

## Complaint regarding the professional performance of Dr George Rae

**To:** General Medical Council (practise@gmc-uk.org)

**From:** Clive Bates, London; David Dorn, Tyne & Wear

**Date:** 7 April 2015

### Procedural basis for complaint

This is a complaint under the Medical Act 1983 Section 35C(2)<sup>b1</sup> regarding the deficient professional performance of Dr George Rae (GMC reference 1327616, Beaumont Park Practice, Whitley Bay)

*35C (2) A person's fitness to practise shall be regarded as "impaired" for the purposes of this Act by reason only of:*

*(a) [...]*

*(b) deficient professional performance;*

Under the GMC guidance (reproduced at appendix 2), this complaint falls under the category:

*We take action to prevent a doctor from putting the safety of patients, or the public's confidence in doctors, at risk.*

### Complaint summary

The heart of the complaint is that Dr George Rae, a high profile GP speaking on behalf of the BMA, appeared on 31 March 2015 on a BBC radio programme<sup>2</sup> to claim that using e-cigarettes is just as risky or even more risky than smoking cigarettes. He claimed that: *"there are potentially more cancer forming chemicals within e-cigarettes than you've actually got in cigarettes per se themselves"*. Dr Rae's perspective is incorrect and harmfully misleading by a very large margin.

Experts in the field of tobacco and nicotine science suggest the risk of e-cigarette use is *at least 95% lower* than smoking. There is no evidence to support Dr Rae's various claims and overwhelming evidence to dismiss them. There is no reputable expert opinion that supports his view and he appears not to understand the studies to which he is likely to be referring. The Royal College of Physicians provides a useful overview of the contrary position to that advanced by Dr Rae. The 2014 e-cigarette position statement of the RCP states<sup>3</sup>:

*On the basis of available evidence, the RCP believes that e-cigarettes could lead to significant falls in the prevalence of smoking in the UK, prevent many deaths and episodes of serious illness, and help to reduce the social inequalities in health that tobacco smoking currently exacerbates.*

Doctors command the highest levels of trust of any profession<sup>4</sup>, but when they appear as authorities making false and misleading statements, they present a material danger to health. False statements create false perceptions of risk, which can lead to smokers changing behaviour, for example to smoke rather than try e-cigarettes, or to relapse back to smoking from e-cigarette use.

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<sup>1</sup> Medical Act 1983 Chapter 54 [consolidated version as amended] [\[link\]](#)

<sup>2</sup> BBC Radio Newcastle, Alfie and Charlie at Breakfast, 31<sup>st</sup> March 2015 shortly after 9am [\[iPlayer link\]](#) – interview from 02:09:05]. BBC iPlayer expires after 30 days – a permanent copy is retained here: [\[audio\]](#) Transcript at appendix 1.

<sup>3</sup> Royal College of Physicians, Statement on e-cigarettes, London. 14 June 2014. [\[link\]](#)

<sup>4</sup> Ipsos-Mori, Trust in professions. 2015 [\[link\]](#). 90% of the public trust doctors to tell the truth.

## Statements of Dr Rae

A full transcript of the interview is at appendix 1. Almost everything Dr Rae said is incorrect, but this complaint focuses on three statements. Particularly troubling language has been highlighted in bold.

### Statement 1

**Presenter:** Right, give us the science bit Dr Rae. And with regards to these e-cigarettes, how dangerous could they be?

**Rae:** Well I think one of the points about e-cigarettes is firstly, they're not regulated and that's the concern that I as a professional and most professionals have. **But you've got to realise that there are chemicals within e-cigarettes, particularly a group of chemicals called nitrosamines, and nitrosamines actually can cause cancer. They can be even more cancer forming than what you're getting within cigarettes themselves.**

Several studies have looked at nitrosamines in e-cigarette liquids and vapour. However, these showed levels at three orders of magnitude lower than in cigarette smoke, and at levels comparable to residual contamination found in medically licensed nicotine replacement therapies. Farsalinos and Polosa (2014)<sup>5</sup> summarise the evidence as follows and in Table 3 of their review:

*The estimated daily exposure to nitrosamines from tobacco cigarettes (average consumption of 15 cigarettes per day) is estimated to be up to 1800 times higher compared with EC [e-cigarette] use (Table 3):*

**Table 3. Farsalinos and Polosa (2014)**

Levels of nitrosamines found in electronic and tobacco cigarettes. Prepared based on information from [Laugesen \[2009\]](#), [Cahn and Siegel \[2011\]](#) and [Kim and Shin \[2013\]](#).

