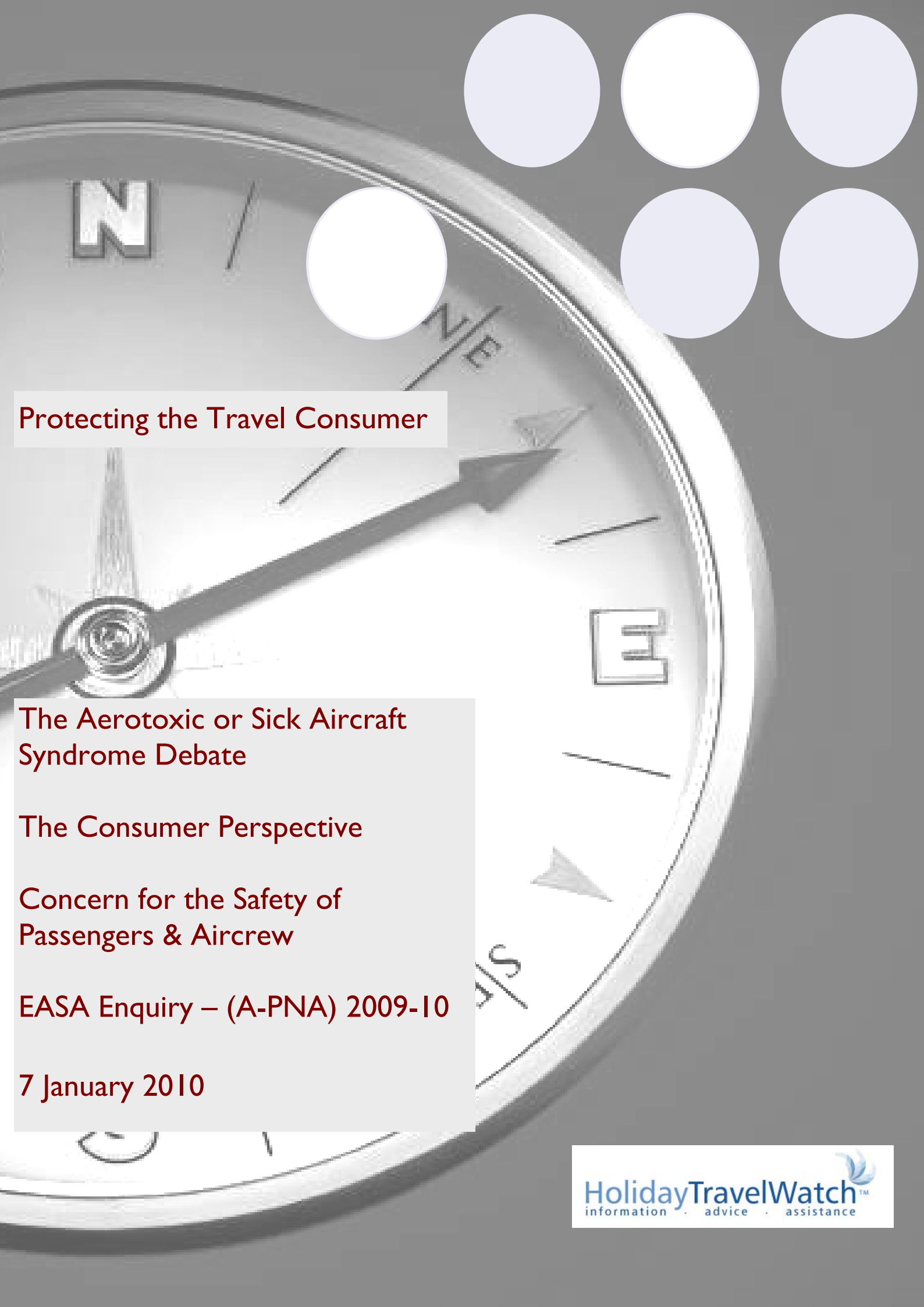

Protecting the Travel Consumer

The Aerotoxic or Sick Aircraft Syndrome Debate

The Consumer Perspective

Concern for the Safety of Passengers & Aircrew

EASA Enquiry – (A-PNA) 2009-10

7 January 2010

HolidayTravelWatch™
information · advice · assistance

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ACKNOWLEDGEMENT

It is 5 years since the death of our Founder, Brenda Wall. Her outstanding determination and courage, led to a new dialogue between the Consumer and The Travel Industry. Such dialogue has created a greater awareness of corporate behaviour and the need for Safety & Consumer Protections that benefit both the Consumer and The Travel Industry.

At the time of her death, the issue of Aerotoxic or Sick Aircraft Syndrome was relatively unknown amongst Consumer circles. This report is dedicated to the memory of Brenda Wall and the undeniable courage of passengers, aircrew and the campaigners who have risked everything to bring this 21st century scandal to the top of the aircraft safety agenda!

INTRODUCTION TO HOLIDAYTRAVELWATCH

The European Aviation Safety Agency has ordered an enquiry into 'Cabin Air Quality onboard Large Aeroplanes'. HolidayTravelWatch (HTW) provides its views and opinions not upon scientific data, but based upon the growing consumer contact and information on this important issue.

HolidayTravelWatch is British based consumers organisation founded in 1995. Through 15 years of operation, it has provided information, advice and assistance to over 190,000 holidaymakers, through its dedicated helpline and website. This should however be put into context with the 65,000,000 individual trips taken by British Citizens in 2005[1]. It suggests that HTW only receives a small proportion of all complaints, however, these holiday complaints tend to reflect the more serious element of contractual, illness and injury difficulties faced by the consumer.

The Organisation currently provides information and advice, assisting some 75% of all travel consumers who contact HTW, to find a resolution to their travel complaint. The remaining complainants are then given the opportunity to progress toward litigation, through travel law specialists. It is estimated that more than 80,000 holidaymakers have received such legal assistance, and have achieved in excess of £20,000,000 in compensation for their holiday complaints, holiday illness and injuries. This report will cite the relevant experience of this Organisation and the Travel Consumer, in support of its conclusions.

HolidayTravelWatch is entered onto the European Commission's Register of Interest Representatives. The Organisation's Registration Number is – 63992152960-12.

[1] Lord Treisman – FCO Reception March 2006

THE RISE OF AEROTOXIC AWARENESS AMONGST UK TRAVEL CONSUMERS

We first became aware that fumes on board an aircraft may be an issue in 2006.

That case related to a fire onboard the aircraft. We were made aware of holidaymakers exposed to smoke in the cabin and the after effects they suffered. At that stage, we had no knowledge of carbon monoxide or neurotoxins that could potentially escape into aircraft.

In 2007, we were approached by one UK travel consumer who advised of a serious incident on board a UK registered aircraft. The incident exposed this family to fumes, resulting in them all becoming ill. The family had travelled to their holiday accommodation in Florida, only to be faced with a catalogue of illnesses requiring local hospital treatment. It was only when they returned to the airport in Florida that they realised that their fellow passengers had also suffered with this 'mysterious illness'.

They determined that the one common denominator was that they had all shared the same 'fume event' outbound flight from the UK to Florida.

All of the passengers recalled the 'fume' incident on board their aircraft and the indifference shown to them by the flight crew.

They resolved to band together to create what was to become the first Consumer group action in the UK.

HTW researched the issue that affected the passengers on this flight and discovered the long standing incidents and illnesses that had also affected aircrew for many years.

HTW was privileged to have been invited to the launch of The Aerotoxic Association and to meet the brave crew who had given a lifetimes work to a

profession that they clearly loved, only to be met by ridicule and groundless allegations as to their mental state, many suffering isolation!

From HTW's perspective, we were confronted by a problem that could easily factor into the whole holiday illness debate. It caused us to re-examine our initial Consumer interview process. We realised that there was a need to determine whether the illness complained of was in fact hotel related, or whether it was subject to the conditions experienced by passengers on board aircraft.

The concept was quite simple; the issue was based upon an air supply (bleed air process) routed from an aircraft's engines, which was subject to chemical contamination from the leakage of faulty seals, thereby releasing contaminants into the cockpit and passenger cabin.

Those chemically based contaminants were shown to include dangerous chemicals, some holding neurotoxic properties. In our view this was sufficient to cause concern.

We began to discover that passengers were aware of fumes in cabins and in some cases; they suffered immediate physical side effects of such exposure.

We wanted to ensure that Consumers had access to basic information and guidance and so we set about to create simple advices on how to deal with this unique situation.

Consumer Advice on how to deal with a fume/smoke event:

In our first major press article, we provided comment and advice to Consumers on how to deal with exposure to fumes or smoke on board an aircraft. In that press release (20 April 2008) we stated:

"HolidayTravelWatch welcomes the forthcoming BBC Panorama programme, due to be broadcast on Monday 21 April 2008. The programme will raise questions and concerns on the issue of poisonous fumes entering aircraft cabins.

HolidayTravelWatch has advised returning holidaymakers following their exposure to a fume event or smoke event, on board an aircraft. Some of the cases where we have assisted air passengers can be found in our 'Call to Arms' section.

Air supplies on board aircraft are fed through what is known as a 'bleed air supply' This means that a portion of the air that enters an aircraft engine, is siphoned off, cooled and then circulated into the aircraft cabin and cock-pit area. Problems arise when the seals which form part of the 'bleed air supply', fail to prevent the combusted oil product (which lubricates the engine) from mixing with the 'bleed air'. Aircraft engine oil products contain Organophosphates, one product in particular, which is alleged to create health problems is Tri-Cryslphosphate (TCP).

