



To: Sian Giddins  
Deputy Clerk  
Health and Social Care Committee  
National Assembly for Wales

From: Quentin Sandifer  
Executive Director of Public Health Services  
Public Health Wales NHS Trust

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Submitted by email

Dear Sian,

In its oral evidence session at the Health and Social Care Committee meeting held on 9 July 2015, Public Health Wales was asked to provide the Committee with a note on the following matters:

**The collaboration work being undertaken by Public Health Wales, Sport Wales and the Welsh Government to encourage physical activity in improving the health of local people**

Public Health Wales, Welsh Government and Sport Wales have jointly appointed a new programme director for health and physical activity who will lead efforts to improve population health and reduce health inequalities by increasing physical activity levels.

Evidence shows that successful approaches to achieving this involve collaboration between many sectors and agencies. The programme director for health and physical activity will oversee the introduction of a coordinated approach to a range of policies – transport, education, social justice, health, housing and economic regeneration – to change the social, cultural, economic and environmental roots of inactivity in Wales.

An action plan is being finalised around the themes of Active Places, Active People and Activity for All.

**Our views on whether financial incentives should be offered to assist local authorities in providing public toilets**

Local authorities are best placed to comment on their ability to safeguard existing provision and to promote new facilities and the financial requirements to meet these objectives.

### **Our views on implementing a minimum age restriction for all body piercings**

Public Health Wales recognises that ear piercing in young children is culturally accepted in some populations in Wales.

Current evidence indicates that if there is parental consent and support for the procedure and if sterile piercing equipment is used in a sterile and appropriate environment and the correct aftercare is provided, then there is no evidence of increased risk of infection in children.

As such, we do not believe there is sufficient evidence to challenge current practice.

### **Any additional tobacco control measures which should be considered for inclusion in the Bill**

Wales is currently well placed according to international comparisons in the implementation of policy and legislation to minimise harm from tobacco use. The main area for future development would relate to hypothecated taxes or a levy on cigarette purchase or profits. Work has been done that has demonstrated that there is an artificial marketplace for tobacco products and that the normal competitive market forces do not operate, enabling high profits for manufacturers. In addition, most notably in California, a levy on every pack of cigarettes sold has funded public health action; they now have among the lowest smoking rates in the world. We recognise however, that these measures may not be within the current legislative competence of the National Assembly for Wales.

We would support early implementation of the extension of the smoking ban in enclosed public places to outdoor environments with a priority given to hospital grounds; school grounds; playing fields and outdoor leisure facilities; beaches and National Parks.

### **Any evidence which demonstrates the effect of residual and third hand vapours from e-cigarettes**

The context for this question was an enquiry by a member of the Committee about any evidence of residue from e-cigarettes within the fabric of the room.

Evidence regarding indoor environmental residues from e-cigarettes is limited due to their recent commercial introduction. Awareness of ‘third hand’ contamination of surfaces and textiles from cigarette smoke and the potential for exposure via the skin, by breathing and by ingestion is, however, well established.

Research indicates that products of e-cigarette vaping results in the deposit of nicotine on surfaces including walls, wood and metal but primarily on floor and windows, resulting in a risk of third hand exposure to nicotine from e-cigarettes<sup>1</sup>.

It has been reported that vaping in an eight cubic metre test chamber for half an hour or more does not measurably increase the trace quantities of a variety of organic chemicals above background levels, whereas cigarette smoking causes dramatic and rapid increases<sup>2</sup>.

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<sup>1</sup> Goniewicz ML, Lee L. Electronic cigarettes are a source of third hand exposure to nicotine. *Nicotine and tobacco Research*, 2014; doi: 10.1093/ntr/ntu152

<sup>2</sup> Nitzkin JL. The case in favor of e-cigarettes for tobacco harm reduction. *Int J Environ Res*.

A small study comparing residues from tobacco smoke and from e-cigarettes found that half of the homes of e-cigarette users had detectable surface nicotine deposits, whereas deposits were detected in the homes of all smokers. Nicotine levels in the homes of e-cigarette users was significantly lower than that found in the homes of cigarette smokers but not significantly different compared with the homes of non-users of nicotine containing products. The researchers concluded that nicotine is a common contaminant found on indoor surfaces and that using e-cigarettes indoors leads to significantly less third hand exposure to nicotine compared to smoking tobacco cigarettes<sup>3</sup>.

The limited evidence indicates indoor environmental risks produced by e-cigarette vaping may be present to some degree, but is likely to be appreciably less hazardous than cigarette smoking.

The Executive Director of Public Health Services at Public Health Wales also noted the Committee's interest in the health risks associated with electrolysis and acupuncture. An appendix to this response is included that addresses this matter. It is informed by a review of the scientific literature since 2000 and by an analysis of the findings from the look back exercise undertaken recently in Newport, Gwent following concerns about skin infections identified in clients who had used a piercing and tattoo studio.

