Health Effects of Bryn Composting

Briefing Paper for Bryn Compost Liaison Group

Updated Report January 2013

Background

The Director of Public Health, Aneurin Bevan Health Board and team members based in Caerphilly, have been involved with the residents and communities affected by Bryn Composting since April 2009 (under the auspices of Caerphilly Local Health Board at that time). This was at the invitation of the residents. Initially this involved attendance at the informal Residents Liaison Group chaired by Mr Jeff Cuthbert AM. Public Health advice was enhanced by involvement of Mr Huw Brunt, Consultant in Environmental Public Health, Public Health Wales (formerly NPHS). Residents were concerned about the health effects of Bryn Composting and assurance was sought that it was not hazardous to the public.

Public Health Effects

Initially involvement focused on health concerns in Gelligaer. Later representatives of Nelson ward also expressed concerns. At the request of the Director of Public Health, Dr Gill Richardson, Mr Huw Brunt of Public Health Wales conducted a literature review of the health effects of in-vessel composting and produced a briefing for the meeting of Bryn Compost Liaison Group chaired by Mr Jeff Cuthbert, 13 July 2009. Records of bio-aerosol monitoring at Bryn Composting were also examined and levels found to be below that which would affect the physical health of residents. Recommendations for future monitoring were made.

In July 2010 following the local authority assuming running of the Bryn Compost Liaison Group a presentation was made by Dr Gill Richardson and Mr Huw Brunt. This examined the available evidence and concluded that any risk to the physical health of the public was very low.

However, it was evident from initial involvement that for a proportion of residents, particularly from the Gelligaer area but also including some from Nelson, there was considerable distress and anxiety, which they attributed directly to the odour from Bryn Composting. Dr Richardson met several residents on home visits with local Councillors to advise on personal physical health anxieties. Residents were also directed to report health concerns to their GPs. The possibility of conducting a mental health survey was raised by residents and considered by Public Health Wales (Mr Brunt and the Director of Public Health). The advice of the UK Expert Committee on the Medical Effects of Air Pollution was sought. This advice stated that 'single site studies of the effects of air pollutants on health are unlikely to have sufficient statistical power to confirm or refute assertions of effects and there is significant risk

that the results of such investigations will be impossible to interpret'. It was felt that other small health study limitations included the fact that it would not be possible to attribute small area study findings to a specific potential point source. Furthermore the multifactorial influences on mental health would also confound any study findings and there was not a 'before Bryn composting ' survey with which to compare any mental health measures currently with those in the past.

At the meeting of the Bryn Compost Liaison Group in October 2010 the Group were advised of the above. Residents requested that Dr Richardson make contact with local GPs to determine whether they had noticed any effects associated with the site. A Health Effects of Bryn Composting Report was presented to members of the Liaison Group meeting in May 2011.

At the Bryn Composting Liaison Group meeting in October 2012 a commitment was made to update the Health Effects Report with available data for 2011/12.

Effects on Primary Care

Examination of 'Quality and Outcomes Framework' data, which GPs collect routinely as part of their contract, was conducted.

Quality and Outcomes Framework

GP practices can voluntarily participate in the Quality and Outcomes Framework (QoF). This allows them to be rewarded, for good practice (and its associated workload).

Prevalence for specific diseases can be recorded as part of QoF process. It must be noted that prevalence data is only for conditions have been **diagnosed** and then captured by GP information systems. Also, as the QoF data is primarily used to monitor GP practice performance against their contract, secondary uses of the data need to be interpreted with caution.

