

THE SCOPE

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Dream Job: Brain Surgeon

By Audrey Srkins

The Brains Behind the Brain Surgery

Ever thought about finding a lucrative, fulfilling, high-status profession far beyond the reach of the average man or woman? Ever thought about brain surgery? Well, think again.

A neurosurgeon studies for an absolute minimum of 14 years before being legally qualified to poke inside someone's head. But even after four years pre-med, four years MD and six years of residency, many neurosurgical candidates cram in a two-year master's degree and follow their residency with a one- to two-year subspecialty fellowship, if not significant Ph.D. research in neuroscience. And if you think that's a long haul as an impoverished student, try doing it while all your med school buddies are living large on GP salaries.

On the flip side, the patient having his or her head examined probably feels better knowing that the guy wielding the knife put in 20 years for the privilege. But 20 years...isn't that a bit much?

"Absolutely not," says Dr.

Deon Louw, FRCS, a practicing neurosurgeon since 1994. "We need that kind of double-Darwinian selection process so only the strongest survive. You don't want the unskilled fiddling with peoples brains."

In Dr. Louw's experience, becoming a good neurosurgeon isn't about being the smartest guy in the room, which is well nigh impossible anyway when all your peers are mental giants. "It's not just about scholarship. People don't realize the strenuous physical demands of the job. It's common to put in long hours in the OR, standing very still, performing delicate technical tasks with every ounce of dexterity you can muster. That takes stamina."

So what makes neurosurgery a dream job? "The rewards are great. To make a diagnostic home run in this highly competitive arena is enormously self-validating. Finding you've developed 24-carat fingers performing a particular procedure over time is truly satisfying. And just imagine the life-changing results one can achieve with patients. The gratification of shaking the hand of someone who was formerly paralyzed

is incomparable."

Add on the fact that neurosurgery is one of the most prestigious and highly paid professions in existence (you could become a millionaire), and maybe 20 years isn't so long after all. "Certainly the upper echelons of the profession enjoy great status and wealth," agrees Dr. Louw, "but that's attainable faster and easier in other branches of medicine, and at far lower personal cost."

For Dr. Louw, the critical difference in choosing neurosurgery was the philosophical implications. "Everything that's interesting about humans, from a Brahms' symphony to weapons of mass destruction, is a function of the brain. To delve in, to try and dissect the complexities of the mind without having a higher intelligence than we have, that's formidable. We don't call the heart, or the colon, the seat of the soul. It's the brain. Can you conceive of anything more fulfilling than trying to crack the code of the final frontier?"

Check out Salary.com's.



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Interview Preparation (Part1): Interview Advise Column

BY JEREMIAH FLEENOR, MD, MBA

SEPTEMBER 5, 2007

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YOUR DEDICA-
TION AND IN-
VOLVEMENT IN
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When I look around, everything tells me fall is in the air: school is back in session, the weather is becoming slightly cooler and the smell of OChem lab lingers on my clothes. If you're half the dork I am, the smell of a new textbook is a welcome aroma. It represents a fresh start and being one step closer to becoming a physician.

All of these indicate there is another interview season upon us. Accordingly, this two-part series is dedicated to helping prospective medical students prepare for upcoming interviews.

Do I really need to prepare?

This is a fair question. We all have multiple demands placed on us and we must make wise decisions as to where we allocate our most precious resource: time. Is it really appropriate to dedicate time to something that is months away and is seemingly just a "conversation?" After all, I have to maintain a stellar GPA, gain work experience, balance my personal life and try not to go crazy in the process. As the title of this column indicates, the answer is yes.

While the interview is, in many ways, just a "conversation," it only becomes so once you have put

in the work required to build a solid foundation. If this foundation is lacking it will be difficult to have a productive interview. There are numerous time constraints and nuances that make the medical school interview very challenging.

For some of you, this may be the first real interview you have encountered. It would be a mistake to think of it like an interview for a job at a fast food restaurant or a coffee shop. Nor is it like an undergraduate entrance interview. It is much more akin to a job interview for a highly paid professional position. After all, you are seeking admittance into a program that, once completed, will allow you to hold one of the most respected positions in our society. It's a big deal.