Product	Total nitrosamines levels (ng)	Daily exposure (ng)	Ratio <sup>4</sup>
Electronic cigarette (per ml)	13	52 <sup>1</sup>	1
Nicotine gum (per piece)	2	48 <sup>2</sup>	0.92
Winston (per cigarette)	3365	50 475 <sup>3</sup>	971
Newport (per cigarette)	3885	50 775 <sup>3</sup>	976
Marlboro (per cigarette)	6260	93 900 <sup>3</sup>	1806
Camel (per cigarette)	5191	77 865 <sup>3</sup>	1497

<sup>1</sup>Based on average daily use of 4ml liquid

<sup>2</sup>Based on maximum recommended consumption of 24 pieces per day

<sup>3</sup>Based on consumption of 15 cigarettes per day

<sup>4</sup>Difference (number-fold) between electronic cigarette and all other products in daily exposure to nitrosamines

Even this gross misrepresentation of the data on nitrosamine exposure is only part of the problem. The uniquely harmful exposure to carcinogens and other hazards to health associated with smoking comes from the mix of thousands of substances in tobacco smoke – the products of combustion of organic material inhaled as reactive aerosol particles ('tar') and hot toxic gases. Tobacco smoke chemistry has been extensively studied over many decades and reported in the literature.

<sup>5</sup> Farsalinos KE, Polosa R. Safety evaluation and risk assessment of electronic cigarettes as tobacco cigarette substitutes: a systematic review. *Ther Adv Drug Saf* 2014;5:67–86. [\[Link\]](#)

Summarising the available evidence in 2010, the Surgeon General of the United States stated<sup>6</sup>:

*Researchers have estimated that cigarette smoke has 7,357 chemical compounds from many different classes (Rodgman and Perfetti 2009)*

*Fowles and Dybing (2003) [...] considered the risk for cancer, cardiovascular disease, and heart disease. Using this approach, these investigators found that 1,3-butadiene presented by far the most significant cancer risk; acrolein and acetaldehyde had the greatest potential to be respiratory irritants; and cyanide, arsenic, and the cresols were the primary sources of cardiovascular risk. Other chemical classes of concern include other metals, N-nitrosamines, and polycyclic aromatic hydrocarbons (PAHs).*

Because there is no combustion, e-cigarette vapour chemistry is much more straightforward, consisting primarily of the ingredients in the liquid (propylene glycol, water, nicotine, flavouring), possibly some products of thermal decomposition and possible contaminants. Compared to cigarette smoke it is relatively benign and does not contain many of the hazardous substances found in smoke. But Dr Rae is focussing his public message on one toxin class (nitrosamines), which is not one of the most significant from a health perspective, while stating the relative weight of nitrosamines between smoke and vapour incorrectly by three orders of magnitude or 1,800 times.

#### Statement 2

**Presenter:** We often hear of tar, you know, in the adverts of years ago really, it's all about the tar causing the problems, but with the e-cigarettes if there's different types of chemicals, by the sounds of it they can cause the same types of problems.

**Rae:** **Absolutely, there's absolutely no doubt about that at all, and that is the whole point,** that they are being marketed, as something that is safe and something that is a safe substitute, and that's not the reality.

In fact there is no evidence that the chemicals in e-cigarette vapour can pose the same types of problems or cause the same risks as tar exposure from cigarettes, and overwhelming evidence to contradict his assertions about tar. Burstyn undertook an extensive review of e-cigarette vapour toxicology studies undertaken so far concluded<sup>7</sup>:

*Current state of knowledge about chemistry of liquids and aerosols associated with electronic cigarettes indicates that there is no evidence that vaping produces inhalable exposures to contaminants of the aerosol that would warrant health concerns by the standards that are used to ensure safety of workplaces.*

As an example of such studies, Goniewicz *et al* measured toxicants in vapour<sup>8</sup> and concluded:

<sup>6</sup> Surgeon General of the United States. How Tobacco Smoke Causes Disease: The Biology and Behavioral Basis for Smoking-Attributable Disease. 2010. [\[link\]](#)

<sup>7</sup> Burstyn I. Peering through the mist: systematic review of what the chemistry of contaminants in electronic cigarettes tells us about health risks, *BMC Public Health* 2014;**14**:18. doi:10.1186/1471-2458-14-18 [\[Link\]](#)

<sup>8</sup> Goniewicz M., Knysak J., Gawron M., Kosmider L., Sobczak A., Kurek J., et al. . (2013) Levels of selected carcinogens and toxicants in vapour from electronic cigarettes. *Tob Control* 2014 Mar;**23**(2):133-9 [\[abstract\]](#)[\[paper from March 2015\]](#)

*The levels of the toxicants were 9-450 times lower than in cigarette smoke and were, in many cases, comparable with trace amounts found in the reference product”.*

Many of the more important toxins in cigarette smoke are simply not present at all in detectable quantities in vapour. At present there is no evidence of *any* material risk, however scientists in this field cautiously suggest data on toxicity and carcinogenicity are consistent with the claim that vaping is *at least 95% lower risk* than smoking. Dr Rae asserted that the risks were the same or worse.

