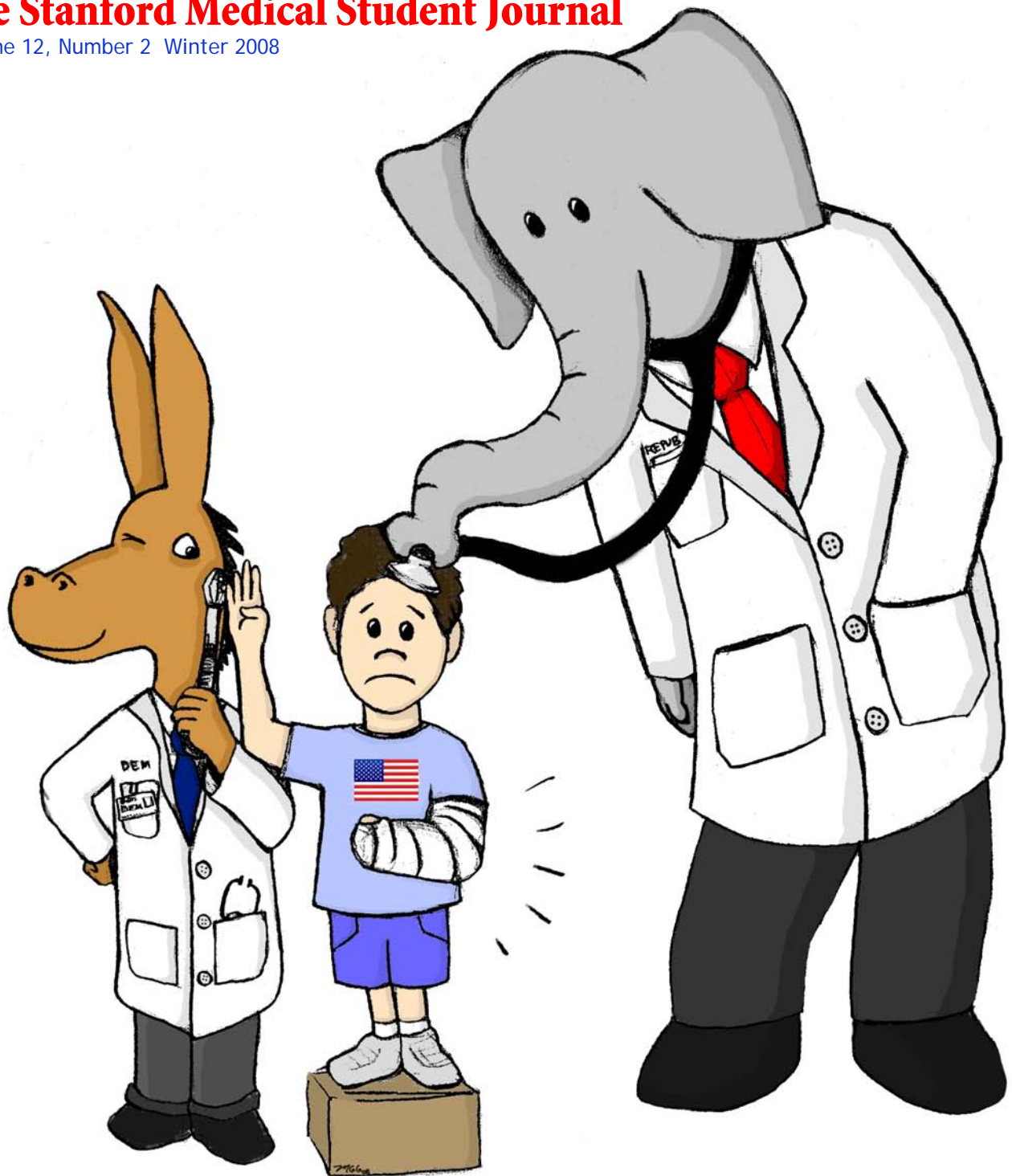


H&P

The Stanford Medical Student Journal

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Election 2008: Health Care on the Ballot

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The Stanford Medical Student Journal

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Editors' Note

Whether you support a single-payer health care system, an emphasis on the individual health insurance market, or something in between, political debate has the ability to unite, to polarize, and perhaps even to change society for the better. In this season, battles over primaries, straw polls, and caucuses challenge us to think critically about the issues and solutions proposed by each candidate. Our hope with this issue of *H&P* is to provide a forum for discussing how the candidates' platforms and proposals may affect our future lives as medical professionals.

To frame the discussion, Philippa Soskin articulates the differences between the health care plans of the three main candidates. Flynn LaRoche conveys the impact of the complexities of controversial U.S. policy on reproductive health rights internationally, while Josh Rolnick, medical student and third year Yale law student, evaluates how the membership of the Supreme Court could affect the field of medicine domestically. Finally, Jenya Kaufman brings politics closer to home, focusing on the impact of present policy on medicine—specifically, posttraumatic stress disorder among Iraq war veterans. We also present the results of an informal poll of our medical student colleagues to learn their perspectives on some of the issues covered in the *Features*. We thank David Craig for creating an online survey out of our questions and analyzing the results.

Complementing the *Features*, Lena Winestone presents a case report on an uncommon condition in a new format to sharpen our clinical reasoning skills. As always, we are deeply impressed by the breadth of talent among our medical student classmates. Michael Galvez's political cartoon provides the cover artwork for this issue. In our *Humanities* section, Kristen Whitaker recalls her internal monologue during an interview with a Vietnam veteran as an example of the tension between medical professionalism and personal connection. Blake Charlton interviews Dr. Abigail Zuger, science writer for *The New York Times* and visiting Medical Humanities Fellow, about the growing trend of doctor-writers. Christina Chao contributes a poem about the My Lai Massacre, as this year marks the 40th anniversary of its occurrence. On a lighter note, Will Slikker reflects

back on an elephant-riding adventure during his trip to Thailand.

Concluding the *H&P*, Sean Sachdev profiles another leader in her field, Dr. Sarah Donaldson, whose contribution to the treatment of children with Hodgkin's disease is world-recognized.

We would like to thank our student contributors for their photography submissions, as well as our photography staff.

We hope this issue of *H&P* provokes thoughtful reflection on some of the important issues in this upcoming election. Jump-starting this discussion, we are printing below a selection of the survey's write-in responses regarding what decision or policy from the next administration will have the greatest impact on society or medicine.

"To re-focus our domestic efforts on improving our safety net systems in general. This includes health care reform, tax plans, and welfare systems that boost the low-to-middle income sectors of the population, and other programs that serve to prevent those in need from falling deeper into trouble."

"Whether the next administration will continue to usurp more powers illegally or whether they will respect the rights of citizens, as clearly specified in the Constitution, and abide by the limits and restraints placed on government by the Constitution. This variable will have the greatest impact on all aspects of our society."

"The economy—investing in U.S. infrastructure and 'green' jobs and investing in modernizing U.S. industries to compete under the existing NAFTA treaties (instead of renegotiating the fair free trade to be pro-American free trade) will revitalize the U.S. economy, and a strong U.S. economy and surplus is the most important thing for health care—for universal programs, NIH funding, and global health."

Chantal Forfota
Malavika Prabhu

The title H&P reflects the importance of the basic history and physical examination in clinical medicine in every corner of the world. It also represents Hygeia and Panacea, two daughters of Asclepius. In Greek mythology, Hygeia is the goddess of welfare and the prevention of sickness, while Panacea is the goddess of healing and cures. We believe that these figures represent the two facets of our medical education—to treat and cure illnesses while promoting the welfare of our patients by preventing disease. The title H&P also reflects our interest in the metaphors of medicine. What an illness means to a patient may be as important as the diagnosis itself, and a practitioner of the art of medicine attends to each of these meanings.

Abdominal Pain and Amenorrhea in a Young Woman: A Broad Differential

Lena Winestone, SMS III

In this pilot approach to case reporting, information about a real patient is presented in stages (boldface type) to a clinical student, who responds to the information, sharing her reasoning with the reader (regular type). The author's commentary follows.

Case Presentation

A 23-year-old woman presents to the Emergency Department for evaluation of acute abdominal pain. She describes having several similar episodes in the last few months. She reports intermittent nausea, bloating associated with abdominal fullness, and distention for approximately the last three months. In addition, during this period she notes increased urination and increased frequency of stools. She denies vomiting, loose stools, hematochezia, melena, fever, and weight loss.

Acute abdominal pain in female patients in this age group can be divided into gynecologic and non-gynecologic causes. At this point the pain has not been well-localized, and thus causes of both abdominal and pelvic pain must be considered. Endometriosis, ovarian cysts, and pelvic inflammatory disease are all common causes of pelvic pain in young women. Likewise pregnancy could well account for the combination of nausea, abdominal distension, and increased urination. Therefore it is important to get a thorough menstrual and sexual history from this patient. Gastrointestinal causes include inflammatory bowel disease, an infectious agent such as giardia, hepatitis, or cryptococcus, or a malabsorption syndrome. It would thus be important to gather more information about her diet, eating habits, and travel history. Additional information regarding her immune status would also be relevant to evaluate her susceptibility to infection. Irritable bowel syndrome frequently presents with vague gastrointestinal symptoms such as those that the patient has been experiencing.

The patient has had amenorrhea for the last three-and-a-half months. She reports irregular menses since the start of menstruation at age 13. She is currently sexually active with a single partner and uses condoms. She has not had a pelvic examination or Pap smear in the prior three years. She denies any history of sexually transmitted infections.

In a patient with a history of irregular menses, the absence of menses is not generally of particular concern unless this pattern persists for six to twelve months; however in this patient, the presence of her other symptoms raises the level of

concern. Weight loss, stress, and certain medications, such as antidepressants, can also cause secondary amenorrhea, which is loss of menses in a patient who has previously menstruated. With a ten-year history of irregular menstruation, polycystic ovarian disease would be a major consideration, particularly if the patient is overweight. Furthermore, other hormonal imbalances can lead to the loss of menses, including those resulting from hypothyroidism, Cushing's disease, premature ovarian failure, pituitary insufficiency, or hyperprolactinemia. Still, the most common cause of secondary amenorrhea is pregnancy. The acute pain associated with her amenorrhea raises concern about the location of implantation and an ectopic pregnancy must be ruled out.

The patient reports several negative pregnancy tests, which were confirmed in the ED by serum HCG. She appears somewhat uncomfortable but is afebrile, and her vital signs are within normal limits. On physical exam, diffuse abdominal tenderness and ascites are noted. Bimanual exam reveals a large mass extending to the umbilicus, which is immobile and somewhat tender. Ultrasound shows a large complex solid cystic mass, which filled the pelvis from sidewall to sidewall and extends superiorly to almost the level of the umbilicus. It appears separate from the uterus and neither ovary could be reliably palpated.

It is clear that this large pelvic mass accounts for all of the patient's symptoms. Considering the mass in the context of amenorrhea as well as in relation to the imaging, it is most likely an adnexal mass. Nevertheless, enlargement of the uterus should be considered as a possible cause of a pelvic mass. The size of this mass alone likely rules out functional ovarian cysts as well polycystic ovarian disease. A complex mass could be the result of hemorrhagic ovarian cysts, endometriomas, a tubo-ovarian abscess, a benign ovarian tumor, or a malignancy. The presence of ascites makes this particularly concerning for a malignant process, most likely ovarian carcinoma.