At the risk of sounding paternal, this is not the time to try and "wing it." It is incredibly difficult to get to the interview stage. You will be best served by being as prepared as possible, so you can realize your goal of getting into medical school.

Here is the bottom line: interviewing is a skill. It's just

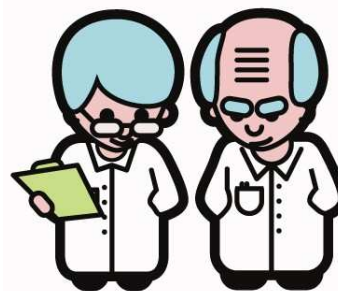
like riding a bike, making new friends or succeeding in a class. There are certain unique concepts that are important to success and utilizing these concepts takes practice.

As you see one more thing added to your plate, please don't lose hope. General preparation for your interview might not be as hard as you think.

Gathering Information

One of the most important initial preparations is discovering what you bring to the table. What qualities will carry you through medical school and contribute to your becoming an excellent physician?

In essence, this is the material you will convey during the interview. It is the information you are using to substantiate your candidacy. I view each relevant experience or characteristic as a piece of gold. Gathering usable information is like mining. It requires spending time to take an inventory of who you are and what you've done in life.



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Once you've collected this information, sift through it and single out the most relevant and important facts. These will best demonstrate how and why you will make an amazing medical student and future physician.

Unfortunately, there is far more detail on the subject of gathering your personal information than this forum allows. Nevertheless, here are a few categories to help you get started in your quest for gold:

- * List your strengths and weaknesses.
- * List the reasons why you want to be a doctor
- * List your travels and the important things you learned from them
- * List the challenging times in your life, how you dealt with them and what you learned
- * List your hobbies or extra-curricular activities
- * List the positive things that make you unique

Organize It

One of the most daunting facts we face during the interview process is the realization that an interviewer could ask almost any question. Can you imagine trying to prepare for a million dif-

ferent questions? It's as overwhelming as it is impossible. Fortunately, you don't have to attempt this feat. It is true that a million different questions can be asked, but they all condense quite nicely into a few broad categories. It is the formation of these categories that allows you to handle the sea of variability encountered during an interview.

Categories are simply mental constructs for grouping similar pieces of the personal information you collected from your past (the gold). The reason for grouping personal information is to make it easy to access during the fast pace of an actual interview. For example, here are some real medical school interview questions to help demonstrate the point.

- * Who is a person you would invite to dinner and why?
- * What are three adjectives that best describe you?
- * What is a symbol that typifies you as a student?

These are all very different questions but each fits nicely into the single category of Personal Values or Characteristics. The interviewer could go on to ask 10 more similar questions and you could easily answer each just

with the information you collected and placed in this category.

Again, there is much more detail that goes into the process of category formation but here a few ideas to help get the process started:

- * Abilities
- * Accomplishments
- * Personal Values
- * Hobbies

Feel free to adapt, combine or rearrange these categories to best fit your needs. Category creation is largely determined by the way you think, as well as how you want to organize and access your personal information. The categories you choose will likely be different from the choices of the applicant next to you.

In The End

The new school year offers many great opportunities: the chance to learn, meet new friends and come one step closer to realizing your dream of becoming a physician. The interview plays a large role in that process and preparation is the key to success. Use the above steps to help get started, and make this interview season your last!

"Never discourage anyone... who continually makes progress..."
Plato (427 BC
- 347 BC)



What is Neurosurgery?

Neurosurgery is a branch of medicine that deals with the surgical treatment of problems affecting the brain, spine, peripheral nerves and the arteries of the neck.

The word neurosurgery is derived from the words 'neuro' (nervous system). Neurosurgery is therefore the discipline of treating neurological diseases with surgery.

What is the nervous system?

The nervous system is formed by the Brain, Spinal Cord and the Peripheral Nerves.

The brain is the command center of the body; our movements and our sensations as well as our understanding and speech.

Peripheral nerves bring the information from the eyes, ears, face, arms, legs and the rest of the body to the brain.