**Safe or safer?** It is not true that manufacturers or anyone engaged professionally describes these products as ‘safe’. Dr Rae will struggle to find any examples and he certainly will not find a pattern or systematic claims of complete safety. Very little is completely safe, but it is true that these products are very much safer than smoking and likely to be comparable in risk to other lifestyle or consumption choices commonly practiced. However, manufacturers are actually prevented by law from making claims that would be deemed therapeutic by the MHRA, because these products are not licensed as medicines. At best, this part of Dr Rae’s interview is merely misleading, but it will have been widely misunderstood: “*not safe*” does not convey any sense that e-cigarettes are *much safer* – which is the most relevant idea to convey to the public.

### Statement 3

**Presenter:** That said Dr George we’ve had campaigners on before, very committed to this cause, and one of their arguments is surely it’s better than the alternative? It’s certainly more pleasant than the alternative, and yeah we probably do have a long way to go before we know all the research and we know everything, but surely it’s better than the alternative?

**Rae:** Well actually Alfie, I’ve just actually said that it’s not. I mean I can’t talk about the pleasantness, because I don’t smoke myself and I don’t know what its like to smoke a cigarette or even...

**AJ:** No, no, I don’t actually mean the experience, I mean, you know passively just from... My mother for example smokes one, she used to smoke like a chimney, and it wasn’t pleasant, and now I don’t particularly mind being around her when she’s smoking these things.

**GR:** Yeah, yeah, right, that’s what you’re talking about as far as the pleasantness is concerned. **But no it’s not better, because what I’m actually trying to get across, and I’ll say it again, there are potentially more cancer forming chemicals within e-cigarettes than you’ve actually got in cigarettes per se themselves.**

In this comment, Dr Rae generalises his false claim about nitrosamines to all cancer forming chemicals and makes the claim emphatically that e-cigarette use is not better than, indeed may be worse than, smoking. This claim is completely incorrect and harmfully misleading. Note that the correct argument that e-cigarettes are safer is not new one to this audience. Dr Rae’s intervention may have had the effect of reversing listeners’ reasonable perceptions of risk into false perceptions. He may even have persuaded the presenter’s mother to switch back to smoking after a successful switch to vaping from much more harmful smoking.

The UK has a number of world-leading researchers and experts in this field, and the Royal College of

Physicians has provided leadership on smoking and related risks since 1962. These experts take a completely different view to Dr Rae.

The Royal College of Physicians made the case for reduced risk options for nicotine users as long ago as 2007, in its major work on 'harm reduction'<sup>9</sup> – it is not a new idea:

*This report makes the case for harm reduction strategies to protect smokers. It demonstrates that smokers smoke predominantly for nicotine, that nicotine itself is not especially hazardous, and that if nicotine could be provided in a form that is acceptable and effective as a cigarette substitute, millions of lives could be saved.*

The current (2014) position of the Royal College of Physicians is underpinned by the 2007 report<sup>10</sup>:

*The RCP recognises that electronic cigarettes and other novel nicotine devices can provide an effective, affordable and readily available retail alternative to conventional cigarettes. These innovations could make harm reduction a reality for smokers, as proposed in our 2007 report.*

*On the basis of available evidence, the Royal College of Physicians believes that e-cigarettes could lead to significant falls in the prevalence of smoking in the UK, prevent many deaths and episodes of serious illness, and help to reduce the social inequalities in health that tobacco smoking currently exacerbates.*

In advice to a UK 2014 parliamentary hearing, leading UK experts in the field: Professor Robert West of University College London, Professor Peter Hajek of Queen Mary University of London, Professor Ann McNeill, of Kings College London, Dr Jamie Brown of University College London and Deborah Arnott, the Director of Action on Smoking and Health, put the relative risk in perspective<sup>11</sup>

*From analysis of the constituents of e-cigarette vapour, e-cigarette use from popular brands can be expected to be at least 20 times safer (and probably considerably more so) than smoking tobacco cigarettes in terms of long-term health risks*

Professor John Britton, currently Chair of the Royal College of Physicians Tobacco Working Group and Director of the UK Centre for Centre for Tobacco and Alcohol Studies, and his colleague Ilze Bogdanovica give a similar if unquantified message in an assessment for the government agency Public Health England<sup>12</sup>:

*Overall however the hazards associated with use of products [e-cigarettes] currently on the market is likely to be extremely low, and certainly much lower than smoking.*

These arguments have been made easily available to GPs like Dr Rae. Professor Robert West and Dr Jamie Brown, in an editorial for the British Journal of General Practice<sup>13</sup>, point out that we already know enough to make reasonable judgements about e-cigarette risk relative to smoking.