An exploratory laparotomy is performed, in which a 30 cm complex cystic mass adherent to the anterior peritoneum of the bladder and anterior abdominal wall, and a

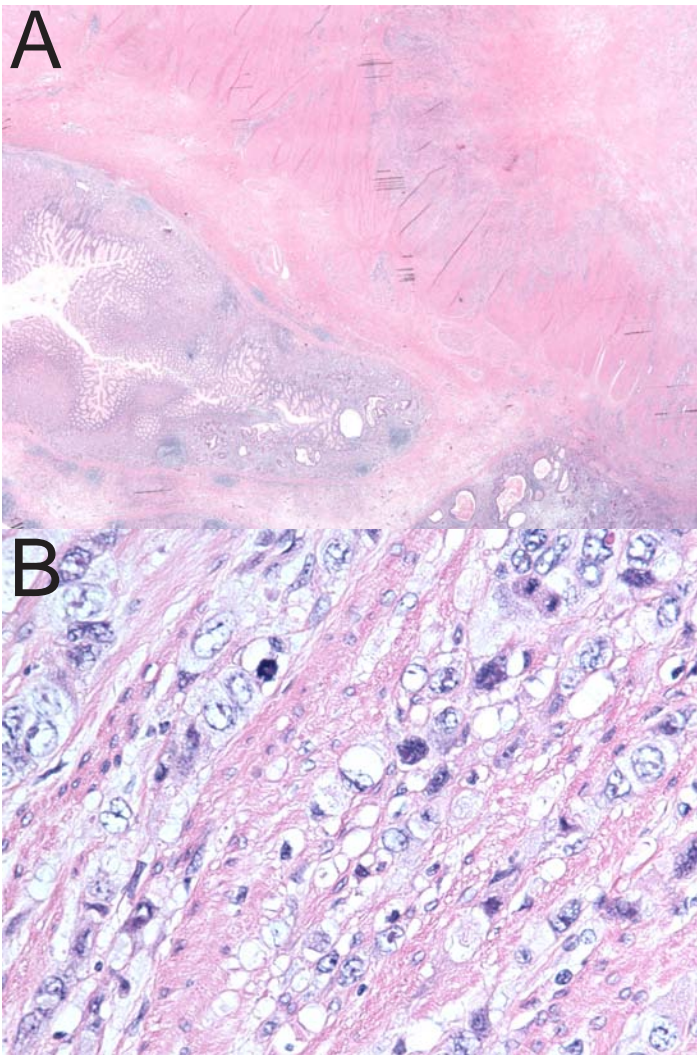


Figure 1:

A. Uninvolved gastric glands (left), gastric glands involved by signet ring carcinoma (right), and adjacent invasion of muscularis propria.

B. Poorly differentiated signet ring carcinoma with extensive nuclear pleomorphism and vesicular nuclei seen invading muscularis propria.

Figures from Natalia Isaza.

left ovarian mass are identified. Bilateral salpingo-oophorectomy and lysis of adhesions are performed. The right ovary measures 18.5 x 13.5 x 8.5 cm and the left measures 8 x 6.5 x 3 cm.

Dermoid cysts or mature cystic teratomas are the most common ovarian tumor in the second and third decades of life. However, the lack of differentiated tissues, such as teeth or hair, from the three germ layers makes this rather unlikely. Likewise, the appearance suggests that this is not a site of ectopic endometrial tissue, which would appear as a 'chocolate cyst.' Serous and mucinous cystadenoma hold the remaining

prospect for this mass to be benign and are somewhat consistent with the size and appearance of the mass. However, its adherence to neighboring structures point towards a malignant process. The majority (80-85%) of ovarian neoplasms derive from epithelial cells, although they can also arise from other germ cells, gonadal-stromal cells. The bilateral involvement of both ovaries makes a metastasis from another location a strong possibility as well.

At the time of surgery, a large 6 x 5 cm mass in the left stomach closer to the greater curvature is identified. Inspection of the stomach reveals a "linitis plastica" type pattern with diffuse involvement of the body and antrum of the stomach, including both anterior and posterior walls. The lesser sac has extensive infiltration extending down the left gastric lymphatic channels to the celiac plexus, which is encased in tumor as well. A small nodule in the omentum, multiple small lesions in the mesentery and peritoneum, and nodularity in the colic gutters are also palpated and biopsied. A frozen section reveals adenocarcinoma with signet ring and goblet cell morphology (Figure 1).

The majority of metastases to the ovary derive from the gastrointestinal tract. Another common source is the breast; however, in this case the cell morphology requires that metastases from the stomach, bowel, and appendix be ruled out. This patient likely has a Krukenberg tumor, which spread from her stomach to both of her ovaries.

Commentary

The incidence of ovarian malignancy in pre-menopausal women with an adnexal mass ranges from six to eleven percent.¹ It's not surprising, then, that for some time this patient's symptoms were mistaken for pregnancy. Still, studies have shown that frequency and intensity of symptoms can be used to differentiate between benign and malignant processes.² As a rather subjective measure, it becomes difficult to apply this observation in the context of individual patients.

Ultrasound quickly confirmed the results of numerous pregnancy tests: this patient was not pregnant, but instead had a large pelvic mass.

The symptoms at presentation of a Krukenberg tumor are extremely variable. Symptoms related to the ovarian tumors usually dominate, but in some cases symptoms related to the primary tumor at its original site or at other sites of metastatic spread are also present. Abdominal pain and swelling are the most common presenting complaints,³ with menstrual abnormalities present in approximately one-third of cases. In addition, ascites is present in approximately half of patients and is associated with a poor prognosis.⁴

The most straightforward clue to the metastasis of an ovarian tumor is history of a tumor outside the ovary; however, there was no such history in our patient. Suspicion for

metastasis in the case of ovarian tumors is heightened by bilateral involvement of both ovaries, as was the case here. At least 80% of Krukenberg tumors are bilateral and in some series all have been bilateral on microscopic examination.⁵ As a general rule, if the primary site of involvement of a Krukenberg tumor has not already been identified (only 25% to 30% of patients are initially known to have a primary carcinoma elsewhere), the source of the metastasis is usually found intraoperatively, particularly if a frozen section provokes a search for the primary tumor, as was the case with our patient. If this does not occur, the primary carcinoma usually becomes evident within the next six months.

The term Krukenberg tumor refers to metastatic carcinoma, most commonly originating in the stomach, which is characterized by bilateral ovarian metastases composed of mucin-producing, signet-ring cancer cells (which by definition occupy at least 10% of the neoplasm). Although relatively uncommon in the United States, it occurs with relatively high frequency in places where gastric carcinoma is common, such as Japan.⁶ The average age of patients is about 45 years,⁵ again reflecting the distribution of gastric signet-ring cell carcinomas, for which the mean age is 50.1 years.⁷ One study of gastric carcinoma in young women (under the age of 36) demonstrated that 55% of cases involved the ovaries.⁸



Joanna Wrede

On gross pathology, Krukenberg tumors are typically solid with external surfaces that are characteristically bossellated, sometimes strikingly so. About 76% of Krukenberg tumors originate in the stomach, 11% in the intestines, 4% in the breast, 3% in the biliary system, 3% in the appendix, and the remaining 3% in miscellaneous sites.⁵ Microscopically, small signet-ring carcinoma cells embedded within a cellular non-neoplastic reactive or hyperplastic ovarian stroma are typically observed, however the concentration of carcinoma cells varies greatly.³ Like most other forms of metastatic cancer, the prognosis for Krukenberg tumors is poor, with a median survival of 14 months, and two year survival rate of 18%.⁹ There is no established treatment for Krukenberg tumors.¹⁰ Resection has been shown to play a role in the management of Krukenberg tumors of stomach origin if it can render patients free of gross residual disease.¹¹ If other sites of metastasis have been identified, resection does not improve long-term survival. The current accepted wisdom is that chemotherapy and radiotherapy have no significant effect on prognosis of patients with Krukenberg tumors. Some reports suggest that perioperative intraperitoneal chemotherapy as an adjuvant to resection may improve prognosis.¹²

A malignant tumor may not leap immediately to the clinician's mind when a young woman of reproductive age presents with an acute abdomen, both because it is not common and because the prognosis is poor. Still, it is essential to remember that Krukenberg tumors occur in a young population, with reports of girls as young as 13 being diagnosed. Early diagnosis of this disease, as with most malignant carcinomas, has a major impact on prognosis. The assumption that most young women are pregnant when they present with primary amenorrhea should be applied with caution. In this case, this young woman presented with the classic symptoms of Krukenberg tumor and yet she was not diagnosed until several months after her initial presentation to the ED. This case highlights the key role that a thorough physical exam plays in narrowing the differential and ultimately arriving at the correct diagnosis.

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Odmara Barreto

Health Care for All?

Presidential Candidates on Health Policy Reform

Philippa Soskin, SMSII

Health care continues to be among the top issues on the domestic agenda of American voters; however, its salience differs between political parties. A recent survey of likely Democratic primary voters ranked health care as the second most important voting issue behind the war in Iraq. [1] Likely Republican primary voters ranked health care as fourth behind the war in Iraq, the economy, and immigration. The two parties also diverge on what they see as the most pressing issues within health care. Democratic voters are equally concerned with both providing coverage to the uninsured and reducing the costs of health care and health insurance while Republican voters report being primarily focused on reducing costs.

Unsurprisingly, the contrasting interests of Democratic and Republican primary voters are directly reflected in the health care platforms of the leading presidential candidates. Democratic candidates Senators Hillary Clinton and Barack Obama offer fairly detailed health care plans centering on achieving universal coverage. Republican candidate Senator John McCain has emphasized health care less in his campaign but offers a list of guiding principles and suggestions focus-

ing on containing costs. This article aims to outline the major elements of the leading presidential candidates' health care plans and highlight their main differences.

Senator Hillary Clinton

Senator Clinton's plan aims to achieve universal coverage by mandating individual insurance. The public can fulfill this mandate in one of three ways: 1) maintaining existing coverage, 2) entering the private insurance market, or 3) selecting a newly created public plan similar to Medicare. The latter two options will be part of a new "Health Choices Menu." The Menu will open private health insurance options offered through the Federal Employee Health Benefit Program to the general public while also offering a new public plan with a similar level of benefits. Employer-based coverage, the hallmark of the American health care system, is still actively encouraged in Clinton's health care reform. The plan requires that large employers either provide health care coverage or contribute to its cost. Small businesses offering health insurance to their employees will receive a tax credit.

	Access to Coverage	Public Programs	Cost Containment
Hillary Clinton	Individual insurance mandates for everyone <u>Proposal:</u> <i>American Health Choices Plan</i> ; large employers must provide insurance or contribute to cost; small employers provided tax breaks to insure; create pool of private plans similar to those available to federal workers	Create 1 public program similar to Medicare; expand Medicaid, SCHIP	<ul style="list-style-type: none"> • Ensure better preventive care • Electronic health IT systems • Streamline care for the chronically ill • Create large insurance pools • Institute independent 'Best Practices' research • Control prescription drug costs • Reform medical malpractice system
Barack Obama	Mandates for kids; encourage all adults to be insured <u>Proposal:</u> Emphasis on driving down cost of insurance; large employers must contribute to cost; subsidies for low-income people; create pool of private plans similar to those available to federal workers	Create 1 public program similar to Medicare; expand Medicaid, SCHIP	<ul style="list-style-type: none"> • Reduce cost of catastrophic illness to employers and employees • Electronic health IT systems • Increase preventive health care programs • Control prescription drug and insurance premium costs • Reform medical malpractice system
John McCain	Opposed to federally mandated universal coverage but affordable access must be available to all <u>Proposal:</u> Free market, consumer-based system; increase drug competition; remove tax-code bias towards employer-based insurance; provide tax credits; encourage personal responsibility	No SCHIP expansion	<ul style="list-style-type: none"> • Promote competition between providers, treatments • Electronic health IT systems • Reform medical malpractice system • Drug competition, permit safe re-importation, foster safer, cheaper generics • Increase use of non-physician clinicians

Sources: The New York Times

In order for the public to meet the insurance mandate, each individual must be accepted by an insurance program and be able to afford to enroll. Clinton aims to achieve this through regulations placed on the insurance industry which are intended to prevent discrimination based on medical history and encourage insurers to compete on quality and cost. Clinton outlines four major regulations: 1) Requiring a guarantee issue compels insurers to offer a policy to every applicant who pays the premium regardless of risk factors or preexisting conditions; 2) Requiring automatic renewal prevents insurers from dropping a policyholder due to a change in health status; 3) Requiring community rating protection prohibits insurers from differentiating premium costs based on risk factors such as age, gender, occupation, etc.; and, 4) Requiring minimum stop-loss ratios ensures that premiums are directed to high quality care rather than marketing and disproportionate profits.

Clinton's plan addresses affordability by providing refundable income-related tax credits for health coverage. Furthermore, premium payments will be limited to a percentage of income to prevent health coverage from becoming overly burdensome. Clinton's plan also seeks to expand eligibility for public programs such as Medicaid and the State Children's Health Insurance Plane in order to assist in achieving universal coverage.

Clinton provides the most financial detail of any of the candidates. She estimates \$54 billion in tax savings and \$56

billion in savings from reducing overpayments and improving efficiency. The tax savings come from repealing President George W. Bush's tax cuts for households over \$250,000 (\$52 billion) and capping tax exclusions for employers providing high-end coverage to households making over \$250,000 (\$2 billion). Savings from reducing overpayments are predicted from phasing out Medicare overpayments to health maintenance organizations (\$10 billion) and reduced need for Medicare and Medicaid spending (\$7 billion). Furthermore, large savings are expected from promoting development of generic drugs, allowing Medicare to negotiate prescription drug prices (\$4 billion), and improving systems through technology, cost effectiveness, preventive care, and chronic care management (\$35 billion).

