

Minutes of public meeting of the PFAS Scientific Advisory Panel on Teams

10am on 11 July 2024

Panel Members present: Dr Steve Hajioff – Independent Chair
Dr Tony Fletcher – PFAS and Health member
Professor Ian Cousins – PFAS and Environment member

In attendance: Julia Head – Senior Public Health Officer

Apologies: Grace Norman – Deputy Director of Public Health

Welcome:

The Chair welcomed everyone to the Panel meeting, and reminded people the meeting was being recorded.

Dr Hajioff reminded Islanders that queries should be sent to the pfaspanel@gov.je mailbox so that the whole panel can feed into the response, rather than sending queries to individual panel members please.

Finally, he gave a reminder for offering evidence of experience around PFAS testing or treatments to lower PFAS body burden for Report 3. Please email pfaspanel@gov.je and instructions will be sent.

Introductions

The Chair and Panel members introduced themselves.

Dr Steve Hajioff, Independent Panel Chair: A background as a GP for 25 years and a retired Director of Public Health from an area of London with two major international airports and a variety of other environmental hazards and challenges. Not a PFAS expert but has done lots of work with National Institute of Care Excellence and other groups about translating science into policy. Dr Hajioff has also worked a lot in the pharmaceutical industry.

Dr Tony Fletcher, PFAS and Health Panel Member: Environmental Epidemiologist at the London School of Hygiene and Tropical Medicine, working on PFAS since 2006 and member of the panel with experience of epidemiological studies on the health effects of PFAS in contaminated communities in West Virginia in the United States, in the Veneto region, in Italy, and in Ronneby, and is the health expert on the panel.

Professor Ian Cousins, PFAS and Environment Panel Member: A Professor in Environmental Chemistry at Stockholm University, an expert on PFAS, appointed as the environmental expert on this Panel and whose expertise on PFAS is on the sources, transport, fate, and exposure of PFAS.

Support staff for programme management and administration were also in attendance.

Declarations of Interest

No additional declarations.

Minutes of last meeting

There were no minutes to review in this meeting. They will be ready for the next meeting in August.

On 26 June the panel discussed reflections and recommendations for Report 2 on the health effects of PFAS. To update, that report is now almost complete and there will be a public meeting on 12 September where the draft will be formally launched for Islander input. The final version will be published once the Panel has provided responses to the feedback.

Additional findings since the last meeting

Dr Fletcher noted there may be another source of PFAS exposure to consider from the manufacture, disposal and recycling of batteries in mobile phones and batteries for electric vehicles. Prof Cousins noted that they are different PFAS to those being investigated in Jersey, and are not a human toxicological concern due to them being very mobile and not bioaccumulative in humans. The concerns are during the manufacture and disposal of batteries, and not during normal use.

Agenda item 5 – Assessment approach

The Chair introduced the approach to Report 3 and noted that the panel have consulted with Islanders on the structure of this report already. The structure has been revised as a result.

Interventions

The panel will consider the following factors for the potential interventions to lower PFAS body burden:

- Effectiveness
- Tolerability
- Cost effectiveness
- Capital and training
- Speed of deployment
- Affordability and proportionality

Testing

The Chair noted that there are 4 components to this section of the report.

1. Retesting those who have already been tested under the Public Health testing
2. Other people in the plume area who didn't meet the criteria for testing under the Public Health programme or were not tested for other reasons
3. People elsewhere in Jersey
4. People with occupational exposure e.g. those who worked with AFFF at the airport

A literature review will be conducted by a panel member to consider what has happened in other AFFF affected populations. The Chair reminded observers that the panel have already made a recommendation in report 1 that there be a representative sample of people tested in order to assess background levels in Jersey.

The panel discussed what the principal goal of testing should be; to gather a representative sample of the population, or, to provide individuals with levels of PFAS in their own body. The panel noted that if individuals were given levels, then they should be accompanied by a warning to note that these measurements are imprecise. The panel will review the options and make a decision about how to proceed.