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<sup>9</sup> Royal College of Physicians Tobacco Advisory Group, Harm reduction in nicotine addiction: helping people who can't quit, London 2007 [\[link\]](#)

<sup>10</sup> Royal College of Physicians, Statement on e-cigarettes, 14 June 2014. [\[link\]](#)

<sup>11</sup> West R et al, Briefing: Electronic cigarettes what we know so far. Presented to UK All-Party Parliamentary Group on Pharmacy: 10th June 2014 [\[link\]](#)

<sup>12</sup> Britton J, Bogdanovica I. Electronic cigarettes: A report commissioned by Public Health England. May 2014 [\[link\]](#)

<sup>13</sup> West R, Brown J. Electronic cigarettes: fact and faction. Br J Gen Pract 2014; 64: 442–3. [\[link\]](#)

*Some reviews have bizarrely concluded that we do not know whether e-cigarette use is safer than smoking, ignoring the fact that the vapour contains nothing like the concentrations of carcinogens and toxins as cigarette smoke. In fact, toxin concentrations are almost all well below 1/20th that of cigarette smoke.*

Professor Peter Hajek, an expert in nicotine smoking behavioural science shows what a more realistic and evidence-based communication with the public should look like. He reinforces a 95% reduction in risk, in an interview for News-Medical<sup>14</sup>

*Electronic cigarettes are estimated to be at least 95% safer than cigarettes and they appeal to smokers who cannot or do not want to stop smoking, but who want to reduce the risks smoking poses to their health*

This is the kind of message that is actually supported by the evidence and appropriately, but cautiously, conveys the relative risks in a way that gives a smoker a good basis for decision-making.

## Other misleading statements

Dr Rae made a number of other statements that are incorrect or misleading. Rather than provide a full account of the evidence against his statements, these are just listed here – the burden of proof should rest with Dr Rae to show that these are true and fair statements to make to the public.

**Statement:** “[e-cigarettes] are not regulated and that’s the concern that I as a professional and most professionals have...”

**Fact:** e-cigarettes are not regulated *as medicines*, but they are not unregulated. They are regulated as consumer products and bound by at least 17 European Union directives<sup>15</sup>. Courts throughout European Union member states have rejected the mandatory designation of e-cigarettes as medicines, because they do not conform to the legal definition of a medicine.

**Statement:** “it’s not inconceivable that a number of younger people who are smoking e-cigarettes can then go on to actually smoking cigarettes per se and so forth”.

**Fact:** though it is “not inconceivable”, there is **no evidence anywhere** that this progression is happening in reality, or that e-cigarettes cause young people to smoke who would not otherwise have taken up smoking. Observations of changing smoking prevalence are consistent with e-cigarettes *reducing* smoking at all ages. Dr Rae is advancing an unsupported hypothesis with much contradictory evidence. This is not a sound basis for communicating with the public.

**Statement:** “I don’t think there have been many clinical trials done on e-cigarettes”.

**Fact:** contrary to this assertion, there is a large and growing literature on e-cigarettes covering toxicology, safety, efficacy, behaviour and impact on smoking cessation, including a several systematic reviews and a Cochrane Review<sup>16</sup>.

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<sup>14</sup> News-Medical, Electronic cigarettes and smoking cessation: an interview with Professor Peter Hajek, 5 Feb 2015 [[link](#)]

<sup>15</sup> General Product Safety [2001/95/EC](#); Technical Standardisation [1025/2012](#); Classification, Labelling and Packaging CLP [1272/2008](#); REACH [1907/2006](#); Low Voltage [2006/95/EC](#); Electro-Magnetic [2004/108/EC](#); RoHS [2011/65/EU](#); WEEE [2012/19/EU](#); Batteries [2006/66/EC](#); Weights and measures [76/211/EEC](#) [2007/45/EC](#); Sale of goods [99/44/EC](#); Distance Selling [97/7/EC](#); Electronic Commerce [2000/31/EC](#); Misleading Advertising [2006/114/EC](#); Unfair Commercial Practices [2005/29/EC](#); Protection of Personal Data [95/46/EC](#)

<sup>16</sup> McRobbie H, Bullen C, Hartmann-Boyce J, Hajek P. Electronic cigarettes for smoking cessation and reduction. Cochrane database Syst Rev 2014; 12: CD010216 [[link](#)]

**Statement:** *“you’re not going to find the medical profession relenting on the message that we’re trying to get across about e-cigarettes”*

**Fact:** the medical profession is not unified in the way Dr Rae suggests, and certainly not around the false and misleading positions he has put forward in this interview. See the approach of the Royal College of Physicians (above) as an example of informed medical opinion.

