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

10:00am on 29 January 2025

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
	Grace Norman – Deputy Director of Public Health
	Programme support team from I&E

Welcome:

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

Introductions

The Chair and Panel members introduced themselves.

Dr Steve Hajioff, Independent Panel Chair: 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, with 35 years in clinical medicine. An expert on translating science into policy, he has worked with Nice, the Greater London Authority, the EU, WHO and World Bank, several UK government departments and several international governments. Dr Hajioff has also worked extensively 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.

Standing observer Grace Norman, Deputy Director of Public Health is present. Grace commissioned the panel on behalf of Government of Jersey. Support staff for programme management and administration were also in attendance. Dr Hajioff explained that the Regulation team are in attendance as they are taking over the process from January and it is important that they understand the process of the panel.

Declarations of Interest

No additional declarations.

Minutes of last meeting and matters arising

The December minutes were reviewed by the panel.

Dr Hajioff identified a typing error on page 6 and corrected the spelling of Professor Willie Hamilton's name. It has been updated in the minutes.

In matters arising, Dr Hajioff commented that Tony raised the Wilson and Jungner criteria for screening tests in the previous meeting, and the discussion is recorded in the minutes. An additional section for this report has been prepared on these criteria, giving more detail and explaining what they mean to help contextualise discussions around PFAS testing and clinical testing.

The minutes were signed off as true and accurate record of the meeting.

Additional findings since the last meeting

Dr Hajioff confirmed that there is a draft framework for Report 4 available and there is a public meeting planned to discuss this draft on 11 February 2025.

Prof Cousins commented that last week was a big week for PFAS news, with 10 articles in the Guardian alone and many other European newspapers. It was a coordinated effort led by La Monde newspaper in France called Forever Lobbying. One of the articles was about PFAS in Jersey.

Dr Fletcher explained that the Guardian article about Jersey described a misinterpretation regarding a recommendation for phlebotomy. Dr Fletcher commented that the panel did not recommend people had phlebotomy in Report 1, they recommended phlebotomy be made available on an interim basis until Report 3 had been finished and a more definitive judgment could be made on interventions for lowering blood PFAS levels.

Dr Hajioff confirmed that Report 1 was interim work, and Report 3 is the more definitive work. This will be published in the coming weeks. The science in this area has moved on and there has been interesting and useful work since Report 1 was published.

Grace also commented that as the Guardian article was not representative of the panel's findings, and that Prof Peter Bradley did an interview with ITV to correct the inaccuracies from the article.

Dr Fletcher also mentioned an Observer article published recently suggested a link between PFHxS and breast cancer. He confirmed that the study is not good quality as it has some significant methodological weaknesses, and there is no high-quality evidence of any PFAS being associated with an increased risk of breast cancer. The panel's conclusion in Report 2 – that there is not a known association between PFAS and breast cancer – is still appropriate. Dr Hajioff agreed, and confirmed that higher levels of breast cancer would have been seen in studies such as Ronneby if it were associated with PFAS exposure.

Agenda item 5 – Costs of phlebotomy analysis – Dr Hajioff

Dr Hajioff presented a paper on the costs of phlebotomy, using the same analysis technique which was used for the other intervention options in previous meetings. The paper was sent out in advance. Dr Hajioff spoke to the paper, explaining the costs including consumables and staffing in order so that the phlebotomy intervention can be assessed side by side with the other interventions.

Agenda item 6 and 7 – Cost effectiveness analysis – Dr Hajioff

Dr Hajioff explained what cost effectiveness analysis means in a health and healthcare context. For PFAS interventions, it was most appropriate to conduct a health effectiveness analysis. The Panel

have examined how good the different interventions are at lowering PFAS body burden and how much it costs to achieve this reduction for each intervention. The findings compare cost effectiveness of each intervention, and are used for the panel to recommend the best option for people.

Dr Hajioff spoke to his paper which was prepared using Dr Fletcher's literature review, describing each comparison table and explaining the calculations and assumptions made for each. The tables are simplifications, as background exposure "top-up" has been excluded, because the main purpose of the calculations are to compare the different options against each other. He concluded that there is a big difference in the timeframes in reduction for each intervention across the three different PFAS compounds.

