because it fails to respect the adolescent as a maturing individual.[7]

The most controversial situation is when an adolescent seeks the vaccine without parental permission. The parents might have refused, or the adolescent might not want to discuss her sexual activity with her parents. Furthermore, some parents do not act in the child's best interests, as in cases of abuse. In most US states adolescents may obtain treatment on their own for sexually transmitted infections, contraception, and pregnancy because requiring parental permission might deter them from seeking treatment for these important health problems.[8] In these conditions, the adolescent's wellbeing and growing self determination are considered to outweigh the right of parents to make decisions on behalf of children and to shape their values.[9]

Proponents of HPV vaccine might advocate public health policies that increase its uptake, such as requiring vaccination as a condition of entry into middle school. However, the rationale for mandatory vaccination is weaker for HPV than for childhood infections because HPV is not contagious; it is transmitted only by unprotected intercourse. Moreover, because of parental opposition to other vaccines, most states allow exceptions to required childhood vaccinations before school enrolment.[10] Another approach is making HPV vaccine "routine" for adolescents—that is, giving it without extensive discussion or affirmative consent unless the parent or child objects. Such a policy, which effectively ignores the concerns about HPV vaccine, may be short sighted and could increase opposition.

Conservative "pro-family" organisations and others who are concerned about the vaccine's potential impact on sexual behavior seek parental choice regarding HPV vaccine. Although HPV vaccine raises some similar issues as abortion, it need not be as contentious. Unlike abortion, HPV vaccine cannot be considered morally wrong per se: its long term goal is cancer prevention, an undisputable benefit. The point of the vaccine is to give it before sexual activity starts. Objections might be addressed by linking administration of HPV vaccine without parental permission to programmes that facilitate parent-adolescent communication and counsel adolescents about risky behaviour.

The HPV vaccine is most needed in resource poor countries, where cervical cancer takes a particularly heavy toll and where cancer screening is lacking.[11] In these countries, the projected US price of $300 (£171; €246) or more is unaffordable, and a series of three injections (as proposed in the US regimen), may not be feasible. Thus a global programme will require research to develop single dose vaccines, international assistance for vaccine financing and delivery, and negotiations on two tier pricing.

HPV vaccine is not a magic technological bullet. Decisions about HPV vaccine will be made in the context of organised opposition to childhood vaccines, allegations that vaccine risks are downplayed, mistrust towards physicians and drug manufacturers, disagreements over childrearing and sexuality, and inaccurate information on the internet. Transparent policies that acknowledge disagreements and uncertainties regarding HPV vaccine will build trust and support for it as well as for other programmes to promote adolescent health.

Bernard Lo *professor of medicine*

(bernie@medicine.ucsf.edu)

Program in Medical Ethics, Division of General Internal Medicine, and Center for AIDS Prevention Studies, University of California, San Francisco, USA

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An international standard for disclosure of clinical trial information

Comprehensive disclosure could restore public trust

The long running campaign for comprehensive registration of clinical trials has taken a turn for the better. Over the past two years discussions have shifted from whether ongoing trials should be registered at all to detailed negotiations with the drugs and devices industries about what information should be registered for which trials and when.

Next week, at a meeting in Brussels to launch international clinical trials day—20 May, the same day as, in 1743, James Lind started his landmark trial of lime juice for scurvy—a landmark of similar historical importance could be struck: the setting of a tough international standard for disclosure of information about trials. Whether it happens or not will depend on

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the steadfastness of a small group at the World Health Organization.

Since the first calls for a comprehensive registry of clinical trials 30 years ago,[w1] journal editors[w2] and others[w3] have argued repeatedly for trial registration. Some enlightened drug companies have declared their support,[w4] laws have been passed,[w5] and trial registries have been set up, most notably clinicaltrials.gov at the US National Institutes of Health and the metaRegister of Clinical Trials established by Current Science Group in the United Kingdom. But despite these efforts, real progress has been hard to detect.