**Statement:** *“my job as a doctor is to you know encourage them to give up cigarette smoking by the traditional ways, which are pretty successful, the patches, sometimes tablets and so forth”.*

**Fact:** a doctor’s job is to help to improve the health of patients and public health more broadly by staying up to date on science and keeping up to date on the options available to help patients, even if these are not licensed medicines. It is not true that NRT or the medications are ‘pretty effective’. The vast majority of patients using these products struggle to quit smoking: these products merely shift the odds somewhat against failure. New options to assist quitting should be welcomed by the medical profession.

## **Basis for concern about Dr Rae’s remarks**

**Seriousness of risks.** Smoking is one of the most significant causes of serious disease in the UK<sup>17</sup>. Smokers can avoid most of the incremental disease risk if they quit completely, or if they switch to taking forms of nicotine that are much lower-risk than smoking – for example nicotine replacement therapy or e-cigarettes. The latter approach is a ‘harm reduction’ strategy, and it is an important option for people who cannot or choose not to give up nicotine completely. Nicotine is not a cause of cancer, cardiovascular disease or the respiratory conditions that dominate the ill health from smoking. Pure nicotine is not completely benign, but it is widely sold in medicinal form and does not cause any serious illness<sup>18</sup>.

**Size of opportunity.** A survey conducted for Action on Smoking and Health estimated that there were 2.1 million adults in Britain using electronic cigarettes in March 2014. Of these, approximately 700,000 were ex-smokers while 1.3 million continued to use tobacco alongside their electronic cigarette use<sup>19</sup>. In 2013, 19% of British adults aged 16 and older, roughly 9.9 million people, smoked<sup>20</sup>. This technology is making substantial positive inroads into smoking behaviour in Britain.

**False and deteriorating perceptions of risk.** However, by asserting without qualification that a valid and popular reduced risk alternative to smoking is as dangerous as smoking, Dr Rae is providing false information about an alternative to smoking that many people have found worked for them. The danger is that false information adversely affects perceptions of risk in a way that will incline smokers not to try this alternative, or cause e-cigarette users to lapse back to smoking. There is a causal chain linking information, perceptions, behaviour and disease. False information provided by authority figures causes adverse changes in public risk perception, which, other things being equal,

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<sup>17</sup> In England in 2013, smoking caused 79,700 deaths of which 37,200 were from cancer, 24,300 respiratory diseases, 17,300 circulatory diseases, 900 digestive diseases. Health and Social Care Information Centre, Statistics on Smoking in England, October 2014 [\[link\]](#). No deaths have been attributed to pure nicotine use.

<sup>18</sup> Farsalinos KE, Polosa R. Safety evaluation and risk assessment of electronic cigarettes as tobacco cigarette substitutes: a systematic review. *Ther Adv Drug Saf* 2014;5:67–86. [\[Link\]](#)

<sup>19</sup> ASH, Fact sheet: Use of electronic cigarettes in Great Britain, October 2014 [\[link\]](#)

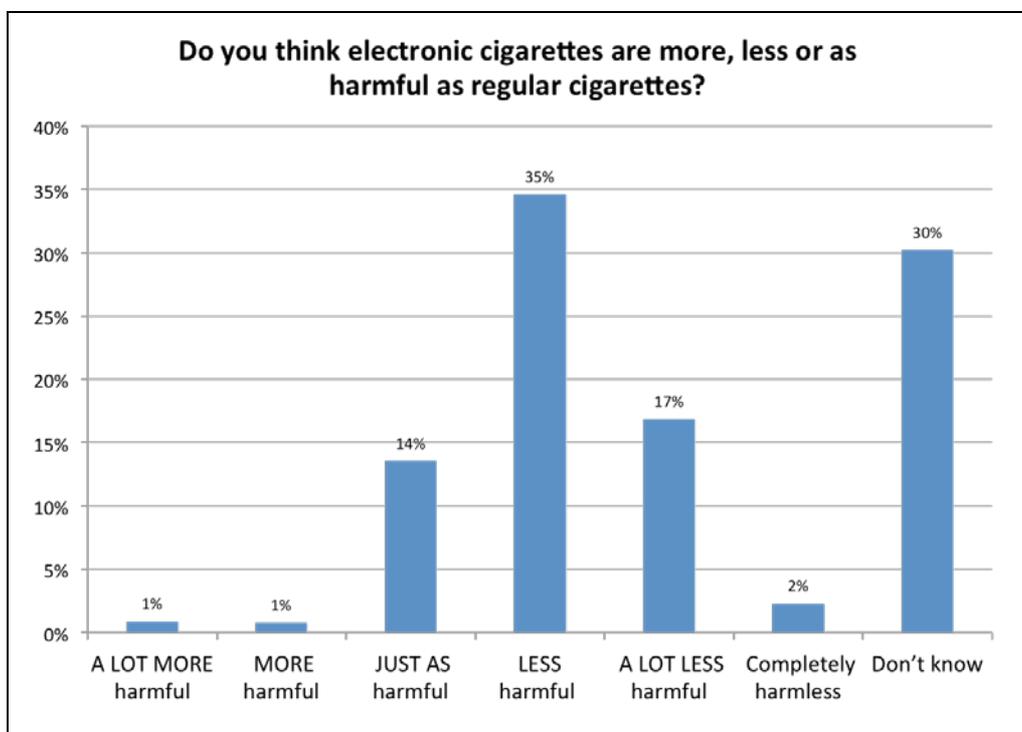
<sup>20</sup> ONS, Opinions and Lifestyle Survey, Adult Smoking Habits in Great Britain, 2013, 25 November 2014 [\[link\]](#)