Senator Barack Obama

Senator Clinton and Senator Obama's health care plans are similar in many ways and share the aim of achieving universal coverage; however, their most significant difference lies with individual mandates. Clinton's plan mandates that every individual possess health insurance while Obama limits the mandate to children and relies on expanding coverage options and increasing affordability to reduce the ranks of the uninsured. In his plan, Obama asserts that states must have the freedom to continue to develop new models for health care coverage and delivery.

Obama's plan focuses on expanding insurance options

Health Care Reform Financing	Abortion	Stem Cell Research	NIH Funding	HIV/AIDS
<ul style="list-style-type: none"> \$54 billion in tax savings from repealing current tax cuts \$56 billion in savings from reducing Medicare/Medicaid overpayments and improving efficiency 	<ul style="list-style-type: none"> Supports <i>Roe v. Wade</i> Critical of partial birth abortion ban Supports federal funding for contraception 	Supports federal funding	Increase funding by 50% over the next five years; double NIH budget in 10 years	Increase global funding to \$50 billion by 2013 (including doubled NIH budget to \$5.2 billion annually)
Financing would arise from tax savings as well as improved system efficiency	<ul style="list-style-type: none"> Supports <i>Roe v. Wade</i> Critical of partial birth abortion ban Supports federal funding for contraception 	Supports federal funding	Would strengthen funding	Would increase funding
\$50 to \$65 billion a year <ul style="list-style-type: none"> Savings within the health care system should fund most of the cost Additional revenue from discontinuing tax cuts for those with incomes over \$250,000 	<ul style="list-style-type: none"> Supports overturning <i>Roe v. Wade</i> Supports partial birth abortion ban Proposes federal funding for contraception 	Supports federal funding	No clear policy outlined	No clear policy outlined

times (www.nytimes.com), www.hillaryclinton.com, www.johnmccain.com, www.barackobama.com, www.mikehuckabee.com, www.ontheissues.org, www.health08.org

and closing coverage gaps. This will be accomplished in five ways: 1) Like Clinton, Obama will offer a newly created public national health plan with benefits meeting the standards of the FEHBP. This option will be open to small businesses as well as individuals who are self-employed, lack employer-coverage, or are ineligible for Medicaid and SCHIP. Those who are ineligible for Medicaid and SCHIP but for whom affordability is still a barrier will be given income-related subsidies to purchase private or public insurance. 2) Obama will increase access to the private insurance industry. A National Health Insurance Exchange will be created to regulate the private insurance industry and evaluate plans in order to clearly communicate differences in costs and services. 3) Obama will continue to encourage employer participation by requiring that employers either provide health coverage or contribute to the national public plan. 4) Eligibility for Medicaid and SCHIP will be increased. 5) Children are mandated to possess health insurance and young adults up to the age of twenty-five can remain covered under their parents' health plans.

Obama also includes several policies intended to improve quality, increase efficiency, and lower costs. Accountability will be improved by requiring providers to collect data and report on costs, quality of care, preventable medical error, and health care disparities. Provider compensation will be restructured to base reimbursement on outcomes and quality rather than volume of services. Obama plans to strengthen antitrust laws to protect doctors from being overcharged for malpractice insurance. Patient care will be improved by requiring that public plans and private plans participating in the FEHBP employ evidence-based disease management programs. The research behind such programs will come from an independent institute created to study comparative effectiveness and provide objective information to health care providers. Obama is committed to investing \$10 billion a year over the next five years for electronic health information systems in order to enhance efficiency, reduce error, and improve

coordination of care. He plans to promote public health and preventive medicine by supporting school and workplace efforts and strengthening the primary care workforce through loan repayment programs.

Obama believes his plan will save American families up to \$2,500 per year on medical expenditures. He expects significant savings from mechanisms similar to those outlined by Clinton. Like Clinton, Obama plans to repeal Bush's tax cut for households over \$250,000. He also seeks to reduce drug prices by increasing the use of generics in public plans, prohibiting large companies from keeping generics off the market, allowing drug purchases across borders, and repealing the ban on direct negotiation with drug companies.

Senator John McCain

Aligning with the priorities of Republican voters, Senator McCain's campaign has placed little emphasis on health care. This is reflected in his health care plan, which is a list of guiding principles and ideas rather than a detailed proposal. McCain focuses on reducing costs and encouraging personal responsibility. McCain does use "health care for all" rhetoric on his website and in his speeches but opposes individual mandates. Unlike his Democratic rivals, McCain is looking to promote the individual insurance market over employer-based coverage by offering a tax credit of \$2,500 (\$5,000 for families) as an incentive to obtain health coverage. States will also be required to develop risk adjustment bonuses to further subsidize high-cost and low-income families. The hope is that weakening the connection between insurance and employment will improve the overall economy by increasing the competitiveness of American companies worldwide. He asserts that people should be able to purchase coverage from the source of their choice (private market, employers, churches, etc.) and insurance options should be portable from job to job and across state lines.

Along with personal freedom, McCain employs a market-based approach to reforming health care and aims to



Aabed Meer

reduce costs and improve quality through competition and innovation. He supports evidence-based research, information technology, and creative delivery approaches such as alternative medical access options (retail outlets, community health centers, telemedicine) and expanded roles for nurse practitioners and physician assistants. McCain also supports greater attention to chronic care management, preventive medicine, and public health.

Like Obama, McCain emphasizes the importance of allowing states to experiment with new ways to deliver care and provide coverage. He plans to promote the development of generic drugs and permit re-importation of pharmaceuticals in order to foster competition. To increase efficiency, McCain plans to adjust provider payment schemes to compensate for results, prevention, and care coordination rather than fee-for-service or capitation methods. Under his plan, Medicare would not reimburse for preventable medical error or mismanagement. He also plans to enact tort reform to prevent excessive damage payments and lawsuits lacking merit. Although his plan is centered on reducing costs, McCain does not directly address the financial impact of his reforms or detail what costs and savings will be incurred.

Commentary

As is evident in the presidential candidates' respective plans, there is much agreement about strategies to improve quality and efficiency of health while reducing costs. All the candidates have acknowledged the importance of public health and preventive medicine, innovation in health care delivery systems and chronic care management, development of information technology, and support for generic drugs. All the candidates use "health care for all" rhetoric although they differ on the financial and political strategies for achieving universal coverage.

So far in this election, the major health care debate has been limited to the Democratic primaries, with Clinton and Obama sparring over individual insurance mandates. The issue came to a head with a mailing sent by the Obama campaign. The mailing reads, "Hillary's health care plan forces everyone to buy insurance, even if you can't afford it." The images on the mailing are reminiscent of the insurance lobby's "Harry and Louise" campaign, which is credited with playing a major role in bringing down President Bill Clinton's health care plan in 1993. Senator Clinton claims that the mailing is misleading, as it ignores the fact that her plan strives to allow everyone to fulfill the mandate by subsidizing those who cannot afford insurance.

The theory behind instating an insurance mandate is based on preventing adverse selection. Adverse selection occurs when individuals with significant medical needs, substantial medical costs, or a high risk of illness buy into the insurance system while younger and healthier individuals opt out. This increases the cost for insurers forcing them to raise premiums,

which causes the next-most healthy group in the insurance pool to drop out while retaining the sickest, which further raises costs and so forth.

Individual mandates are intended to keep everyone in the insurance pool in order to maximize the spread of risk and costs among a large population with diverse medical needs and abilities to pay. Proponents of mandates laud their ability to prevent adverse selection and claim that, without a single payer system, individual mandates are the only way to achieve universal coverage. Furthermore, insurance mandates, unlike single-payer plans, maintain an element of consumer choice, which increases competition and reduces moral hazard.

Moral hazard occurs when individuals purchase more health care services than they would if they were forced to pay for first dollar expenses. The thinking is that individual mandates would generate low-cost, high-deductible options forcing policyholders to face first dollar expenses. Opponents of individual mandates stress that requiring insurance violates the principle of personal freedom and is a slippery slope towards a single-payer system. Additionally, it is difficult to set a minimum standard for benefits, and mandates are challenging and costly to enforce.

It should be remembered that the presidential candidates' current health care plans largely reflect the priorities of the Democratic and Republican primary voters. In a national election, the two remaining candidates will have to adjust their plans to appeal to the broader public. Should Clinton win the Democratic primary, she may face far greater resistance to individual mandates in a general election. Should Obama win, he may find universal coverage difficult to promise with a voluntary system. In a general election, McCain will have to provide more details on his plan and find a way to bridge the gap between fiscal conservatism and covering the uninsured. Still greater is the challenge any of the candidates will face if elected to the presidency and given the opportunity to actively attempt true reform of the American health care system.

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Imposing Silence: Reproductive Health Rights in Developing Countries

Flynn LaRochelle, SMS I

Nafula¹ is a young Kenyan mother of three. In the recent violence after the contested presidential elections, her husband was one of over 1,000 people killed. She and her three children have been displaced by ethnic violence to refugee camps, where she discovers she is pregnant. She is devastated; amidst the escalating violence, without the support of her husband, and worried about three young children already, she decides she cannot continue the pregnancy. A United States-based non-governmental organization, Family Health International, is working with the Kenyan Ministry of Health to provide those displaced with basic medical care, family planning, and HIV prevention services; however, this organization cannot help Nafula terminate her pregnancy. While supported by the U.S. Agency for International Development, FHI cannot use its own, non-AID funds to counsel, refer, or provide services related to abortion.

Why? The answer lies in a complex history of one U.S. foreign aid policy whose course has closely mirrored the political debate on abortion domestically.

What is the “Global Gag Rule”?

In the same year the U.S. Supreme Court legalized abortion in *Roe v. Wade*, Congress prohibited the use of U.S. funds to pay for abortion services as a part of the Foreign Assistance Act, known as the Helms Amendment. [1] A decade later, in response to his pro-life constituency, President Ronald Reagan instituted a new U.S. policy on foreign aid and family planning at the U.N. International Conference on Population in Mexico City. The policy, termed the “Mexico City” Policy, asserted that the U.S. would not provide foreign aid to NGOs that provided abortion services, promoted access to abortion, referred women to abortion, or

engaged in advocacy to change the abortion laws of the state. [2] NGOs would lose USAID assistance if they supported or provided abortion services, even if they used alternate, non-AID funds. In essence, global organizations were “gagged” from abortion advocacy, hence the adoption of the “Global Gag Rule,” by pro-reproductive health organizations as a common reference to the policy.

Despite several court challenges against the USAID on behalf of reproductive health and rights organizations, the policy was in place until President Bill Clinton rescinded it in 1993. He affirmed that the “excessively broad anti-abortion conditions [of the policy] are unwarranted” and “have undermined efforts to promote safe and efficacious family planning programs in foreign nations.” [3] For the length



Ricky Tong

of his term, recipients of USAID could use their own funds for abortion-related services as long as USAID funds were maintained in a separate account, in accordance with the Helms Amendment.

Then, in his first days in office in 2001 and on the 28th anniversary of *Roe*, President George W. Bush restored the Mexico City Policy.

In response to the policy restrictions, international NGOs were forced to decide between continuing their current practices and risk losing USAID funding, or eliminating referral,

¹ This is a fictional scenario; however, the events mentioned—post-election violence in Kenya, displacement due to ethnic violence, and the involvement of Family Health International—are true. (http://www.fhi.org/en/HIVAIDS/country/Kenya/res_Crisis-Relief.htm)

counseling, advocacy, and other abortion-related services. A 1990 USAID study on the implementation of the Mexico City Policy found that some foreign NGOs had become oversensitive to the policy and reduced services, including post-abortion care for women who have abortion complications—which is allowed under the policy—in fear of losing funding. Other organizations, such as the International Planned Parenthood Foundation and Member Associations, chose to uphold their services and opted to forego USAID funding altogether. [4]

Additional Restrictions on Reproductive Health

In addition to the limits imposed by the restitution of the Mexico City Policy, the Bush Administration has refused to provide congressionally-approved funds totaling \$34 million annually to the United Nations Population Fund, an organization that promotes universal access to safe and affordable contraception, prenatal care, and management of sexually transmitted infections, including HIV. UNFPA does not provide abortion services or referrals; however, it supports family planning programs in China, which is one of the 150 countries UNFPA serves. By doing so, the current administration claims that UNFPA violates U.S. anti-coercion policies, such as the Kemp-Kasten Amendment, which prevents funding to an organization that, “as determined by the President of the United States, supports or participates in the management of a program of coercive abortion or involuntary sterilization.” [5] Both the UNFPA and independent U.S.- and British-led investigators to China have refuted that UNFPA supports such practices.

