Background

In January 1964, when the Chief Medical Officer started the collection of birth defect statistics “as a means of providing early information of causal factors of congenital malformation”, he also reminded doctors that “following the thalidomide tragedy it was generally felt that there should be a national notification of congenital abnormalities so that any increase in these conditions might be noted as soon as possible”. [1]

Birth defects are caused by mutagens that damage DNA such as radioactivity, organophosphate herbicides/pesticides [2] and industrial emissions of PM2.5s, i.e. particles small enough to get into the lungs, containing certain heavy metals, dioxins and similar chemicals. [3, 4, 5]

The earliest birth defect data published by the Office of National Statistics [ONS] so far examined starts in 1971 when the recorded rate of babies born with heart and circulatory defects in England and Wales was 9.0 per 10,000 births, but the true rate was almost certainly higher due to under-reporting. The recorded rate rose to an initial peak of 15.7 per 10,000 in 1983 before falling to a minimum of 7.0 per 10,000 in 1995. The recorded rate in 2003 was 21.2 per 10,000, i.e. more than triple that in 1995. Improvements in scanning techniques has meant that more defects are detected earlier, allowing the opportunity for pregnancies to be terminated and concealing the true extent of the increase in reported rates that omit termination data.

When examining the above graph, and also the very high rates of babies born with defects in some Primary Care Trusts (PCTs), it’s worth recalling the final paragraph of the above Times article of 1964: “The scheme will be widely welcomed as a valuable means of helping to cope with a problem that
involves a high infant mortality rate and is responsible for much ill health, disability and parental
distress.” [1]

**Hazardous fuel**

Since 1992, and especially from the downgrading of IPPC [Integrated Pollution Prevention and Control] in 2000, relaxation in the quality of fuel allowed to be burned in power stations, cement kilns and other industrial processes has led to a massive increase in toxic PM2.5 emissions - leading to increased rates of asthma, heart attacks, stroke, diabetes 2, depression, obesity, birth defects, infant mortality, stillbirth, cancers, ME/CFS, MS, autism, premature deaths of all ages etc. etc. [3]. Dr Dick van Steenis first proved industrial PM2.5 causation for asthma with epidemiological studies in West Wales and elsewhere. [6] He followed up the asthma surveys by comparing rates of hospital admissions for cancer and hospital referrals for depression in both high and low asthma zones, finding correlation with asthma incidence, i.e. the high zones in West Wales being where there was maximum grounding of PM2.5 emissions from the oil refinery/power station complex at Milford Haven waterway. [7] Incineration of municipal and hazardous waste has also increased exposure to PM2.5s, causing health damage up to some 20 miles downwind, compared with 3 miles from hazardous landfills.

**Published birth defect data**

The 1987-2001 ONS birth defect data [8] revealed a sharp upward trend in the rate of total defects recorded per 10,000 total births [i.e. live and stillbirths], leading to a press release [9] and concern among some politicians, including John McDonnell MP, Lembit Opik MP, Nick Harvey MP and David Taylor MP - all of whom have either been quoted in press articles, or have asked parliamentary questions.

In 1987, published ONS birth defect data included statistics for 18 types of defects and also the number of babies notified as having defects for 200 locations in England and Wales. In 1988 and subsequent years, the numbers of babies recorded as having defects was not printed for any location. The number of locations was gradually reduced over time, so that in 2001 only 100 locations were listed. In 2002, birth defect data was only published for the 28 Strategic Health Authorities in England and five health authorities in Wales, making any trend analysis in England impossible. The purpose was clearly to hide high zones by diluting with low zones.

The unpublished ONS data examined here confirms earlier concerns and provides greater detail over an 8-year period 1995 to 2002.