HolidayTravelWatch hears regularly from passengers who allege that they have been affected by contaminated air within aircraft. Many complain of the following symptoms:

- *Respiratory problems;*
- *Chest Crackles;*
- *Wheezing;*
- *Stomach Cramps;*
- *Gastro-Intestinal Difficulties;*
- *Pins & Needles;*
- *Nausea;*
- *Chest Pain;*
- *Headaches;*
- *Rashes;*
- *Blistering;*
- *Itching;*
- *Fatigue;*
- *Memory difficulties.*

Many passengers and professional air crew report that they still suffer with many of the aforementioned symptoms, and some are continuing to receive medical assistance.

HolidayTravelWatch is concerned that many Consumers and Professional Air Crew are either unaware of the effects of exposure to toxic fumes or fail to report serious incidents to the relevant authorities.

HolidayTravelWatch recommends that the following action plan be employed by Travel Consumers.

Frank Brehany, the MD of HolidayTravelWatch states:

"If any passenger is affected by illness on board any aircraft, either departing or arriving in the UK, then I would recommend that the following action is taken:

1. ***Notify the Airline and the Civil Aviation Authority (CAA) immediately** of any smells or fumes experienced on your flight - **and in any event before you leave the airport.** (Pilots should complete a Mandatory Occurence Report (MOR) which is submitted to the CAA. Cabin Crew should complete a Flight Report for submission to their airline);*

2. ***Notify the Airline and the Civil Aviation Authority (CAA)*** *of any illness suffered during your flight, or immediately following your flight, or any period following that flight -* ***where possible you should do so before you leave the airport****;*
3. ***Make a record of the events*** *you are complaining of - retain that record;*
4. ***Obtain the contact details of fellow passengers and/or crew*** *who are also affected by these issues - do not give this information to the Airline or the CAA;*
5. *Obtain immediate and ongoing* ***medical attention*** *from your own medical practitioner;*
6. ***Do not provide access to medical notes and records*** *to any Airline, the CAA or any Solicitor without receiving independent advices;*
7. ***Do not accept any compensation/vouchers*** *without receiving independent advices;*
8. *Contact HolidayTravelWatch for free and confidential advice.*

Frank Brehany concludes:

"The Panorama broadcast is timely; highlighting what I believe is not just a National Scandal but a Global Scandal. In January 2008, there were 264,083 aircraft movements in the UK. In a recent Facebook Small Survey (9/11/07), we discovered that 15% of those surveyed had experienced a fume event or smoke event on board an aircraft cabin, and, 5% reported that they had suffered illness following exposure to a flight fume event or smoke event. If you translate those figures into the January 2008 aircraft movements statistics, our survey would suggest that some 39,612 flights over the UK were affected by smoke or fumes in aircraft cabins. With the information already available on this topic, and the results of our survey, this presents a potentially terrifying scenario; the public and professional alike deserve immediate action on this issue"[2].

The Facebook Survey:

The survey referred to in the above press release, was commissioned in an attempt to try and measure the extent and experience of smoke or fumes events on board aircraft. Our terrifying conclusion must however be balanced by acknowledging that consideration must be given on how the survey participant would interpret a smoke or fume event. Would for example the 'smoke' or condensation seen from an air conditioning unit be misinterpreted, or does the operation of galley services provide for a misunderstanding of the passenger experience?

Even allowing for a 50% reduction for such errors of 'interpretation', the fact that 19,806 aircraft over the UK in January 2008, may have suffered with a smoke or fume event, should provide a real cause for concern!

[2] http://www.holidaytravelwatch.net/news-desk/holidaytravelwatch-presscentre/holidaytravelwatch-creates-an-action-plan-for-air-passengers-affected-by-a-fume-event-or-aerotoxic-syndrome/

The Hyperventilation Argument:

Confidence in this debate was not eased by comments made to the Committee on Toxicity (UK) that the Aerotoxic condition was akin to ordinary or chronic hyperventilation[3].

We were concerned that the debate on this issue was taking a direction that added nothing to the wider concerns expressed on health & safety. Whilst we recognised that all Scientific possibilities must be explored, we launched our own online petition generically referred to as the 'Brown Bag Campaign' - this was a deliberate play on the 'hyperventilation' issue, seeking to demonstrate that behind this 'diagnosis' there lay serious concerns that required a more ambitious approach in scientific analysis!

We do not have the resources to actively promote this petition, but to date 109 people have signed the petition. When they sign the petition, they subscribe to the following expression of collective will:

"We the undersigned call upon the Airline & Aviation Industry and Governments Worldwide to recognise the growing concern with regard to the air bleed supply of oxygen into aircraft cabins and flight-decks. We call upon those parties to take immediate steps to provide a safer air supply to all pilots, cabin-crew and passengers and promote a better health & safety regime on this issue. In particular, we call upon:

1. Airlines to invest in the upgrading of air supplies, in bleed air supply aircraft, with appropriate bleed air filtering systems.

2. We call upon Governments World-Wide to recognise the seriousness of this issue; it is an issue that transcends National Boundaries. We call upon them to take action to create an environment and partnership with the Airline & Aviation Industry for the protection of Pilots, Cabin-Crew and Passengers"[4].

First Call for a Public Enquiry:

In March 2008, the Global Cabin Air Quality Executive (GCAQE) called for a public enquiry into the causes and effects of the Aerotoxic condition. This organisation was pleased to be able to offer its support to this call and stated:

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[3] http://cot.food.gov.uk/pdfs/tox200621annex1b - http://cot.food.gov.uk/pdfs/tox200720annex3pdf - http://www.gcaqe.org/GCAQE_COT_Analysis_20_August_2007.pdf - http://www.esam.aero/main/docs/ecam08/No%207%20Bagshaw%20paper.pdf

[4] http://www.holidaytravelwatch.net/campaigns/brown-bag-campaign/

"How serious does this issue have to become before government will act? Do our survey figures not cause alarm in government or airline circles? Clearly if passengers are being affected, what is happening to the crew? How many pilots have reported Flight Smoke or Fume Events to the CAA in the last 10 years? How many flight crew have reported illnesses either to the CAA or their Trade Unions in the last 10 years? These are important questions that require answers and action now!"[5]

Second Call for a Public Enquiry:

Regrettably, the UK Government did not accede to their call and twelve months later, a further call for a public enquiry was made. We again supported their campaign and stated:

"I once again support the call by the GCAQE for a Public Enquiry on the important issue of Aerotoxic Syndrome. Given that the Government is somewhat pre-occupied with the so-called credit crunch, it is no excuse to fail to respond adequately to responsible organisations or the Consumer on the issue of a Public Enquiry. It seems to me that it is sensible to form such a Public Enquiry, or do we have to wait for some catastrophic event to take place before one is granted? It also seems obvious that if the airline and manufacturing industry are so confident in their views on opposing the concept of Aerotoxic Syndrome, then they too should also welcome such a call for an enquiry!"

He concludes, "Throughout 2008 we continued to hear from Consumers who were concerned about fume or smoke events on board aircraft. I do not expect 2009 to be any different! It is outrageous that on such an important issue, elected and public officials either remain silent or simply throw a crumb of comfort through what is generally thought to be a flawed enquiry into substances within aircraft cabins. Government's must facilitate a broader discussion and open dialogue with the those affected by exposure to cabin fumes. The British Government should now respond to and create a Public Enquiry into this very important issue, before it is too late!"[6].

Consumer Action:

In providing commentary and guidance to Travel Consumers, we also generally seek to help those Consumers to find and join with other holidaymaker's or air passengers. This Organisation was created by a holidaymaker who formed her own group legal action against the failures of health and safety in her own holiday contract. We make no apologies for this position, it is often the only course of

[5] http://www.holidaytravelwatch.net/campaigns/holidaytravelwatch-supports-call-for-public-enquiry-on-aerotoxic-syndrome/
[6] http://www.holidaytravelwatch.net/news-desk/holidaytravelwatch-presscentre/holidaytravelwatch-supports-second-call-for-public-enquiry-on-aerotoxic-syndrome/

action left open to a potential holiday litigant, in order to seek fair and just compensation for the injury that they have suffered.

In relation to the Aerotoxic issue, we have sought to bring to the Public's attention, the dangers posed by this issue and to gather holidaymaker's or air passengers, in order to create an option of litigation, if they should choose to take this route.

The mechanism that we use to attract fellow passengers is through the responsible use of our 'Call to Arms' feature. Between 2007 and 2009 we have placed 6 such 'Calls' on our website[7]. Throughout 2009 we continued to receive reports of smoke/fume experiences, but many chose not to take any further action on this issue.

Current Alternative Solutions:

Not everyone agrees with this approach. There are those within the debate that find the concept or experience of litigation unpalatable. Their viewpoints are just as acceptable as the Consumer who is seeking to find recompense for the illness he is suffering.

The argument follows that such actions would 'bankrupt' an Industry. This is a valid point. However, if the knowledge exists that the use of certain chemicals, within the aircraft environment, will lead to illness or death and they knowingly could to prevent escape into the cabin environment, then such a reckless approach to health & safety deserves the harsh light of the civil law shone upon its 'misleading omission'.

The other aspect to our work is Political Campaigning. We consider that campaigners must provide a reasoned approach to how such dangers can be tackled within the present Political/Legal environment. There is clearly a lack of confidence amongst campaigners with the UK model, as is demonstrated by the UK Government's approach to enquiry on this important issue.

[7] http://www.holidaytravelwatch.net/category/news-desk/call-to-arms/

However, we believe that there already exists a framework within the European Union for a comprehensive and uniform approach on the question of aircraft safety, or a failure to promote a safe regime, through EU Directive 2111/2005.