Of consequence to both domestic and international family planning, the U.S. government has contributed billions of

dollars to abstinence-only education. Since 1996, almost \$1 billion have been allocated domestically for abstinence-only education programs that fail to include accurate information about contraception. Although the Mexico City Policy restrictions do not apply to programs for HIV relief, abstinence-only policies have extended internationally to the President’s Emergency Plan for AIDS Relief, which has contributed \$15 billion to support the fight against HIV/AIDS around the world. [6] Organizations that receive PEPFAR funds must use one-third of their prevention allocation to teach abstinence-only before marriage programs, as a part of the ABC policy: Abstinence, Be faithful, and Condoms. [7]

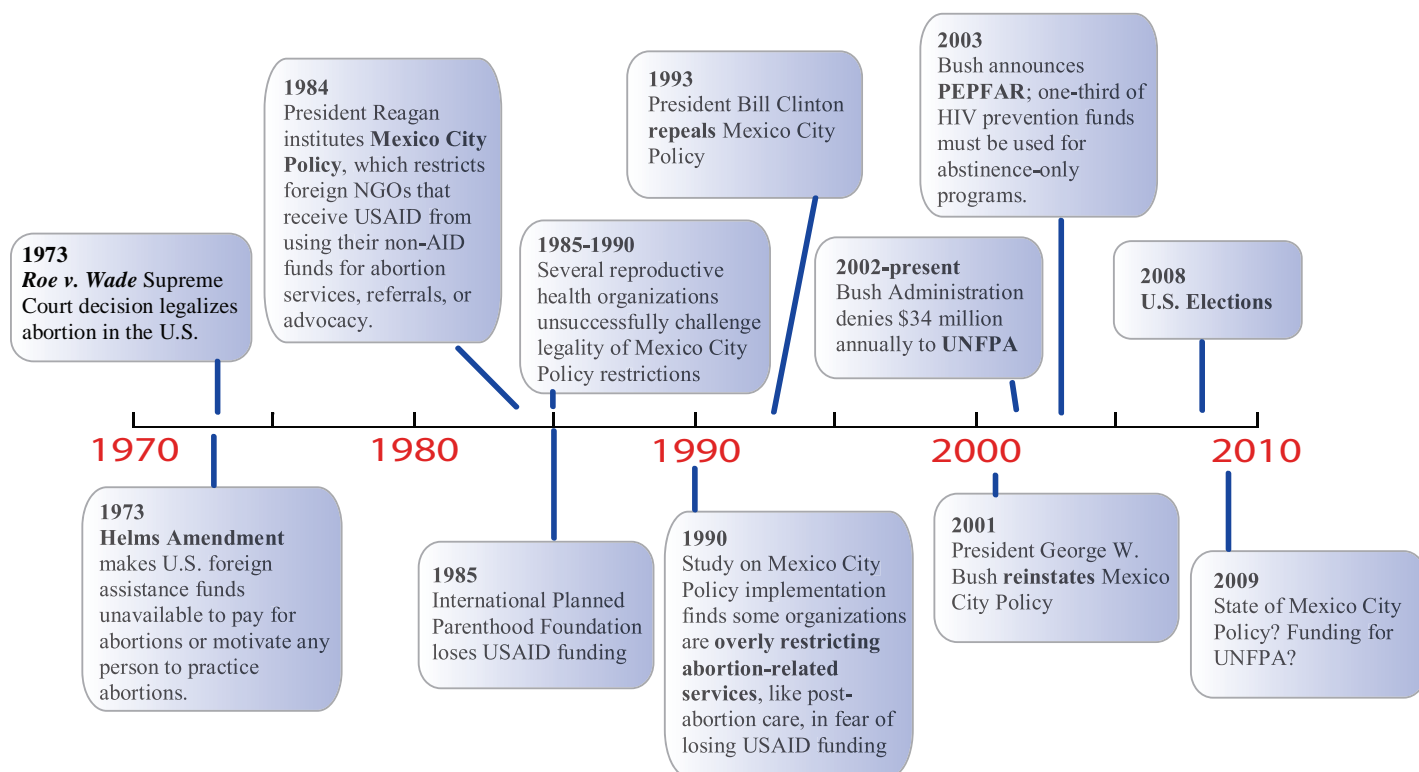
Maternal Mortality and Reproductive Rights

Established at the 1994 International Conference on Population and Development in Cairo, the Programme of Action defines reproductive health rights as

“The basic right of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children and to have the information and means to do so, and the right to attain the highest standard of sexual and reproductive health ... The promotion of the responsible exercise of these rights for all people should be the fundamental basis for government- and community-supported policies and programmes in the area of reproductive health, including family planning.”

ICPD Programme of Action, Chapter 7.3 [8]

Though adopted by consensus by 179 countries, the repro-



ductive health objectives set forth by the Programme of Action are not protected rights of many women. In developing countries, women often face extreme hardship: poverty, economic dependence, social and educational inequality, female genital mutilation, violence, high rates of maternal mortality, poor obstetric care, and limited power over their sexual and reproductive lives.

Estimates of maternal mortality developed by the World Health Organization, United Nations Children's Fund, The World Bank, and UNFPA point to 536,000 maternal deaths worldwide; although this may seem like small number compared to the world population, 99% of these deaths occur in developing countries. [10] In Afghanistan, a 15-year-old woman has a one in eight chance of death due to maternal causes in her lifetime; in Niger, one in seven. In comparison, the probability is one in 4,800 in the U.S., and one in 10,200 in the Netherlands. [9] The drastic difference in maternal mortality rates demonstrates the disproportionate burden placed on women in developing countries who lack access to obstetric and other reproductive health care.

UN leaders and the international community have included reducing maternal mortality and promoting gender equality as Millennium Development Goals. [10] Paramount to this mission is safe, affordable, and accessible family planning. [11] According to the Guttmacher Institute, there are 42 million abortions worldwide each year, almost half of which are unsafe. [12] This study shows that rates of abortion do not decline in regions where abortion is illegal; in fact, some of the lowest abortion rates are in countries with the most liberalized abortion laws, such as Western Europe.

Where abortion is illegal, the majority of abortions are unsafe—women do not have access to a trained provider who uses safe technology under hygienic conditions. Each year, 68,000 women die from complications of unsafe—and illegal—abortions, the majority of which occur in Africa and South-central Asia. [13] For a woman in a developing country, the risk of death associated with an abortion is 330 per 100,000 procedures, whereas the mortality rate is 0.2-1.2 per 100,000 in developed countries. [14]

The international community recognizes that the high rates of maternal mortality and unsafe abortion demand greater awareness of the needs for improved reproductive health care for women in developing countries. Addressing the unmet need for contraception is one way to improve maternal health. According to estimates by the Guttmacher Institute and UNFPA, there are 201 million women in developing countries who have an unmet need for contraception²; satisfying this need would prevent 52 million unwanted pregnancies annu-

ally, save more than 1.5 million lives, and prevent 505,000 children from losing their mothers. [15] Organizations such as UNFPA are working to make motherhood safer by promoting safe, accessible, and affordable contraception to avoid unwanted pregnancy, reduce abortion rates, and save women's lives, despite their not receiving their U.S. allocation.

Election 2008

Senator Hillary Clinton has explicitly pledged to overturn the Mexico City Policy as one of her first acts as President and to reinstate funding for UNFPA. [16] Senator Barack Obama does not have a clear statement regarding this issue but has demonstrated a pro-choice voting record and supports women's reproductive rights.

Senator John McCain does not support *Roe v. Wade*, and states that he would nominate justices that support a reversal of the 1973 decision. Stemming from the history of this issue along party lines and the traditional constituency of the Republican Party, it is more than likely that he would let stand the Mexico City Policy.

What's next?

Already in her young life, Nafula has survived many obstacles—poverty, female genital mutilation, and early marriage. Fortunately, she has not died during the birth of her first three children, despite inadequate obstetric care; she has not been raped, despite the escalating violence against women, particularly in war-torn regions; and she is not yet HIV-positive, despite increasingly high rates of infection among women. However, these events could still transpire given that she does not have access to complete reproductive health care to prevent unwanted pregnancy.

In our season of elections, we reflect on issues that matter to us, and have the opportunity to change. As future professionals dedicated to improving lives, we must ask ourselves: when will the United States, as an international leader, recognize that reproductive health rights are human rights and are crucial to improving the health of our population? Will we elect a leader who will support initiatives and established programs that protect those rights, or at least not impede those that do? We will see this November.

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Aaron Wang

One Vote: How the Supreme Court Could Affect Medicine

Josh Rolnick, SMSI

Reflecting on the Supreme Court's busy term last fall, a blur of activity in which the Court upheld a federal anti-abortion ban and invalidated school integration programs, Justice Stephen Breyer remarked, "It is not often in the law that so few have so quickly changed so much." Breyer was noting the profound transformation that one swapped seat had wrought: Samuel Alito, a consistent conservative, had replaced Sandra Day O'Connor, whose unpredictable voting had provided the pivot point between a balance of conservatives and liberals.

With her replacement, the court swung slightly right, all the while remaining divided. One-third of the 68 cases last term were decided five votes to four. As *The New York Times* noted, the 5-4 votes divided along ideological lines, and the four justices who conventionally wear the "liberal" label—John Paul Stevens, David H. Souter, Ruth Bader Ginsburg, and Stephen Breyer—prevailed in only six, including four lethal injection cases.

The divide virtually ensures that the next president will set the court's future direction. Four justices will be over seventy; the oldest, Justice Stevens, will be eight-nine. Their replacements will likely be much younger, meaning that the next president will chart the court's direction for years or even decades after he or she leaves office. That court, in turn, will face petitions for redress on several politically charged issues that could thrust doctors and health care providers into the crosshairs.

The medical profession has already seen the effect of one presidential appointment on the Court. In *Gonzales v. Cahart*, the decision last term upholding the Partial Birth Abortion Act, Alito provided the fifth vote in favor. Neither the Act nor *Gonzales* was meant to be about doctors. The charged debate is instead about the clash of rights and jurisprudence embodied in the 35-year history of the American constitutional right to abortion. Yet the court decision and the Act itself feature doctors, medicine, and health prominently.

The Act took the unusual step of regulating not the concept of abortion or an associated right (e.g. parental notification) but, instead, a specific medical procedure to perform abortion. In the Act, Congress banned doctors from intentionally performing an intact dilation and extraction, calling the procedure "outside of the standard of medical care." In *Gonzales*, the

Court reaffirmed that women have a right to abortion without what the Court had called in a previous decision "undue interference" from the state. At the same time, it held that the Partial Birth Abortion Act did not interfere unduly with that right. The Court also upheld as legitimate the state's interests in protecting "the life of the fetus that may become a child" and the "integrity and respect" of the medical profession, which the Act called a brutal procedure whose practice by doctors threatened the profession's reputation.

Further presidential appointments could determine whether a future Supreme Court reverses *Gonzales* or eventually overturns *Planned Parenthood v. Casey* (*Planned Parenthood*, not *Roe v. Wade*, is the reigning precedent on abortion). To be sure, it is not clear how likely the Court is to go that step in the foreseeable. To do so would be a significant legal leap from the status quo. It is one thing to find that a

seeming restriction on abortion is consistent with *Roe* and *Planned Parenthood*. It is another to undo the precedent itself. The legal principle of *stare decisis* (Latin for "to stand by things decided") urges respect for precedents and discourages overturning them without good reason. Indeed, some legal scholars believe *Roe v. Wade* was wrongly decided but still believe it should not be overturned, labeling it, along with cases like *Brown v. Board of Education*, a "superprecedent." Some remarks by Chief Justice John Roberts sug-

gest that he agrees with this view.

Thus, it is unclear whether one or two presidential appointments could overturn *Roe*. It is possible, however, that four votes already sit on the court—Antonin Scalia, Clarence Thomas, Roberts, and Alito—and in that case, one more presidential appointment could provide a majority. That possibility prompts fans and foes of *Roe* alike to look to the candidates in the challenging task of predicting how they would choose justices.