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<sup>3</sup> Bush D, Goniewicz ML. A pilot study on nicotine residues in houses of electronic cigarette users, tobacco smokers, and non-users of nicotine containing products. *Int J Drug Policy* 2015; 26:8: 609-611

## APPENDIX

### a) Summary of evidence on Acupuncture, Electrolysis, Tattooing and Piercing

A review of evidence in scientific literature since 2000 examined the reported impacts of the four special procedures outlined in the draft Public Health Bill. This review identified 206 published articles from across the world and reviewed them to draw out key themes. The key points from this review were:

#### *1 – Range and severity of potential adverse consequences is consistent across the four procedures.*

Infections were the most commonly reported adverse consequences in case reports for all procedures identified. The causative agents for these infections were a wide range of bacteria, including *Haemophilus parainfluenzae*, *Staphylococcus aureus*, *Listeria monocytogenes*, *Pseudomonas* species, Non-tuberculous *Mycobacterium* and *Enterococcus faecalis*, and viruses (e.g. Hepatitis).

In interpreting these findings it is important to note that the nature of the complications reported are different depending on the nature of the study reporting them. Cohort studies involving practitioner reporting of complications generally show high levels of minor consequences (e.g. minor bleeding, itching). This is a different picture to the case reports published by medical professionals which describe more unusual or severe outcomes and outbreaks. This makes estimation of the prevalence of infections following the procedures difficult.

Outbreaks of infectious disease have been reported in the academic literature for all of the special procedures listed. Similar causative agents (e.g. Non-tuberculous *Mycobacterium species* or hepatitis virus) are seen across these outbreaks.

The numbers of studies or reported cases are not necessarily the same, but this may reflect differences in prevalence of the procedure or management and reporting of cases. This is exemplified by electrolysis where only one study was identified within the time period and one older outbreak was subsequently identified. This may reflect a lower risk or a lower prevalence of the procedure being used – there is not sufficient evidence to say which of these applies.

As all procedures proposed in the legislation involve piercing the skin with a needle and the skin is the body's first line of defence against infection there is a *prima facie* case that the risks of infection posed by the procedures are similar. This is apparent in the evidence identified and for most procedures the organisms reported to be causing infection are similar. It is therefore important to ensure that standards of infection control and awareness of infections are similar across the procedures.

#### *2 – Risk of severe outcome is dependent on type and location of procedure and patient characteristics*

With many of the infectious adverse events the consequences range from minor localised infection to fatal or life changing outcomes for the case. There is evidence that there are a number of factors

which contribute to the severity of the outcome for patients. These factors include susceptibility of the client to serious infection and the body site where the procedure is carried out.

It is clear that diabetes and congenital heart conditions feature regularly in the case reports of severe and fatal outcomes. It is also clear that in some cases the client was aware of the condition but not that it carried an increased risk for the procedure. The outcomes including invasive group A streptococcus infection and infective endocarditis carry large costs for health services (e.g. heart valve transplant) and risks to the patient. Some evidence suggests that risks can be reduced in these vulnerable cases by good infection control or measures such as antibiotic prophylaxis.

For some special procedures specific locations and practices have been associated with increased risk. In piercing there is evidence that some piercing sites (high ear, tongue) carry substantially higher risks of complications and subsequent infection than others. This evidence of location specific risk does not exist for other special procedures. It is clear that tongue piercing in particular carries an especially high risk of complication for individuals, including bacterial endocarditis, aspiration of jewellery and dental issues, compared to other sites. Additionally, high ear piercing was associated with a larger number of outbreaks (mostly pseudomonas species) compared to other piercing sites. Similarly dilution of black ink to create grey during tattooing has been associated with a number of outbreaks of Non-tuberculous mycobacterium in the UK and worldwide.

It is therefore important that practitioners are equipped with sufficient knowledge of the risks to vulnerable patients and the increased risks associated with certain locations and practices in order to minimise the risk for patients and the population. Studies of practitioner knowledge in the UK suggest that this is not currently the case and minimum standards of training have been advocated.

### *Conclusion*

Measures proposed by the Public Health (Wales) Bill requiring minimum standards for knowledge and practice for all special procedures to be set and enforced are proportionate to reduce the risks faced and necessary to protect public health. All four special procedures share the same risk factor, a needle is used to pierce the skin. Although each has technical differences, which alter the likelihood of infection transmission and the severity of infection if acquired, the similarity between the basic technique means that all should be regulated in the same way. The case in Wales supporting these conclusions has been reinforced by the findings from a recent health protection incident in Newport, Gwent, as described in the next section.