The panel predicted that in the most contaminated area, most people will want to know their blood levels. For the rest of the Island, it might be more appropriate to get a representative sample of people to understand what the blood levels are like in those areas.

Biomonitoring

The panel will review the evidence and decide whether to recommend that wider screening or testing on the basis of the potential health impacts of PFAS, as described in Report 2. The panel will build on a Report 2 discussion that PFAS exposure is associated with elevated serum cholesterol. The panel will discuss whether high cholesterol should be screened for regularly in affected populations. It will also consider kidney cancer screening in affected populations and potentially advising on self exam for testicular cancer again.

Dr Fletcher noted that there are several pieces of evidence to review for biomonitoring, with several review papers which will be useful. Additionally, the Agency for Toxic Substances and Disease Registry (ATSDR) has recommendations which can be critically considered and HBM4EU (Human Biomonitoring for the EU) have a paper with recommendations about a priority list. He noted that there was a screening programme in Italian which was justified due to the fact that there were added benefits for widespread screening, for example being able to identify additional diseases which wouldn't otherwise be picked up.

Prof Cousins questioned whether it would be possible to look at environmental markers such as tap water and dust and match exposures to assess the potential for ongoing exposure? Dr Hajioff replied noting that that work would be more relevant in Report 4 than this report. There will be a good discussion to have around different routes of exposure in Jersey, and noted that the panel will be meeting with the Infrastructure and Environment team to start planning out potential approach for Report 4 shortly. They will discuss if there is an ability to do a paired analysis in Report 4.

The panel discussed the potential for looking at historical blood and other tissue samples for assessing PFAS levels in order to give an indication over time of human exposure. There may be issues with generalising this information across a population, and potential difficulties with using stored tissues with precursors and PFAS sticking to test media. The panel decided to not review the literature on testing historical samples at this present time, but would first like to discuss with Health and Community Services (HCS) and Public Health to identify if there are historical samples available to test.

Interventions to lower body burden of PFAS

The Chair reminded the panel that there will be two parts to the analysis for each treatment; one to investigate how effective the treatment is, and the second looking at potential side effects and other aspects, e.g. cost effectiveness, speed of deployment etc. The work will be allocated between Panel members through a consensus between the panel members.

Blood and blood product removal treatments

- Phlebotomy (looked at in Report 1)
- Plasma interventions – including plasma exchange, plasma donation, plasmapheresis

The panel plan to review the literature around these treatments. They noted that they have already reviewed phlebotomy in Report 1, and also included plasma treatments in this report. The panel understand that there has been no further work in this area in the general scientific literature since Report 1 was published. Dr Fletcher noted that he will conduct another search to confirm this understanding. There is a study planned with Fire Fighters in the USA looking at interventions, but the study is at the recruitment phase and has not yet commenced.

The work in Report 1 will be built on and updated for Report 3.

Prevent reabsorption in the gut

- Cholestyramine granules
- Cholestyramine capsules
- Psyllium husk

Dr Fletcher noted that he had a colleague in Denmark who is planning an intervention study which compares the impact of cholestyramine, psyllium husk, and a placebo. The study is designed to investigate whether psyllium husk is a more acceptable way to reduce PFAS levels than cholestyramine. The study will not produce results for 2 or 3 years, but the panel believes it is useful to understand the rationale for the study.

Prevent reabsorption in the kidney

There are medications designed to prevent reabsorption of PFAS in the tubules in the kidney. The most well-known drug is probenecid although there are others on the market. The panel will review the literature regarding reducing kidney uptake and therefore reducing body burden of PFAS.

Dr Fletcher noted that there is a study in the C8 programme looking at these two drugs and levels of PFAS. There was a significant reduction in PFOA levels in those taking cholestyramine, but not for probenecid. This was not an intervention study. The evidence shows that probenecid works in animals, but there is limited evidence of effectiveness in humans. This work will be reviewed formally during Report 3.