To some degree, views divide along party lines. Senators Hillary Clinton and Barack Obama voted against the confirmation of Alito and Roberts and would face strong pressure from constituents to appoint a defender of *Roe* and other constitutional rights supported by many judicial liberals.

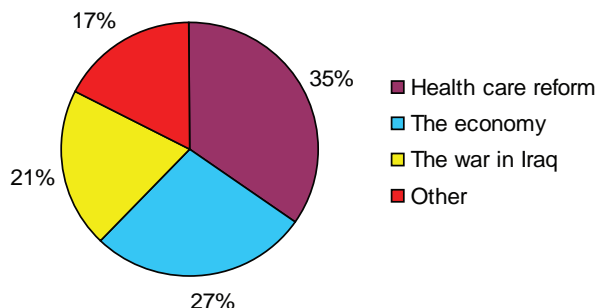


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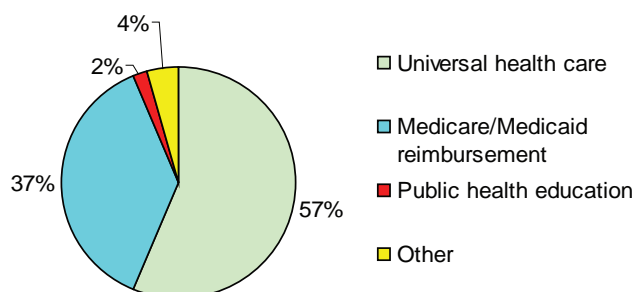
Senator John McCain, on the other hand, voted to confirm both Alito and Roberts. Steven Calabresi and John McGinnis, Northwestern law professors and judicial conservatives, praised McCain's conservative judicial record in a January op-ed in *The Wall Street Journal*. "On judicial nominations, he has voted soundly in the past from Robert Bork in 1987 to Samuel Alito in 2006," they wrote. "His pro-life record also provides a surety that he will not appoint judicial activists."

McCain, it is true, opposes abortion and voted for the Partial Birth Abortion Act. On other issues, however, McCain diverges from the canonical conservative views. He supports campaign finance reform and stem cell research, for example, and not all judicial commentators are convinced that McCain would try to engineer the overturning of *Roe v. Wade*. After all, a president can only choose the nominee, not his or her beliefs, and McCain, if put in the position to make the choice,

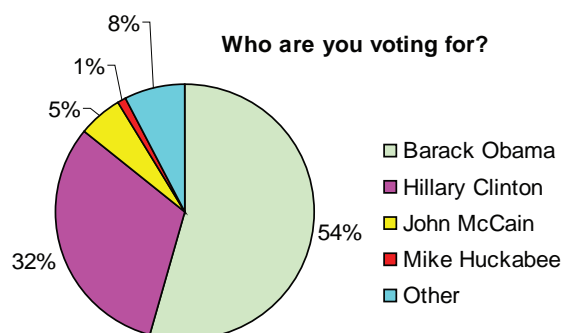
Which issue matters most to you?



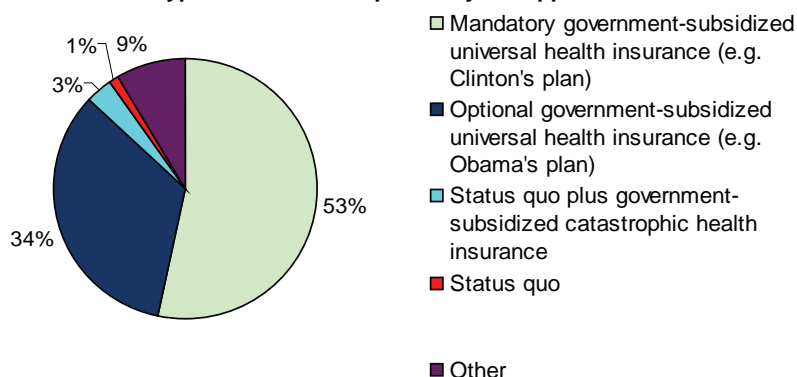
Which issue do you believe matters most to practicing doctors?



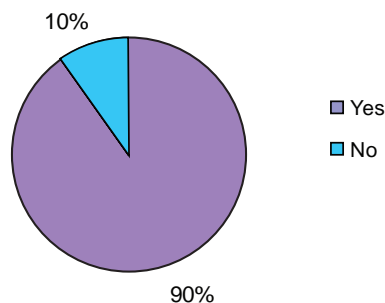
Who are you voting for?



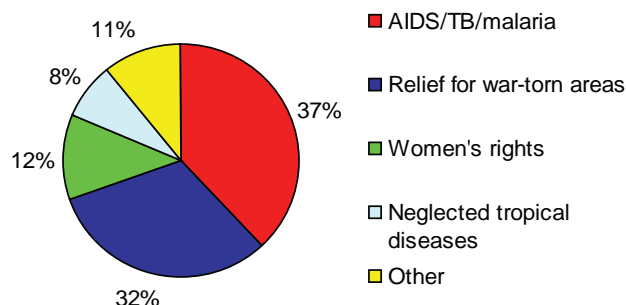
What type of health care plan do you support?



Do you support *Roe v. Wade*?



Which issue is most important to support with foreign aid money?



We conducted an informal, anonymous survey of Stanford medical students regarding their positions on health care issues raised by the upcoming election. In addition to the answer choices provided, we provided a write-in section to make room for other viewpoints from our 92 respondents. Many students support Ron Paul and a single-payer system. There was also variability in responses to the most important issue personally, ranging from immigration reform, civil liberties, and gay marriage, to the environment, poverty, and education. We thank David Craig for implementing this survey and analyzing the results.



Jon Kleinman

might feel pulled between choosing a candidate who supports campaign finance reform and one who opposes *Roe*.

Should the Court overturn abortion, however, the consequences would be significant for doctors and their patients. Freed from an overriding constitutional decision, states would be able to decide the matter for themselves. Some states would keep abortion legal in its current form. Other states might prohibit it entirely, possibly leading to battles with patients' rights advocates over what would happen in cases such as rape, incest, or endangerment of a woman's life. Unfortunately, doctors could find a changing landscape in moving from state to state. Medical students in states permitting abortion might learn the procedure whereas those in other states would not. Doctors would perform it with varying restrictions in different parts of the country. For women, clearly, access to abortion would become more a function of location than it is currently, though it is worth noting that the availability of abortion already varies dramatically from place to place.

The composition of the Court could also determine the fate of execution by lethal injection. In January, the Court heard oral arguments on a challenge to the current injection protocol. Although the case concerns only this one protocol—a mix of thiopental, pancuronium, and potassium chloride—it is used in most states, and, for that reason, the case has essentially put

the death penalty on hold nationwide. The constitutional challenge relies on the Eighth Amendment prohibition on “cruel and unusual punishment,” by citing the pain and discomfort that can accompany death by the injections.

The role of doctors in lethal injection has become central to the debate over its constitutionality. The two death row inmates challenging lethal injection make the point that the drugs are not administered by physicians. A number of similar cases led lower courts to stop executions from going forward. One of the most effective ways prison officials could reassure courts was by promising to have a doctor participate in the process. In fact, before the Supreme Court accepted the case, state licensing boards were battling with prison officials over whether doctors should be allowed to take part in executions, despite the AMA's opinion that such participation is unethical. The Supreme Court opinion and its future opinions on lethal injection will influence how the debate shakes out. If the Court seems willing to allow executions by lethal injection to proceed, provided the procedure is assured to be painless, then the call for physicians to participate could intensify.

New nominees will influence the docket as well as the decisions. With a few exceptions, the Supreme Court determines which cases it will hear. It takes four votes to grant a petition for a writ of certiorari, a common way to request that the Court hear a case. The Court turns down most petitions,



Odmara Barreto



Leslie Stewart

meaning that the first, most difficult obstacle for petitioners is just to be heard. If the Court turns down the petitioner, then the decision of the lower court remains in force, affecting the region of the country over which that particular lower court has authority.

Given the divide on the Court, one or two appointments could influence which cases the Court can hear. In January, the Court declined a writ from Abigail Alliance, appealing a lower court decision against the Alliance on access to investigational drugs. (Abigail Burroughs, who died from head and neck cancer at 21, had lobbied to be able to take cetuximab while it was still in clinical trials.) The FDA generally prohibits access to drugs before approval, except as part of clinical trials, though the agency has some special programs to provide limited access. The Alliance argued that these “compassionate use” programs accommodate only a small fraction of the desperately ill individuals who could benefit from early access, partly because drug companies cannot charge more than their cost for the drugs. The Alliance wanted the FDA to expand these programs, by allowing them to begin earlier in the FDA approval process, encouraging companies to participate, and permitting them to charge prices above cost.

Since the Supreme Court declined the writ, the issue in the case lives to fight another day. That the high-profile case could not marshal four votes to accept the writ suggests that the Alliance would probably have lost the appeal. With

a changed court, the outcome might be different. How can anyone predict how a nominee would vote on a case like *Abigail Alliance*? In a certain sense, *Abigail Alliance* brings us back to *Roe*. The basis for *Roe* was due process, the guarantee in the Fifth Amendment that “no person shall be . . . deprived of life, liberty, or property, without due process of law,” which the Supreme Court has interpreted to provide a number of rights, such as the right to marry, the right to use contraception, and the right to choose to have an abortion. In fact, the Alliance cited *Roe* in its argument.

To many judicial conservatives, the argument for a right to experimental drugs is an example of “judicial activism”—defined by opponents as the attempt to read non-existent rights into the Constitution. *Roe* is also used as an example of judicial activism, and a Republican president would likely face more pressure from judicial constituents to nominate justices who oppose due process rights to abortion, contraception, and access to experimental drugs. Still, a nominee could certainly support *Roe* and not the Abigail Alliance claim, and any choice for the court, whether by a Democratic or Republican president, might disagree with the idea of an experimental drug right. No one can predict for certain. It takes five justices to make law, but how individual justices will vote is sometimes a mystery until the Supreme Court renders its decision.



Anna Lonyai

The Hidden Cost of War: Posttraumatic Stress Disorder

Jenya Kaufman, SMS IV

Several days into my most recent rotation at the VA, a second-year medicine resident leaned in during rounds and said, “Oh, *you’re* going into psychiatry...” and lowering her voice she whispered, “Do *you* think PTSD is real?” The rest of the team was discussing a patient who was near the end of a life he had spent drinking his liver into an irreversible cirrhotic state. I can’t remember if he had been formally diagnosed with PTSD at some point during the years between Vietnam and now, but our attending was using him as an example of her observations about PTSD in veterans on hospice. It surprised me that the patient’s life history and current suffering seemed to invite the question rather than render it obsolete.

Posttraumatic Stress Disorder is an anxiety disorder that can emerge after experiencing or witnessing a traumatic event. Living through PTSD can be an overwhelming, frightening, isolating, and debilitating experience. People may feel their world has fallen apart, and they often lose hope that they can recover and lead a worthwhile life. There is frequently confusion and shame about the length of time it appears to require to recover from a traumatic episode that has left others seemingly unscathed. According to the *Diagnostic and Statistical Manual of Mental Disorders IV*, PTSD has discretely defined criteria for diagnosis, which include: reliving the event, avoiding situations that remind one of the events, feeling numb, and hyperarousal/hypervigilance. In order to be diagnosed with PTSD, one must experience symptoms within the above categories for at least one month and the symptoms must seriously interfere with leading a normal life. [1] PTSD is not unique to veterans; 3.5 percent of Americans in the general population meet criteria for PTSD in any given year. However, just as football players are more prone to orthopedic injuries, veterans are more likely to suffer from PTSD, with estimates as high as 18 to 20 percent of Vietnam Veterans meeting criteria. [2]

There is no question that there are psychological consequences of war. They have been described as far back as Homer’s *Iliad*, and many claim that the origins of today’s description of PTSD can be traced to Freud’s research on hysteria. In World War I, “shell shock” was a term used for presumed injury to nerves during combat that resulted in a soldier’s decreased fighting efficiency. Shell shock was used mainly to describe immediate psychiatric distress while still in battle. Returning soldiers from World War II experienced post-battle distress, known as “soldier’s heart,” and this manifestation of the psychological effects of trauma was an important focus when the National Institute of Mental Health was created more than 60 years ago. A specific diagnosis

associated with combat exposure, however, did not receive adequate attention until the Vietnam War. Returning troops from Vietnam displayed rates of mental illness well above the rates in the general population, the most common disorder among them still being called “shell shock.” The continued suffering and disability of the Vietnam veterans catalyzed the inclusion of discrete criteria for PTSD in the DSM-III, and the disorder finally gained legitimacy.

