while we discuss the models, new cases occur and children die.

I am an employee of Novartis Vaccines and Diagnostics and am a Novartis shareholder.

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A few comments could be added to those of Richard Moxon and Matthew Snape.[1]

Cost-effectiveness studies are frequently unfavourable for preventive strategies such as vaccination. Decision making is more likely to be postponed because of criteria that give lower weight to future health. Moreover, the difficulties in estimation of non-medical costs and indirect costs are also difficulties unfavourable for meningococcal vaccine in cost-effectiveness studies.[2]

Developing vaccines against MenB has been challenging for decades and was hindered by the close relations between serogroup B capsule and the human antigen neural-cell adhesion molecules (NCAM). The huge efforts made by the pharmaceutical industry in this field have led to a pioneer approach: reverse vaccinology,[3] which opened the way to develop, not only a vaccine against MenB, but also many other vaccines, otherwise difficult to develop using conventional approaches.

More than 15 years of intense research has led finally to the licensure of Bexsero (Novartis Vaccines and Diagnostics, Sienna, Italy), the first vaccine against MenB. Importantly, the licensure of meningococcal vaccine is based on surrogate of protection (ie, bactericidal titres of antibodies in the sera),[4] and no clinical efficacy studies have been required for the licensure of meningococcal vaccines. The Bexsero vaccine might offer a potential unique strategy against meningococcal disease (not only due to MenB) because the antigens targeted by the vaccine are conserved among meningococcal isolates, regardless of their serogroups.[5]

In France, the Bexsero vaccine has been considered, after its licensure in 2013, to control local serogroup B outbreaks.

I have been a consultant and received travel support from GSK, Novartis, Pfizer, and Sanofi Pasteur.

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UK medical students, debt, and career choices

Aaron McLean and colleagues (June 22, p 2165)[1] provide insight into medical students' opinions regarding research careers in light of recent tuition fees rises and the economic downturn. However, data were gathered from undergraduates attending the University of Edinburgh, Edinburgh, UK, which promotes research through student options, intercalated degrees, and an active undergraduate research society. Data need to be compared with institutions that promote student research less actively.

McLean and colleagues report that only 38% of respondents were concerned by long-term debt. The data were collected from a Scottish university where Scottish residents are exempt from tuition fees. Thus, it cannot reflect views of medical students across the UK who, because of 5–6 years of tuition fees, face considerable debt. Also, only first-year fee-payers were affected by the new higher fees. It would be interesting to review data from fee-paying respondents.

A greater proportion of respondents wanted to undertake a higher degree than wanted a research career (43% *vs* 29%). Most believed a research degree improves career prospects (109 of 129) and indicated that this increased their likelihood of undertaking such a degree. Thus, we can reasonably postulate that a substantial group wishing to undertake a higher degree do so to enhance career prospects, rather than prepare for a research career. Given the costly, competitive nature of PhD and academic programmes, and the need to train more clinical academics, the question remains of how best to select students with a true desire for an academic career.

We declare that we have no conflicts of interest

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1 McLean AL, Piper R, Carmichael J, Qureshi Z, Ma A, Russell CD. UK medical students, academia, and the financial crisis. *Lancet* 2013; **381:** 2165.

Which future for doctors in China?

Medical practice has become a high-risk job in China. Doctors' legitimate rights and interests cannot be fully guaranteed; many are under threat of

intimidation and violence, and several have been killed because of their medical activities.

On Nov 29, 2012, the head of the acupuncture department of Tianjin University of Traditional Chinese Medicine, was killed in her clinic;[1] and this is only one example of a long list. Although the Chinese Government has introduced policies to protect doctors, there are no meaningful measures at present to stop such tragedies. 12 cases of violence against doctors have been reported so far in 2013; by this time last year, 14 cases had been reported.[2,3]

What is the source of so much tension between patients and doctors? According to Therese Hesketh and colleagues,[4] commodification of the health-care system is the main cause of deteriorating conditions. Patients pay most treatment costs themselves; even with health insurance, the proportion and the amount of reimbursement is limited, despite efforts of the Chinese Government to improve the situation. Moreover, some hospitals are self-financing or semi self-financing, and aim to increase revenue generation. So, there might not be short-term solutions to the financial problem.

Beyond that, many patients and their relatives misunderstand the medical profession. They believe that, no matter what the disease is, if they get treatment in hospital they will have a remarkable therapeutic effect or even be cured. If the treatment is not satisfactory, patients and their relatives will vent their dissatisfaction with doctors. Additionally, some media have reported false medical disputes to increase audience ratings.

As for doctors, 80% describe themselves as overworked and underpaid in secondary and tertiary facilities. Even in cities, many doctors earn as little as 5000 yuan (US$780) a month or less. Senior doctors earn consultation fees of just 7 yuan ($1·14) in most hospitals. Doctors' workloads have increased, and many forgo their rest hours to serve outpatients or do operations. The recent deaths of four doctors have been attributed to overwork.[5]

Overworked, underpaid, and under threat, I wonder who will be the next doctors in China?

I declare that I have no conflicts of interest.

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Chinese health professionals need to seek protection of their rights,[1] because the doctor–patient relationship is increasingly becoming a commercial transaction.

In the past 30 years, medical disputes and violence against doctors have greatly increased in China.[2] The main reason is the distortion of the doctor–patient relationship.[3] Many patients are willing to spend large amounts of money as long as doctors can cure them. They regard themselves as consumers and believe that doctors should compensate for the financial and emotional loss when they fail to cure disorders.[3] But this notion is absurd. Health and life are the two things that cannot be bought.

A misunderstanding of medicine also contributes towards hostility to doctors in China. Many doctors immerse themselves in pursuit of modern advanced technology, leading to greatly increased medical costs. Many patients with an unreasonable expectation of medicine are desperate for new treatment at any cost.[3] Violence against doctors occurs when medical accidents happen; such accidents often arise from the pressure to try new and expensive treatments.

Patients should respect and appreciate their doctors' work. Similarly, doctors must respect their patients. The doctor–patient relationship will only return to normal when medicine ceases to be a commercial transaction and when technology worship ends in China.

X-YW is an employee of Abbott, China. C-YL and H-J declare that they have no conflicts of interest.

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WHO's budgetary allocation and disease burden

In 2008, David Stuckler and colleagues[1] reported in *The Lancet* that WHO budget allocations were heavily skewed towards control of infectious diseases. This report concluded that WHO funding did not match the disease burden, particularly in the western Pacific region, which has low rates of infectious diseases and a high burden of non-communicable diseases by comparison with Africa. Therefore, we reassessed WHO's budgetary allocation after 5 years to evaluate whether this situation remained.

We obtained WHO's biennial budget plan, based on the medium-term