From: Andrew Watterson > [REDACTEDs.38(1)(b)]
Sent: 04 July 2019 09:52
To: Cackette PH (Paul) < [REDACTEDs.38(1)(b)]

Subject: The Buchanan High School site, bladder cancer latency periods and related matters

Dear Mr Cackette and Dr Hannah,

The “Blue Water” affair

One of the parents concerned about the Buchanan High School site asked me to send you some information on minimum latency periods relating to occupational bladder cancer. I am happy to do so in the context of the following observations.

As one of a number of researchers working in the occupational and environmental health field, but outwith both NHS North Lanarkshire (NHSNL) and North Lanarkshire Council (NLC), we have struggled at times with the perceived lack of transparency relating to official investigations about the Buchanan High School cluster and other illness reports linked to the site. At this stage, details of the methods used in these investigations appear incomplete or absent as do the literature reviews compiled for them.

Fuller disclosure and better communications at the beginning would probably have helped dispel many unfounded concerns about the site and helped to identify any other concerns that merited further investigation. It is especially unfortunate that information has been reluctantly made available on some topics both by the council and health board only through the repeated use of FOIs. The old saws of a stitch in time saving nine and penny wise, pound foolish look all too true in this case: much time and money has been spent down the line when a little spent earlier might have established the facts far more quickly.

The policies and principles of WHO Europe’s Charter on Environment and Health - with regard to information, consultation and participation of individuals and communities and the responsibilities of local and central government bodies on environmental health - if followed would also almost certainly have avoided at an early date many if not all of the problems that have occurred at the Buchanan High School site.

I look forward to the review panel report in due course which I am sure will shed light on many of the above issues. However, unless it emerges that there has been satisfactory site and building environmental monitoring between 2012 and up to 2019 and, where necessary, some confirmatory biological testing to allay staff and parental fears, then the matter will continue to fester and trust will not be restored. Such monitoring is not the same as validation tests on the site relating to its initial remediation. The parents, staff and others are looking for evidence of absence of risks and not absence of evidence which appears to have been provided so far on several issues.

The information made available by NHSNL in the public domain indicates they consulted a range of bodies including a former cancer registry head about the bladder cancer cluster and whether it could be random or causal. Whilst fully appreciating the need to respect and protect patient confidentiality, they have not presented more detailed information which could often have been anonymised on the numerator and denominator numbers of Buchanan High School staff between 2012 and 2019. They have not given a breakdown of the cluster gender, age, age at onset of the bladder cancer cluster, smoking history, occupational histories and other factors.
NHSNL information gathering led them to rule out any occupational bladder cancer risk on the basis of a minimum 10-year latency period. One of the big problems with occupational cancer studies has undoubtedly been the lack of follow-up in exposed populations and hence missing bladder cancers after 30 or more years of exposure. However, there has also been a problem with cases being missed due to under-estimating how short exposure times can be that lead to occupational bladder cancer. There can be very short latency periods not only to aromatic amines where a 1-year latency period has been noted but to other bladder carcinogens (https://www.tandfonline.com/doi/abs/10.1179/oeh.2007.13.4.428). In a recent US Government review of occupational cancer latency periods, John Howard flagged the 4-year minimum in the literature (https://www.cdc.gov/wtc/pdfs/policies/wtcpminlatcancer2014-11-07-508.pdf). These cancers often occur when there is high level short-term exposure sometimes to mixtures. Such facts merit discussion and noting in the public domain especially when bladder cancer cluster investigations are curtailed because a school was built in 2012 on a site with a history of very low-level contamination by a number of chemicals known to cause bladder cancer.

After the June public meeting where NHS NL explained their selection of the 10-year cut-off to staff and parents, I contacted Professor Dick Clapp from Boston University/University of Massachusetts, a leading international cancer epidemiologist and former head of the Massachusetts Cancer Registry. He confirmed my recollection about minimum bladder cancer latency periods and thought it not unreasonable in the circumstances to use a 4-year minimum in assessing the Lanark cluster. Again, in terms of keeping public, parent and staff confidence in a difficult situation, if NHSNL had adopted a shorter latency period than 10 years and carried out a more thorough investigation of the cluster or made transparent the detailed work they had done, the ‘crisis’ might have been averted. They could, based on environmental monitoring, then have ruled out conclusively any exposure to bladder carcinogens in the building and corridor where the 3 staff worked if that was the result of the monitoring but no such monitoring has happened.