With so much scholarly consideration and research dedicated to PTSD in the wake of Vietnam, the persistent skepticism surrounding the disorder, even within medicine, is curious. Although an accepted disorder in the medical community, the discussion around PTSD has taken on political dimensions. It is often portrayed by the media as a pro-war vs. anti-war issue, with one side questioning the disease model and suggesting that the liberal community is using this disorder to justify its politics with science. Much of this rhetoric may be driven by resistance to any criticism of the war, which stunts efforts to further understand and treat the disorder.

The current military operations in Iraq and Afghanistan have again raised the specter of large segments of the population returning from combat with PTSD and have sparked this debate anew. Operation Iraqi Freedom and Operation Enduring Freedom are the longest sustained combat missions since the Vietnam War. According to the National Center for PTSD, research has convincingly shown that the frequency and intensity of exposure to combat is strongly associated with the risk for chronic PTSD. [3] The sustained combat in OIF and OEF has led to increased concern for the long-term mental health outcomes as compared to other post-Vietnam war operations, which were shorter with less ground troop presence. In Iraq, soldiers are required to maintain an unprecedented degree of vigilance and must be careful of civilian casualties. Dr. Christopher Hoge, director of psychiatry and neuroscience at Walter Reed Army Institute of Research in Washington, D.C., has suggested that the climate of the war in Iraq leads to chronic anxiety and stress, creating conditions whereby stress hormones are released excessively, with unknown but likely significant consequences regarding health maintenance, restoration, and coping capacity. [4,5]

The projected rise in functional impairments and psychiatric morbidity among returning Veterans can also be linked to the fact that the ratio of wounded-to-killed in action during OIF is the highest in U.S. history. [6,7] So while technological advances in medicine have made it possible to survive horrific assaults, we must now consider that the near-death experiences and disasters witnessed by these survivors puts



Ricky Tong

a greater proportion of returning soldiers at high risk for PTSD. Many of these wounded military personnel sustained traumatic brain injuries that create an increased risk for PTSD, according to a paper published in the *New England Journal of Medicine* last month. “Almost 44 percent of soldiers reporting an injury involving loss of consciousness met the criteria for PTSD versus only 27.3 percent of those reporting an injury involving altered mental status, 16.2 percent of those with other injuries, and 9.1 percent of those with no injury.” [8] Hoge goes on in his conclusion to emphasize the importance of recognizing the psychiatric complications of such injuries, because “mental health issues such as PTSD and depression have shown to be important mediators in the physical health problems of returning soldiers who had mild traumatic brain injuries.”

The statistics are frightening, but it is important to remember that PTSD is multi-factorial and complex. Initially it was thought that trauma could create pathology in anyone exposed, with equal risk for all. Now, a diathesis-stress framework predominates, and there is ample evidence that exposure to trauma is a necessary but not sufficient cause for the emergence of chronic PTSD. Thus, combat is not the exclusive factor in determining a soldier’s lifetime risk for PTSD. There are many factors at work including the unique socio-economic-cultural context that dynamically shape soldiers’ recovery and affect the trajectory of their response to trauma in the war zone over the life-course. Some will maintain a chronic level of PTSD and functional impairment for the

remainder of their lives, while others will recover to pre-deployment homeostasis or possibly even grow and mature from their experiences. As imaging technologies and genomic research improve, scientists will be more likely to be able to pinpoint individual risk, which may then lead to better treatments as well as prevention.

The increasing number of people who will suffer from PTSD has led the NIMH to increase funding for PTSD research from \$15 million to \$45 million over the last decade. [9] Much of this money is being focused on research involving PTSD in active duty and veteran populations. The NIMH has also recently strengthened its relationship with the VA sys-

tem and the Department of Defense in order to integrate the knowledge being built regarding the magnitude and nature of mental health needs related to deployment and war-associated trauma. The DoD and VA have come together and require all returning soldiers to take the Post Deployment Health Assessment within one month. This is a step in the right direction, considering that 70 percent of people who meet criteria for Acute Stress Disorder will develop PTSD. [10] Long-term studies on adaptation to trauma show that the trajectory is fluid and the prevalence will likely decrease over time if the post-traumatic environment is supportive. On the other hand, if stressful variables come into play—such as the mission being experienced as a failure, multiple deployments to combat zones, and lack of health support for returning veterans—then the lasting mental health toll of the wars in Afghanistan and Iraq may increase over time.

The intensive funding and interest in this area is relevant across fields of medicine, because chronic post-service mental health problems such as PTSD and associated psychosocial dysfunction pose a significant public health problem. Veterans with PTSD are heavy service users and have a variety of co-morbid mental and medical problems. In fact, the primary care setting is where most initial diagnoses and referrals are made. Early recognition and early intervention have been shown to reduce morbidity and the risk for chronic impairment. Further complicating the issue, modern soldiers are very concerned about being stigmatized as sick or weak: 40% of OIF/OEF soldiers with mental health problems stated

they were interested in receiving help, but only 26% reported receiving mental health care. [10] The benefits of early treatment and a supportive environment mandate that healthcare professionals put an end to a politically charged debate over a legitimate brain disorder and begin to truly support our troops by encouraging them to freely report and address symptoms they may be experiencing.

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Nina Patel

What Goes Unsaid

Kristen Whitaker, SMS II

I used to police the extraneous thoughts and powerful emotions that sometimes come into my mind while interviewing a patient. But I have come to find some comfort in them. They remind me that I am both a physician-in-training and a human being. Interviewing Mr. D one Tuesday afternoon at the Palo Alto Veterans' Affairs Hospital, I felt the tension between professionalism and personal connection, and wondered how both of these medical values could help me be of service. Here is an excerpt from our interview, as well as some of what goes unsaid.

"Mr. D, can you tell me why you came into the hospital this past weekend?"

"I guess this time it was my roommates who thought I needed to come in. But I've wanted to quit for a long time. The problem is that I can't just quit on my own. The withdrawal is unbearable." *Yes, I've heard. Acute alcohol withdrawal—abrupt cessation of alcohol exposure results in brain hyperexcitability, which can lead to seizures, delirium tremens, "the shakes," and "the horrors." It can be life-threatening.*

"Can you describe what you mean by unbearable?"

"Well, I get the shakes, really bad. I sweat like crazy and feel really panicky. I tried to quit in 2000 and again in 2002 and I had a grand mal seizure each time. I need the Valium to help me through it." *Benzodiazepines—work by potentiating the GABA-A receptor's response to GABA. Hmm... the same receptors that alcohol works on. So the best treatment that medicine has to offer is to replace one highly addictive drug with another?*

"Has the Valium been helpful?"

"Yes, as long as I have it in my system. When it wears off, I start to feel awful again. It's going to be a few more days of feeling like crap."

"That sounds tremendously difficult, Mr. D. I'm sorry you have to go through this, but I'm also glad that you decided to come in so we can help you through it. I'd like to ask you some more questions about your history of drinking and your health. When did you first start drinking?"

"Well, in Vietnam, like most of the guys who were sent there. That's when I started just about everything—alcohol, marijuana, heroin, speed. Probably some things I don't even remember. I was raised in a Mormon home, so I never touched anything before then. But in 'Nam, man, we did just about anything." *Just like my mom's brother, Uncle Bobby. Actually, they resemble each other. Same big, sad eyes, same graying beard, same height and stooped posture. Could they have met each other over there? They were about the same age—17, 18, just children. Stay focused, Kristen.*

"Do you remember what you drank and how much of it you drank in Vietnam?"

"No idea... a lot." *So did my uncle. He didn't remember much either. Or maybe he just never wanted to remember. Focus.*

"And after Vietnam?"

"Well, when I got back, I drank about a twelve-pack every day. It helped with the flashbacks, the constant second-guessing, the depression." *The summer Uncle Bobby came to stay with us I was ten years old and learning about war for the first time. Was he having flashbacks then? Did we have a word for PTSD?*

"How long did you drink twelve cans a day?" *I wonder how much my uncle drank that summer.*

"For about 15 years. Then it just didn't have the same effect. That's when I started with the vodka and I've been drinking it ever since." *Tolerance—the price you pay for self-medicating an illness caused by your own country. We have a word for induced by physician: iatrogenic. Is there a word for induced by serving your country, by doing your civic duty? I think they call it "service-related illness."*

"Have you had to increase your intake of vodka since you first started to achieve the same effect?"

"Yes, I didn't drink that much at first, but I just kept needing more and more to reduce the shaking and the sweating and the flashbacks." *That's what my mom meant when she said that my uncle was trying to feel better. Was he hurt in the war? I asked. Well, not really, Krissy. His heart was hurt. So is he trying to make his heart feel better? I asked. Yes, she said, his heart and his mind.*

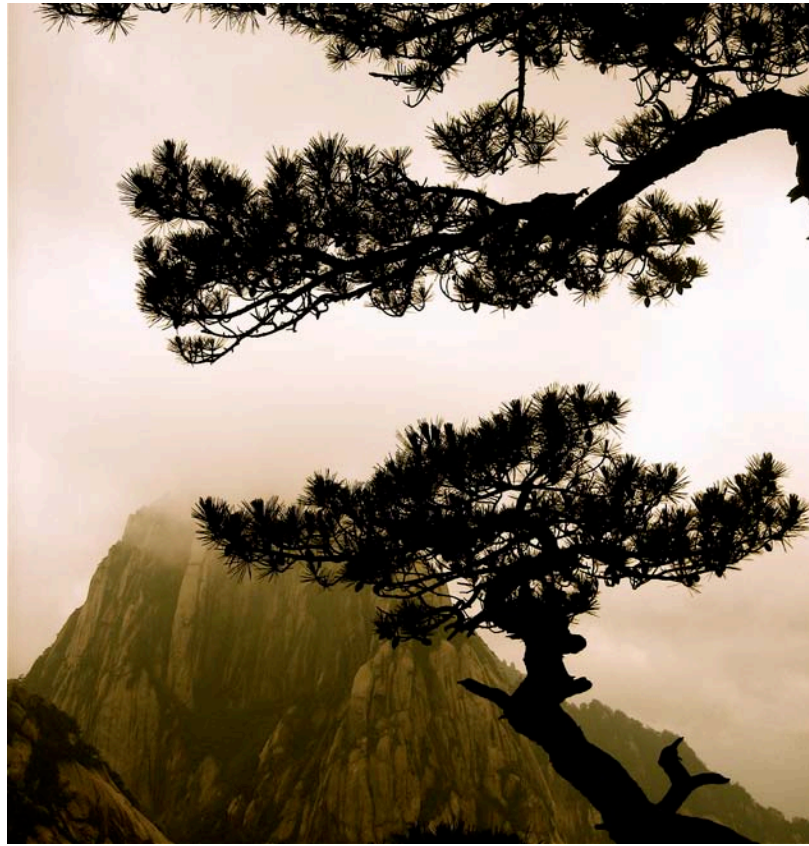
"Mr. D, were you hurt in Vietnam?"

"Well, not really. I wasn't injured." *But your heart was hurt. Your heart and mind?*

"Have you used drugs since you got back from Vietnam?"

"No, no drugs. They were legal in 'Nam, but not here. We mostly used them when we went out on Ops." *I wonder how I would have handled Ops when I was 18. I wonder how I would handle them now. Heading out into the jungle, my only goal to kill before being killed. Facing my own mortality head-on. Could I do that sober? Or would I do what Mr. D and my uncle and so many of our VA patients did to get through it? Would I take something to make it less terrifying and perhaps less real? Would I be able to quit once I came home? Or could I have become a Mr. D, an Uncle Bobby, my life forever altered?*

Yes, the answer is yes. This could be me. This could be a family member of mine. I have to remember that.



Huangshan Mountains, China

Christina Chao

Powder

Blades of the field stem
through water-glassed plain,

Untouched today, they prick
the My Lai calm in waiting.

On the cutting board,
winter's vegetable is replaced

with memory –
white like fear, dense as bone,

Steady slicing gives way to
two hands gripping steel,

the ivory log of the past
blisters into air carried

to foreign cherry blossoms
bent in withered rose bow.

Memory drifts in the backdrop
of Washington weather,

Eyes try to remain open –
bone dust is heavy as hail.

A man on the snow holds his head
through the loop of his scarf.

Christina Chao, SMS II

The My Lai Massacre was a tragedy that occurred during the Vietnam War in which hundreds of unarmed Vietnamese civilians were killed by members of the Charlie Company battalion. March 2008 marks 40 years since the event's passing.



