they are prepared to learn from each other's experiences, both good and bad. There is now no shortage of evidence on how clinical services and health policies can reduce suicide. What we lack is an effective forum where a rigorous examination of international evidence can take place, with the findings translated into actions across the many countries where deaths from suicide are now on the rise.

References

Appleby, L., Dennehy, J. A., Thomas, C. S., *et al* (1999) A case control study of aftercare and clinical characteristics in suicides by people with mental illness. *Lancet*, **353**, 1397–1400.

Department of Health (2011) *Consultation on Preventing Suicide in England. A Cross-Government Outcomes Strategy to Save Lives*. DH.

Hawton, K., Towsend, E., Deeks, J., *et al* (2001) Effects of paracetamol and salicylate legislation in the United Kingdom: opportunistic before and after study of suicide, liver transplantation, and self-poisoning and its consequences. *BMJ*, **322**, 1203–1207.

Hawton, K., Bergen, H., Simkin, S., *et al* (2009) Impact of withdrawal of co-proxamol: time series analysis of prescribing and drug poisoning deaths in England and Wales. *BMJ*, **338**, b2270.

Hunt, I. M., Kapur, N., Webb, R., *et al* (2007) Suicide in current psychiatric in-patients: a case–control study. *Psychological Medicine*, **37**, 831–837.

Kapur, N., Hunt, I., Webb, R., *et al* (2006) Suicide in psychiatric in-patients in England, 1997–2003. *Psychological Medicine*, **36**, 1485–1492.

Mann, J. J., Apter, A., Bertolote, J., *et al* (2005) Suicide prevention strategies: a systematic review. *JAMA*, **294**, 2064–2074.

National Confidential Inquiry into Suicide and Homicide by People with Mental Illness (1999) *Safer Services*. Department of Health.

National Confidential Inquiry into Suicide and Homicide by People with Mental Illness (2006) *Avoidable Deaths*. National Patient Safety Agency.

National Confidential Inquiry into Suicide and Homicide by People with Mental Illness (2008) *Lessons for Mental Health Care in Scotland*. Scottish Government.

National Confidential Inquiry into Suicide and Homicide by People with Mental Illness (2011a) *Annual Report: England, Wales, and Scotland*. National Patient Safety Agency.

National Confidential Inquiry into Suicide and Homicide by People with Mental Health (2011b) *Suicide and Homicide in Northern Ireland*. National Patient Safety Agency.

National Confidential Inquiry into Suicide and Homicide by People with Mental Illness (2011c) *A National Study of Self-Inflicted Deaths in Prison Custody in England and Wales from 1999–2007, 9 Year Report*. Department of Health.

Stuckler, D., Basu, S., Suhrcke, M., *et al* (2011) Effects of the 2008 recession on health: a first look at European data. *Lancet*, **378**, 124–125.

While, D., Bickley, H., Roscoe, A., *et al* (2012) Implementation of mental health service recommendations in England and Wales and suicide rates, 1997–2006: a cross-sectional and before-and-after observational study. *Lancet*, **379**, 1005–1012.

THEMATIC PAPERS

The global spread of clinical trials

David Skuse

Behavioural and Brain Sciences Unit, Institute of Child Health, London, UK, email d.skuse@ucl.ac.uk

There has been considerable publicity recently in the UK concerning the threatened contraction of the country's pharmaceutical industry. The UK currently has the third highest share of global pharmaceutical research and development expenditure (after the USA and Japan), but the costs of conducting research in the UK are rising.

In February 2011, Pfizer announced it would be closing its entire research and development (R&D) facility in Sandwich, Kent, with the loss of 2400 jobs. *Nature* (1 February 2011) commented that UK governments had repeatedly been warned that the country is perceived as being unfavourable to medical research, although Pfizer claimed its decision was not made on those grounds. The Academy of Medical Sciences recently produced a report expressing concern that it is exceptionally difficult to get ethical approval for clinical trials in the UK (Academy of Medical Sciences, 2011). It made recommendations for reform of the 'much maligned' European legislation on the matter.