This Directive was created out of the furore of a 'secret' blacklist of airlines in the EU. Demands for its publication led to the creation of this Directive to give more powers to the Consumer. In fact, the theory of the Directive is good, but in practice it provides very little in the way of additional rights.

In our press release of 10 March 2009, we called upon the EU Commission to act to protect aircrew and passengers and utilise their wide raging powers under 2111/2005. We highlighted the important powers given to the EU Commission by stating that:

"Notwithstanding, preamble 20 provides the following solution where a National Government is either unwilling or unable to deal with a aircraft safety issue. It states,

"Where there is a risk to safety that has not been adequately resolved by the Member State(s) concerned, the Commission should have the possibility of adopting immediate measures on a provisional basis" (It requires the Commission to follow an advisory procedure).

The Directive continues by providing examples of when the Commission may intervene, they are:

1. *If there is serious evidence of safety deficiencies by an air carrier;*
2. *Lack of ability or willingness on the part of an air carrier to address the safety issues;*
3. *Lack of ability or willingness of the authorities to deal with the safety deficiencies of an air carrier;*
4. *Insufficient ability of the authorities to ensure that the aircraft is operated according to the Chicago Convention*[8].

We concluded:

"Judging by the calls we receive on this issue and the information received from our fellow campaigners, this matter is not going to disappear. If a Government is either unwilling or unable to accede to a call for a Public Enquiry or creates an investigation which is considered to be flawed, then other than a members of Aircrew or groups of Consumers taking direct legal action for compensation, little else appears to be happening to protect the public and employees from a serious health and safety issue. It is clear that the EU

[8] http://www.holidaytravelwatch.net/news-desk/holidaytravelwatch-presscentre/call-for-eu-commission-to-act-and-protect-travel-consumers-and-aircrew-from-aerotoxic-syndrome/

Commission is empowered to act under EU Directive 2111/2005 - we call upon the Commission to use their extensive powers to act and demonstrate to the workers, consumers and those living under the flightpaths of Europe's airports that safety is truely paramount!"[9]

We hope that the EU Commission will not shy away from its responsibilities!

[9] http://www.holidaytravelwatch.net/news-desk/holidaytravelwatch-presscentre/call-for-eu-commission-to-act-and-protect-travel-consumers-and-aircrew-from-aerotoxic-syndrome/

THE AIR PASSENGER EXPERIENCE:

In March 2009, we created an online survey to determine air passengers experience of smoke or fume events on board aircraft.

The surveys created by HolidayTravelWatch are designed to create a snapshot of a particular issue. The uses of snapshot/low participation surveys are widely used by many companies to persuade Consumers of the 'value' of their products.

The Organisation does not have the resources to promote participation and therefore unable to promote the survey onto a wider Public platform. We adopt a limited and cost effective 'invitation' to the public to participate, through Google advertising. We consider that this method does produce a more accurate survey, as those taking part are more likely to have been affected by the issues we raise and therefore motivated to contribute.

The survey was closed on 29 November 2009. In total there were 102 responses. We have disallowed 3 of those responses as there were indications of technical difficulty when completing the survey. Therefore the data extracted has come from 99 distinct contributions.

In June 2009, we submitted a similar report to the Australian Government's Civil Aviation Safety Authority and cited our early findings from the survey. At that stage we stated that we expected to find that the lack of reporting, the symptoms, the failure to seek medical assistance and poor responses from the authorities, would be confirmed as the survey gathered data. We also expected the survey would confirm the Consumer experience and information received by this Organisation to date.

Those early conclusions have been confirmed!

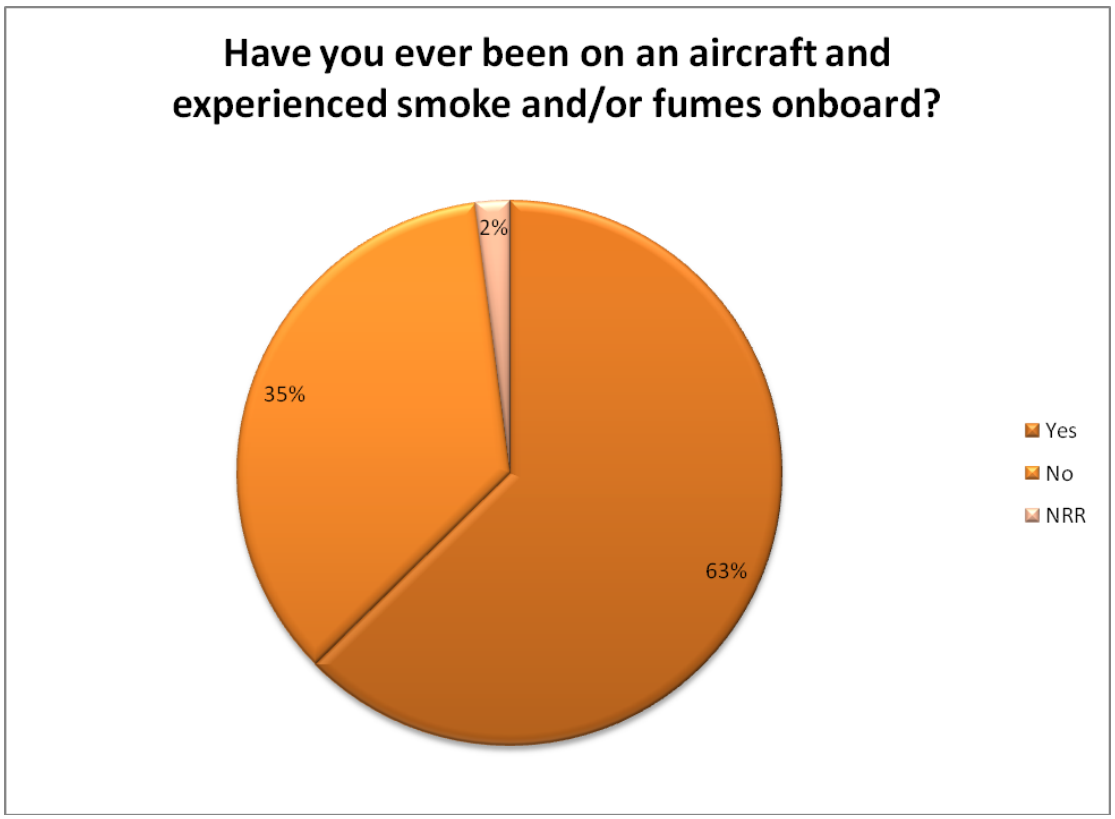
The Survey:

The survey sought to extract the experience and views of aircrew and passengers. The questions either invited a 'yes/no' response, a multi-answer response or a 'free text' opportunity to express views. Where a participant made no responses to a question, these were recorded as 'no response recorded' (NRR).

At the conclusion of this survey, we shall make a comparative study with the aforementioned 'facebook short survey' which we carried out in 2007.

Question 1

Have you ever been on an aircraft and experienced smoke or fumes onboard?

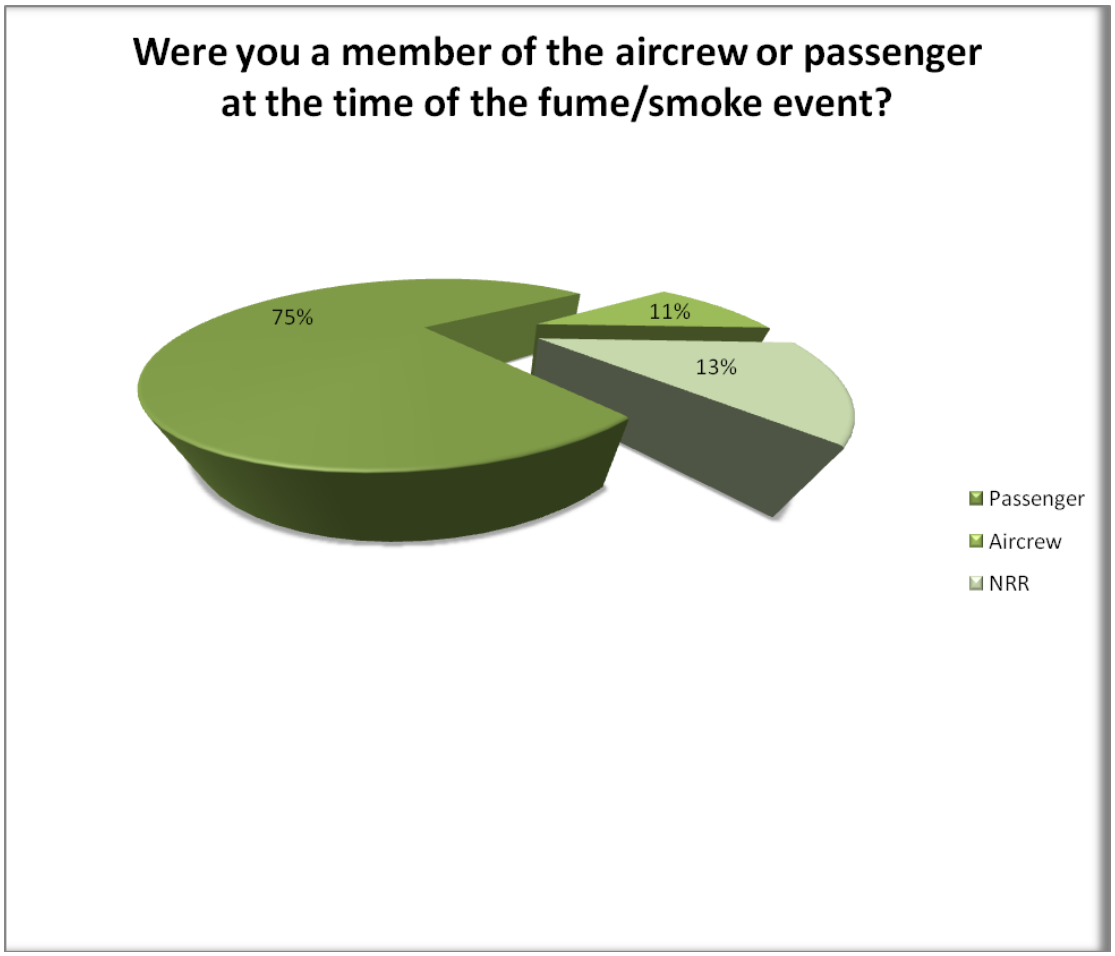


In this initial question 63% stated that they had experienced smoke/fumes, 35% stated they had not and 2% provided NRR. In considering the 35% who had not experienced smoke or fumes, we can see from their further responses that 10