Barriers to trial registration, as characterised by Dickersin and Rennie in 2003, include industry resistance, lack of funding, lack of mechanisms for enforcement, and lack of awareness of the importance of the problem.[w6] In the past two years each of these barriers has been more or less overcome. Industry's resistance was driven by the perceived threat to competitive advantage if trial information was made public before a trial was completed. But the reputation of the drug industry, already poor in 2003, has suffered a series of devastating blows in the past two years, with reports of huge profits, accusations of disease mongering,[w7] and several high profile scandals around selective reporting of data.[w8 w9] With its credibility badly damaged, industry has found it harder to argue its corner, and the more enlightened industry leaders have seen trial registration as an opportunity to restore public trust.

Funding for trial registration has come mainly from governments, but lack of secure long term funding has limited what could be achieved internationally. In August last year, WHO changed all that by launching its International Clinical Trial Registry Platform to provide a single point of access to information about ongoing and completed clinical trials. The platform will link together information held in national registers and will provide a universal clinical trial number.[w10] A degree of enforcement has been achieved by the requirement from the International Committee of Medical Journal Editors (ICMJE) for trials to be registered at inception if the results are to be considered for publication,[w11] and awareness has increased with the recent Vioxx and SSRI scandals and the TGN1412 debacle at Northwick Park.[w12]

At a meeting convened by WHO in April 2004, participants agreed on 20 items of data as the minimum amount of information that must be disclosed at registration for each trial (see boxon bmj.com). Industry hoped to contain the threat by arguing that registration should apply only to phase III and phase IV trials. The ICMJE's 2004 statement excluded phase I trials and was vague about phase II trials,[w11] but the TGN1412 episode made inclusion of early trials non-negotiable.

This left only one area on which industry could make a last stand—the timing of disclosure. A stakeholder consultation meeting in Geneva two weeks ago that was hosted by WHO and attended by representatives of industry, academia, trial participants, and the public dissected in detail the arguments for and against delayed disclosure. Industry representatives argued that requiring disclosure of all 20 items at the time of registration would reduce compliance among drug companies and stifle innovation. They expressed particular concern about disclosing information on trials of unmarketed drugs and drugs for unlicensed indications. They argued that for any one trial up to five of the data items might be commercially sensitive and companies should be allowed to withhold these until the trial was completed.

But others argued persuasively against allowing delayed disclosure. To make informed decisions, participants in trials need to understand the whole landscape of other ongoing trials, not just those known to one company. Patients need to be aware of ongoing trials internationally when deciding about treatments, especially those who have run out of current treatment options. Ethics committees and institutional review boards need to know what other trials are ongoing when deciding whether to approve a new trial. Access to information is especially important for people in the developing world, where the potential for exploitation is greatest. Competitive advantage would not be seriously affected if all companies were obliged to register all trials, and because companies generally know what their rivals are working on. Changes to the patenting laws should be explored to address the special concerns of devices manufacturers.

But the most convincing arguments against delayed disclosure were about practicalities and credibility. The Geneva meeting heard from people running trial registers, who made clear that auditing the quality of information and keeping entries up to date is already a huge task. Allowing delayed disclosure would make the job far harder. Who would decide whether information from a certain trial should be withheld, and on what grounds? Would there be an appeals process? As for credibility, the question was asked whether delaying disclosure would increase the credibility of trials in general and of industry in particular. The clear answer was no.

Registration is not the whole answer. It is only the necessary first step to ensuring full and unbiased disclosure of trial results. Making protocols available is one next step,[w13] along with providing mechanisms for enforcement to augment the ICMJE's declaration.[11] Ethics committees and institutional review boards could have an important role by mandating trial registration as a requirement for full ethics committee approval—but to do this they would have to be better constituted.

Whatever decision is announced at next week's meeting this is a success story for which many individuals and groups deserve credit, including industry leaders—even if only for seeing the writing on the wall. Credit must also go to people within WHO for taking the lead in such an open and effective way. In doing so they have fulfilled two of WHO's core functions: the setting of norms and standards in medical research and health care, and working towards greater equity in health care.

Expectations are running high for the "right" decision from the team in charge of WHO's registry platform—a decision that delayed disclosure will not be allowed and that all 20 data items must be disclosed at the time of registration. After so long a journey, to fail at this last hurdle would be no less than a crime.

Fiona Godlee *editor*

(fgodlee@bmj.com)

BMJ, London WC1H 9JR

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