While the number of clinical trials approved in the UK has not dropped significantly in recent years, the UK's global share of patients in trials plummeted from 6% in 2004 to just 2.5% in 2008. It takes an average of 621 days in the UK from the award of a research grant through to the first patient entering a trial, compared with 30–60 days in Canada, because of the complexities of the current system. The chair of the Academy working group that produced the report, Michael Rawlins, highlighting the difficulty getting permission for a funded trial to be enacted, commented: 'at the moment nobody knows half the time where to go and what to do' (quoted in the same issue of *Nature*).

In light of the problems encountered here, and to a similar degree in the USA, it is hardly surprising that 'Big Pharma' has turned to low- and middle-income countries to conduct trials. The attraction of countries where legislation on ethical

https://doi.org/10.1192/S1749367600003027 Published online by Cambridge University Press

constraints is rather less rigorous than in Europe or North America was discussed in a special report from the Reuters news agency (2011). In 2008, a total of 78% of all participants in trials to support drug applications submitted to the US Food and Drug Administration (FDA) were enrolled at foreign sites. In Europe, 61% of patients in trials submitted to the European Medicines Agency between 2005 and 2009 came from low- and middle-income countries. A further 11% were from Eastern European countries that had recently joined the European Union.

Here, we present three papers on this contentious subject. The first presents an overview of the challenges from an African perspective. Akwasi Osei is from Ghana, and he debates both the positive and the negative implications of what has become a rapidly developing trend. Second, we learn about the role played by contract research organisations, in a piece by Mariëtte van Huijstee and Nuria Homedes. This is an important article, shedding light on the little-known phenomenon of 'contracting out' clinical trials to organisations over which there is little formal control. Finally, we gain a fascinating insight into the growth of the manufacture and marketing of generic drugs in India, from Anita Kotwani.

References

Academy of Medical Sciences (2011) *A New Pathway for the Regulation and Governance of Health Research*. Academy of Medical Sciences.

Reuters (2011) Special report: Big Pharma's global guinea pigs, 6 May. Available at http://www.reuters.com/article/2011/05/06/us-pharmaceuticals-trials-idUSTRE7450SV20110506 (accessed March 2012).

THEMATIC PAPER

Challenges of clinical trials in low- and middle-income countries

Akwasi Osei

Chief Psychiatrist, Ghana Health Service; Medical Director, Accra Psychiatric Hospital, Accra, Ghana, email akwasiosei@yahoo.com

Clinical trials have been conducted almost wholly in high-income countries until recently, yet their results may not always be valid or applicable in middle- and low-income countries. Clinical trials are now, though, increasingly being done in less wealthy countries. While this is welcome, there is a need to ensure the profit motive does not override the benefits. Partnership with local counterparts while adhering to international standards should help to maintain high-quality output from clinical trials.

Clinical trials have been conducted almost wholly in high-income countries until recently, yet their results may not always be valid or applicable in middle- and low-income countries. A welcome recent development is the increasing number of clinical trials being conducted in the latter areas. Growth in the number of trials and their increasing costs in high-income countries are combining with globalisation to shift clinical trials to less wealthy countries (Rowland, 2004). Glickman *et al* (2009) have shown that about a third of clinical trials conducted by the 20 largest US-based pharmaceutical companies are now conducted outside the USA, many in low-income countries.

Such globalisation of clinical trials obviously confers some benefits to the host countries, including the sharing of experiences and knowledge. It also increases the local availability of the medicines under trial, as well as familiarity with them. The trials bring revenue to the host countries while cutting costs to the pharmaceutical companies by around 10–50%. Clinical trials in India, which is emerging as a favoured global destination for research and outsourced clinical trials, was expected to have earned that country US$1.5 billion of revenue by 2010 (Federation of Indian Chambers of Commerce and Industry, 2005).

As welcome as this development is, it brings in its wake challenges, provoking the debate over whether clinical trials in low-income countries are as valid as they are intended to be. Many factors come together to determine the validity of clinical trials, including the number of participants who can be recruited, the affordability and local availability of the medicines, informed consent, and ethical approval from an institutional review body or the agency accredited by the local ministry of health, among others. Ethical approval is a very important consideration, to ensure that nobody is exploited in the course of the trial and that the drug is properly shown to be safe in general application.

In the light of these considerations and challenges, two key questions arise.

- Are clinical trials accurate and reliable in low-income countries?

https://doi.org/10.1192/S1749367600003027 Published online by Cambridge University Press