Capital costs for the different interventions are compared in the paper, with some interventions requiring capital costs. The most expensive bile acid sequestrant (Colesevelam) has been selected for the modelling as a worst case scenario. There is a wide range of costs between different interventions.

Dr Hajioff commented that for fibre supplements the evidence is based on people who have high fibre diets have lower PFAS levels, but the reason for this is not well understood. It could potentially be because these diets contain less of food items which have higher PFAS such as fish, meat and dairy products. It is also not known whether fibre supplements have the same effect as a high fibre diet.

Dr Hajioff prepared two tables showing the estimated impact of different interventions (phlebotomy, plasma removal, bile acid sequestrants and haemodialysis) on PFHxS levels and total PFAS. Probenecid and fibre supplements were excluded because they are not effective at reducing PFAS levels. The tables demonstrate the estimated time and cost to halve the level of PFHxS and total PFAS, and the relative cost effectiveness of each intervention. The analysis concluded that bile acid sequestrants halve the total PFAS levels and PFHxS more quickly and for the lowest cost than the other potential interventions.

All analysis up to this point had included the natural rate of decline of PFAS in the human body from excretion. Interventions that take the longest time to reduce PFAS levels include a greater proportion caused by natural decline. This means that it appears that more time consuming interventions may appear to be more impactful than they may actually be. Dr Hajioff shared additional analyses looking at the 'attributable' impact, which is calculated by taking out the natural decline and is not a real world scenario. This demonstrates the impact of background decline for those which take longer to have an impact such as phlebotomy. The cost effectiveness for total PFAS reduction when corrected for natural wastage indicates bile acid sequestrants are the most effective intervention, with plasma removal 10 times less effective.

In summary, bile acid sequestrants are the most cost effective solution, and they also work the fastest of all interventions considered by the panel.

Dr Fletcher commented that the theoretical analysis in the absence of natural decline would never happen. Particularly for the impact of fibre supplements as these speed up natural wastage. Dr Fletcher proposed a simpler way of displaying the impact, and displayed a slide containing a table to illustrate his point. Dr Fletcher added a column which is subtracting the additional reduction related to each of the interventions and calculated the amount of cost per nanogram per millilitre reduction in total PFAS.

Relative cost (12 months capital + revenue for 50 people) of different interventions to give a 1 ng/ml drop in serum level

		Total PFAS	Drop (ng/ml) beyond no intervention	Cost for 12 months	Cost per 1 ng/ml drop	Ratio of cost of 1 ng/ml drop relative to BAS
No Intervention	12 months	22.2	0	0		
Phlebotomy	12 months	19.5	2.7	£125,000	46k	17
Plasma Removal	12 months	16.2	6.0	£275,000	46k	17
Bile Acid Sequestrants	12 months	6.6	15.6	£41,510	2.6k	1
High-Fibre Diet	12 months	21.9	0.3	£26,206	86k	33
Haemodialysis	12 months	9.2	13.0	£1,480,000	114k	44

Dr Fletcher explained that this additional analysis gives a similar outcome as Dr Hajioff's analysis, but he considers it more tangible and a better way to communicate the message. Dr Hajioff disagreed that this was as appropriate a methodology and expressed concern that looking at a 1 ng/ml, rather than a 50% drop obscured marginal differences, such as those between phlebotomy and plasma removal. The Panel subsequently found problematic assumptions in the table and agreed to not progress it further.

It was agreed that fibre supplementation should not be included in any of the cost-effectiveness analyses because of the difficulty extrapolating high fibre diet to fibre supplementation

Dr Fletcher enquired as to why probiotics did not form part of this analysis. Dr Hajioff explained that only licenced medical products have been included, and there are no licenced prescribable probiotics products available and said that probiotics as an adjunct to other measures is possibly something the panel should consider in their recommendations

Agenda item 8 – Discussion and forming recommendations

<u>PFAS testing</u>

Dr Hajioff reminded the panel and audience that there must be a good reason for testing, and that it must benefit people's health and/or wellbeing.

