

patients not yet on dialysis were often given a transplant in preference to those who had been on dialysis for 10 years or more.⁸ In all these situations patients from ethnic minorities were particularly disadvantaged,⁹ partly because of their increased prevalence of rare blood groups and tissue types.

Recent data also show that, probably because of more potent immunosuppressant drugs, tissue type matching has a much smaller effect on the long term outcome of kidney transplantation.⁵ While still important for large groups of patients, the effect for an individual is much less important than it used to be.¹⁰ At the same time renal transplantation has been recognised to improve survival as well as quality of life compared with remaining on dialysis: patients on waiting lists are 2-3 times more likely to die than those allocated kidneys.¹¹

In the past, when the allocation system was debated some parties argued that patients favoured the status quo to optimise the use of available donor organs. Yet this seemed contrary to the impression held by many clinicians looking after patients with established renal failure. Indeed a recent study showed clearly that patients on dialysis and undergoing transplants consider waiting time to be very important.¹²

The debate surrounding organ allocation is a good example of how patients may be involved in decisions about rationing in health care. Although the organ allocation organisation in America (OPTN/UNOS) has patient representation, it is cautious about the role patients should have in deciding allocation policy,¹³ and the need to consider patients' opinion is not included in the summary mission statement of the European transplant kidney allocation organisation (EKTAS), published this year.¹⁴ The discussions following the death of the footballer George Best (who underwent a liver transplant) show that organ allocation is of interest not only to specialists but also to doctors generally and the general public. Resolving the conflicting demands of equity and making best use

of a scarce resource is indeed complex but must include obtaining the wishes of patients.

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- 1 UK Transplant. *Transplant Update 2004*. www.uktransplant.org.uk/ukt/statistics/latest_statistics/pdf/yearly_stats_for_2004.pdf (accessed 12 Feb 2006).
- 2 Cho YW, Terasaki PI, Cecka JM, Gjertson DW. Transplantation of kidneys from donors whose hearts have stopped beating. *N Engl J Med* 1998;338:221-5.
- 3 UK Transplant. *Activity Reports 2001 and 2005*. www.uktransplant.org.uk/ukt/statistics/ (accessed 12 Feb 2006).
- 4 De Klerk M, Keizer KM, Claas FHJ, Witvliet M, Haase-Kromwijk BJJM, Weimar W. The Dutch national living donor kidney exchange program. *Am J Transplant* 2005;5:2302-5.
- 5 Su X, Zenios SA, Chakkera H, Milford EL, Chertow GM. Diminishing significance of HLA matching in kidney transplantation. *Am J Transplant* 2005;4:1501-8.
- 6 UK Transplant. *Centre specific reports 2005*. www.uktransplant.org.uk/ukt/statistics/centre-specific_reports/centre-specific_reports.jsp (accessed 12 Feb 2006).
- 7 Oniscu GC, Schalkwijk AAH, Johnson RJ, Brown H, Forsythe JLR. Equity of access to renal transplant waiting list and renal transplantation in Scotland: cohort study. *BMJ* 2003;327:1261.
- 8 Sibanda N, Johnson RJ, Powis SH on behalf of the UK Transplant Kidney and Pancreas Advisory Group Access to Transplantation Task Force. *Multifactorial modeling of waiting time to kidney transplant*. www.uktransplant.org.uk/ukt/statistics/presentations/pdfs/april_05/waiting_time_analysis.pdf (accessed 12 Feb 2006).
- 9 Rudge CJ, Johnson RJ, O'Neill J, Fuggle SV, Forsythe JLR. Renal transplantation for patients from ethnic minorities [abstract] www.uktransplant.org.uk/ukt/statistics/presentations/pdfs/ethnicity.pdf (accessed 12 Feb 2006).
- 10 Organ Procurement and Transplantation Network. Kidney Kaplan-Meier graft survival rates for transplants performed 1995-2002. www.optn.org/latestData/rptStrat.asp (Accessed 12 Feb 2006).
- 11 Wolfe RA, Ashby VB, Milford EL, Ojo AO, Ettenger RE, Agodoa LY, et al. Comparison of mortality in all patients on dialysis, patients on dialysis awaiting transplantation, and recipients of a first cadaveric transplant. *N Engl J Med* 1999;341:1725-30.
- 12 Geddes CC, Rodger RSC, Smith C, Ganai A. Allocation of deceased donor kidneys for transplantation: opinions of patients with CKD. *Am J Kid Dis* 2005;46:949-56.
- 13 Seagall MD. The development of kidney allocation policy. *Am J Kid Dis* 2005;46: 974-5.
- 14 Mayer G, Persijn GG. Eurotransplant kidney allocation system (ETKAS): rationale and implementation. *Nephrol Dial Transplant* 2006;21:2-3.