They also take the orders from the brain to the muscles of the face, arms, legs and the rest of the body. This allows us to speak and move.

These nerves act like electric wires that take information to and from the brain.

On their way to and from the brain most of these cables pass through the spinal cord, which is protected by the spine and the ver-

tebrae.

The brain contains and is surrounded by special fluid known as cerebro spinal fluid or CSF. This fluid acts as a shock absorber. The cavities inside the brain that contain this fluid are known as ventricles.

The brain depends on the blood to give it oxygen and sugar; four major blood vessels take the blood to the brain. Two are located in the front and are known as carotid arteries. The two in the back are known as vertebral arteries.

The spine is formed of vertebrae. These are the solid building blocks of the spine.

Disks are softer and smaller than vertebrae. They are located in between vertebrae. They allow the great mobility of the spine.

Nerves take off in between the vertebrae. They are located in between vertebra. They allow the great mobility of the spine.

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Nerves take off in between the vertebrae to go to the arms, chest, abdomen, pelvis and legs to convey the messages of the brain and to

bring back different sensations to the brain.

What is The Role of The Neurosurgeon?

Neurosurgeons train an average of 6 to 7 years after finishing medical school.

Because neurosurgeons have extensive training in the diagnosis of all neurological diseases, they are often called upon by emergency room doctors, neurologists, internists, family practitioners, and osteopaths for consultations.

Frequently patients are sent to neurosurgeons for consultation and to help the referring physician decide if an operation is needed or not.

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To help with these decisions, it is important for the patient to bring the results of any previous medical tests to the consultation. This includes scans, blood work, ultrasounds, nerve studies, EEGs, and the like.

Thanks to advances in technology and techniques, treatment of neurological diseases has become more successful and safe.

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Diseases of the brain and its blood vessels

Neurosurgeons are trained to take care of head injuries.

They are able to take blood clots out of the brain caused by accidents or hypertension.

They are able to take out brain tumors and direct the treatment of such tumors.

Blockage in the drainage system of the CSF can lead to accumulation of this fluid and increase pressure on the brain. This is known as hydrocephalus and could lead to death. Neurosurgeons are able to divert the fluid from the brain to the abdomen or blood system. These operations are known as ventriculo-peritoneal and ventriculo-atrial shunting.

Aneurysms and arteriovenous malformations (AVMs) are abnormalities of the blood vessels of the brain. They can rupture and cause bleeding in and around the brain. They can also compress the brain causing paralysis and seizures.

Recent studies have shown that partially blocked carotid arteries can incise the risks of strokes. Neurosurgeons are trained to open such blockage. The operation is known as 'carotid endarterectomy.'

Seizures that cannot be controlled with medication alone may be amenable to treatment with surgery. Operations to take the abnormal part of the brain have been devised to control seizures. Other operations to place a stimulator of the vagal nerve in the neck have recently been approved for the control of seizures.



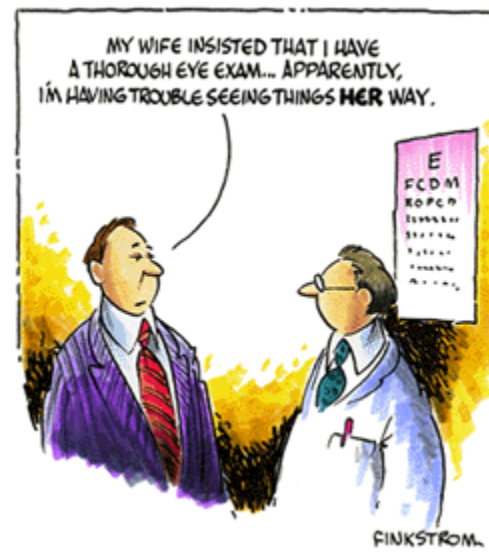
Diseases Of The Spine And Spinal Cord

Neurosurgeons are also highly trained in the treatment of spinal cord and spinal problems.

They are able to take tumors from the spinal cord or the spine and direct further treatment if needed.

They are also able to take care of disk problems that may result in severe neck, arm, back or leg pain.