Off the Coast

Jacqueline Ng

The Evolution of the Modern Medical Narrative: An Interview with Dr. Abigail Zuger

Blake Charlton, SMSI

From an inner city infectious disease clinic, Dr. Abigail Zuger witnessed the AIDS epidemic arrive and spread through an unwitting New York City. The experience moved her to pick up a pen. Her earlier work culminated in *Discover* and *The New York Times* articles, her later in a well-received book entitled *Strong Shadows: Scenes from an Inner City AIDS Clinic*. Subsequently she became a medical columnist for the *Times*, where she explored everything from state-of-the-art research to the ravaged healthcare of post-communist Russia. Lately, Dr. Zuger has focused on the recent proliferation of doctors qua writers as a book reviewer for the health page of *Science Times*. During all of this, she has still found time to practice and teach clinical medicine in New York. Fortunately, Stanford was wise enough to bring her west for a semester as the second Visiting Medical Humanities Fellow in English and Human Biology. Recently I sat down with Dr. Zuger to discuss why so many doctors are writing and what it means about the profession.

You've mentioned that during your training, you put writing aside despite your newspaper experience as an undergraduate and your work with Time-Life Books. You've also mentioned that you discourage residents from seeking to publish articles about their patients. What is it about publication that might be dangerous for a developing doctor?

There's an old quote; I think Alice McDermott said that "A good writer sells out everybody he knows, sooner or later." And I don't think writers are out only for themselves, but a good writer will always betray his subject to some extent, because you're trying to tell a story. You have a plot in your mind. You have a moral. You have something you want to say. And if you're writing about things that are going on in the hospital, there will be a conflict of interest, particularly because you're writing about your own patients, particularly because you're young and impressionable. You will be on the outside looking in; you put yourself on the outside looking in at yourself and at your patients. And when you're learning to be a doctor, that's not the best place to be. You have to be in there, with your patients, 100%. So I would say the current vogue of being a writer, of being a doctor all at once [is not for the

best]—there is something to be said for writing: it's great for decompressing—but writing for publication is something different all together. There's writing for yourself, and there's writing to get published and mold the way the world looks at you and your stories. And that is something I think is better left to a later stage when you are more balanced in what you are doing as a doctor. So you're not put in such a precarious position of trying to learn medicine and comment on it at the same time. Now, that said, I'm sure lots and lots of people will disagree with me. But, speaking for myself, writing just wasn't a possibility during my training.

So about the increasing number of writer/doctors these days, do you think the all-consuming focus during training might lead so many doctors to write?



<http://www.stanford.edu/dept/english>

I would say probably. But there is also the urge to be creative, which in medicine is becoming increasingly stifled by algorithms and evidence-based medicine. That, in the grossest way, limits the creative aspects of life.

One of your *Times* articles about the proliferation of MD authors prompted an interesting letter-to-the-editor by a doctor named Catherine Dubeau. She writes, "Unfortunately, the medical narrative is under threat now by the electronic medical record. I have already seen medical students and residents losing the art of following patients' stories and developing their own "history" of patients' complaints as they scroll through pull-down menus, click on check-off boxes and use word processors to copy the same note day after day. It leaves one to wonder whether this

generation of trainees will ever produce a [Jerome] Groopman or a[n] [Atul] Gawande to tell us stories in the future."

Oh, they will. Sure, they will. It's just that the narrative value of hospital charts is gone. And the biggest shame I see is not the loss of the medical notes, which were often unremarkable. But the nursing notes usually gave one most of the color of what was going on with a patient every day. Those are almost completely gone in computerized hospitals. It's dreadful from an artistic point of view, which is that a lot of the color is gone from the chart. And it's dreadful from a medical point of view because they provided such a human depiction of the

patient, and that is just gone. It's a disaster.

Do you think the appearance of so many writing doctors is in some way related to the appearance of so much new technology in hospitals?

I do think it is related. I think, on one level, it's a rebellion against the computerized pushbutton algorithms. But there were always doctors writing. A large part of it is that we live in an age of memoirists. Richard Seltzer was one of the first back in the sixties. In his piece called, "The Exact Location of the Soul," he starts out asking why a surgeon should write when there are too many words already. And there's a lot to read there. It bears reading about forty times to get to all the layers. But one of the reasons he gives for writing is that medicine can be pretty cut-and-dry unless we reach for something higher.

But you have noted that recently there are more medical narratives in print, Gawande and Groopman and so on. What do you think is the driving force behind that?

I wrote an article about this that never found publication. It was very much in the first person. And in it I explained that as far as I was concerned, doctors were writing so much about medicine because they were trying to apologize. Nowadays, medicine can be a miserable process to take part in. It can be miserable to be a patient, miserable to be a doctor. The whole thing has just spiraled out of control, and sometimes the best way to try to explain that what is going on is really not the doctors' or the patients' fault is to write. And I think many of the doctors who are writing are trying to do that, they're apologizing. I remember interviewing Jerry Groopman and hearing him say that medicine was a broken machine and how you fix it is by writing about it.

That is a fascinating observation about the apology. I think there is a lot of wisdom in it. Do you think that is why so much of medical writing focuses so intensely on the author?

I wouldn't say it's only egoism. Most medical writing should never be published; it's written as a therapeutic tool by whoever is writing it and is very legitimate in that way. And the same is true from the patient's point of view. There's much research showing that writing about illness really can alleviate some of the symptoms.

So perhaps there are two species of medical writing, that written for personal therapy and that written for publication. Do you think the two are related?

Yes, the people who can do it very well can do both. A surgeon named Pauline Chen comes to mind as just such an example.

Her book, Final Exam, an excellent book, not only got a lot of things off of her chest but connected to a lot of readers. In that way, the book is a kind of phoenix rising from the ashes of burnout.

To go back to medical narratives in the hospital, I recently read a JAMA article by a Dr. Harold Horowitz on the changing roles of attendings. Horowitz notes that when he began as an attending, he was a fount of knowledge for the residents. But now with PubMed and Up-to-date on every resident's PDA, he rarely provides facts but rather helps residents interpret those facts. What effect do you think that change has had?

It is very true that there is a huge amount of data to find. And in the past everyone was absorbed in finding the data; there wasn't much worry about what to do with it, because there wasn't very much of it. But now it's everywhere, and we have to use it to form out medical narratives wisely.

With the national debate on healthcare reform gathering steam, the coming years promise to be especially formative. As students and practitioners, we are likely to enter a medical culture in flux. Whereas previous generations inherited a fairly uniform tradition of the medical narrative—through the aforementioned nurse's notes and a slowly evolving medical culture—we are likely to inherit a plurality of medical narrative traditions. As in all societies, flux creates an opportunity for improvement or loss. That being so, our generation will face the challenge of cultivating the medical narrative despite the increasingly capricious winds of technology and policy.

For the interested, Stanford offers a range of opportunities to study the medical narrative both from the physician's and the patient's perspective. These include Dr. Zuger's Human Biology class "Writing Medicine," Dr. Audrey Shafer's medical school class "Creative Writing for Medical Students," Sharon Bray's "Writers Workshops," and the Stanford Cancer Center's seminar: "Words that Heal: A Writing Workshop for Men and Women Living with Cancer."



Aaron Wang

Banana Trees and Seatbelts, Please

Will Slikker, SMS II

I threw my sandals on and burst out of our hut in a flurry. My friends Jordan and Stan were waiting for me to start the ride. Dashing through the village, I caught a glimpse of the burnt-out campfire, which brought back memories the local villagers' rhythmic dancing of the night before. We were in the depths of Thailand's northern rainforest, among the Pa Long hill tribe people. Today, our guide, Tee, had another adventure in mind for us.

As I rounded a corner, I caught sight of the lumbering beast. It was a giant elephant with legs like tree trunks, dark, leathery skin, two-foot-long ivory tusks, and a curious, wandering trunk. Despite its enormous presence, it had a peaceful aura, radiating a calm, patient temperament.

Perched casually on top of its head was a boy who looked to be several years younger than me. He addressed us with a quick nod hello and shouted a phrase in Thai. As the elephant lowered its head for its master to slide off, I realized the boy's exclamation was actually a distinct command directed at the elephant, which the beast somehow understood.

The boy shouted something else toward the elephant and it sauntered up towards us.

Do we step out of its way or just let it proceed to stomp right over us?

The elephant continued to approach unabated, its massive height occluding the sun. Even when the animal's tusks were less than a foot away, Tee stood his ground, and, following his cue, I stood solidly next to him. (Well, I mean, somewhere in there I might have taken a half step back or something, but otherwise I stood my ground.)

I could feel the elephant's labored breathing. It was close enough to skewer me with one of its long ivory blades at a moment's notice. It didn't do any skewering though, or trampling, or any other kind of generalized mangling. I stood mesmerized by this strange creature.

Another shrieking exclamation from the elephant's master awoke me abruptly from my reverie. The boy seemed to think the beast was hard of hearing, which I found ironic considering the size of its ears.

Following the command, the elephant pulled up to the tall wooden platform next to us like a car pulling up to a fast food window. As Tee waved goodbye to us, the boy motioned for us to climb aboard.

Atop the elephant's back was a makeshift wooden bench tied on by a rope under the beast's belly. Jordan was the first to climb on, followed by Stan. When I reached the top of the platform, I realized that there was very little room on that two-person bench for another traveler. Seeing my confusion the boy walked up to the elephant and patted its neck, staring eagerly at me. I looked over at him, confused.

Hold on a sec, he's not really saying... I thought to myself, trying my best to interpret the speechless boy. *No, that can't be it.*

My fears were confirmed when he actually verbalized his suggestion, "You," he said, "Ride here." His finger was pointing at the elephant's neck.

I carefully climbed onto the elephant's back and crouched down, so my knees touched my chest and my hands could hold onto the hide.

Baby steps I said to myself, *baby steps*.

As I moved toward its neck, the elephant made small steps that launched its giant shoulder blades up and down beneath my feet. Between the uneven, moving walkway, the warning shouts of my friends, the strident commands from the master, and the periodical snorts from the trunk, it was a pretty tense situation. But I have to admit, seeing me waddle down the back of an elephant like a six foot two inch squatting penguin must have been a pretty hilarious sight.

I eventually made it to the neck and threw my legs over each side, situating them between the animal's ears and the back of its bulbous head. I looked back over my shoulder to see Jordan and Stan torn between congratulating me and crying with laughter. They were the ones safely seated back in the designated sitting area.

With a commanding view from the front row, I thought I had the best seat in the house. But as soon as the lumbering giant started to move and its shoulder blades began to jolt upward, I remembered that I was thirteen feet off the ground and sitting on top of a three-ton wild animal. Even less comforting was looking down over the elephant's head to find two ominous looking tusks curved upward towards my face.

We headed downhill through the village. We squeezed between huts and the edge of the bench crashed into rooftops as the hulk swayed from side to side. Stan was almost taken out by one of the awnings, but truthfully, I wasn't paying much attention to the other passengers. I was too busy trying to hold on for dear life.

See, when you observe an elephant from a distance it appears to have a fairly smooth stride. While riding on the neck of one, however, I found this to be an illusion. Each step was jarring, the animal lurching forward and then halting to a stop every two seconds.

Obedying commands from the boy walking ahead of us, the elephant headed down a dirt path towards a clearing where tall grass encircled a lone thatched hut on stilts. As dusk approached, the sun cast slanting shadows on the hut, elongating the outline of its rustic stilts and leafy patterns from the tops of tropical trees.