respondents cited health difficulties further into the survey and one merely stated that they were aware of the smoke/fumes problem and avoided travelling in certain types of aircraft. With regard to the 10 who did not answer positively to this question there are two possibilities; either they were unaware of a smoke or fume event or their illness was related to other issues not connected to the Aerotoxic issue.

Question 2

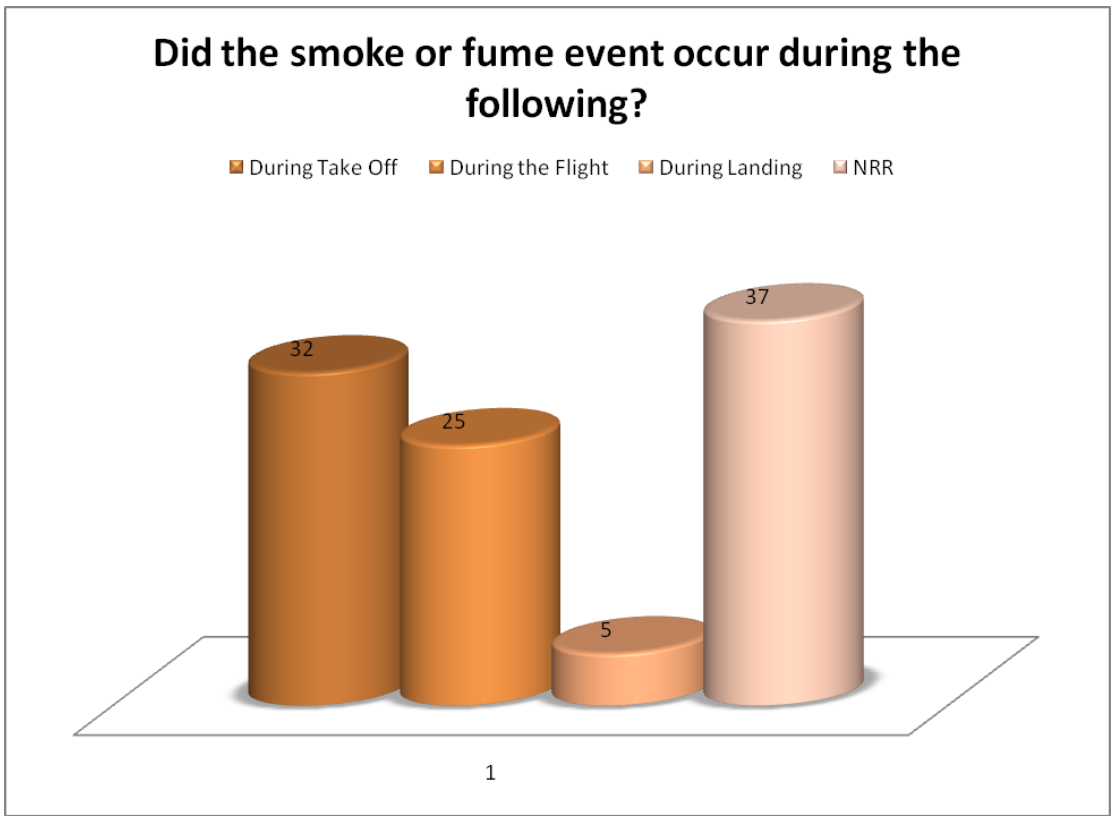
Were you a member of the aircrew or a passenger at the time of the smoke/fume event?



This question was designed to identify the status of the survey participant; 75% stated that they were passengers and 11% stated that they were members of aircrew.

Question 3

Did the smoke or fume event occur during the following?

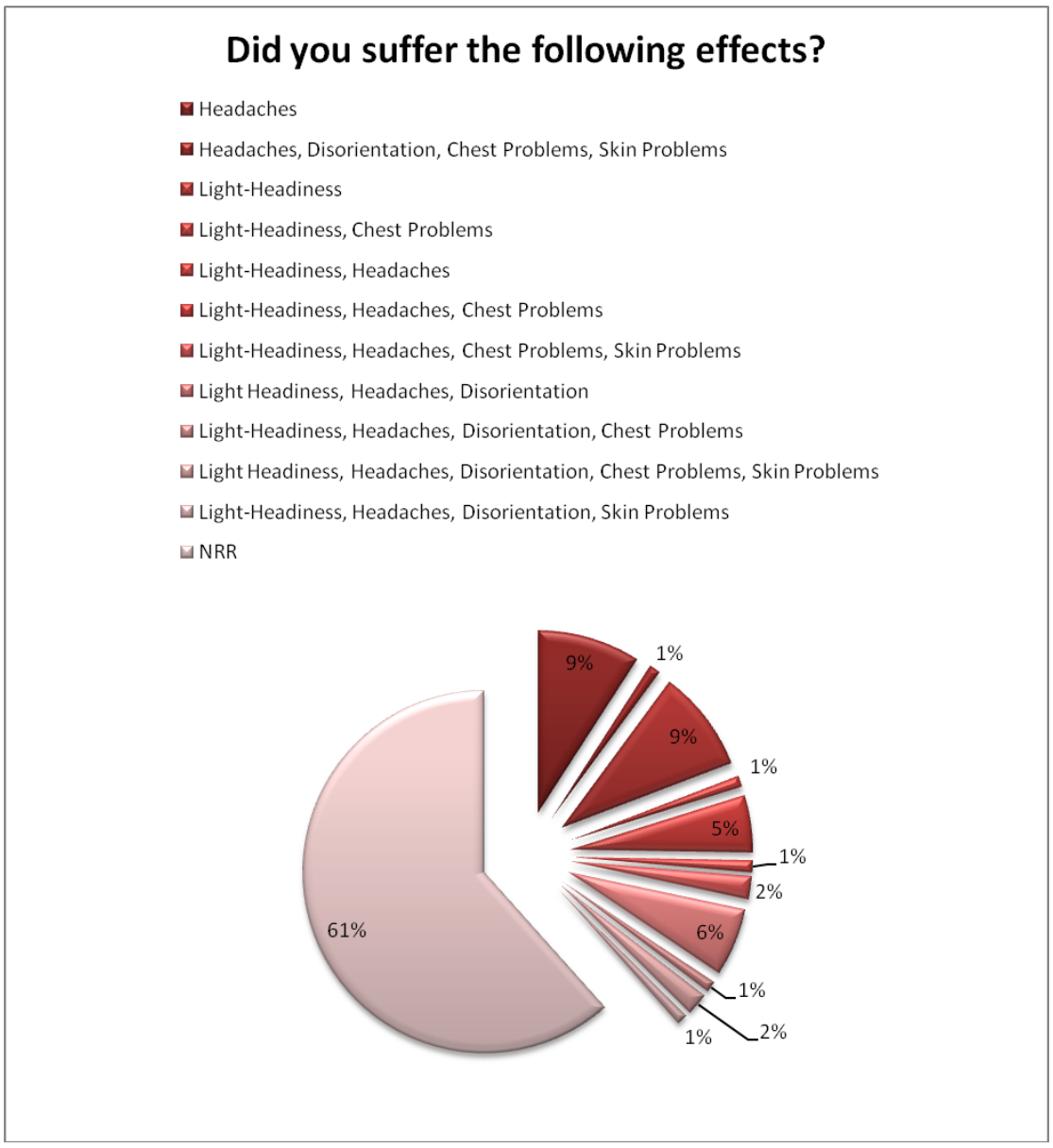


In this part of the survey we sought to establish the point at which either aircrew or passengers detected fumes or smoke onboard an aircraft. 32% stated that it was during take-off, 25% stated that it was during the flight and 5% stated that this occurred during landing – 37% were NRR.

4 aircrew reported that this occurred during take-off, 4 aircrew stated that this event took place during the flight and 2 stated that it was during the landing procedure. 1 member of aircrew did not provide a response.

Question 4

Did you suffer the following effects?