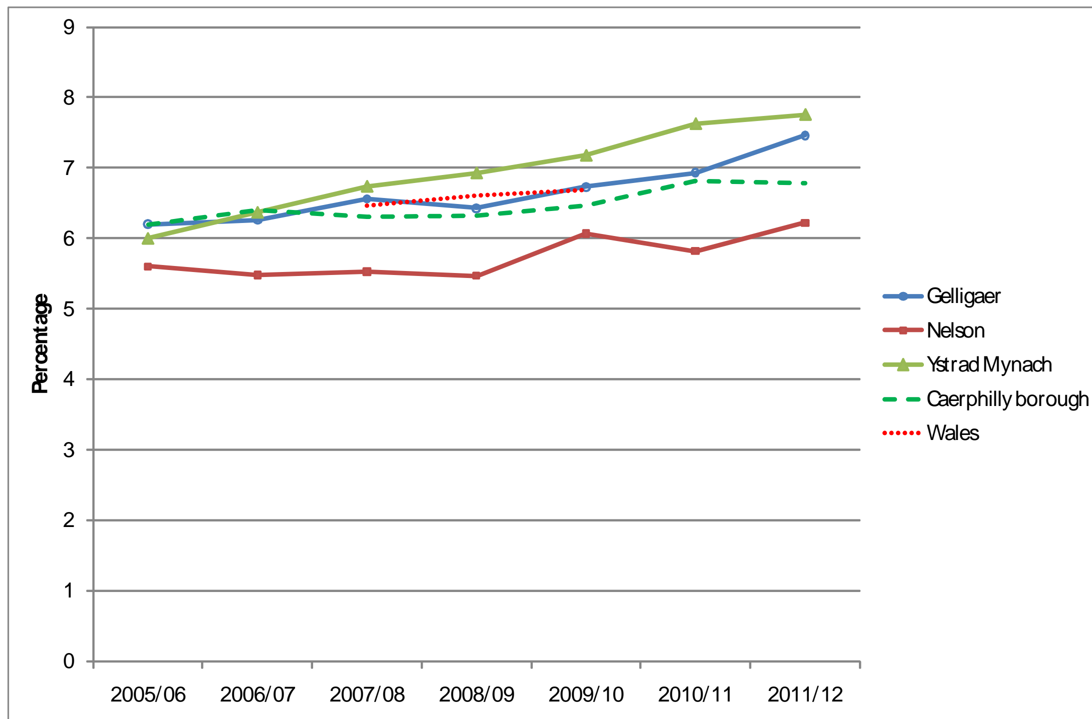
Practices do vary in the prevalence rates recorded. The least variability is found for conditions with an onset that is easily recognised by both the patient and clinician (for example, a stroke), and the greatest variability for conditions where identification is more dependent on individual and clinician practice (for example, hypertension).

Also to note is the fact that the data shown below have not been age standardised. Age standardisation allows comparison of rates across different populations while taking account of the different age structures of those populations. Differences in prevalence may be due to different population structures in practices.

The following charts show QoF data on disease prevalence for Caerphilly borough as a whole, and practices in Gelligaer, Nelson and Ystrad Mynach. Data for Wales are shown where available. Asthma, Chronic Obstructive Pulmonary Disease (COPD) and Depression are the conditions that are illustrated.

Asthma

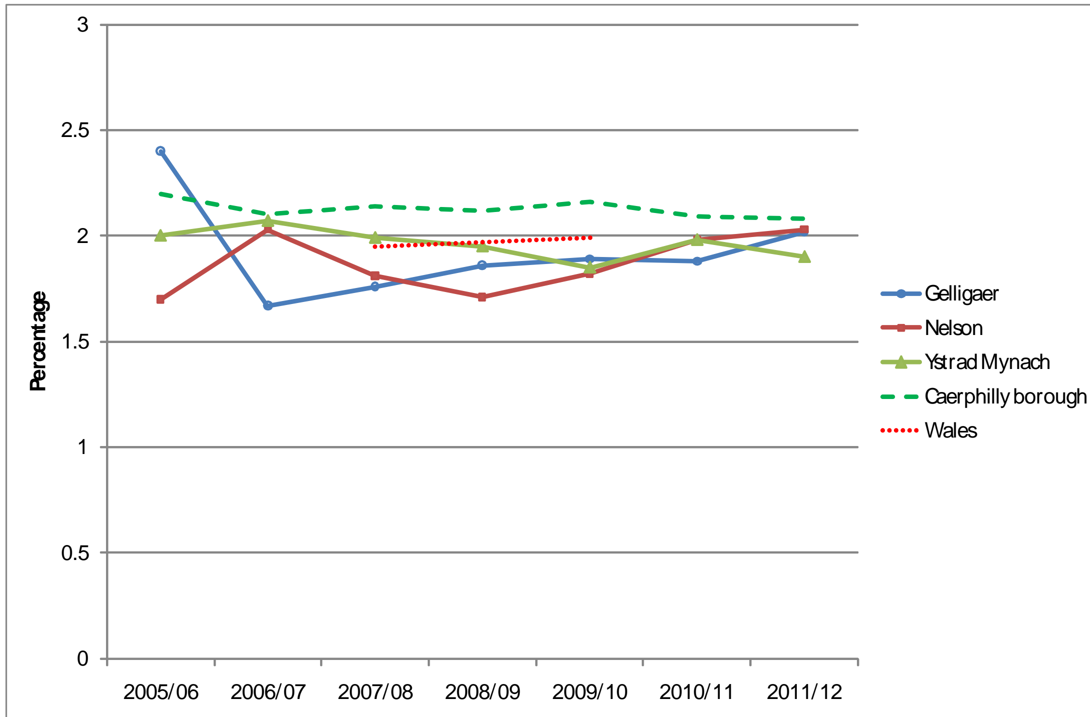
Asthma prevalence has been increasing for some time across Wales. This is a national trend. Prevalence is highest in Ystrad Mynach, the practice furthest away from the area of interest.



