships (PODs) are spreading throughout the spinal surgery community and can help companies secure the business of a hospital as well as feed the coffers of the surgeons. Indeed, there has been a steady increase in spinal surgeries, and the costs for Medicare have increased from $343 million to $2.2 billion from 1997 to 2008. As might be expected, both the Office of the Inspector General of the Department of Health and Human Services and the Centers for Medicare and Medicaid Services have indicated that such PODs may violate federal anti-kickback statutes and laws governing patient referrals. Of “local” note, the CEO of Omega Solutions is listed in California corporate records as a partner in several limited liability companies that could possibly be considered to be PODs.

*Adapted from an article by John Carreyrou and Tom McGinty, The Wall Street Journal, April 13, 2011.*
New CSA Members

A list of new CSA members is set forth below by membership category.

Active Members

Samuel D. Anderson, MD
Wayne Arioto, DO
Adam Birek, MD
Joseph F. Borau, MD
Deborah Brauer, MD
Kathy H. Chang, MD
Peter S. Chang, MD
Jeannie Chen, MD
Jason H. Chua, MD
Jeremy Collins, MD
Amy B. DeRoche, MD
Marek Domanski, MD
Mona S. Eremita, MD
Rosa Farrer-O’Bryant, MD
Kurt A. Fink, MD
Robert B. Fisher, MD
Aaron Frankel, MD
Brian Garcia, MD
Nadeem A. Hamid, MD
Michael Harutunians, DO
Laura A. Hastings, MD
Nima Hosseini, MD
Jin J. Huang, MD
Eric J. Huang, MD
Ameet Keny, MD
Kris F. Kline, MD
Edward S. Lee, MD
Sungeun Lee, MD
Sarah Little, MD
Daniel P. Loder, MD
Salomon M. Maya, MD
Joseph S. Meltzer, MD
Brian J. Moon, MD
Joel Nagafuji, MD

Ali Nassiri, DO
Hai T. Nguyen, MD
Melissa A. Noone, MD
Oji A. Oji, MD
Jun K. Park, MD
Claudia Praetel, MD
Charandip K. Sandhu, MD
Patrick D. Soran, MD
Fadi T. Tahrawi, DO
Glenn K. Tan, MD
Vivianne L. Tawfik, MD, PhD
Monique A. Tu, DO
Leonard S. Vaughan, MD
Binbin Wang, MD
William D. Wang, MD
Danielle T. Williams, MD

Retired Members

Audrey L. Adams, MD
Lyn S. Aye, MD
William C. Berger, MD
Lily H. Chen, MD
Farzad Namdaran, MD
Alan F. Olson, MD

Affiliate Members

Nina Schloemerkemper, MD
Kenneth Y. Son, MD
Robert Swift, MD

Resident Members

Orode Badakhsh, MD
Aaron E. Barry, MD
Claudia Benkwitz, MD
Elizabeth M. Cudilo, MD
Janis Dossen-Jones, MD
Ishai Erez, MD
Roy K. Esaki, MD
Esther D. Garazi, MD
Monica W. Harbell, MD
Genewoo J. Hong, MD
Juliette Humsi, MD
Angela K. Lipshutz, MD
Nir Maghen, MD
Omar S. Malik, MD

Kevin P. McElroy, MD
Nitesh S. Mody, MD
Jamila Neal, MD
Matthew S. Newbern, MD
Puja Trivedi, DO
Melanie Ward, MD
Waylan Wong, MD
ASA Delegates and Alternates to the American Society of Anesthesiologists

Terms begin at the close of the annual CSA meeting at which they were elected.

Delegates

1. Eugene L. Bak, MD (14)
2. Stanley D. Brauer, MD (13)
3. Edgar D. Canada, MD (14)
4. Michael W. Champeau, MD (12)
5. Neal H. Cohen, MD, MPH, MS (13)
6. Christine A. Doyle, MD (12)
7. William W. Feaster, MD (13)
8. James W. Futrell, Jr., MD (12)
9. Steven D. Goldfien, MD (12)
10. Linda B. Hertzberg, MD (14)
11. Stephen H. Jackson, MD (13)
12. Patricia A. Kapur, MD (14)
13. Robert D. Martin, MD (13)
14. Rima Matevosian, MD (14)
15. James M. Moore, MD (13)
16. Manuel C. Pardo, Jr., MD (12)
17. Rebecca J. Patchin, MD (13)
18. Kenneth Y. Pauker, MD (13)
19. Johnathan L. Pregler, MD (13)
20. Michele E. Raney, MD (12)
21. Stanley W. Stead, MD (13)
22. Earl Strum, MD (13)
23. Karen S. Sibert, MD (14)
24. Peter E. Sybert, MD (14)
25. Narendra S. Trivedi, MD (12)
26. Samuel H. Wald, MD (13)
27. Paul B. Yost, MD (12)
28. Mark I. Zakowski, MD (14)

Alternate Delegates

1. Jonathan F. Barrow, MD (12)
2. John G. Brock-Utne, MD, PhD (12)
3. Keith J. Chamberlin, MD (12)
4. Patricia A. Dailey, MD (12)
5. Gregory M. Gullahorn, MD (12)
6. T.J. Hsieh, MD (12)
7. Jonathan S. Jahr, MD (12)
8. Uday Jain, MD (12)
9. Zeev N. Kain, MD (12)
10. Wayne A. Kaufman, MD (12)
11. Thelma Z. Korpman, MD (12)
12. Norman Levin, MD (12)
13. Edward R. Mariano, MD, MAS (12)
14. John S. McDonald, MD (12)
15. Stephen C. Nemeth, MD (12)
16. Dennis M. O’Connor, MD (12)
17. Jeffrey A. Poage, MD (12)
18. Jeffrey M. Rusheed, MD (12)
19. Michelle L. Schlult, MD (12)
20. Nitin K. Shah, MD (12)
21. R. Lawrence Sullivan, Jr., MD (12)
22. Sydney I. Thomson, MD (12)
23. Judi A. Turner, MD (12)
24. Jeffrey Uppington, MBBS (12)
25. Clifton O. Van Putten, MD (12)
26. Keren Ziv, MD (12)

IN MEMORIAM

Robert B. Kaster, MD  Julian H. Satnick, MD
Bert W. Marks, MD  Austin R. Sawvell, MD

Upon notice that a CSA member is deceased, a donation is sent to the Arthur E. Guedel Memorial Anesthesia Center in their memory.
CSA District Directors and Delegates

<table>
<thead>
<tr>
<th>District Director</th>
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<td>Adam F. Dorin, M.D., MBA (13)</td>
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CSA Continuing Medical Education

Free CME Program for CSA Members
CSA CME Critical Care Program, Modules 1–8
CSA CME Obstetric Anesthesia Program, Modules 1–4
CSA CME Pain Management and End-of-Life Care, Modules 1–12
CSA CME Pediatric Anesthesia Program, Modules 1–4
CSA Bulletin and CSA Web Site (www.csahq.org)

October 24–28, 2011
CSA Fall Hawaiian Seminar
Grand Hyatt Kauai Resort & Spa
Poipu Beach, Kauai

January 23-27, 2012
CSA Annual Meeting &
CSA Winter Hawaiian Seminar
Hyatt Regency Maui Resort & Spa
Ka’anapali Beach, Maui