The panel first considered who should be tested, based on Prof Cousin's paper including discussions with subject matter experts. There were 4 potential categories:

1. People who live/d in the plume area but who only didn't meet the criteria in 2022 due to lack of symptoms, or were eligible but untested for another reason (previously untested plume residents)
2. People who do not live in the plume area but who have been exposed occupationally
3. Retesting those who have been previously tested
4. Wider testing across the community

Each category was discussed in turn.

Previously untested plume residents

The panel confirmed, based on their research, that Jersey was unique in only testing those with symptoms to be tested. Other affected communities in areas with environmental contamination asked everyone to come forward for testing. Dr Hajioff commented that the testing in Jersey was done for a different purpose than other places, to identify if there were a problem.

Dr Fletcher explained that it had been considered a right for people in exposed areas to find out their level of exposure in the US and Italy, and that it is considered an ethical principle for people unwillingly and inadvertently being exposed to an environmental contaminant outside of their control, that they have a right to know how much exposure they have, as an abstract notion.

Dr Hajioff explained that the law worked differently in Jersey. He explained that there were ethical issues with the testing conducted in Italy, as there is a principle of non-maleficence, that a healthcare intervention does not do harm , and testing someone to find a level without a clear understanding of what it means, what the health implications are and for which there are no evidence-based interventions to reduce the level (which was the case in Italy at the time) will likely cause anxiety with no demonstrable health benefit.

Both the principle of non-maleficence, and the principle of beneficence (doing good or acting to improve the health and wellbeing of people) are important and valid, and the Panel must take these principles into account when making recommendations for Jersey.

The panel agreed that they will write a recommendation about residents in the plume area (using 2022 eligibility criteria, excluding the criteria relating to health symptoms or conditions) who did not participate in the 2022 testing programme should be offered PFAS testing.

Occupational exposure

Occupational exposure can be wide, but given the nature of industry in Jersey, it only really applies to firefighters and those who may be involved in clean-up of contaminated areas. The date at which Jersey Airport and Fire Service ceased using PFAS-containing AFFF on flammable liquid fires is relevant information and should be determined. PFAS-containing AFFF were taken off the market in 2002, but there may have been stockpiles that were used later. Firefighters who used these foams may have higher serum levels, although they would be expected to have reduced since exposure stopped. The primary exposure route is airborne from inhalation during spraying the foam.

Prof Cousins confirmed that the international evidence is from firefighters using Lightwater AFFF. In Australia, the 3M Lightwater foams were removed from use in 2004. The firefighters that used them in 1990s had high PFAS blood levels, thought to be from inhalation, although their protective clothing was also impregnated with PFAS. Firefighters recruited after 2004 had the same PFAS blood levels as background population, suggesting that dermal (skin) exposure from clothing is not significant. There is a potential that there are firefighters in Jersey who have higher PFAS blood levels if they used the foam. The panel asked to be provided with confirmation of when 3M Lightwater AFFF stopped being used; Grace agreed to take this as an action.

Other industries with potential occupational exposures exist, such as ski wax technicians, electronics manufacture, although it is not thought that these industries are present in Jersey. The feedback from Islanders will be sought on this matter.

The panel is in agreement that they will write a recommendation about those who have worked in firefighting and who used the 3M Lightwater foams prior to cessation of use if available should be eligible for testing. This will also include those who have been responsible for repeated cleanup of 3M Lightwater foams during those years.

Retesting those who have been previously tested

The panel have heard a lot of information from subject matter experts (SME) and there was a variety of opinions on retesting. Most of the previous testing programmes such as in Ronneby and Denmark were run to investigate whether interventions have been successful. They do not recommend testing for clinical purposes. In cases where there are legal settlements such as in the US, re-testing was offered as part of that settlement.

There are no situations internationally in which residents were systematically retested for clinical purposes, except following an intervention. There is no strong evidence for a systematic re-testing programme.