They can also take care of spinal cord injury and fuse broken backs and necks.



Diseases of The Peripheral Nerves

Neurosurgeons are also able to take care of peripheral nerve problems.

One peripheral nerve problem is carpal tunnel syndrome, where a nerve is pinched at the wrist, resulting in numbness and weakness of the hand.

Cubital tunnel syndrome is another common condition treated by neurosurgeons. In this syndrome another nerve gets pinched at the elbow also causing numbness and weakness of the hand.

They can also treat tumors of the peripheral nerves, and they can repair nerves cut during accidents.

Pharmacy debate: Refusal to Fill

April 22, 2007

Pharmacists' refusal to fill legally written prescriptions has recently become a topic of debate among healthcare providers, employers, lawmakers, and the general public.

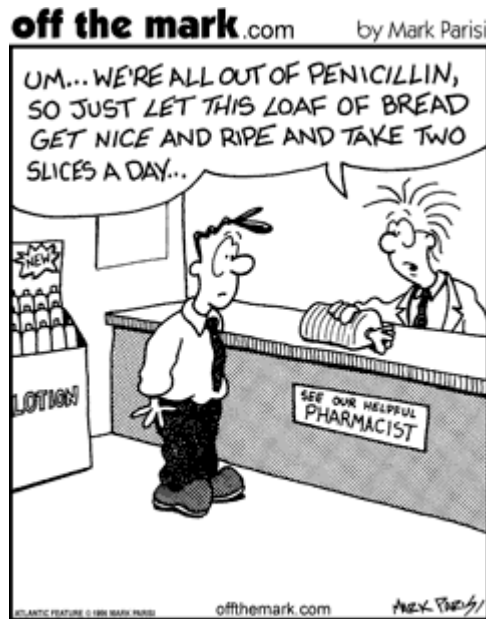
The issue is often framed as a question of patient rights vs. pharmacist rights, due to the public controversy over the emergency contraceptive "Plan B" which has unfolded over the past decade. However, the issue carries broader implications, extending to drugs intended for abortion or immediate post-abortion care, lethal injection for use in the potentially abused medications such as narcotics.

The stakes are so high for interested parties that states across the country have been pressured to take a position for or against pharmacists' refusal to fill through legislation and policy changes. As of November 2006, five states (AR, CA, GA, MS, SD) have chosen to codify the right of a pharmacist to refuse to fill a prescription on moral grounds, while four (IL, MA, NC, PA) have passed legislation requiring pharmacists to fill or transfer certain prescriptions.¹

On March 23, 2007, Washington became the 5th state to take a stance against refusal to fill when their Board of Pharmacy amended policy to require that pharmacists make a good faith effort to fill any legal and medically appropriate prescription.² At the same time, the Board set standards defining and mandating professional behavior in cases when declining to fill is unavoidable. Specifically, pharmacists may not destroy or refuse to return a lawful prescription, violate patient privacy or rights under federal anti-discrimination laws, or intimidate or harass a patient.

Some states' laws are broad in scope,

applying to all medications, while others apply only to certain controversial prescriptions. Unfortunately, in each of the states mentioned above one group loses out, with the needs of either patients or objecting providers remaining entirely unaddressed.



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For patients wishing to fill a controversial medication, the inability to access a willing healthcare provider is a barrier to care. Sometimes that barrier can be overcome by simply seeking out an alternate care provider. In other cases, no alternate is available. Some patients may be unable to access an alternate due to personal limitations such as transportation, insurance coverage, finances, prior time commitment to an employer, or lack of knowledge about where and how to access alternate care.

As with emergency contraception or pain medication, timely access to medication may be crucial, so a temporary delay may be undesirable, despite the presence of other accessible medication providers. Regardless of the feasibility of seeking care else-

where, many patients are simply upset that a third party would have the power to refuse to fill a valid prescription when they have a legitimate medical need.

Often, refusal to fill is an issue of professional discretion, basic moral freedom, or practice of religion. Some practitioners feel that they should be able to decline any prescription for any reason because imposition of any limitations would impinge upon their professional discretion. This is a legitimate concern, as even legally written controversial medications may be inappropriate due to medical contraindications.