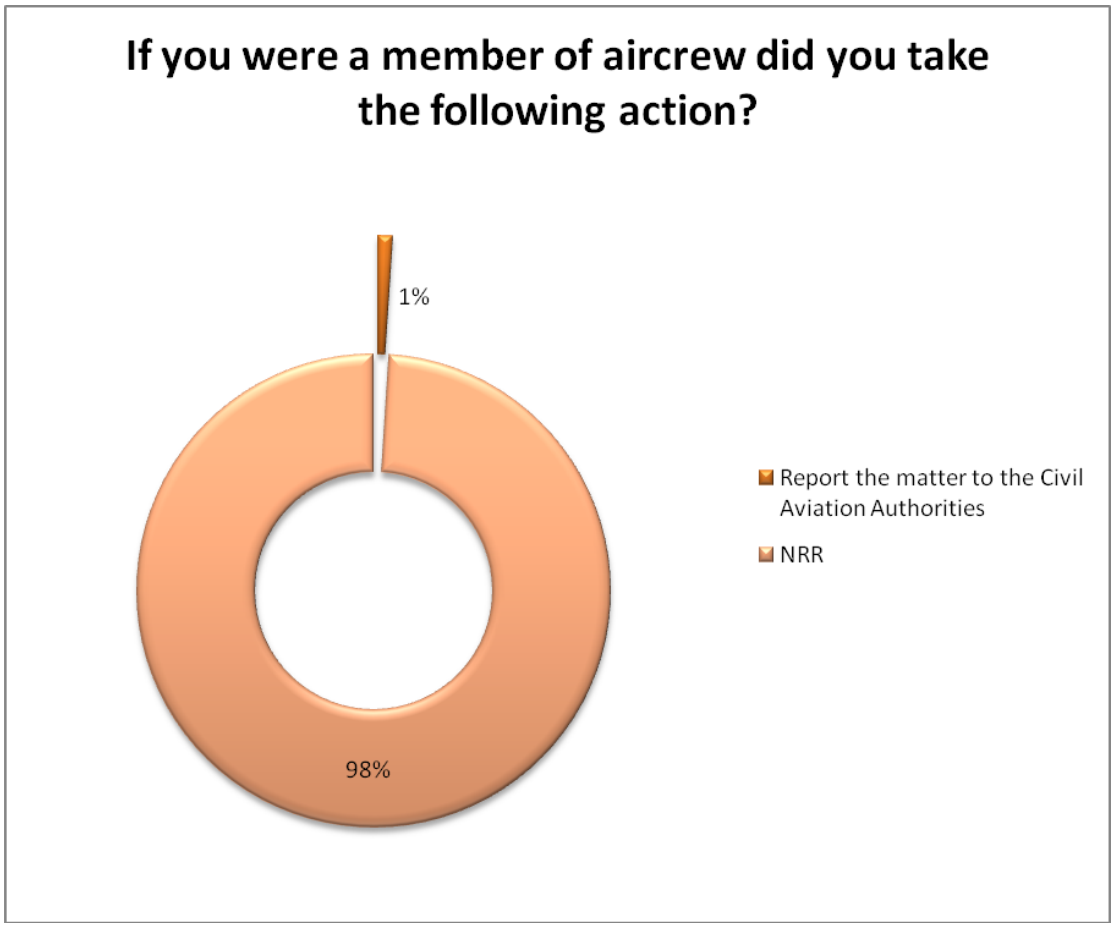


The participants were given a list of potential illness/symptoms that they could chose from following a smoke or fume event. The choices were Light-headiness, Headaches, Disorientation, Chest Problems, Skin problems. The range of symptoms reflect the nature of those reported to this Organisation. It can be seen that only 38% reported that they suffered with symptoms and only 9% suffered with

headaches and 9% with light-headiness. Within the aircrew responses 6 recorded that they suffered with multi-symptoms and 5 were NRR. Overall 61% recorded NRR; we suggest that this is possibly because they did not experience a smoke or fume event or perhaps their later reported illnesses were not connected to events onboard the aircraft.

Question 5

If you were a member of aircrew did you take the following action?

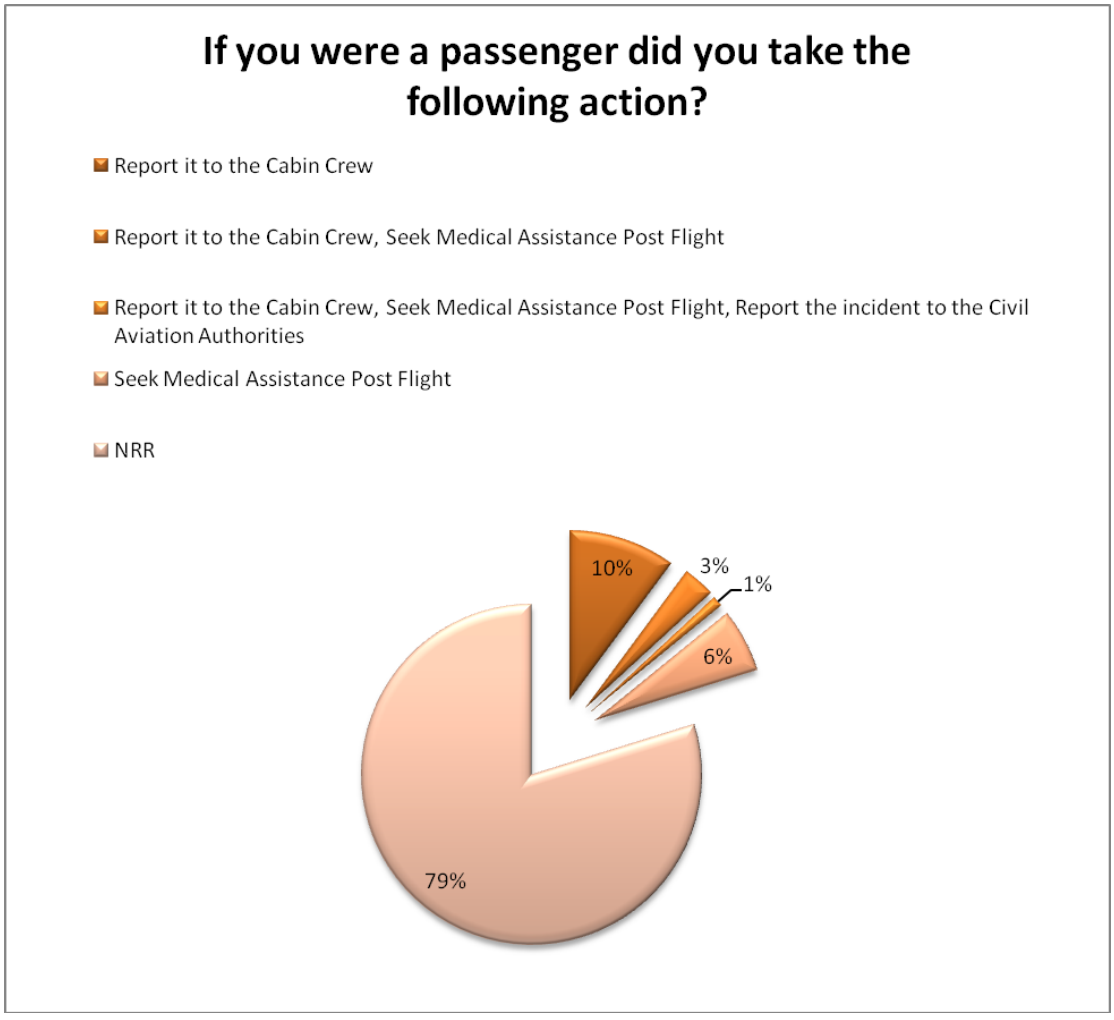


When presenting this question we again provided the following options; declare an emergency, don oxygen masks, report the matter to the Civil Aviation Authorities. Surprisingly only 1 member of aircrew respondents stated their actions; that action was to make a report to a Civil Aviation Authority. From an anecdotal perspective, pilots have told this Organisation of their frustration and the apathy they face when

making 'official' reports and the pressure that is brought to bear upon them to maintain the operational viability of their aircraft; is this suggestive of a 'culture' or 'regime' that has no place within the quest for air safety?

Question 6

If you were a passenger did you take the following action?