Dr Hajioff explained there are several reasons subject matter experts identified for repeat PFAS testing:

1. Establishing half lives for research purposes
2. Establishing effectiveness of an environmental intervention
3. Establishing effectiveness of a clinical intervention to reduce body burden
4. As part of a legal settlement

Otherwise, they recommended not to test.

In Italy, testing was done to establish the effectiveness of an environmental intervention. 50,000 people were tested across the population in the exposed area, and retesting was offered a few years later. This has been useful for tracking reduction in body burden in this population which reflected the interventions in this area to reduce exposure. Additionally, clinical markers were collected so that the researchers could investigate the impact of PFAS on cholesterol, to better understand the association between exposure and health.

The panel commented that they heard from SME that testing has the potential to cause anxiety and, the test results cannot be interpreted in a health risk context, so this harm cannot be offset against health benefits.

Additionally, there can be significant variation between measurements, based on how well the person is hydrated among other things, so, if multiple measurements are taken within a short time period (relative to the half life of the PFAS), any differences will still be within the margin of error and so would not provide meaningful information about changes in the blood for the individual.

The testing was offered in 2022, which is 3 years ago or roughly one half life for PFOA and PFOS, suggesting that re-testing may show a measurable decline levels on average at a population level, but it is less likely to for PFHxS, which have longer half lives. Average population levels might be informative to demonstrate reduction as a consequence of a new intervention, but the major intervention, the connection to mains water was in 2006, so before initial testing. On an individual level, however, there will be variability in the measurements, and so they cannot be interpreted meaningfully, and for some individuals, particularly those with a low exposure already, there will also be a levelling due to ongoing exposure from other sources.

Dr Fletcher commented that it would be beneficial to see to what extent the levels have fallen over a 3 year period in a research context. Dr Hajioff agreed, but reminded the panel that they have not been tasked with research, and but rather to consider the clinical benefit of re-testing in affected islanders. Testing is a medical procedure which has an impact on the individual and so therefore a retesting programme would have to be clinically appropriate in Jersey, with the potential to offer health gain. Failing that, retesting should only be considered within the context of a formal research and evaluation programme.

Dr Hajioff reminded the panel that one of the subject matter experts made it clear that blood testing should not be undertaken until environmental exposures are well understood, because it is not clinically appropriate to test humans as a proxy to measure environment levels of PFAS. Blood testing could be reconsidered once the environmental levels are known from Report 4.

Dr Hajioff summarised the discussion in that there has not been any interventions since the last testing in 2022, and there is not a convincing clinical reason to retest, although there might be research benefits which could be explored further in future. Re-testing is not meaningful at an individual level because of the high margin of error in the tests, and may increase anxiety in affected islanders, thereby causing more harm.

The panel agreed to not make a recommendation about re-testing of the population at the current time, but will review the question of re-testing at a later date once further information has been gathered about exposures within and outside of the plume area as part of Report 4.

Wider testing across the population

The panel considered whether it would be appropriate to offer testing to any islander for their individual purposes outside of the plume area. There are no other situations in which blood testing has been offered to a general population which is not in an area of known environmental contamination. This would be expensive, difficult to interpret, and does not provide information which is useful for health, because outside of areas of environmental contamination the association between PFAS exposure and health is not understood.

The panel agreed to not test more widely on an individual basis for individual benefit.

The panel agreed that broader community average levels outside of the plume area should be determined in Jersey, and that this is very important information. There is precedent, such as testing in Ronneby, and the USA, for population testing to enable a comparison between a hotspot exposure and the general population to better understand the extent of the exposure.

The panel agreed that they will write a recommendation about systematic, anonymous assessments to be made for average serum levels by parish in order to inform the endpoint of any clinical interventions, to better understand the effectiveness of environmental interventions, and in order to assess the nature of contamination outside of the plume area.

