NETLINES

A UK based medical student has put together a useful resource at www.prader-willi-syndrome.co.uk for those wanting to know more about the rare congenital disorder Prader-Willi syndrome. Some of you may know a little about the condition, but a quick stroll through this site (and it does not take long) will make you a little wiser. It is not an in-depth review of the topic, just a basic summary. Small, easily digestible sites such as this one can sometimes be more effective than a large, complex resource.

The internet is a powerful and democratic tool, allowing the free flow of information and knowledge. The clever idea behind the news portal http://doctorworld.net/ is that it allows doctors to share news stories, websites, and sources with everyone else. A voting system allows items to gain more prominence or be buried, according to how popular they are. You can register with the site and develop your own customised page or just log on to see what is there without needing to register. If you get stuck, the site has an excellent and detailed help section.

A very useful UK site that looks at intellectual disabilities is at www.intellectualdisability.info. With input from the Down's Syndrome Association and a mental health unit, it covers an excellent range of topics. The site comprises a large number of well written articles by health professionals and experts from other fields, covering clinical and family issues. As the site is mainly text based information, good navigation allows readers to easily drill down to an article of interest. This well produced site provides a lot of information about intellectual disabilities and is clear and easy to read on screen.

The global initiative for chronic obstructive lung disease (GOLD) has an impressive site at www.goldcopd.com, with the latest guidelines, PowerPoint presentations, the basics of spirometry, and patient oriented material, among other information. Sensibly, the number of documents is not large, meaning that users can quickly run through the publications without feeling overwhelmed by information. The site's good navigation makes it easy to pick out relevant sections.

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We welcome suggestions for websites to be included in future Netlines. Readers should contact Harry Brown at the above email address

MEDICINE AND THE MEDIA

Doctor takes "march of shame" to atone for drug company payments

One US doctor has severed all his ties to drug companies and come out in a blazing public attack on industry funding of medical education. **Jeanne Lenzer** and **Shannon Brownlee** report

A US psychiatrist has vowed to go on a "march of shame" for payments he received from a drug company in return for medical education talks he gave to other doctors. He now promises to give free "undrug" talks to reverse the effects of the "inappropriate prescribing" he may have caused.

Writing in the *New York Times* (www.nytimes.com, 25 Nov 2007, "Dr Drug Rep"), Daniel Carlat, assistant clinical professor of psychiatry at Tufts School of Medicine in Boston, has given a candid account of his role promoting the antidepressant venlafaxine (marketed as Effexor XR in the United States by Wyeth Pharmaceuticals). Carlat was flattered when a Wyeth drug representative asked him in 2001 to give talks to doctors about the drug for the treatment of depression. It didn't hurt that he would be paid $500 (£250; €350) for a one hour talk over a free lunch—and $750 if he had to drive for an hour.

Carlat, who specialises in psychopharmacology, says he didn't believe at first that he was doing anything wrong when he agreed to give the talks. He was familiar with studies showing that venlafaxine, a dual reuptake inhibitor that increases concentrations of serotonin and noradrenaline (norepinephrine), might be more effective than the selective serotonin reuptake inhibitors. As he had already prescribed the drug to a few patients with some success, he reasoned that he would be doing nothing unethical by talking about the drug's benefits.

You can almost smell his sweat as he quivers before a fellow doctor who, he fears, sees him for what he is: "a drug rep"

The company flew Carlat and his wife to a "faculty development" programme in New York City, where they were put up for two nights at a luxury hotel. They were given tickets to a Broadway show, and he was paid an additional honorarium for attending. Carlat quickly discovered that some of the biggest names in psychiatry were also attending—and benefiting from Wyeth's largesse. While there Carlat ran into an old colleague, who mentioned that he was giving talks promoting gabapentin (Neurontin) for Warner Lambert—a drug he said was "great" for some patients with bipolar disorder. Carlat was surprised by his old friend's claim, because of his own experience of prescribing the drug, and because a study of gabapentin for bipolar disorder showed that the drug failed to perform better than placebo. In a comedic moment Carlat, seemingly oblivious to the process he himself was undergoing, wondered whether his colleague's "positive opinion had been influenced by the money he was paid to give talks."

After the faculty development programme Carlat was off and running, teaching doctors about venlafaxine. Fortunately, he doesn't try to put a pretty face on his own behaviour. His account in the *New York Times* is well worth reading for its close-up look at how drug companies bring doctors into the world of industry sponsored "medical education"—and how doctors may embark on such relationships without any intent of harm or deceit but can nevertheless be slowly seduced into questionable behaviours, such as making pumped-up claims of

drugs' effectiveness while failing to give full weight to side effects. Carlat doesn't put his readers at arm's length—he allows them to see his warts. You can almost smell his sweat as he quivers before a fellow doctor who, he fears, sees him for what he is: "a drug rep with an MD."

