

Bread, milk, polio jab...all in a morning's shop

This was the headline of an article by Tom Robbins in the UK *Observer* (27/7/08). He reported that the British supermarket chain Sainsbury's has aroused controversy by setting up travel clinics in 21 of its stores. Here shoppers can consult nurses for free and receive injections at prices that are significantly cheaper than those charged by specialist travel clinics. A combined diphtheria-tetanus-polio injection costs 20 pounds at Sainsbury's compared with 31 pounds at a clinic. The head of professional services at Sainsbury's says: *We will provide an efficient, good value one-stop-shop for people's travel needs - from a first aid kit to immunisations.* If the new clinics are successful they will be opened in Sainsbury's stores throughout the UK. *However some medical professionals are voicing concerns, arguing that travel medical advice is too complicated to be sold alongside baked beans and bananas.*

New wimpy polio virus

In 2002 Dr Eckard Wimmer and his research team caused a stir when they manufactured the polio virus from scratch by stringing together the chemical 'letters' of its genetic code. Fears were expressed that this technology could be used by bioterrorists. Patrick Barry, in *Science News* (26/6/08), reported that Wimmer and his colleagues are now using this technology to produce a new extremely weak polio virus by 'misspelling' the genetic code of the virus that causes polio so that the virus still reproduced but did so a thousand times slower than normal. The new weakened version of the virus when injected into mice trains their immune systems to fight off the real polio virus. *Many vaccines contain weakened versions of viruses. Currently, scientists make these crippled viruses by letting the normal viruses reproduce in cells in the lab until they randomly develop mutations that make them less virulent. But the approach is time-consuming and imprecise.* Another disadvantage of this method is that very occasionally these less virulent viruses mutate back to their deadly form so that a person can contract polio from the live polio (Sabin) vaccine. In producing the new virus Wimmer has used what he calls a 'death by a thousand cuts' approach. *By introducing hundreds of small differences in the viruses' genetic code, the new approach makes it very difficult for viruses to revert to their dangerous form.* The research is in its early stages. The new polio virus is not yet wimpy enough. About one in eight mice who received it died. However the rest of mice show signs of immunity to the non-wimpy polio viruses that infected us.

The Hospital Poems

Jim Ferris, Professor of Disability Studies at the University of Toledo, Ohio, won the American 2004 *Main Street Rag Poetry Book Award* for his book *The Hospital Poems*. Ferris was born with one leg shorter than the other. The poems are a memoir of the hospitalisations and numerous surgeries he underwent as a child. They describe many of the experiences of polio patients. He describes being *Orphaned for the first time/ at five—no one died--/Mom took me to the hospital/ And left. At once I was waif/ and ward.../until our bodies are corrected, /until the gods deign to let us go, / we are children of no one.* In the poem *For His Own Good* Ferris contemplates his mother's feelings: *....I wonder/ what it must have/ been like to/ give your baby/ to the doctors. / What do you/ tell yourself? / What do you/ tell the brave /little soldier?* Medical rounds when you *doff your clothes and listen for a clue about what lies ahead* will bring back memories *of professionals, lords of the hospital, cold-eyed/ white coats trained to find your flaws, focus on failings,/ who measure your meat minutely. You are a specimen/ for study, a toy, a puzzle—they speak to each other as if/ you are unconscious.* The poem

Standard Operating Procedure tells how to conduct orthopaedic surgery; ...*Bust a chuck/ of bone the rest of the way out; chisel it if you have/ to...He won't remember much; kids are like animals/ that way...Tears and pain are standard operating/ procedure, and you have other problems now to solve.*

There is a moving foreword to the book by disability historian and polio survivor Paul Longmore. He wrote that Ferris's memories will remind people with many types of disabilities *of the psychic anguish, the personal costliness, of a program that aimed to refashion a boy into something he never was and never would become, that instructed him he would never be a whole and real person without radical intervention to alter him. Some readers will remember how the most well-intentioned of medical treatments pathologized their very being .* People without disabilities will also have experienced much of what Ferris describes: *The child's sense of being at the mercy of all-powerful adults who impose their will for the child's own good and are often wrong. The camaraderie of children against adult power...Adult obtuseness in assuming that children have no true sense of dignity and can feel no sense of humiliation. The realization that one must submit to being made over in order to be regarded as acceptable, which is to say, human and loved. The resistance to all of this, the struggle to define oneself, to develop a sense of pride.*

Unfortunately the book no longer seems to be in print but secondhand copies are available on Amazon.com.

Polio killed Blessed Pier Giorgio

July saw a week of celebrations in Sydney for World Youth Day. Pope Benedict and hundreds of thousands of pilgrims visited the city. A coffin containing the remains of Blessed Pier Giorgio Frassati was brought from Italy to St Mary's Cathedral in Sydney where it was a focal point for pilgrims. The title 'blessed' means that Pier Giorgio is well on the way to being canonised a saint. He was born into a wealthy Turin family and was handsome, athletic and intelligent. He spent much of his time helping the poor and worked for social reforms. He died aged 24 in 1925. What caught my attention was that one of the many newspaper reports of his visit to Sydney attributed his death to polio. A search of the web revealed occasional brief and sometimes contradictory accounts of his illness. Most of the writers had little understanding of the disease. When the polio was mentioned its cause was invariably attributed to the poor and sick whom he had helped. One account said that he came down with a very bad cold which got worse. Pier Giorgio's grandmother was dying at the time and it seems to have been several days before anyone realised how ill he was. When they did realise *his illness was too advanced for anyone to treat.* There was talk of a flight to Paris to collect *anti-polio serum* but a storm prevented the flight and he died the next day. His sister who wrote a book about his life felt his death was indirectly caused by his parents' inattention and neglect during his illness. He is said to have become paralysed and died within 5-7 days. In the last day or so his mother would allow no visitors even the Archbishop of Turin to visit him. Just before his death Pier Giorgio is said to have written a note with his paralysed hand (or nearly paralysed hand in one account) with instructions to a friend who was helping in his work with the poor. Pier Giorgio was brought to Sydney to inspire young pilgrims that a normal young man can do extraordinary things. If only the cause of his death from polio had also been publicised to encourage vaccination!