<u>Clinical testing</u>

Clinical testing refers to human testing related to health impacts linked to PFAS exposure. The panel considered whether this was appropriate at a population level. Dr Fletcher explained the Wilson and Jungner criteria for screening in a previous meeting, and this information will form part of the report. Dr Hajioff explained that there are three categories where there is reliable evidence of a potential health impact from PFAS, as discussed in Report 2:

- Raised cholesterol
- Kidney and testicular cancer
- Pre-eclampsia / pregnancy induced hypertension

Some of these conditions are tested for as part of routine care, and where this is the case, specific recommendations for screening of the plume islanders are not needed. This applies to pre-eclampsia / pregnancy induced hypertension, as this happens as part of standard maternity care. Therefore, there is no need to make a specific recommendation for screening in this area.

Cholesterol

Elevated cholesterol is a ‘risk marker’ for heart disease rather than a health issue itself. There is convincing evidence from Ronneby that cholesterol is raised by 5% in those with higher levels of PFAS in their blood. This is a modest shift, which is within the normal range for most people, and such a change is unlikely to be identified through screening.

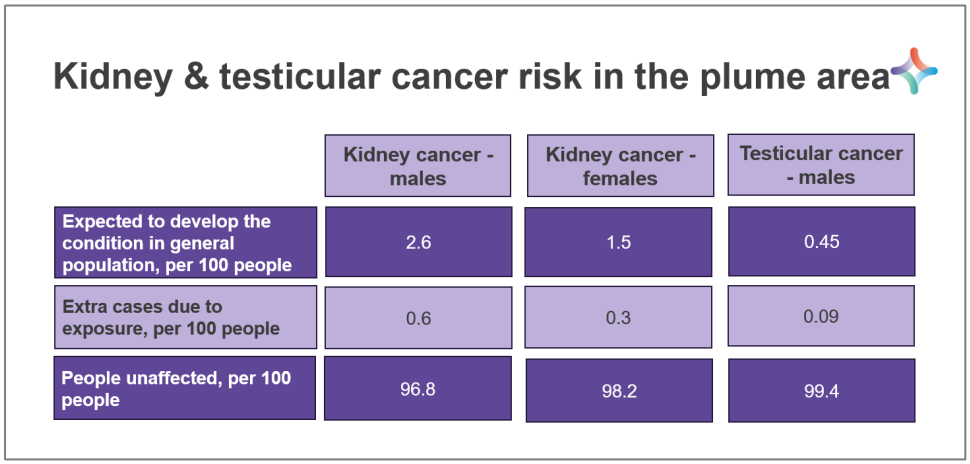
Dr Fletcher presented a slide that showed what the National Academy of Science, Engineering and Medicine (NASEM) recommended for human screening and the levels at which screening is recommended for the conditions they consider to be related to PFAS. Dr Hajioff reminded the Panel that the context in the USA is different because of the legal case and the nature of the funding of their health system (i.e. that it is paid for by individuals or private insurance, rather than being state funded), that they are recommendations to physicians to consider testing rather than services offered and paid for by the government, and that the C8 contamination was different to Jersey and so some of the conditions listed have not been found to be associated with AFFF exposure.

In the UK, cholesterol is screened for routinely after the age of 40 as part of a multi-dimensional intervention known as NHS Health Checks which also includes other checks such as for high blood pressure, diabetes, and obesity. This programme is highly cost effective, however it is not known if cholesterol screening is on its own, is clinically effective or cost-effective, as there has not been an analysis of cholesterol screening in isolation.

On balance, the panel were of the view that it would be reasonable to consider testing cholesterol in people known to have elevated PFAS levels The panel have recommended encouraging doctors to assess cholesterol in people who have a history of PFAS exposure. However, the evidence is not strong enough to offer this screening to everyone.

Kidney and testicular cancer

The Panel asked what the UK lifetime risk is and what the estimated additional risk is for the plume population over a lifetime. Grace showed a slide that showed the potential number of extra cases per 100 people in the plume area:



The panel discussed that the additional risk was over a lifetime and at any given moment, very few people would have kidney or cancer and even fewer people would have kidney cancer that might be attributable to PFAS exposure. This would mean that very large numbers of people would have to be looked at to detect a single case, and even more for an attributable case.