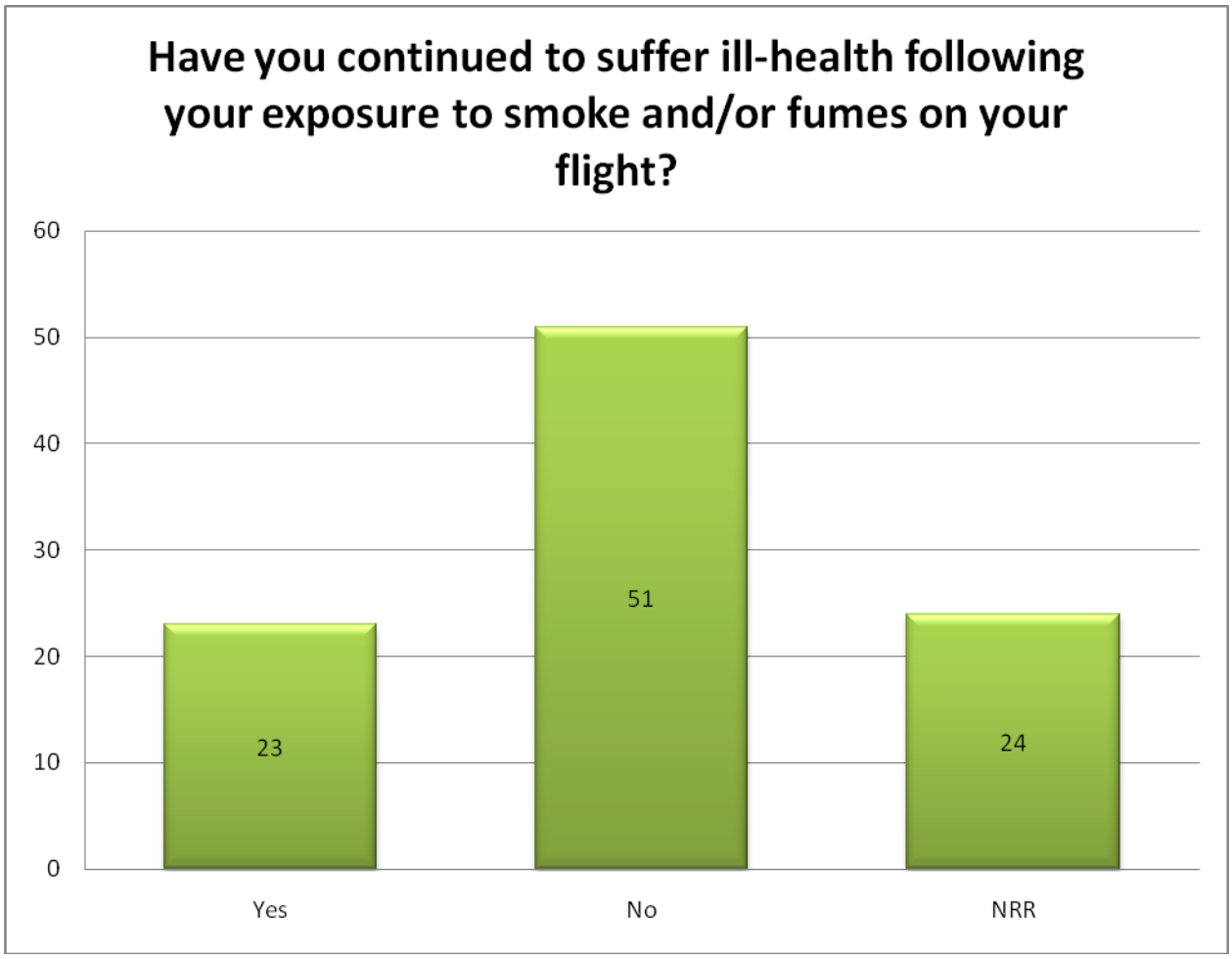


Passenger respondents to the survey were given several choices when answering this question; report it to the cabin crew, seek medical assistance post flight, report the incident to the Civil Aviation Authorities. As can be seen, only a small number of passengers reported the incident to the cabin crew; this would be the normal reaction by a passenger to any smoke or fume event. The questions raised are; if passengers do report matters to an airline or the authorities, how is that report investigated, what explanation is given to a complaining passenger and what

data is publicly available to intending passengers when choosing an airline?

Question 7

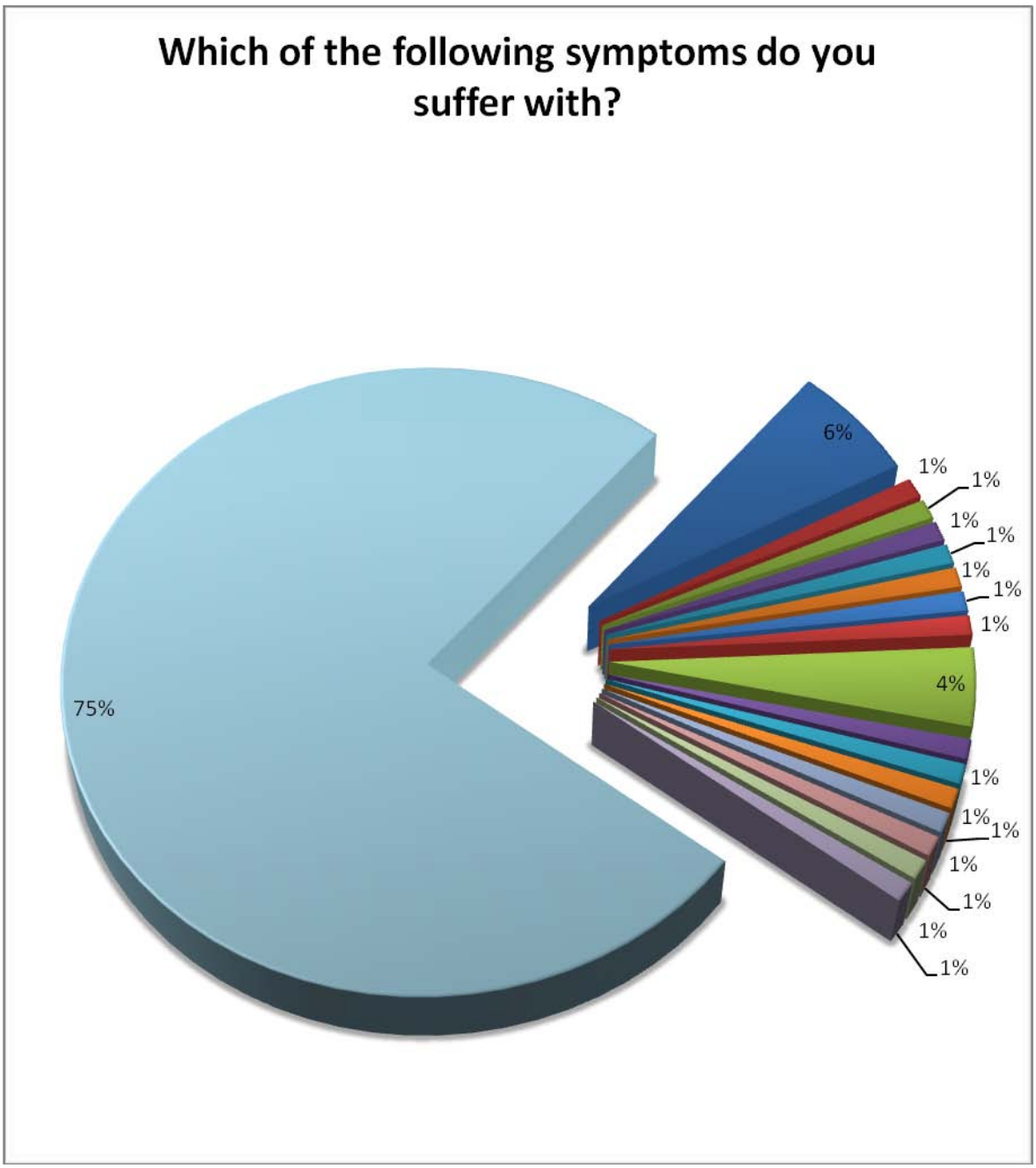
Have you continued to suffer with ill-health following your exposure to smoke and/or fumes on your flight?



This question required a straight-forward 'yes/no' response. It simply sought to define ongoing symptoms following the exposure to fumes or smoke onboard an aircraft. 7 aircrew responded positively that they continued to suffer with ill-health.

Question 8

Which of the following symptoms do you suffer with?