will change nicotine using behaviours to be more risky than they otherwise would be, which in turn will cause more cancer, cardiovascular disease and respiratory illness.

We already have evidence that perception of e-cigarette risk are radically misaligned with reality. The Smoking Toolkit Survey for England<sup>21</sup>, which systematically surveys smoking and quitting behaviours and attitudes in England, has started to ask about perceptions of relative safety of smoking and e-cigarette use. Dr Jamie Brown, one of the investigators reported in February 2015 the risk perception data as follows<sup>22</sup>:

*We have been tracking harm perceptions for the last 3 months or so now. Only about 45% of smokers in England now believe e-cigarettes are less harmful. When we measured at the end of 2012, albeit in a different survey, the figure was more like 70%.*

This is consistent with 2014 survey data gathered by YouGov for Action on Smoking and Health<sup>23</sup>:



There are several points to draw from this data that are relevant to the complaint:

- Only 17% have a realistic appraisal of risk (a lot less harmful) and Dr Rae's contribution will not have helped to increase this.
- Dr Rae based several of his remarks with an assertion that people believe these products to be 'safe'. This data shows that few people (2%) believe this – his remarks were grounded in a *non*

<sup>21</sup> West R. Brown J, Beard E. *Trends in electronic cigarette use in England*. Smoking Tool Kit Study. 15 January 2015 [\[link\]](#)

<sup>22</sup> Jamie Brown, Personal Communication, 6 February 2015. The 2012 figure is from: Brown J, West R, Beard E, Michie S, Shahab L, McNeill A. Prevalence and characteristics of e-cigarette users in Great Britain: Findings from a general population survey of smokers. *Addict Behav* 2014. [\[link\]](#)

<sup>23</sup> Action on Smoking and Health, Smokefree Britain Survey, 2014. Total sample size was 12269 adults. Fieldwork was undertaken by YouGov between 5th to 14th March 2014. The survey was carried out online. The figures have been weighted and are representative of all GB adults (aged 18+).

*sequitur* and assumption about the public that is false.

- At least 52% have a more realistic perception of relative risk than Dr Rae but his contribution will have helped to increase the proportion that erroneously believes that e-cigarettes are “just as harmful” or “more harmful” and reduce the proportion that have a realistic understanding.

**Undermining the local anti-smoking campaign.** Dr Rae even undermines the work of the local anti-smoking campaign, Fresh North East. It states<sup>24</sup>:

*It is a worry that concern among smokers over the perceived dangers of electronic cigarettes and vapourisers appears to be rising compared to the much more harmful product which is tobacco. A significant number of people hold incorrect beliefs about the harm from electronic cigarettes and nicotine - believing that part or most of the health risks from smoking are from nicotine.*

Ironically, this practical community-based campaign highlights exactly the problems of risk perception that Dr Rae’s interview will serve to aggravate.

## Further considerations

**Is this outside the remit of the GMC?** Providing publicly broadcast advice on health matters while speaking as a trusted representative of doctors falls within the duty to protect the safety of patients and maintain public confidence and trust. Dr Rae’s comments breach several of the duties of doctors described in Good Medical Practice<sup>25</sup> – see extract at Appendix 3. The Andrew Wakefield MMR/autism case shows how damaging irresponsible public communications by doctors can be.

**As a doctor, Dr Rae would advise against e-cigarette use.** It does not matter if Dr Rae does not approve of using e-cigarettes himself, he is professionally obliged to provide evidence-based information about risks. People listen to advice and make their own minds up, and should be able to do that with reliable information from any doctor who chooses to speak publicly on these issues.

**It was a radio interview, not a patient consultation.** If this advice had been provided to a smoker in Dr Rae’s consultation room it would be bad enough, but it was provided as advice to thousands of people simultaneously through a radio broadcast<sup>26</sup>. That makes the consequence of unprofessional advice more serious, not less. Doctors have important ‘public health’ responsibilities as well as direct patient counselling. Dr Rae appears as an authoritative representative of the medical profession. As the presenter concludes: *Thanks very much. That’s Dr George Rae, chairman of the British Medical Association in the North East giving us the doctors’ medical perspective.*

**Is it too soon to say if e-cigarettes are safer?** Dr Rae is not discussing uncertainty in the evidence base, he is asserting with unwarranted confidence that e-cigarettes are not safer and may be more risky, as if this is established. In fact enough is known from the chemistry and physical processes involved to be certain these products are much less harmful than smoking. There remains some uncertainty, but this is about where in the range 95-100% less risky vaping is compared to smoking.