NHSNL have now provided information, to some individuals only in FOIs not made available at the start of the blue water affair, indicating they followed the ‘HPS Scottish guidance on dealing with assertions of human health risk’. The FOI I have seen did not give web links to the guidance which would have been helpful for a lay audience (https://hpsubsrepo.blob.core.windows.net/hps-website/nss/1573/documents/1_dealing-with-assertions-of-human-health-risks.pdf). I do not think the Buchanan High School site staff and parents were aware of this guidance or its use by NHSNL in its investigations or indeed are aware now. At the public meeting in June NHSNL stated the cancer cluster investigation had been underway for 6 months and the outcomes of the investigation were reported. In which case much of the information gleaned by that investigation could have been made available at that time but was not.

The guidance document makes no reference to the HSE which is a serious omission when investigating what appeared to be a possible occupational cancer cluster although your review I know will address the role of the HSE and that will be welcome. What the guidance does do is outline steps for an investigation that NHSNL apparently followed.

It is difficult to understand why NHSNL did not put the information gleaned in the first stages of the investigation (Scenario One) in the public domain especially as either it did not involve patient confidentiality – the literature review, the symptom profile and review of existing epidemiological data – or could have been anonymised in various places where needed [stage one].

The review of existing data on local pollution sources [stage 2], it is assumed, was conducted but meaningful details of this have not been made available as far as I am aware to either staff or parents. Did NHSNL ask for details of any reported breaches of landfill regs with dumping of
materials that should not have been dumped, or illegally dumped and if so, what were the materials and how were the public health risks assessed?

Such data, clearly documented, would again have helped to allay any unnecessary fears of both staff and students. It may, however, beg the question about what was disposed of on-site over several decades, what checks occurred on the waste dump and industrial waste disposal, what checks were done on the site remediation and building construction and site maintenance at various stages, by whom and how thoroughly: all things your review will be able to address and answer. This would include checks on any residues in school water tanks indicating any longer-term groundwater problems not linked to copper (different to the wider school potable water testing for several chemicals already completed), any checks relating to legionella and temperature controls as indicators of past site inspections, checks on the general state of the campus and grounds, checks on whether any dead wildlife – birds and mammals – has been reported and if so, reasons for their mortality. Your review will hopefully be able to answer some of these questions.

The HPS stage 3 looks at the ad hoc collection and analysis of health data. Parents and staff assumed, I think, that this was carried out by NHSNL. However, it is unclear from statements at the public meeting and since that time exactly what data collection and analysis was carried out, how it was done, by whom and over what period. This is the stage that the parents were looking for to provide re-assurance with regard to the reports about a small number of pupils, ill-health and links with arsenic and other exposures.

NHSNL told the public meeting I recall that there were no unusual patterns of illness in the pupils. They need to make public the information on which that assessment was based and document the sickness patterns. They need to show they checked and everything was acceptable not simply assert that was so. This would include details on what exactly NHSNL looking for, the extent to which data they used was accurate with regard to reported illnesses and recording of absences across the campus, what illnesses may or may not be associated with potential exposures to pollutants etc. The concerns have been further compounded by statements put out by NHNL/NLC on their web page that organic arsenic for example is not harmful. WHO, SEPA - and indeed every standard toxicology text book - do not state this only that organic arsenic is less harmful than inorganic arsenic.

Nor is it clear if NHSNL used a professional statistician to advise on what data to acquire both for the cancer clusters and pupil ill-health assessment and to contribute to the final assessment of the random/causal cluster analysis.

The lack of transparency with the statements issued by NHSNL as well as NLC have led to high levels of distrust among parents and staff and the lack of openness with legitimate questions to these bodies from the media has compounded that distrust. Also, the lack of evidence so far that environmental monitoring of the site has occurred between 2104 and 2019 with regard to soil and air makes what staff and parents perceive as a powerful case for stage 4 environmental monitoring/modelling of the site as outlined in the HPS Guidance on investigating environmental risks. Although the size and nature of the sites are different, it is worth noting that continuous environmental monitoring occurs at the Ravenscraig Brownfield site which is contaminated by industrial waste.

Good luck with your review. It will be welcomed I am sure by all parties involved. I will especially welcome it as I am currently researching the issues surrounding the use of brownfield sites, contaminated industrial sites and public health risks in Scotland.
Best wishes,

Andrew Watterson

Professor Andrew Watterson,
Occupational and Environmental Health Research Group,
Public Health and Population Health Research Group,
Faculty of Health Sciences,
Pathfoot Building,
University of Stirling,
Stirling,
Scotland FK9 4LA