COPD

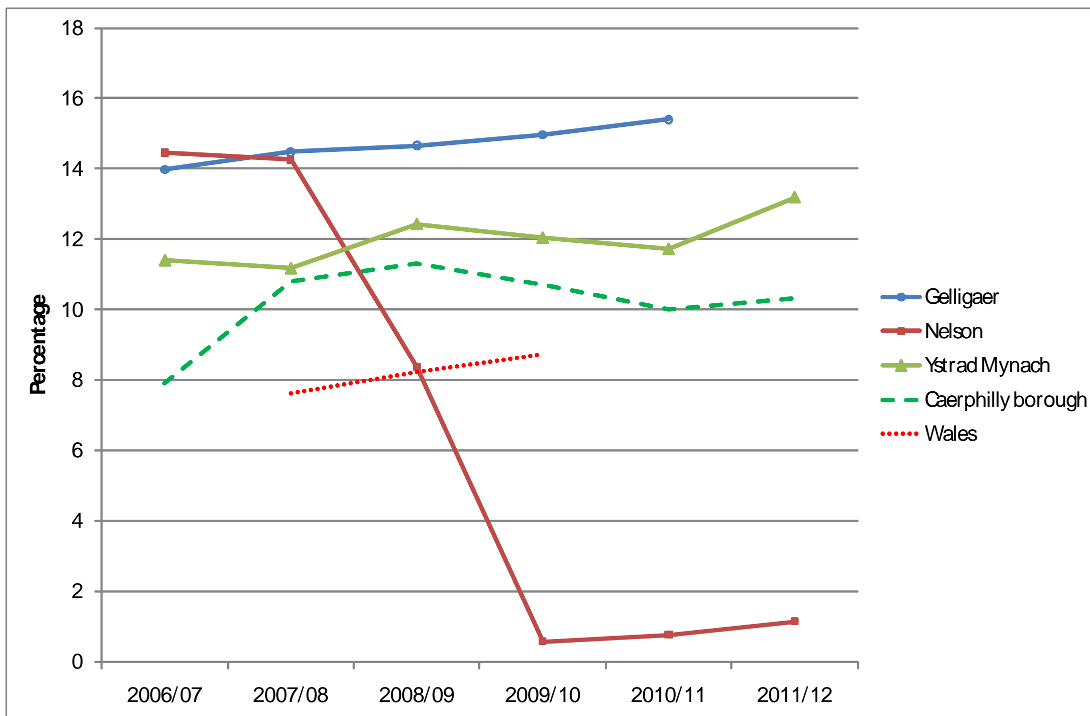
Prevalence for COPD is low, around 2% of the population. Small numbers means that year to year fluctuations are likely.

Prevalence in all 3 highlighted practices is lower than the average for Caerphilly borough.



Depression

Data on depression are only available from 2006/07. Prevalence for depression is highest in the Gelligaer practice and has been consistently higher than the Caerphilly borough average for several years. Data are not shown for 2011/12 for Gelligaer, as the practice changed its clinical data system which affected the quality of the coding for depression. Data for 2012/13, when available, may be more reliable.



The improvement in depression levels in Nelson from 2007/8 may be an artefact of reporting. The practice underwent a similar change in software as Gelligaer, and coding of depression requires verification by the practice.

Summary

Bryn Composting is not likely to have any significant effect on the general physical health of the public. GP records support, in that the rates of respiratory conditions and chronic obstructive airways disease, are not elevated.

Residents have self-reported experiencing sore throats, runny eyes and nose, along with emotional distress and anxiety which they have attributed to the odour from Bryn Composting. The GP data confirms that the mental health of Gelligaer residents is less than that of Wales and neighbouring wards. However, the data only goes back to 2006/07 and so a baseline value for mental health before Bryn Composting was operational is not attainable. Since mental health problems can also be caused by unemployment, personal circumstances and so on it would be difficult to ever prove that direct causation by Bryn Composting was responsible. The Director of Public Health is, however, aware that there is much distress in the community concerning the odour problems from Bryn Composting and that many residents feel that their quality of life has been affected by this. The difficulty is that there is no method to prove this or demonstrate this scientifically.

Dr Gill Richardson
Director of Public Health, Aneurin Bevan Health Board

January 2013