The jungle began to close in around us and form a canopy

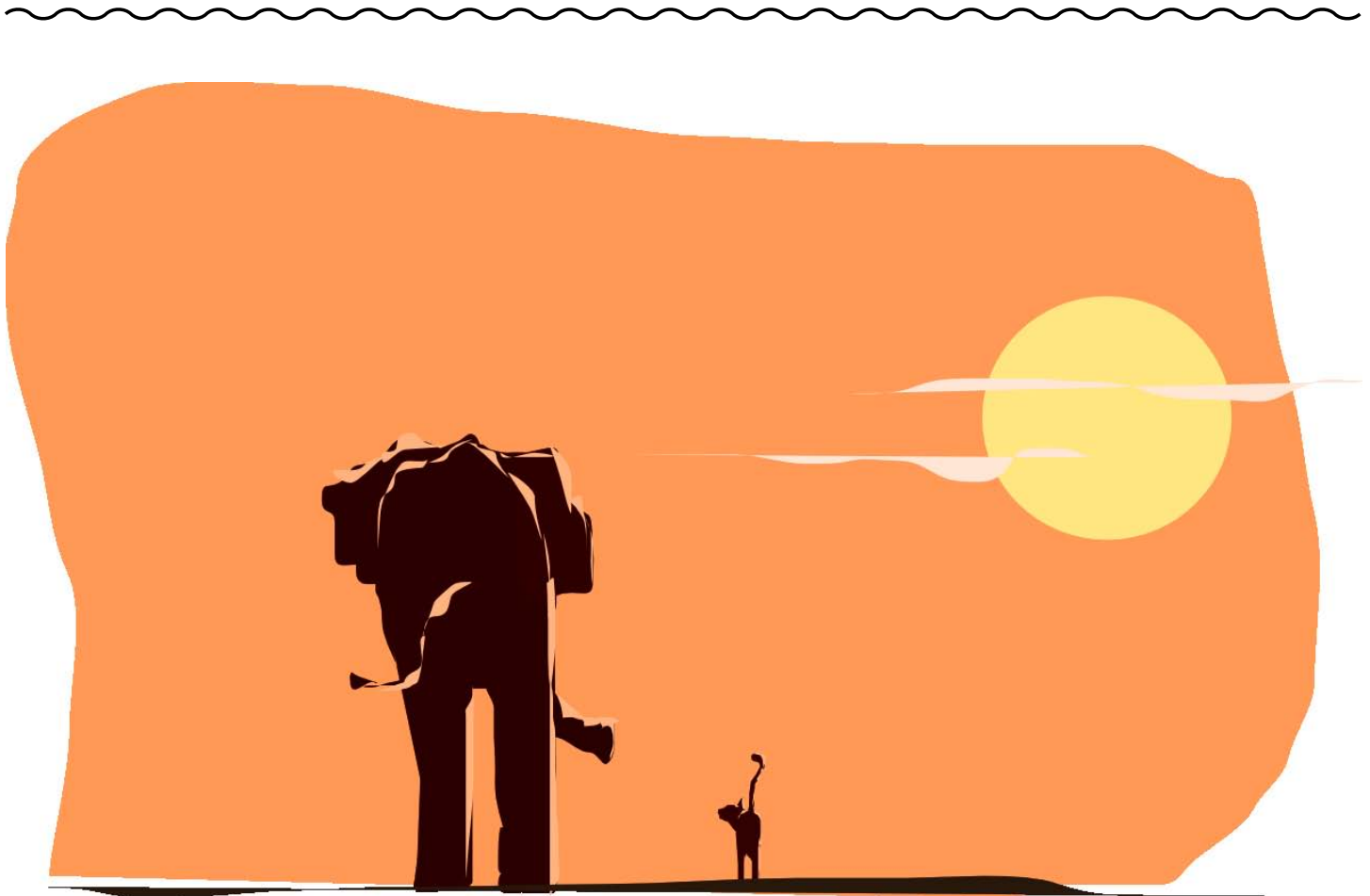
over our heads as we headed into the tunnel of entangled branches. With an unexpected lurch the elephant grabbed the nearest banana tree, wrapped its trunk around it, and proceeded to rip the entire tree out of the ground. As its head thrashed about violently, I tightened my grip around his neck with my legs. The elephant cleverly twisted his trunk around the uprooted tree folding it in half and somehow sticking the entire five-foot long tree in his mouth at one time. After this quick snack we moved on.

We reached the top of the hill and I looked down the other side in disbelief: the path downhill looked too narrow for anyone to descend. Now we were about to head down it on the back of an elephant! I was dropped six feet with every step and expected to start rolling at any time. A huge tree blocked our path about halfway down, which I was sure would force us to turn back. But no, without hesitation, the elephant scaled the huge trunk and crashed its mighty weight down on the other side, just about knocking us all off. We finished the rest of that mountain path just glad to be in one piece.

I was just starting to get the hang of things when we

stopped at a small stream. The elephant's head lunged down toward the stream, nearly sending me sailing over the top of its brow. The elephant proceeded to inhale water into its trunk, aim its water laden snout back over its shoulder, and successfully douse my entire left side with a high pressured burst of water. I was suddenly very wet and a bit stunned, but that didn't keep us from all having a good laugh about it when I stopped choking. As soon as we caught our breath, the elephant took the liberty of dousing my other side. So here I am sitting on an elephant's neck, uncontrollable laughter erupting from the guys behind me, dripping wet from an elephant water cannon in the middle of the Thai jungle. It was one of those moments where you shake your head and wonder:

How did I get here?!



Elephant and Cat

Danny Shen

Leader in Medicine: Dr. Sarah Donaldson

Sean Sachdev, SMS I

Dr. Sarah Donaldson is the Catharine and Howard Avery Professor and Associate Chair in Radiation Oncology as well as the Chief of the Radiation Oncology service at the Lucile Packard Children's Hospital. As a world authority in the use of radiation in the treatment of patients with cancer, she is most widely recognized for her work in pediatric radiation oncology, in which she has contributed immensely to the management and treatment of children with Hodgkin's disease, retinoblastoma, and rhabdomyosarcoma. In addition, she is recognized as an authority in the use of radiation for lymphoma of the eye and orbit, breast cancer, as well as for certain benign diseases. Former president of both the American Board of Radiology and the American Society of Therapeutic Radiology and Oncology, she currently serves on the Board of Directors of the Radiological Society of North America. She has received numerous honors and awards including the Marie Curie Award of the American Association for Women Radiologists, the Janeway Medal of the American Radium Society, and the Henry S. Kaplan Memorial Prize for Teaching. She has also received gold medals from the del Regato Foundation, the American College of Radiology, and the American Society for Therapeutic Radiology and Oncology and currently, she is a member of the Institute of Medicine.

Author's note:

I interviewed Dr. Sarah Donaldson on February 7, 2008, in her office in the Stanford Cancer Center. Thanks to the help of a resident, I arrived at the department hallway, about 20 minutes early—but I had no problem spending the extra time, as in front of me was a tremendously inviting vista of Radiation Oncology posters begging to be explored. Among the posters, I found many that described Stanford's historic role in pioneering the field of radiation therapy, better known now as "Radiation Oncology." Even as a first-year, it was hardly a surprise to discover that another Stanford department had made pioneering contributions to its field; still, it was awe-inspiring to see the extent of its accomplishments, including the creation of the first medical linear accelerator in the Western hemisphere. Another poster displayed a 1961 *New York Times* clipping describing how Stanford cured a patient with Hodgkin's disease when it was considered invariably terminal. It described, with vivid excitement, how cancer scientists at a national conference were finally able to use the "c-word" to describe the future—"cure."

Indeed, from Henry Kaplan to Saul Rosenberg, Stanford faculty members have made amazing advancements in the treatment of various kinds of cancer, pushing the limits of therapy further. And where Kaplan and Rosenberg left, Sarah Donaldson has continued the tradition. If many cancers, particularly pediatric cancers, are considered to be nearly treatable today, it is in part due to the patient diligence of clinician-scientists like Dr. Donaldson—as can be attested to by her spot on the Stanford "Milestones in Cancer Research" timeline, where she is noted for having helped achieve a 96 percent survival rate in children diagnosed with Hodgkin's disease.

As a prolific scientist, Dr. Donaldson's accomplishments and publications have been rightfully recognized and featured all over the world. In addition to being the president of two national medical organizations, she has garnered numerous prestigious awards and medals. Her picture and name are ubiquitous around

Stanford—whether you punch in the URL to the Stanford Cancer Center website or walk into Lane Library, where she is currently featured in the library's latest lobby exhibit.

But a person is always cumulatively more than the sum of his/her actions or accomplishments. My interview with Dr. Donaldson revealed what an enthusiastic, humble, and astute clinician she is. I could tell within minutes how confident she must be in approaching difficult clinical situations and how her wonderful sense of humor must be a relief to her young patients in the midst of their ailments.

How long have you been practicing medicine since after your training?

I finished training in 1972, so... 36 years.

If you could look back to your earlier days as a medical student or even earlier, how did you end up where you are now? What motivated you to pursue Radiation Oncology as your specialty? Why Pediatrics?

Traversing my path to where I am now probably would not have been possible without the help of a tremendous mentor who challenged me to push myself. After graduating from nursing school in Oregon, I began working as research nurse for Dr. William Fletcher, a cancer surgeon. While working with him I became heavily involved in his research, becoming his data coordinator, and also working with him in with the operating room, the clinic, and the tumor board.

One day, he asked me, "Why didn't [you] apply to medical school?" That was not an easy question to answer, but I came with up with what I thought were several strong reasons. First of all I was a girl; secondly, I might have been too old for it [Dr. Donaldson was 25 at the time]; third, I didn't have enough money; and four, I wasn't smart enough.

He immediately rejected each of my reasons. As an alum-



Sarah Donaldson

nus of Dartmouth Medical School, he told me he knew the school was currently trying to recruit women. Secondly, he said, “Ten years from now, you will be ten years older whether or not you go to medical school.” As for money, “You can get a scholarship, financial aid, or a loan.” And finally, as to whether or not I was smart enough, he asked me if I thought I was more experienced than the panels and counselors of the admissions committee. “Well, no,” I replied. “How can you decide who’s a suitable applicant, then?” he asked.

Incidentally, a short time later, a grant for a project that we were working on came up for renewal. He insisted that I go defend it, claiming he was “unavailable” at the time. Moreover, he said, “You know the project better than anyone else.”

So, with a great deal of trepidation I flew to New York and successfully defended the grant for the project. At Dr. Fletcher’s request I also visited a few of the east coast medical schools that he had told me about and surprisingly fell in love with Dartmouth’s beautiful campus and location. Finally, I applied to Dartmouth and three weeks later, found a congratulating letter of acceptance in my mailbox.

After my first two years at Dartmouth, I spent my clinical training years at Harvard. At first, I

thought I would specialize in surgery because of how much I had loved doing surgical research [with Dr. Fletcher], but I thought I might love medicine as well. I was offered a surgical training spot and Dr. Francis Moore, surgeon at Harvard, assured me that the spot would be held for me even if I wanted to try medicine for a year.

So, taking him up on this great offer, I ended up at the University of Washington for my internship. Afterwards, I went back to my mentor, Dr. Fletcher, for advice. He told me about radiation therapy and its exciting future and instilled some excitement about it in me. I knew that surgery would have lifestyle constraints somewhat incompatible with my hobbies and active lifestyle, so I decided if I wanted to be the best physician possible, perhaps I should consider this budding field. I ended up applying

to Stanford for training, loved it, and stayed here ever since.

Eventually I took a year off to do a pediatric fellowship at the Institut Gustave Roussy in France, after which I became more familiar with pediatric oncology.

Why did you go into academics?

I love working in academics. It entails working in a brain-stimulating environment in which I am surrounded by smart students and residents who[m] I love helping teach and train. I think this, plus the level of expertise and the kinds of things we do in this department makes my job both stimulating and dynamic.

In your opinion, what have been the most difficult or challenging aspects of your career as a pediatric radiation oncologist?

I think the most difficult aspect would be striving to improve cure rates while still ensuring we maintain good quality of life in our patients. So the real challenge, here, is to improve survival rates without compromising any aspects of the patient’s quality of life—that is my goal.

What have been the most rewarding aspects?

In addition to those I’ve mentioned earlier, I think a really rewarding part of my career involved a stint as Trustee and then as President of the American Board of Radiology. The board, as you may know, is in charge of defining the curriculum as well as mapping out future areas of growth for Radiology and its subdivisions [Radiation Oncology is represented in the ABR].

When I was president, I felt I had a tremendous opportunity to make an impact on my field and I worked hard to do exactly that. It was a bit tough trying to maintain high standards for education and qualification while pushing for further growth, but I felt it was necessary to keep us in the cutting edge, and I think I successfully made a significant impact.

What are your interests outside your career?

I have several. I love to bike, walk, hike, exercise and give dinner parties. I also love spending time with my residents. In fact, only recently I joined a gym with some of the residents so we could exercise together, a good way to get to know them better.

Do you have any advice for medical students?

I would say: savor every moment. My medical school education encompassed some of the best years of my life, and you’d be surprised at how quickly those medical school years can pass. Make medical school exciting; love learning every fact you are exposed to and pay attention to the details. What may seem like the most insignificant detail in anatomy may one day turn out to be the most important fact needed in an important clinical situation. But don’t do it just because you have to; do it because you want to!

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