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<sup>24</sup> Fresh North East, Fresh and Making Smoking History in the North East Partnership statement on electronic cigarettes, March 2015 [\[link\]](#)

<sup>25</sup> General Medical Council, *Duties of a doctor*. Accessed 1 April 2015 [\[link\]](#)

<sup>26</sup> BBC Radio Newcastle has 307,000 weekly listeners July-Dec 2014. [\[link\]](#)

## Appendix 1: transcript of interview

**BBC Radio Newcastle Interview 31/03/2015**

**GH:** Gill Hope, BBC Radio Newcastle presenter

**AJ:** Alfie Joey, BBC Radio Newcastle presenter

**GR:** Dr George Ray, Chairman of BMA in the North East

**GH:** Let's grab a word with Dr George Rae, chairman of the British Medical Association in the North East. Good morning!

**GR:** Yes indeed, good morning.

**GH:** Right, give us the science bit Dr Rae. And with regards to these e-cigarettes, how dangerous could they be?

**GR:** Well I think one of the points about e-cigarettes is firstly, they're not regulated and that's the concern that I as a professional and most professionals have. But you've got to realise that there are chemicals within e-cigarettes, particularly a group of chemicals called nitrosamines, and nitrosamines actually can cause cancer. They can be even more cancer forming than what you're getting within cigarettes themselves. So there is the worry about that, and the fact they're not regulated and you can go to, sort of, outlets and get e-cigarettes, obviously as a doctor that is causing me concern, because there is the perception by obviously many people that well, I'm not smoking cigarettes which have got tar and which have got nicotine, and therefore this is a safe substitute. Well I think what has got to be coming across loud and clear, and certainly I've been on the airwaves before and previous months and so forth and other doctors saying look hang on, this isn't the case, there are chemicals within those e-cigarettes, they are serious chemicals, I've given you one example of the nitrosamines, and the fact that now almost you're making, you know, cigarette smoking, the actual act of having something in between your fingers and up to your mouth and, smoking it and almost glamorising it, making it acceptable, making it something you can actually do, is inherently dangerous because I think, I just picked up on what Alfie said there, it's not inconceivable that a number of younger people who are smoking e-cigarettes can then go on to actually smoking cigarettes per se and so forth. So there are lots and lots of concerns about e-cigarettes, and I don't think you would get many if indeed any doctors coming on to the radio and saying look it's OK, they're an acceptable substitute, and let's just go with it. I think nothing could be further from the truth.

**GH:** We often hear of tar, you know, in the adverts of years ago really, it's all about the tar causing the problems, but with the e-cigarettes if there's different types of chemicals, by the sounds of it they can cause the same types of problems.

**GR:** **Absolutely, there's absolutely no doubt about that at all, and that is the whole point, that they are being marketed, as something that is safe and something that is a safe substitute, and that's not the reality.** I don't think there have been many clinical trials done on e-cigarettes and anyway, doctors wouldn't get involved in anything which wasn't regulated, in other words, you know, you can only get them from outlets, such as for example, pharmacists, whereby we know what is actually

in the e-cigarettes, we know the concentrations of whatever is in the e-cigarettes and so forth. But you know only too well that there are many places where youngsters and people generally can go and get e-cigarettes and at the end of the day, regulation really must come in. But there is massive concern within the medical profession about the acceptability that seems to be coming across amongst many people who are not aware of what's in e-cigarettes, they feel it's an acceptable and a safe substitute for those wanting to give up cigarette smoking.

**AJ:** That said Dr George we've had campaigners on before, very committed to this cause, and one of their arguments is surely it's better than the alternative? It's certainly more pleasant than the alternative, and yeah we probably do have a long way to go before we know all the research and we know everything, but surely it's better than the alternative?

**GR:** Well actually Alfie, I've just actually said that it's not. I mean I can't talk about the pleasantness, because I don't smoke myself and I don't know what its like to smoke a cigarette or even...

**AJ:** No, no, I don't actually mean the experience, I mean, you know passively just from... My mother for example smokes one, she used to smoke like a chimney, and it wasn't pleasant, and now I don't particularly mind being around her when she's smoking these things.