There is no screening test used internationally for testicular cancer, other than self-examination which was recommended in Report 2. Whilst kidney cancer is not routinely screened for internationally, the panel explored two potential tests. Testing urine for blood would produce 99 false positive results for every case found, and so is not suitable as a screening test. Scanning

people using ultrasound or MRI would need to be at such a scale even to detect a single case, that it would not be practicable. The panel have previously recommended in Report 2 that a summary is produced for GPs to indicate where they should have a higher level of suspicion in PFAS exposed populations.

The panel agreed that there are not additional options that can be recommended in addition to what was included in Report 2, so the Panel agreed to duplicate the previous recommendations about self examination for testicular cancer and for clinicians to have a higher index of suspicion for kidney cancer for people with high PFAS exposure.

Interventions

The panel have considered the available information on clinical effectiveness, cost effectiveness, data on adverse events and side effects, and concluded that bile acid sequestrants could be recommended as an intervention to reduce PFAS levels. Evidence suggests that it is an effective, safe and cost-effective intervention, and Colesevelam is well tolerated.

The panel does not recommend plasma removal therapies for PFAS exposed individuals on a general basis as it is an invasive intervention that can have significant side effects, it is less effective and less cost-effective than bile acid sequestrants.

The panel determined that phlebotomy could be offered as a second line intervention for those who cannot tolerate bile acid sequestrants. It is more invasive, less effective, and less cost-effective than bile acid sequestrants, but is more cost-effective than other interventions.

Probenecid is not effective and is therefore should not be recommended. Dialysis is not cost-effective, and has significant side effects, and not as effective as alternatives, and so should also not be recommended.

Probiotics and fibre supplements do not have the required evidence to be a primary treatment however a dietary change such as increasing the amount of dietary fibre and the use of probiotics and fibre supplementation can be considered.

Different population groups with elevated levels

There are four population groups that the Panel have identified to be considered for eligibility of interventions to reduce PFAS levels:

1. People of childbearing potential who are known to have elevated PFAS – interventions would be to prevent primary exposure in future children, through the birthing parent having lower levels.
    a. The panel agreed that this group should be eligible for intervention.
2. People with high cholesterol who are known to have elevated PFAS levels – bile acid sequestrants lower both PFAS and cholesterol and therefore this group would have an additional benefit.
    a. The panel agreed to recommend considering the potential use of bile acid sequestrants for people with elevated PFAS and elevated cholesterol.
3. Islanders with known elevated PFAS with symptoms which are consistent with a PFAS associated illness. This includes those who were eligible for the 2022 cohort in terms of exposure. The panel reminded the audience that it is not possible to know within an individual whether a symptom is related to PFAS exposure or another factor.
    a. The panel agree that intervention eligibility should not be based on whether someone has symptoms because the evidence is not sufficiently clear to justify that, and therefore people this population group should not be offered an intervention simply based on symptoms.

4. All Islanders known to have significantly elevated serum PFAS.
    a. The panel recommend that for people who have demonstrated PFAS above a certain level in serum, bile acid sequestrants could be considered, expecting that this would be through their usual health care arrangements.