Others feel that because their license is on the line every time they fill a prescription they should be the one to decide when not to fill a medication. Independent pharmacy owners and those who have chosen to practice in religiously affiliated healthcare systems may be especially adamant about the right to determine their own scope of pharmacy practice, limiting it to those items which they can dispense in good conscience.

A mandate to participate would harm some practitioners, forcing them to choose between religious or moral convictions and their perceived professional duties. Where religious freedoms are denied, such legal statutes may be unconstitutional. Ironically, such laws could make lawbreakers out of otherwise good practitioners who refuse to stand down on the issue. The situation is especially frustrating for providers with religious or moral objections, as many entered the profession before the advent of controversial medication such as emer-



gency contraception and are now confronted by a dilemma they could not have foreseen.

While some pharmacists are adamant about the right to refuse to fill a legally written prescription on moral grounds, there is no consensus on the issue within the profession. Many pharmacists disapprove of refusing to fill a prescription on moral grounds, citing that it is an unprofessional imposition of one's personal morality on the patient. A handful believe that this offense is egregious enough to warrant dismissal from the profession.

Others support the right of a pharmacist to refuse to fill so long as the patient is able to obtain the medication elsewhere. It may be considered essential that the medication be provided by someone on-site, or acceptable to refer the patient to a provider at a different location.

To further complicate matters, individual pharmacists may be willing to accept some moral objections, but not others. For example, most pharmacists consider it not only acceptable but morally responsible to decline early refills on narcotic medication. For no definable reason, others may be willing to accept religious objections

when it comes to abortifacients, but not when it comes to the emergency contraceptive, Plan B. The only uniting thought seems to be disgust and frustration at the negative media attention brought on the profession by the refusal to fill issue.

Refusal to fill will continue to be an issue until controversial medications are readily available to those who seek them. To those who see refusal to fill legislation as an easy fix – on either side of the dilemma – I submit that it is no fix at all. Only by making an abundance of willing providers available to the public can we truly eliminate this dilemma.

Instead of berating those who do not feel comfortable dispensing controversial medications, we should be working to improve the number of access points. Prescribers of known controversial medications can help improve patient access by suggesting to their patients at least one pharmacy that is known to stock and dispense the prescribed medication. If no local dispensing sites are known, in-office dispensing should be considered.

Pharmacists can help by making themselves known to key providers as dispensers of controversial medications and by placing themselves on provider lists where they exist, such as the national Plan B registry administered by Princeton University.³ Development of local provider registries by public health departments or public minded healthcare providers can also promote access to controversial medications.

Those of us who gladly dispense controversial medications need to step up and announce our presence. Only when the public knows who we are and how to access our services will the controversy be over.

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“PPMS MEMBERS HAVE LOTS OF FUN AT THE VOLUNTEER EVENTS HELD THROUGHOUT THE SEMESTER”

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Sun	Mon	Tue	Wed	Thu	Fri	Sat
16	17	18	19 Give kids the World	20 Meeting!! UNO's	21	22
23	24 Chili's Fundraising	25 Feed the Homeless	26 Ice Skating	27	28	29 Heart Walk
30	1	2	3	4 PPMS Meeting!!!	5	6 Disney Cross Country
7	8	9 Shepherd's Hope Orienta- tion	10	11	12	13 Pre-Health Dinner
14	15	16	17	18 PPMS Meeting!!	19 Halloween Party	20 Medical Re- cords, Habitat Humanity
21	22	23 Feed the homeless	24	25	26 Boggy Creek	27 Boggy Creek

Susie's Corner—Pre Health Professions Advisement

The Pre-Health Professions Advisement Office will have blocks of time the office will be closed for the fall. Please be patient as the application packets are being completed. This is a long process, and the whole office is working hard.

however, is to provide advisement on all aspects of the application and admission process.

Pre-Health Professions Advisement

The Pre-Health Professions Advisement Office (PHPAO) serves as an important link between you and the professional schools you seek to enter. While this office is not your first stop for academic faculty member, can further assist you with questions you may have about academic matters. The primary focus of this Office,

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