**GR:** Yeah, yeah, right, that's what you're talking about as far as the pleasantness is concerned. But no it's not better, because what I'm actually trying to get across, and I'll say it again, there are potentially more cancer forming chemicals within e-cigarettes than you've actually got in cigarettes per se themselves. Now nobody's going to come on to the air and say, but you know that is better for you, it's not, it's actually a bit of a time bomb that people are actually unaware of, so I think that you're not going to find the medical profession relenting on the message that we're trying to get across about e-cigarettes.

**GH:** Do you have patients coming in to the surgery who have gone down the e-cigarette route in order to stop smoking traditional cigarettes?

**GR:** Yeah I have had the occasional patient coming in but to be honest, not a lot, they don't tell me that, we are still, you know, every week, we will be getting patients coming in and as soon as, you know the, the doctor will ask, particularly with medical conditions, if they've got chronic obstructive airway disease and so on, the obvious question is, you know, do you smoke cigarettes. If people, young people are having missed heart beats, do you smoke cigarettes, because that's one of the most common reasons for people having missed heart beats. And if they do, they're usually honest. There's not to be honest many people but there's the occasional person who will say that I smoke e-cigarettes, but my job as a doctor is to you know encourage them to give up cigarette smoking by the traditional ways, which are pretty successful, the patches, sometimes tablets and so forth.

**GH:** Thanks very much. That's Dr George Rae, chairman of the British Medical Association in the North East giving us the doctors' medical perspective.

## Appendix 2: Complaints and the role of the GMC

Extract from GMC web site<sup>27</sup>

### Complaints and the role of the GMC

**The General Medical Council (GMC) is an independent organisation that helps to protect patients and improve medical education and practice across the UK.**

- We decide which doctors are qualified to work here and we oversee UK medical education and training.
- We set the standards that doctors need to follow, and make sure that they continue to meet these standards throughout their careers.
- We take action to prevent a doctor from putting the safety of patients, or the public's confidence in doctors, at risk.

Every patient should receive a high standard of care. Our role is to help achieve that by working closely with doctors, their employers and patients, to make sure that the trust patients have in their doctors is fully justified.

### What action can the GMC take?

Before the GMC can take action to stop or limit a doctor's right to practise medicine, it needs evidence of impaired fitness to practise. This might be, for example, because they:

- have not kept their medical knowledge and skills up to date and are not competent;
- have taken advantage of their role as a doctor or have done something wrong;
- do not have the necessary knowledge of the English language to practise medicine safely in the UK;
- are too ill, or have not adequately managed a health problem, to work safely.

We can also issue a warning to a doctor where the doctor's fitness to practise is not impaired but there has been a significant departure from the principles set out in the GMC's guidance for doctors, Good Medical Practice. A warning will be disclosed to a doctor's employer and to any other enquirer during a five-year period. A warning will not be appropriate where the concerns relate exclusively to a doctor's physical or mental health.

### What the GMC can't do

The GMC cannot:

- deal with concerns or complaints about nurses, pharmacists, dentists, opticians, hospital or practice managers or administrative staff, or anyone who is not a registered doctor;
- normally give you a detailed explanation of what happened to you. This can only come from the doctor or health provider;
- order a doctor to provide the treatment you want;
- pay you compensation;
- fine a doctor;
- order a doctor to give you access to your records;
- make a doctor apologise to you.

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<sup>27</sup> General Medical Council, *Complaints and the role of the GMC*. Accessed 1 April 2015 [\[link\]](#)

## Appendix 3: Duties of a doctor

Extract from GMC web site<sup>28</sup>

### Duties of a doctor

#### The duties of a doctor registered with the General Medical Council

Patients must be able to trust doctors with their lives and health. To justify that trust you must show respect for human life and make sure your practice meets the standards expected of you in four domains.

#### Knowledge, skills and performance

- Make the care of your patient your first concern.
- Provide a good standard of practice and care.
  - Keep your professional knowledge and skills up to date.
  - Recognise and work within the limits of your competence.

#### Safety and quality

- Take prompt action if you think that patient safety, dignity or comfort is being compromised.
- Protect and promote the health of patients and the public.

#### Communication, partnership and teamwork

- Treat patients as individuals and respect their dignity.
  - Treat patients politely and considerately.
  - Respect patients' right to confidentiality.
- Work in partnership with patients.
  - Listen to, and respond to, their concerns and preferences.
  - Give patients the information they want or need in a way they can understand.
  - Respect patients' right to reach decisions with you about their treatment and care.
  - Support patients in caring for themselves to improve and maintain their health.
- Work with colleagues in the ways that best serve patients' interests.

#### Maintaining trust

- Be honest and open and act with integrity.
- Never discriminate unfairly against patients or colleagues.
- Never abuse your patients' trust in you or the public's trust in the profession.

You are personally accountable for your professional practice and must always be prepared to justify your decisions and actions.

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<sup>28</sup> General Medical Council, *Duties of a doctor*. Accessed 1 April 2015 [[link](#)]