

infrastructures. (Where and how?) And says that an epidemiological network of laboratories will be put up reinforcing surveillance systems (is this a priority and who will bear future costs?). Let us examine some facts.

Poliomyelitis is disappearing gradually from the world, mainly thanks to routine vaccination in integrated services. Once eradication is in sight, vertical programmes take the lead. For Niger, costs for organising national vaccination days in 1997 are estimated at US\$2492 million: \$414 000 should come from development projects and \$11 000 from the government. All this to avoid some 40 yearly cases of poliomyelitis (the number reported in Niger in 1996). Many hidden costs also exist (use of cars, salaries, preparatory meetings, &c); nor are epidemiological surveillance costs included. Instead of a cost-benefit analysis alone, one should look at perverse effects and opportunity costs. Perverse effects include paralysis of the development of health services (time investment), interruption of permanent health services, and the misleading promotion of vertical programmes to the detriment of the credibility of district health systems.

In terms of opportunity costs and alternative strategies, allocation of these funds, were they available, to integrated health services (supervision, drugs, vaccines, health centres, and district hospitals) would solve most health problems for a much higher proportion of Niger's population than at present (in Niger, 68% of the population has no reasonable physical access to health services). Routine vaccination coverage would readily increase to more acceptable levels, and would contribute to general human development (what is the development contribution of 40 cases of poliomyelitis less, in a country in which child mortality was estimated at 31.8% in 1992 and maternal mortality 0.7%?). I agree that it would take longer before poliomyelitis would be completely eradicated, but is the overall objective to eradicate or to be more healthy?

Clearly, poor countries cannot refuse such a worldwide programme, despite negative effects, especially with their low budgets. If WHO and the developed world think such an eradication programme is their priority (it is definitely not that of developing countries) and they want to impose it on the rest of the world, why do they not pay the whole bill?

Paul Bossyns

Projet Alafia-GTZ, Family Health Project,
BP 10814, Niamey, Niger
e-mail: alafia@intnet.ne

Pharmaceutical representatives

SIR—I have been practising psychiatry for over 15 years. Half my patients are elderly, many of whom carry only Medicare insurance, which does not pay for prescription medications. Such patients, most of whom survive on modest fixed incomes and have several diagnoses—medical, psychiatric, or both—find that their monthly medication bill can easily reach \$150.00–200.00 or more. Thus, free samples from pharmaceutical representatives (drug reps) can be crucial for older adults, as well as for younger adults who are underinsured or uninsured.

I have noticed an increasingly rapid turnover of drug reps. One calls Mr X only to learn that his number is no longer in service, or that Company M has been taken over by N. A dizzying succession of calls to hospital pharmacies (whose information about drug reps is more often than not outdated) and company headquarters out of state is then required. Hours, days, or weeks later, the new rep is located. He or she drops samples off in my office and my patients' medication

requirements are met until the next round.

To provide a supply of drugs for the neediest patients now demands nothing less than dogged persistence, whereas it used to be relatively easy. Pharmaceutical companies do have programmes for the indigent, but over the years and after many applications, only one of my patients has qualified. Companies require a detailed inventory of the patient's financial resources. For example, a couple in their seventies who own a small house and dispose of less than \$1000.00 per month have joint medication expenses approaching \$500.00; they were considered to be too well off to qualify.

Meanwhile, the generous, often lavish, wining and dining of physicians and their office staff, compliments of the pharmaceutical industry, continues unabated. One disgruntled rep told me as he was setting up a dinner with all the trimmings for the office staff of a clinic—he had personally ordered the bird, picked it up, and carried it in—"we do catering as part of the job these days". Every man has his price?

Victoria Lewin-Fetter

2040 West Wisconsin Avenue, Milwaukee,
WI 53233, USA

Psion of the times

SIR—D Shattuck-Eidens and co-workers¹ use logistic regression analysis to evaluate the probability that a breast cancer patient carries a deleterious *BRCA1* mutation. Their formula takes up half a column of *JAMA*. The utility of such a model could not have been imagined a few years ago, before the age of pocket computers. Using the "sheet" function of a Psion 3C palm-top computer we have been able to bring this knowledge to the clinic immediately.

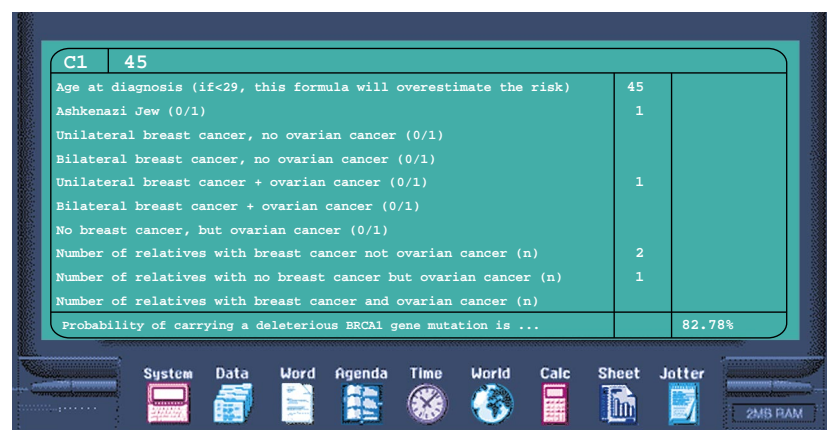
The figure shows a computer screen with the patient's variables that need to

be typed in. The last line immediately displays the risk of the proband carrying a harmful *BRCA1* gene mutation. The risk for her worried daughter can be estimated by dividing this percentage by 2.

*Jayant S Vaidya, Michael Baum

Department of Surgery, Institute of Surgical Studies, University College London Medical School, Charles Bell House, London W1P 7LD, UK

1 Shattuck-Eidens D, Oliphant A, McClure M, et al. *BRCA1* sequence analysis in women at high risk for susceptibility mutations risk factor analysis and implications for genetic testing. *JAMA* 1997; 278: 1242–50.



Computer screen (Psion series 3c) display