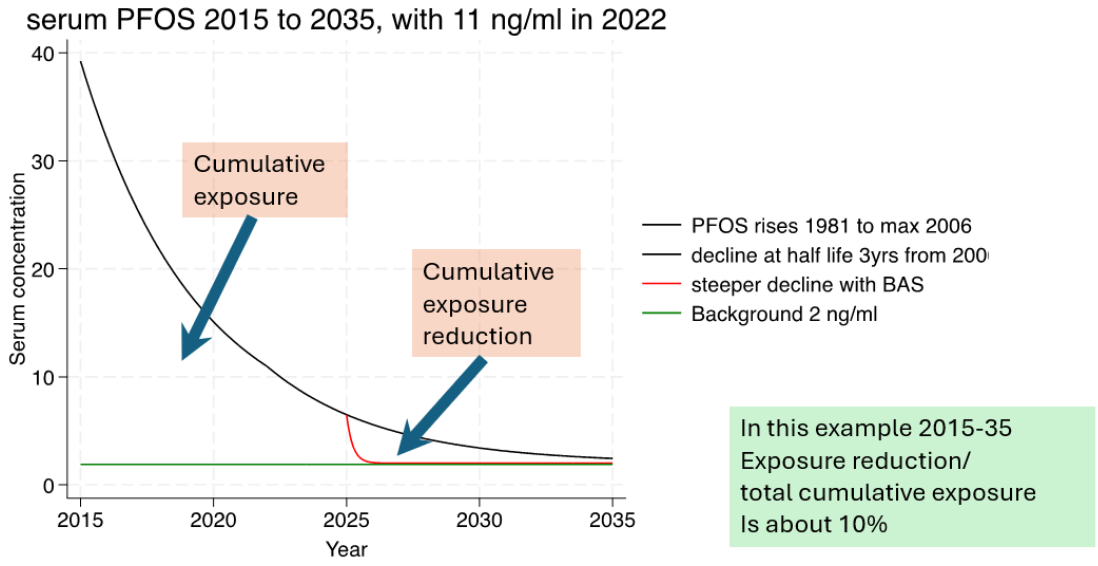
Start and stop levels for interventions

The panel confirmed that they will recommend that eligibility for the service should stop when someone reaches background levels. Until this is established in Jersey, a proxy from elsewhere may be used. The panel would like the opportunity to revisit this recommendation once the background level is understood, so that eligibility can be determined in the light of evidence obtained in the development of Report 4.

The panel considered start levels for an intervention. They reminded themselves that the phlebotomy start level defined in Report 1 was set at 10ng/ml based on HBM-II levels for all population. Prof Cousins indicated that as the levels are elevated in the mains water, it could be that a large amount of the population will be in this range.

Dr Fletcher showed graphs illustrating the international decline which has been occurring over the past 20 years in PFAS levels, and explained the expected additional decline from bile acid sequestrants for those in the plume area. He demonstrated that as the cumulative exposure was high in the past, that indicates the impact on health is likely to already have happened. Some studies have linked the risk of disease to the cumulative exposure, not the current serum levels now. The higher the start level is set, the greater impact the intervention (bile acid sequestrants) can provide per person, but if the level is set lower, there will be less for each individual to gain from the intervention.

If the risk is related to cumulative body burden, including past exposures, then getting rid of all the PFAS gets rid of some of the risk



From the Government testing programme in the plume area, the levels are known from 2022, but the main exposure stopped around 16 years earlier with the extension of mains water to the area. Therefore, for any given PFAS level in 2022, the levels are expected to be considerably higher from the early 2000s. It is important that this is taken into account when making decisions about interventions.

Grace commented that there could be two people – one exposed through the plume area and one not – who could both have levels of 20ng/ml, but in the plume islander it is presumed that their levels would have been much higher in the past, but there's no reason currently to think that non-plume islanders would have had higher levels previously, and she asked whether these two groups should be treated differently? Dr Hajioff agreed that there are differences, and explained that those who have not been in the plume can be expected to gain a greater benefit from intervention because they have not experienced the greater cumulative exposure from the past.

For women of childbearing potential, the Panel will recommend that the start level of 10ng/ml across the sum of 8 PFAS remains, prior to island-wide background levels being established. This is because the aim is to prevent exposure to the foetus, and so prior and cumulative exposure to the parent is less relevant in the decision making process. Setting a low threshold and providing the intervention until the stop point is reached should be effective at protect the foetus and preventing primary exposure.

For other population groups within the plume area and other Islanders who have high levels, the Panel will recommend a start level of 20ng/ml across the sum of 8 PFAS. This would be very low for an intervention had the testing occurred when the environmental contamination was first identified, so this therefore takes into account that individuals in the plume area would be expected to have had much higher levels in the past.

Any other business

No other business was raised by the panel.

Date of next meeting

Thursday 27 February 2025. It will be held 10am-1pm online. This meeting will be the first for Report 4 into the environment.

There will be a public meeting with Dr Hajioff in Jersey on 11 February 2025 at 6pm to launch the potential structure of Report 4 to gather input from islanders.

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 Public Health mailbox on publichealth@gov.je. 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)