But Carlat's moment of truth is yet to come. After deciding that he needed to be frank about venlafaxine's side effects, no matter what the reaction of his sponsors is, Carlat gives a more balanced presentation during his next lunchtime talk. Sure enough, his minders at Wyeth take notice of the change. A Wyeth district manager is dispatched to follow up with Carlat. He lets Carlat know that he is aware that his last presentation was less "enthusiastic" than usual. Then, in a moment that would prove to be the grenade under Carlat's feet, the manager asked Carlat, solicitously, "Have you been sick?"

Although Carlat says it is possible that the district manager's question about his health was a genuine expression of concern, it was this question—and its timing—that brought everything into focus for him. It made him realise, as he told the *BMJ*, that "something I would never, never have predicted happened: I ended up being a cog in their marketing machine."

Carlat immediately resigned as a speaker for Wyeth, and two months later, in January 2003, he launched the *Carlat Psychiatry Report* (www.thecarlatreport.com). The report is now an eight page monthly newsletter, published online and in print, about psychiatric practice. Its website states, "We receive no corporate funding, which allows a clear-eyed evaluation of all available treatments."

Industry influence over medical education continues to bedevil and concern Carlat, despite his departure from Wyeth. By publishing his report he hopes, he says, to take claims of effectiveness and put them "under a microscope," so that he can give readers "the real story about whether they were true or false." He is outraged that much of the education material that comes to his office is "so utterly biased in favour of the funder's product, even though it is supposedly accredited."

Accreditation for continuing medical education is granted by the Accreditation Council for Continuing Medical Education. Despite the council's oversight a 2007 US Senate Finance Committee investigation found that "pharmaceutical companies were routinely using educational grants to help build market share." The council determined that $2.25bn was spent in 2005 on continuing medical education accredited by the council, "of which $1.12bn represented commercial support." Carlat wants to end industry funding of medical education.

By "coming clean" with his story, Carlat hopes he might pave the way for other doctors to end their ties to industry

It has been several years now since Carlat left Wyeth and founded the *Carlat Psychiatry Report*. But the problem of biased medical education isn't going away, he says, and voluntary guidelines about industry funding of medical education have merely created a "veneer of respectability." So, Carlat decided to offer his own story as a cautionary tale—a way to encourage other doctors to kick their addiction to drug company money. The response to his story has been mostly positive, says Carlat, and a number of doctors have told him that they had similar experiences giving talks for drug companies.

But Carlat still has some dues to pay. He began thinking about the $30 000 he received from Wyeth and decided that "the best way I could pay the money back is to give my own services." So, he decided to go on his "march of shame," in which he will give free "undrug talks" to any group that asks.

By "coming clean" with his story, Carlat hopes that he might pave the way for other doctors to end their ties to industry. "I haven't been sued," he says. "There have been no death threats. These are things that people worry about."

Carlat says, "I'm hoping to convince doctors to give up their addiction to industry money. Ultimately, our professionalism is at stake. We want our men and women to come in from the dark side."

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WHAT'S ON BMJ.COM
JUNIOR DOCTORS' BLOGS

The following extracts are from blogs posted by junior doctors on bmj.com:

"It's hard to discuss this year without mentioning Modernising Medical Careers. I was one of the unlucky members of "the lost tribe" that were stung very badly. Having not been shortlisted for a Cardiology ST3 in any of my units of application, for the first time in my career I was left without a plan. Amid the hysteria, advice was sparse, inconsistent, and based on hearsay. It seemed my only hope of continuing a career in medicine rested on my performance at the guaranteed rescue interview. It was at this point that I was offered a research post at the Royal Brompton Hospital. The project sounded fascinating, funding was available for 18 months, the department I would be working with had a fantastic reputation, and it was close to home. Perfect, except for the fact that I was informed I would not be able to then re-enter clinical medicine. Faced with the unnerving prospect of committing career suicide, I had a very difficult decision to make."

Posted by Zarrin Shaikh on 21 December (http://blogs.bmj.com/bmj/2007/12/21/zarrin-shaikhs-first-blog/)

"The plans for next year's applications have been released and it's once again time to start thinking about job applications. This year we only have five days to respond to as many applications as possible, but for jobs everywhere and in any specialty. Except for ST3, which appears to have reverted to the pre-MMC state. For myself, I fully expect to be agonising over the exact way to phrase how much I love my job in 100 words."