#### **b) Newport look back**

A cohort of people at risk of infection following a body piercing or tattoo at a premises under investigation (termed 'at-risk cohort') was identified. This 'at-risk cohort' was identified from client lists held at the premises and from people who self-presented following media reports of the incident, either through a Public Health Wales helpline or by directly attending a clinic session for a blood borne virus screen. The cohort represents only those who were known to the Health Board, and is unlikely to include all those who attended the premises under investigation.

In total 1069 people were included in this ‘at risk cohort’; 680 from client lists, 337 from people contacting the Public Health Wales helpline and considered to be at risk, and 44 who self presented at a clinic session. Source of referral was not recorded for 8 people.

### Age of cohort

Figure 1 illustrates the age profile of those identified in the look back exercise. The largest proportion are aged less than 18 years with many under 16 years.

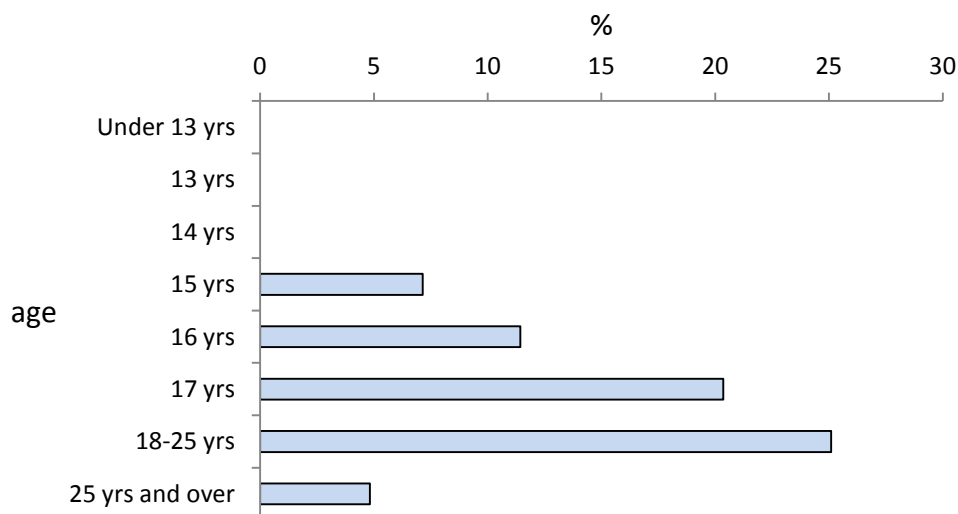
**Figure 1. Age<sup>1</sup> and sex distribution of cohort of people considered to be at risk of infection following a piercing or tattoo at the premises under investigation (‘at-risk cohort’)**



<sup>1</sup> Age as at May 2015

Figure 2 illustrates those identified who reported having ‘intimate’ piercings. It is of note that almost 1 in 15 are under 16 years of age. There are many more under the age of 18.

**Figure 2. Proportion of individuals attending for a blood borne virus screen reporting a body piercing at an intimate site (nipples and/or genitals) by age group<sup>1</sup>**



<sup>1</sup> Age as at May 2015

## Evidence of harm

Of the 628 who reported having had a piercing in the previous two years, 215 (34%) reported having had a skin infection following the piercing. Infections were reported across all age groups. Forty-one of the 215 people (19%) reporting a skin infection stated that they had contacted a health service about the infection. Ten reported attending hospital. Twenty-nine percent (28/96 individuals) of those aged less than 16 years reported an infection, compared to 35% of those 16 years or older (187/532).

## Proof of age

From table 1 it can be seen that clients under the age of 18, and under 16 in particular, are adding years to their true age to pass themselves off as older. Requiring the practitioner to check proof of age is necessary to overcome this issue.

**Table 1: Difference in self-reported age<sup>1</sup> and true age<sup>2</sup> in 387 clients attending a piercing/tattoo studio under investigation in Exercise Seren by age at time of procedure<sup>3</sup>**

	Reported age greater than true age			Exact age match	Reported age less than true age		
	>2 years	1-2 years	<1 year		<1 year	1-2 years	> 2 years
<13	0%	6%	38%	56%	0%	0%	0%
13	10%	10%	10%	70%	0%	0%	0%
14	13%	33%	8%	38%	4%	0%	4%
15	6%	15%	48%	29%	2%	0%	0%
16	8%	6%	12%	73%	1%	0%	0%
17	0%	29%	16%	52%	0%	3%	0%
18-25	1%	0%	3%	96%	0%	0%	0%
>25	0%	0%	0%	97%	0%	0%	3%
Total	4%	12%	17%	65%	1%	1%	1%

<sup>1</sup> Age calculated by subtracting client date of birth from date of procedure. Both dates obtained from piercing studio client records

<sup>2</sup> Age calculated from dates of birth obtained by checking client's details against Welsh Demographics Service

<sup>3</sup> First known visit for piercing and/or tattoo. Clients reported more than one visit and multiple procedures on same visit)