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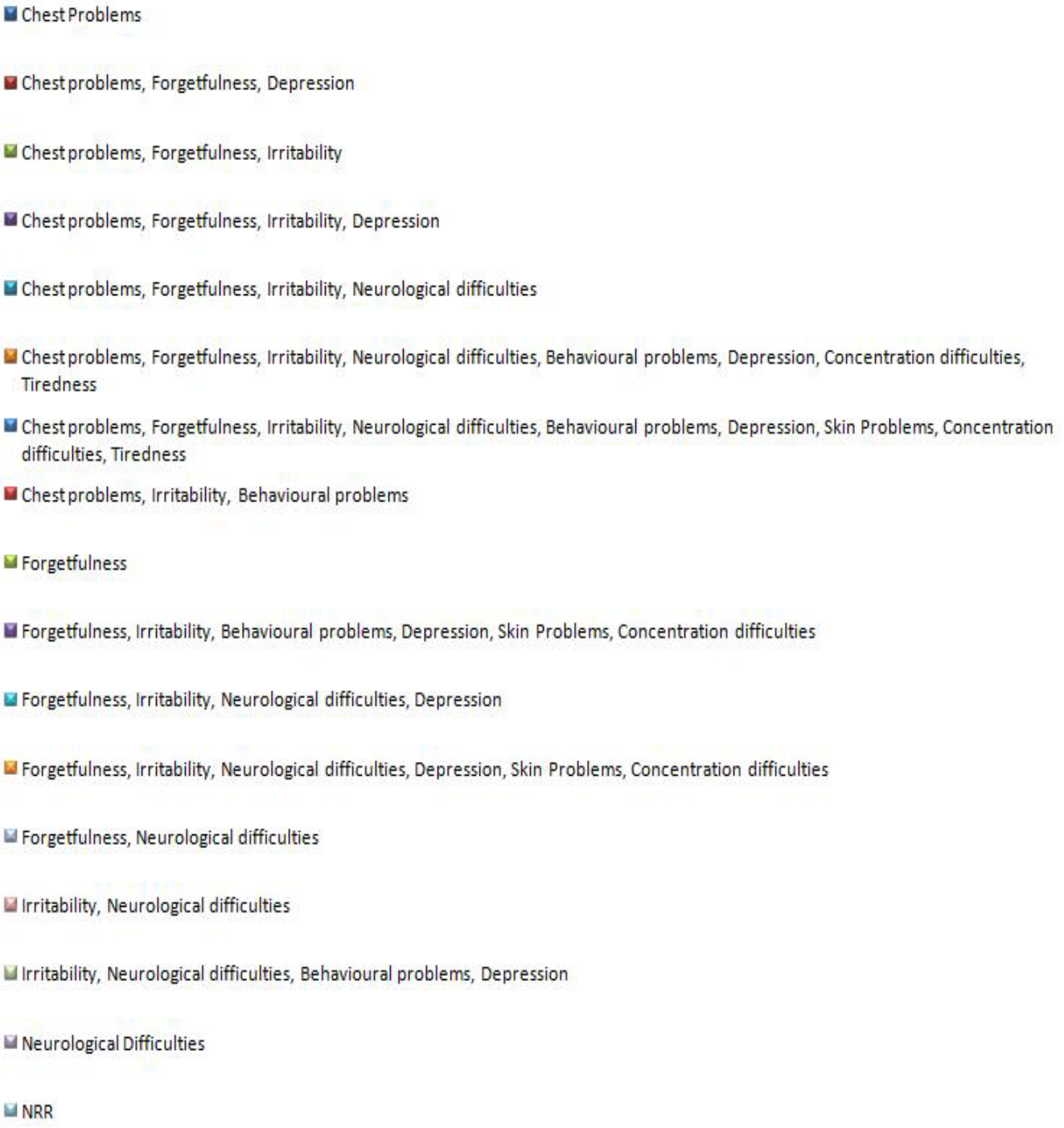
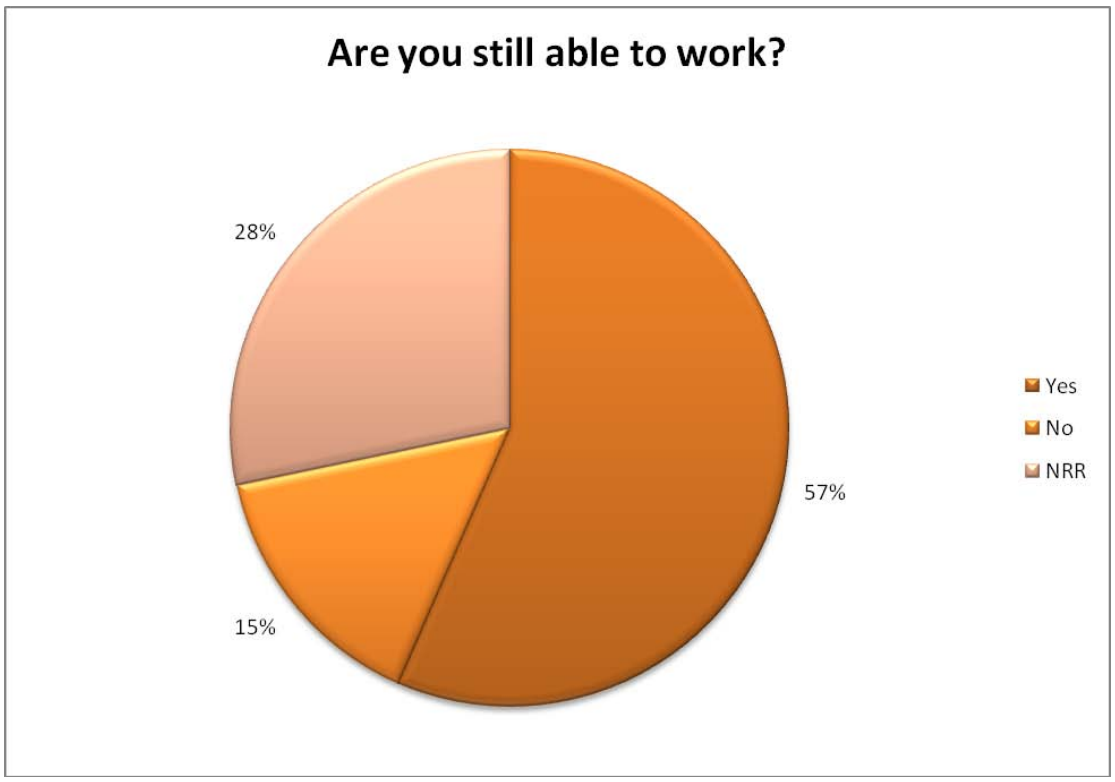


Within the survey question, we presented the respondents with a number of symptoms and they were required to choose those conditions that continue to affect them. Some 24% responded by stating that they were suffering from ongoing conditions; 8 members of the aircrew taking part in this survey indicated that they were suffering with ongoing conditions – 6 with multi-symptoms, 2 recording that

they suffer with 'forgetfulness'. As we have discovered with Consumers, many have difficulty in obtaining support from their medical practitioners when reporting these ranges of symptoms; for professionals this is compounded by the lack of support given by airlines and authorities.

Question 9

Are you still able to work?



As we have discovered with Consumers, being able to work following an exposure is a difficult issue for many. Some Consumers hold important positions; some with responsibility of other peoples safety. It would appear from this survey that nearly 2/3rds have responded positively about their work; 28% are classified as NRR – therefore caution should be taken that some of the 28% may be able to work but there are some who may have preferred not to answer this question. Of those surveyed, 6 members of aircrew stated that they were no longer able to work.

Question 10

Would you like to tell us the detail of how this has affected you?

This question was purely optional and invited direct comment into the survey. 23 respondents chose to share their experience – some of the respondents have simply chosen to share their views on this issue (as we have done in previous reports, other than some minor grammatical errors (to facilitate easier reading) we have not made corrections to the commentaries provided – we have removed references to flight numbers and names of airlines, this we believe concentrates the reader on the Consumer experience):

"This did not affect me but I was concerned that we were 'trapped' inside with no apparent fresh air available"

"I haven't worked for 13 months. I have been diagnosed with many problems including nerve damage obstructed lungs and ME. My health social life relationships and finances have all been ruined. My airline has on several occasions threatened to terminate my contract but hasn't done so yet"

"in March 2007 I flew [NAME OF AIRLINE] from singapore to Yaounde(Cameroun) during the following four weeks whilst on the work site I suffered light headedness and balance problems to such an extent that I was taken toa hospital where I was (mis) diagnosed having blod clots in the carotid arteries I was then medi-vaced to South Africa for further testing where I was given a clean bill of health however after flying [NAME OF AIRLINE] back to Australia in a very old [TYPE OF AIRCRAFT] I felt seriously ill for weeks I experienced the same symptoms again after flying [NAME OF AIRLINE] and [NAME OF AIRLINE] later that year I now know wat I could be suffering from and will demand blood test through my doctor fo rpresence of the chemicals mentioned here.I also suffer now from a constant tingling in my forehead"

"after the flight on [FLIGHT NUMBER] landing on 14 May 2009 I developed" – Note: This respondent did not complete their comments.

“I simply had to give up my job after 16 years with the company. It may not have been the only reason but certainly the main reason. In the end the pushed me out of he company on the grounds of “burn out syndrome”; and made the insurance pay a certain amount of money just o get rid of me. I simply had been asking too many questions”

“Long-term ill health”

“You ought to do a survey on how those on the ground suffer constantly from repeated overflying which disturbs quality of life and sleep and which in itself can lead to cardiovascular problems anxiety disorders and interrupted learning (for those at school). You'll find that tens of thousands of people suffer as a result in contrast to those who fly occasionally”

“It was a very scaring experience”

“Toxins and poisonous fumes are present almost everywhere in our society. They affect muscles which can then cramp and cause a range of severe and unexpected symptoms for example simply by causing tightening of the muscles in the face and neck. The more toxic stress the body is exposed to the more the adrenal glands have to work. The end result is a degrading of the body's ability to deal with toxins”

“Two occasions - these answers relate to the first time. After landing at the rear of the [MAKE OF AIRCRAFT] all crew members smelled fumes. Three of us felt lightheaded so went for lunch before our next flight. Still all felt disorientated and nauseous but when this was reported to the Cabin Service Director in charge of the whole trip he asked if we wanted to go off sick or stay on the trip as it was going to be busy. With [NAME OF AIRLINE] we are quite reticent about going sick as this adds to our likelihood of being called into the office and management meetings eventually leading to disciplinary action. So we all continued to work the next sector which was not in fact busy. I took a drinks bar out and was surprised to find myself for the first time in twelve years' flying attempting to pour orange juice into full

glasses of water one more than one occasion. I continued to feel odd confused and nauseous. A few days later I went sick as I did not improve and I got a piercing headache that lasted approximately two weeks - right between my eyes"

"serious sinus problems since being on the flight"

"I almost always get a headache and nausea on aeroplanes. On the occasion reported above there was a significant amount of smoke in the cabin. The crew said it was because the aircraft had just been de-iced. I am not convinced of this"

"Never experienced this problem but always avoided the aircraft associated with it – [TYPE OF AIRCRAFT] and [TYPE OF AIRCRAFT]" – Note: the aircraft identified are subject to intensive debate on the fume/smoke debate.