HPV vaccine and adolescents' sexual activity

It would be a shame if unresolved ethical dilemmas hampered this breakthrough

In June 2006 the US Food and Drug Administration is expected to approve a human papilloma virus (HPV) vaccine which is over 90% effective in preventing new infections and precancerous cervical lesions caused by the HPV types that it covers.^{1 2} The vaccine prevents cancer through preventing sexual transmission of HPV types that cause cervical cancer.³ This link to a sexually transmitted infection raises ethical concerns that must be resolved if the benefits of preventing cancer are to be realised.

The vaccine must be given before HPV infection is acquired. It is most likely to be recommended for 11-12 year olds, because by the ninth grade (age 14-15) 28% of girls in the US are sexually active. This has prompted some advocates of premarital abstinence to charge that HPV vaccination will condone or promote sexual promiscuity. However, its impact will probably be small because multiple factors are associated with initiation of sexual activity; fear of sexually transmitted infections

is not a major reason for abstinence, and condom availability programmes have not been associated with behavioural disinhibition.⁴

For adolescents aged under 18 medical interventions, including vaccinations, generally require informed consent from both the parents and the adolescent.⁵ Thus several possible combinations of decisions about HPV vaccination exist. If both parent and adolescent agree to the vaccine there are no ethical problems. In surveys, about 75% of well informed parents say they would accept the vaccine.⁶ Some parents would refuse because they believe the child is not sexually active; if they were to agree at a later age, cumulative uptake would be even higher. Little is known about adolescents' attitudes to the vaccine. If both parent and adolescent refuse the vaccine, the physician can try to educate and persuade them. Coerced vaccination is not justified because there is no public health emergency. Similarly, forcing an intervention over an adolescent's objections is not justified

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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.

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- 1 Lowndes CM, Gill ON. Cervical cancer, human papillomavirus, and vaccination. *BMJ* 2005;331:915-6.
- 2 Steinbrook R. The potential of human papillomavirus vaccines. *N Engl J Med* 2006;354:1109-12.
- 3 Stanley M. HPV vaccines. Best practice and research. *Clin Obstet Gynaecol* 2006;20:279.
- 4 Lidden N. Behavioral issues related to the use of HPV vaccine. February 2006. www.cdc.gov/nip/ACIP/mtg-slides-feb06.htm (accessed 3 Mar 2006).
- 5 Committee on Bioethics, American Academy of Pediatrics. Informed consent, parental permission, and assent in pediatric practice. *Pediatrics* 1995;95:314-7.
- 6 Zimet GD. Understanding and overcoming barriers to human papillomavirus vaccine acceptance. *Curr Opin Obstet Gynecol* 2006;18 (suppl 1):s23-8.
- 7 Traugott I, Alpers A. In their own hands: adolescents' refusals of medical treatment. *Arch Pediatr Adolesc Med* 1997;151:922-7.
- 8 Hartman RG. Coming of age: devising legislation for adolescent medical decision-making. *Am J Law Med* 2002;28:409-53.
- 9 Lo B. *Resolving ethical dilemmas: a guide for clinicians*. 3rd ed. Philadelphia: Lippincott Williams and Wilkins, 2005:235-42.
- 10 Rota JS, Salmon DA, Rodewald LE, Chen RT, Hibbs BF, Gangarosa EJ. Processes for obtaining nonmedical exemptions to state immunization laws. *Am J Public Health* 2001;91:645-8.
- 11 Schiffman M, Castle PE. The promise of global cervical-cancer prevention. *N Engl J Med* 2005;353:2101-4.

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