



Practice &amp; Policy Briefing 1

## Ethics, compassion and the nation's interests –

England's recent approach to treating people affected by Morquio syndrome is neither medically nor financially justifiable

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One of the first children to be treated with elosofase alpha, a medicine now licensed for sale by both the European Medicines Agency (EMA) and the US FDA under the brand name Vimizim, was a young NHS patient in Birmingham. His therapy was given as part of a trial funded by a company called BioMarin. It has been investing in research into treating Morquio syndrome (part of a family of rare diseases called mucopolysaccharidoses or MPSs) and related life-shortening genetic disorders for approaching 20 years.

Britain has lost its once world-leading pharmaceutical manufacturing base. But it is still relatively strong in clinical research, and the government is rightly seeking to build on this potentially valuable resource. As part of this strategy David Cameron and his colleagues are putting public money into initiatives such as Academic Health Science Centres and the 100,000 Genomes Project. The latter alone is receiving over £100 million from Genomics England, the MRC and the NHS.

It is hoped that in future these investments will help make this country a world leader in areas like testing for and treating rare genetically caused diseases, so leading to increased export earnings and enhanced domestic welfare. There can be no doubt that the Life Sciences Minister George Freeman has pushed hard for rapid progress. *'Time is the great killer of value'* he was quoted as saying by the Financial Times during the run up to the last election.

Yet sadly for children with Morquio syndrome who are living in England time is a killer in more ways than one. Not only is their typical life expectancy – even in settings such as the US, with for many if not for all the best care in the world – unlikely to be over 30 years. In this country NICE has yet to judge Vimizim 'cost effective', which means that the NHS is yet to supply it.

The trial that allowed Vimizim to be accepted as effective by the EMA and the FDA was in large part UK led. It extended over five years and involved approaching 200 patients, including 34 from this country. This is between 5 and 10 per cent of the total developed world population of people living with Morquio syndrome known to the research community. The disease is associated with very short stature and spinal and allied problems, along with a range of painful and often disabling symptoms.

Nearly all the nations that participated in the trial that provided the young child in Birmingham with care have now, following Vimizim's licensing, made a decision to reimburse it. The countries in which elosofase alpha is now affordably accessible to patients with Morquio syndrome range from Turkey and the Russian Federation to Brazil and Indonesia.

The citizens of nations like Germany, Sweden, Canada and the Netherlands can also be confident of receiving Vimizim, should they or their children need it.

NICE, however, says that it remains unsure of the new treatment's cost effectiveness. The slowness of its timetable is hard to believe. After multiple failures by NHS England to keep to a verbally promised interim funding timetable, a judgement is now – following a letter sent by David Cameron to NHS England Simon Stevens this May – expected in October 2015. Yet even if this proves positive, people with Morquio syndrome and those who care for them have already been placed under what the founders of the NHS might well have seen, were they alive to do so, as an unacceptable and needless level of stress.

### *Consistent with Hippocratic ethics?*

The price being asked for Vimizim of around £250,000 a year in the US is high, even if in reality a lower annual cost were negotiable. There are also inevitable uncertainties as to the full benefits such a novel drug can generate for its users, especially when they begin taking it relatively late in life. But against this only three new cases of Morquio syndrome occur in the UK each year. It is genuinely 'ultra-rare'.

It is also important to record that presently the total amount of money spent on new (as distinct from older generic) medicines by the NHS each year is capped. In England 'overspends' are returned by companies to the Department of Health. Since January 2014 some £500 million has been paid back, and in 2015-16 the UK-wide figure will rise to £1billion. However, in the English setting there is no transparency as to what happens to these funds. What is clear is that they are not, as those negotiating this arrangement may have been led to believe, being used to further improve access to innovative treatments.

Observers who claim to be 'hard-headed' and committed to making sure that the NHS delivers the best possible 'value for money' may argue that it simply cannot afford to treat people in 'non-cost effective' ways. Yet the standard '*£s per quality adjusted life year yielded*' calculus used by NICE to determine affordability does not adjust for disease rarity. The reality is that although the costs of developing a low incidence disease medicine are likely to be comparable to – if not actually as high as – those of common condition treatments, the number of units sold will be tiny when put alongside those enjoyed by the suppliers of 'mass use' medicines.

Failing to fund new treatments such as elosofase alpha in a timely way could be seen as in line with the utilitarian

(‘greatest good for the greatest number’) values which underlies much economic and political thinking in the UK. Budgetary restraints need to be understood and respected. Nevertheless, the view we take is that the Morquio syndrome ‘scandal’ illustrates a decision making process that is not so much hard-headed as it is hard-hearted and wrong-headed.

### *Discouraging investment in the UK*

In denying due priority to those most in need of therapies which, despite not being ideal solutions, can relieve pain, reduce disability and offer hope for a better future, the technocratic managerialism that dominates today’s NHS threatens to undermine trust in the British health service. The creation of the NHS was a world-leading step forward towards universal health care free at the point of use. Yet the recent handling of the Morquio syndrome issue illustrates why many doctors feel disillusioned, while those labelled too expensive for inclusion in the NHS ‘life boat’ are both afraid and – if they are strong enough to resist dying quietly – angry.

Morquio syndrome is not the only relevant example. Other conditions in which similar NHS access and human rights linked problems are arising range from lung and breast cancer in adults through to diseases like tuberous sclerosis and muscular dystrophy earlier in life.

There is a strong case for saying that this is not only this morally wrong but (in part because extra volumes of nearly all medicines can be made relatively cheaply, once their initial development has been funded) economically mistaken. Put from a philosophical perspective, Benthamite efficiency needs to be tempered by Rawlsian justice. Regardless of whether or not the campaigning of groups like the MPS Society eventually proves successful in winning better access to Vimizim (an announcement may perhaps be made at around the time of the 2015 Party Conference season), many its members presently feel they are having to beg for their lives or those of their children.

Even if this situation has stemmed from a well-meant if glacial bureaucratic process, such cruelty is inconsistent with the values of modern civilised society. It is also opposed to the medical values that the Hippocratic School first articulated some 2,500 years ago in Ionian Greece.

What is more, the message that refusals to fund new treatments for small numbers of people sends out to potential private investors in British based innovation is profoundly negative. Spending public money on ‘cutting edge’ research in privileged academic and allied settings can make good sense, especially when costs can be shared with industrial partners. But if Britain stands out in the developed world as a place that is reluctant to buy at viable prices the products that investments like the 100,000 Genomes Project will help generate, the likelihood of the country gaining the inward financial flows that Ministers are hoping for is certain to be reduced.

In the final analysis, the message to David Cameron and his colleagues is that intervening on a selected, case by case, basis to protest against destructive injustices meted out by appointed bodies such as NHS England is not enough. Strong and well informed political leadership, coupled with a principled balance between pursuing the greatest good for populations and meeting the needs of individuals in extraordinary need, could deliver much better outcomes for everyone.

Without a sensible and affordable commitment to buying and supplying the products of bio-pharmaceutical research – which over ten to twenty years will become low cost generic interventions that can be made universally available on a global basis – British taxpayers and patients alike will end up carrying the financial burdens of research while being cheated of its full economic benefits. Children and adults who are living today with diseases like Morquio syndrome will be left to suffer needlessly and die earlier than would in a fair world, blessed with genuinely equitable health care systems, be their fate.

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