Other potential treatments

Haemodialysis will be reviewed by the panel. Prof Cousins indicated he was aware of a paper from a group in China.

There may be other technologies and approaches. The panel will look into the literature to confirm.

The Chair noted that during Report 1, Dr Fletcher calculated the reduction in body burden of PFAS over and above background reduction from each episode of phlebotomy or plasma donation. Dr Hajioff asked if conducting a calculation of reduction in body burden was possible for the treatments to be discussed in Report 3, so that comparisons can be made between different interventions.

Dr Fletcher answered saying it was certainly possible, but accuracy depends on length of trials. It was suggested that providing a figure in ng/ml would be very useful for discussions and comparisons between treatments.

Prof Cousins noted that there are a huge number of studies on biomonitoring in the scientific literature, and that the panel cannot review every study in detail. It therefore might need a

more pragmatic approach. He suggests reviewing the reviews such as a new occupational exposure review paper recently published.

The Chair agreed and commented that it is not proportionate for the panel to review every paper from every context around biomonitoring. The panel should concentrate on the specific conditions which were identified as being of significant and considerable risk in Report 2. The normal biomonitoring approaches for those conditions should be reviewed in the literature and summarised in Report 3.

Dr Fletcher agreed and commented that there are two levels of screening. The first is keeping an eye out for symptoms which may prompt a visit to the doctor, and another is active screening and surveillance whereby the patient attends for specific tests. The panel should make comments on both of those possibilities.

Dr Hajioff noted that he had a previous colleague who is an expert on 'positive predictive value' as a way to inform decision making. He suggested that the panel consult with that person as a Subject Matter Expert, as a similar approach could be useful in prioritising biomonitoring.

Experts by Experience

The Chair noted that the panel has put out a call for affected Islanders to talk to the panel about their treatment experiences to lower body burden. The panel have not formally reviewed the submissions yet, but will in the next few days. The panel plan to hear from EBE at the next meeting on 7 August or another time if this is not suitable for anyone.

Subject Matter Experts

The Chair noted that Subject Matter Experts will be invited shortly to a meeting in September and identified areas in which they would like to speak to experts.

The Chair noted that they had previously consulted experts in the area of blood removal and testing as part of Report 1 preparation.

Dr Fletcher noted that the panel should reach out the C8 medical panel to identify how the panel has worked to identify treatments and biomonitoring.

In the area of cholestyramine, there are 3 trials which are known about. Dr Fletcher noted that one has completed and suggests that the panel should speak to the authors about their experiences.

The panel are unaware of any SME to consult on Probenecid.

Dr Hajioff mentioned an expert on cancer and predictive value of tests earlier and noted that there are technical reasons why he can't appear online, but the panel might be able to arrange a consultation in person or in writing.

The panel will review the information available on Haemodialysis and investigate whether the panel can consult with the authors of a Chinese study on this topic. If the study is found to have been an incidental observation, the panel consider this consultation less urgent.

The authors of a study on a very heavily exposed family in Canada were also mentioned and could potentially be approached again for input.

The panel agreed to collate contact details and invitations will be sent shortly.

Any other business

No other business was raised by the panel.

Date of next meeting

7 August 2024. It will be held 10am-1pm online.

The Chair thanked everyone for their contributions, those watching the meeting and Julia for her support throughout the whole process. A reminder to the public that this meeting has been recorded and the video will be available online on request by emailing the PFAS mailbox. This will take a couple of days to make sure the observers are anonymised.

There being no further business, the meeting was closed.

To note that the Panel can be emailed via PFASpanel@gov.je.

Details of meeting dates and times can be found at [PFAS in Jersey \(gov.je\)](#)

Actions from the meeting

Action	Action given by	Action taken by	Date for delivery
Conduct active search on phlebotomy developments since Report 1 publication	Dr Fletcher	Dr Fletcher	August 7 panel meeting
Collate contact details for SME	Chair	Panel members	ASAP
Invite SME to speak at September meeting	Chair	Julia	ASAP