Polio's patron saint

When researching the above story I was astonished to find, after over half a century as a polio survivor, that there is a saint who is designated the patron saint connected with polio. She is St Margaret Mary Alacoque, a French nun and mystic who lived from 1647-1690. She is listed

on a number of websites that sell medals for patron saints of this or that. On some sites St Margaret Mary is listed as the patron saint against polio so presumably she is expected to protect against infection. Other sites list her as the patron saint of polio patients so if you do catch polio she may still help you. The stories of her life vary but they all include Margaret Mary being bedridden for a long period in her childhood. One version said that she had paralysis for six years as a result of rheumatic fever. Another said she had polio. In both scenarios she was healed by a vision of the Virgin Mary.

Low vaccination rates result in diseases' return

Unvaccinated people may ultimately live shorter not longer lives argues an article in the August 2008 issue of the American Journal *Popular Mechanics* by Glenn Harlan Reynolds. Measles which used to infect between 3 and 4 million Americans a year and cause 400-500 deaths was declared eradicated in the US in 2000 *except for imported cases. But that caveat is important.* [Recently] *an unvaccinated 7-year-old from San Diego became infected with measles while traveling with his family in Switzerland and ended up transmitting the disease back home to two siblings, five schoolmates and four other children in the doctor's office---all of them unvaccinated.* A San Francisco school which favours alternative medicine recently closed after 16 pupils developed whooping cough; less than half the children in the school were vaccinated.

The article explores why parents refuse to vaccinate. *Many are skeptical of modern science and medicine in general. (And it is true that most vaccines carry exceedingly tiny—but real—risks of serious illness or even death). But I think most are responding to a widespread belief that vaccines are linked to autism. Recent studies have soundly dispelled that notion. And a simple glance at health statistics shows that autism cases continued to rise even after thimerosal, the mercury-based preservative widely blamed for the supposed autism link, was largely phased out of US vaccines by 2001.* Many opposed to vaccination say it should be a personal choice; if you want to be protected get vaccinated. The problem with this view is that *while the measles vaccine protects virtually everyone who is inoculated, not all vaccines have the same success rate.* Even if a vaccine is say effective for 90% of those who receive it the other 10% will not be at risk if most people around them are immune as it will be very difficult for the disease to spread. *When people decide to forgo vaccination, they threaten the entire system. They increase their own risk and the risk of those in the community, including babies too young to be vaccinated and people with immune systems impaired by disease or chemotherapy. They are freeriding on the willingness of others to be vaccinated.*

The current complacency is largely the result of the success of modern vaccines. *In previous generations, when epidemic diseases swept through schools and neighborhoods, it was easy to persuade parents that the small risks associated with vaccination were worth it.* We quickly forget dangers. After the terrible 1911 Triangle Shirtwaist factory fire in New York there was a *period of tightened regulations, followed by a gradual slackening of oversight until the next accident.* The author asks what can we do? *To some extent we have to do what the reformers of the 19th and 20th centuries did: Hector people about the importance of paying attention to our society's upkeep. Alas, our main allies in persuasion will probably be the epidemics and disasters that take place when too few pay attention.*

Power failure kills woman in iron lung.

Several years ago I told the story of American, Dianne Odell who had been using an iron lung since she contracted polio aged 3, three years before the vaccine was available. In May, Diane then aged 61 died because a power failure shut down her iron lung. According to CBS

News Diane's family *were unable to get an emergency generator working*. Her brother said, *We did everything we could do but we couldn't keep her breathing. Dianne had gotten a lot weaker over the past several months and she just didn't have the strength to keep going*. Dianne earned a high school diploma, took college courses and wrote a children's book with her voice-activated computer.

Polio lab apes languish in post-Soviet limbo

Sukhumi by the Black Sea is the capital of the breakaway province of Abkhazia in Georgia. The province is not recognized by any country and is subject to an economic blockade by Georgia. Sukhumi houses the former pride of Soviet science, the Institute of Experimental Pathology and Therapy. Outside there is a battered monument featuring a baboon and bearing the inscription, *Polio, yellow fever, typhus, encephalitis, hepatitis and many other human diseases were eradicated thanks to tests on primates*. There were once 2,500 monkeys at the institute. In the 1950s-60s the oral (Sabin) polio vaccine was produced and trialed at the Institute with US scientists before it was used on Americans. A Reuters report by Dmitry Solovyov (28/7/08) recalled the separatist war of the 1990s when both Georgian and separatist forces looted and some took away monkeys. A number returned dying monkeys. Today the Institute is a far cry from its *heyday, when academics, cosmonauts and Soviet statesmen mingled with the up to a million tourists who flocked to the institute each year*. After the polio trials the monkeys went on to become pioneers in the Soviet space program, orbiting the earth long before humans. Today *303 monkeys remain at the institute, many of them are old and dying. The bored survivors roam sullenly in empty enclosures, waiting to cajole an occasional morsel from one of the 25,000 visitors who come each year... Abkhazia's cash-starved authorities cannot offer the financial support the institute needs to haul itself back to the forefront of modern science*.