Posted by Mark Lewis on 19 December (http://blogs.bmj.com/bmj/2007/12/19/mark-lewiss-first-blog/)

For all of the junior doctors' blogs please go to bmj.com

YANKEE DOODLING **Douglas Kamerow**

Waiting for the genetic revolution

Will 2008 be the year that genomics delivers on its promises?

The sequencing of the human genome was completed in 2003. Since then we've been told that we're living in the "genomic era"—the biggest revolution in human health since antibiotics, some say, and the beginning of scientific, personalised medicine.

In the United States we've spent about $4bn (£2bn; €2.8bn) since 2000 to fund the National Human Genome Research Institute, so it seems fair to ask what we've got for our money.

Certainly there have been dramatic improvements in the efficiency of DNA sequencing and other related technologies. Polymerase chain reaction and other amplification techniques have made what was exotic and painstaking work commonplace and quick. And I guess that some indirect applications of genomics can be found in the doctor's surgery. Human papillomavirus DNA testing, rapid tests for some infectious diseases by polymerase chain reaction, HIV analyses, and other diagnostic laboratory tests have found their way into general practice.

Genomic tools have been used to develop some drugs that specialists use, and more are being evaluated all the time. But most that I've heard of are the province of oncologists or ophthalmologists. Given that we baby boomers are all getting older, I suppose I should be happy that new drugs are available for age related macular degeneration, arthritis, and various cancers, but I'm not sure how big a difference they've made on a population basis.

Pharmacogenomic testing may be able to help us target specific drugs at the people most likely to benefit from them, telling us who should get trastuzumab (if they can afford it), who is likely to be hypersensitive to which antiretroviral, or which chemotherapy regimen is likely to be most effective. But again this is consultant level stuff.

What about the common, everyday diagnoses—heart disease, diabetes, and other multigene disorders? I hope that there is some new information out about them. Generally when I hear experts addressing GPs on genomics they offer the same stock examples: the woman with breast and cervical cancer in her family history who is referred with her daughters for testing; the man with colorectal cancer at a young age who turns out to have a hereditary syndrome. But we knew about these kinds of things a long time ago—we just didn't have the exact gene. It comes down to taking a good family history.

Maybe the future lies in the flashy new genetic testing websites that have sprung up, all planning to start collecting our money and DNA this year. Just pay your $995 to $2500, spit into a tube or scrape your cheek, and in four to six weeks you can see your genetic destiny on a special secure website. Apparently the smart money is betting on these companies, to judge from the venture capitalists they have behind them, including Google founder Sergey Brin and Silicon Valley guru Esther Dyson.

These "personal genomic services" allow you to "unlock the secrets of your own DNA." They can tell you your risk of developing lots of common and less common diseases, in comparison with the rest of the population. The rub, of course, is what to do with these data. All the sites take pains to point out that they aren't giving medical advice. And most of them don't report any single gene disorders that are the daily work of clinical geneticists and genetic counsellors. What are you supposed to do with the knowledge that you have a 30% increased risk of Alzheimer's disease or a 40% less likelihood of developing atrial fibrillation? Change your behaviour? How?

There is precious little evidence that simple knowledge about anything changes people's health related behaviours. And even less is known about how people's knowledge of their genetic risks will affect them. The US Centers for Disease Control and Prevention convened a panel of experts in 2004 to assess genetic tests and technologies for their appropriateness in practice. After three years of work setting up a systematic, evidence based process they have just issued their first recommendation. They evaluated pharmacogenomic testing for cytochrome P450 in depressed patients to predict how well selective serotonin reuptake inhibitors would work. Their conclusion: the evidence to recommend for or against such testing is insufficient (*Genetics in Medicine* 2007;7:819-25).

"Precious little is known about how people's knowledge of their genetic risks will affect their behaviour"

And what about all the legal and ethical challenges involved in genetic testing, especially the broad genetic surveys? It's probably not an accident that these new websites steer clear of conventional medical care. What will happen if (or when) insurance companies get hold of our genetic profiles? Legislation that would prohibit discrimination on the basis of genetic risks has been pending at the US Congress for a number of years but never seems to pass. It is no surprise that the US National Human Genome Research Institute has a whole programme devoted to research and policies on what they call "ELSI," the ethical, legal, and social issues involved in genomics.

This is not to say that progress hasn't been made or that these discoveries won't some day revolutionise health care. But the day when the genome is a regular part of the medical record, when personalised medicine is a reality rather than a catchphrase, seems a long way off.

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