**Unpublished ONS data**

Following a personal request to Ruth Kelly MP, ONS have kindly released birth defect statistics for each of the Primary Care Trusts [PCT] in England for the years 1995 to 2002. The data comprises the numbers of babies recorded as born with defects in each year and the numbers of live and stillbirths in each PCT, enabling a rate to be calculated. Where the number of babies born with defects was less than 5, no figure was divulged to allegedly preserve confidentiality. The purpose is clearly to hide differentials. This means that the rate of babies born with defects in the chosen “control” cannot be stated with certainty, although it is of course possible to calculate rates for 4, 3, 2, 1 and zero such babies. Islington, in the heart of the largest urban area in the UK has been chosen as a control so that any confounding factors due to traffic emissions can be discounted.

When the data was examined, there were very wide variations in rates. Locations downwind of
incinerators, oil refineries, cement kilns and power stations had elevated rates of birth defects.

The highest recorded rate of babies born with defects in 2002 was 62.1 per 1,000 births in Mid Devon PCT, where one in 16 of all babies born were recorded as having at least one birth defect.

In Islington, the recorded birth defect rate was between 1 in 632 births and 1 in infinity, as follows:

1.6 per 1,000 births if 4 Islington babies born with a recorded defect [i.e. 1 in 632 births] or 0.4 per 1,000 if there had been only one such baby [1 in 2,526 births] or 0.0 per 1,000 if no babies born with defects [1 in infinity]

The 2002 differential between rural Mid Devon and urban Islington is 39-fold if 4 babies were born with defects in Islington and 155-fold if just one Islington baby was born with defects. It’s possible that some of the Mid Devon defects could have been caused by incineration of “foot and mouth” carcasses using waste oil/solvents as fuel because such foot and mouth pyres were suspected by Devon dog breeder, Diane Irwin, who noticed defects in dogs for the first time since 1969. [10]

Conclusions

1. The upward trend of heart and circulatory defects in England and Wales demonstrates a major public health failure in the UK and also a failure of the Environment Agency to regulate industrial emissions of PM2.5s. The US equivalent of the Environment Agency have enforced the US Clean Air Act, which has resulted in savings of $193 billion over the ten years 1992 to 2002 due to reduced hospital visits and fewer days off work resulting from the reductions of industrial emissions of PM2.5s according to the White House Office of Management and Budget [11]. Most of the savings would have been from the last two years of this ten-year period, enhanced by the successful prosecutions of ten
power companies, six oil companies and one steel company. If the same standard of reduction of PM2.5s took place in the UK, there would be a £10 saving for every £1 spent on abatement - i.e. for each £1 spent on PM2.5 abatement, there would be a £6 saving on the NHS bill and £4 on reduced social security payments. The opportunity for the UK to adopt the US Clean Air strategy was suggested to The Chancellor in October 2004 by Paul Marsden MP. [12] This letter was passed from HM Treasury to DEFRA for reply and the eventual response, signed by Environment Minister Elliot Morley MP, ignored all health effects of industrial PM2.5s, also the potential NHS savings of £24 billion per annum and also how additional revenue could be raised to "provide adequate compensation for avoidable illness from the millions of UK citizens harmed by government neglect, despite the 1985 commitment to the World Health Organisation to reduce mortality inequalities in the UK.” [12] and the recent ruling [Fadeyeva-v-Russia] by the European Court of Human Rights, making the State responsible for protecting citizens from industrial air pollution. [13]

2. The very high birth defect rates in many PCTs should be of sufficient concern to further examine the incidence at smaller areas, such as electoral ward or broad post-code and also examine other health parameters in the same locations with the intention of removing the cause(s) of illness and premature death. Elevated birth defect rates should be examined in the context of the present Department of Health strategy of cutting treatment, hospital beds and staff to try and cope with increasing budget deficits in certain PCTs, instead of recognising the impact of industrial PM2.5 pollution and then using the savings from reducing industrial PM2.5 pollution to provide a top quality NHS.

3. High birth defect rates both near, and downwind of incinerators [see data for Slough, Hillingdon, Hounslow, Harrow, Kingston and Bexley] demonstrate the lack of regulation by the Environment Agency and also suggest a reluctance by public health doctors to examine causes of illness.

Data

Table 1: Numbers of live births, stillbirths, total births and babies born with defects in each Primary Care Trust in England ranked in descending order of the rate of babies born with defects per 1,000 births.

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22 August 2005
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