"before departure from Istanbul Ataturk airport the cabin of my flight was sprayed with some aerosol - no explanation by the crew and no warning. At that time I was suffering from asthma and could just barely cover my nose with my sweatshirt and breathe trough that for the next 10 minutes. I never complained but assume I should have"

"Have flown regularly (weekly)"

"I'm concerned about the quality of air in the aircraft when push-back is delayed and passing aircraft produce exhaust fumes which are then taken up by the aircrft on stand. Sometimes (today) the fumes become so strong that I feel nausius"

"It made me feel sick in flight NAUSEA which is not one of your symptom choices. It also caused anxiety because I could not escape the toxins I knew I was inhaling"

"Only ever been on short haul flights of 2-3 hours max and never experienced any problems. This is not to say they don't exist I don't know. I simply state that In some 20 flights in about 8 years as a passenger I have never experienced anything. Airport lounges are a lot worse"

"After the flight to Denia 8 years ago I experience a burning sensation throughout my body and tingling feeling as I went through customs. After a few days my left big toe started to go numb. I have had extensive tests at Kings College and they cannot come up with a cause but at this present time I have little feeling in my feet and the numbness goes up to my thighs and have also recently experienced numbness in my fingers. Occasionally I have a burning sensation in my mouth and tongue. I go every year to the specialist who keeps an interest in my condition and I always hope that there may be a new drug that can help me. I have always blamed the aircraft that day I flew to Denia"

"Have been diagnosed with aerotoxic syndrome/ ME been off sick for over 3 months after being cabin crew for 6 years"

"My life had been completely devastated by this my doctor still will not recognise this condition"

"I started flying in July 2007 I was always very nauseous and occasionally vomited.I then started having problems with my balance and was diagnosed with labrinthitisthen my sinuses blocked and on many occasions after landing it would take days for my ears to unblock"

"Temporary effects that lasted for about 5 hours of an 11 hour flight. Felt fully recovered after I left the aircraft"

Question 11

Have you ever complained to the airline, the aircraft manufacturer, the fuel manufacturer or the Civil Aviation Authorities – have they ever responded?

This question was purely optional and invited direct comment into the survey. 11 respondents chose to share their experience – some of the respondents have simply

chosen to share their views on this issue (as we have done in previous reports, other than some minor grammatical errors (to facilitate easier reading) we have not made corrections to the commentaries provided – we have removed references to flight numbers and names of airlines, this we believe concentrates the reader on the Consumer experience):

"I've written a report of the Incident to my airline I've shown them my medical reports where 4 Doctors believe my ill health is as a result of exposure to toxic air. I've written to the CAA twice and received 1 reply. I've written to my MP and seen him twice Prince Charles and The House of Lords. All I ever get told is that the Government is doing research"

"no"

"Oh yes I did. More than once! But the answer has been the same all the time. "We don´t know anything about that. There´s now official report". The report written by myself was not considered "official" enough"

"Yes. Entirely disinterested. They get away with it because they can"

"Your survey is somewhat flawed in my opinion most fumes are experienced on pushback"

"No. I only found out the fundamental flaw in aricraft design recently. I am utterly disgusted with the anything to do with the aircraft manufacturing industry the airlines and governments for perpetuating such obvious bad design. I have never written to these organisations and will not. My response has been to refuse flying as a form of transport and keep all my business inside Europe. I no longer do business in the U.S.A."

"I think this is a very important problem crucial in the aviation field but certainly not limited to it. I have spoken out in a blog and to people I know. Generally discussion of these problems is met with skepticism and incomprehension. Until a large

number of people understand the danger of toxic substances and their prevalence in our daily lives so that it modifies their choices at a consumer level it seems unlikely that our economy-driven society will make the costly necessary changes to remove toxins from our environment such as on airplanes. Thank you for this survey it represents a huge jump forward in raising public awareness"

"I put an Incident Form into [NAME OF AIRLINE]. I have asked for follow-up (from Apri 2008 I believe) and when I last checked they said they investigate all such incidents but that mine had not yet been dealt with"

"I have never complained as I felt it would have been a waste of time as I had no proof"

"I collapsed on a flight from Sydney to Bangkok and spent two days in hospital - I wrote to [NAME OF AIRLINE] to thank the airhostess you looked after me on the flight explaining what happened and expressed my concern about how I have collapsed and felt and thought it was Aerto Toxic Syndrome - they acknowleded my letter but never mentioned what I had said about the Aero Toxic - my docotor does not what to know - neither does the Nerosurgen I have seen nor the ENT specialist"

"No but I am going to in light of all the evidence"

Comparing Surveys:

The reader of this report will recall the aforementioned 'Facebook small survey' carried out by this Organisation in 2007. The survey ran for a 24 hour period and captured 100 opinions. That survey discovered that some 15% of respondents had experienced a smoke or fume event onboard an aircraft and 5% suffered with illness as a result of that exposure.

By comparison, the present HolidayTravelWatch survey has discovered that 63% of those surveyed had experienced a smoke or fume event, with some 38% suffering

with illness/symptoms following that exposure.

We have already stated above the official figure for flights over the UK in January 2008 as being 264,083. We discounted that figure by using the 15% figure to establish the number of potential flights affected by smoke or fumes; this created a figure of 39,612 flights over the UK in January 2008. Within that discussion we provided a further 'discount' to allow for 'misinterpretation' of events in an aircraft – this created a possible 19,806 flights over the UK in January 2008 that may have suffered a smoke or fume event onboard.

Using the figure of 19,806 flights possibly affected and the 15/5 % & 63/38 % figures extracted from our surveys, the following is we suggest the possible numbers of passengers and crew affected by smoke/fumes within the aircraft cabin/cockpit environment:

	15% (experience of smoke/fumes)	5% (experience of illness)	63% (experience of smoke/fumes)	38% (experience of illness
Number of Flights	19,806	19806	19,806	19,806
Number of people affected	297090	99030	1,247,778	752,628

We need to ask the question, why the disparity? The first survey was carried out over a 24 hour period on a social networking site. The second survey was in place for 8 months and was a 'special interest' detailed survey of choice. We suggest that the reason for the difference is simply down to the dynamic of the survey's themselves; what both indicate however, is that there is a serious problem which will require resolute and definitive action.

A NEW ROUTE?

In our report to the Australian Civil Aviation Safety Authority, we suggested that this problem requires innovative and clear thinking. For the purpose of this report, we re-state those proposals.

As the debate progresses, we consider that it is approaching an important cross-road. It is clear that aircrew and passengers have borne the effects of smoke or fume events for many years, with little appetite either by Industry or Government to tackle this important issue. Clearly this is connected to the harsh reality that the Airline Industry is the 'oil' that feeds the Global Economy!

Whilst we consider what happens in the air, we should also consider the wider logic of contamination arising from the use of Organophosphates.

If there is concern that neurotoxins are escaping into the cabins of aircraft from the bleed air supply, this must also mean that those neurotoxins are also being spewed out of the exhaust/thrust of a jet engine? This would therefore logically mean that the potential for contamination also rests on the ground and within those living close to the environs of any busy airport.

If that is the case, then the potential must therefore exist for a wider cohort study group that could benefit aircrew and passengers, in order to determine the effect of neurotoxins or other contaminants upon humans?

To illustrate the point, in 2006, The Chartered Society of Physiotherapy reported that their survey of contamination around British airports, pollutants were 75% above recommended EU levels. Their survey appears to be concerned with nitrogen dioxide which they concede could also come from road traffic.[10] The 2001 article 'poison circles around airports' suggested that a ring of contamination from aircraft

10 http://www.csp.org.uk/director/members/newsandanalysis/news.cfm?item_id=E3F37556C22D16546782F69E1B31A33E

fumes could extend by up to six miles.[11] Helpfully, the Lead Action News set out the range of exhaust fumes from an aircraft[12], all giving the impression that those living adjacent to airports are effectively being 'crop sprayed'. Compare that environment then to those either working or travelling within aircraft, who are reliant on seals to prevent those toxins entering an aircraft cabin!

In the debate on evidence, it is appropriate to dwell on the Tobacco Industry's experience. In 2001, one Tobacco company was ordered to pay more than £2bn in compensation to one individual,[13] subsequent US court decisions ruled against Tobacco companies, locking them into high awards for Claimants and long legal battles on appeal.

Mindful of the recent and tragic crash of Air France AF447, it is re-assuring to note that the Industry is doing all that it can to replace suspect speed sensors on board aircraft, presumably without concern as to costs? Why then, in the face of a growing campaign on the Aerotoxic issue, does the Industry resist installing filters into aircraft that would cost no more than £15k per aircraft?

We suggest that the Industry is locked into and are fearful of the potential harm that could be caused to their brand(s) by litigation. We note that pilots are being 'retired' with modest pay-offs – such pay-offs we suggest does nothing to resolve this issue and falls short of a just settlement for a potentially serious claim.

We suggest that the way forward for air passengers and crew safety (and possibly those who live on the ground) is to create a 'no fault' protocol that could encompass scientific, medical and legal disciplines – it could provide for an ordered and balanced management of all the issues.

In summary, we recommend:

1. The installation of filters with immediate effect in all bleed air supply aircraft,

[11] http://www.areco.org/ExpAir.pdf
[12] http://www.lead.org.au/Lanv7n3/L73-4.html
[13] http://news.bbc.co.uk/1/hi/business/1374938.stm

and

2. The creation of a ‘no fault’ protocol to encompass scientific, medical and legal disciplines to assist aircrew, passengers and possibly those living close to airports, thus providing for an informed, fair, just and balanced management system for all stakeholders.

The question is whether the Industry and Politicians are capable or equipped to deal with this 21st Century challenge?

CONCLUSION

Since the middle of this decade we have received concerns and comment from those affected by this Aerotoxic issue. We have no doubt that this will continue through 2010 and beyond.

We call upon all parties to create the conditions to:

1. Install filters on all bleed aircraft immediately;
2. Create an 'obligatory' aircrew/passenger reporting system which is subject to Public Scrutiny;
3. For all stakeholders to create a 'no-fault' protocol to deal with the substantial issues arising from the Aerotoxic issue.

We repeat the sentiments expressed in our report to the Australian Civil Aviation Safety Authority in June 2009:

"There is no question that aircrew and passengers are clearly experiencing real events and real illness – the question falls to the Politicians and Industry Leaders – who will have the courage to acknowledge that mere lip service to health & safety is no longer an option and put right an injustice to innocent victims?"

Frank Brehany
MD – HolidayTravelWatch
7 January 2010