



Public Health
England

Protecting and improving the nation's health

Evaluation of the joint PHE/EA flooding leaflet following the winter floods of 2013/14

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. It does this through advocacy, partnerships, world-class science, knowledge and intelligence, and the delivery of specialist public health services. PHE is an operationally autonomous executive agency of the Department of Health.

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Key findings

The overall message from the evaluation is that the joint PHE/EA leaflet is clear and easy to read, with minor suggestions made for improvements to content and format. The leaflet provides general advice and information and the five additional factsheets on specific topics are useful as a more detailed resource.

Content

- concerns about the risks to health from sewage far outweigh concerns about drowning, the health risks from electrocution and having accidents whilst tidying up after a flood
- the mental health impacts of flooding on families, including pets, are significant and can be likened to other major life events
- flood kits are specific to individuals and some people will prefer to use a checklist and others will prefer to have a physical kits/bags packed
- advice about flooding needs to include information relating to gardens, outbuildings (including garages and sheds) and businesses as well as homes
- different floods require different responses and different stages of floods require different forms of communication

Format

- people like the clear language and use of imagery in the new PHE/EA leaflet
- the new PHE/EA leaflet is easy to use and concise, helpfully signposting people to further advice
- there are some aspects of the new PHE/EA leaflet that could be improved, mainly in relation to clarifying messages, choice of images and icons and additions to useful contacts
- there are existing forms of communication that could be modified slightly to include messaging about flooding

Methods of dissemination

- people seek health advice and information relating to flooding emergencies from a range of different sources, including communities themselves, and PHE is not necessarily the first source of information
- social media is not a substitute for traditional communications such as leaflets, television and radio
- information needs to be available out of hours and in a diverse range of formats to account for different age groups and community members

- there is no substitute for physically distributing leaflets to people both at risk of flooding and during the response and recovery phases
- there needs to be more engagement within agencies which will ensure that partners are all communicating the same message
- some people wanted more detail about the long-term on-going mental health impacts of flooding, but were not clear about what this might include
- leaflets are considered useful strategic and operational staff responding to the incident
- future public health messaging could make greater use of existing community groups

Introduction

Communicating with the public about the health effects of flooding before, during and after a flood is essential to help minimise the potentially significant impact flooding can have upon health. As part of their statutory duty under the Civil Contingencies Act, 2004 and following public and professional consultation (see PHE report '*Findings of a study of the usefulness of HPA/PHE Flood Factsheets*'), Public Health England (PHE) and the Environment Agency (EA) produced a joint flooding advice leaflet for the public in December 2013, targeted primarily at individuals and communities in their homes. This was part of the requirements set out in Communications Guide set out in Annex E of the National Flood Emergency Framework for England, launched in 2013. This new leaflet was intended as a single, evidence-based resource designed to be easy to read, temporally arranged and complementary to the five existing factsheets previously published by the Health Protection Agency (HPA) (now replaced by PHE). PHE was created as part of the reorganisation of the NHS arising from the Health and Social Care Act 2012 and began operating on 1 April 2013. It is therefore worth noting that PHE is a relatively new organisation.

The Environment Agency is responsible for managing the risk of flooding from main rivers, reservoirs, estuaries and the sea. Lead local flood authorities are responsible for managing the risk of flooding from surface water, groundwater and ordinary watercourses and lead on community recovery. PHE supports those working on flooding by providing expert scientific and technical advice about the health impacts of flooding during all three stages of planning, response and recovery.

During the flooding of winter 2013/14, the new leaflet was disseminated through PHE centres, published online, promoted via social media and press release, and printed and distributed by frontline responders to members of the public. Some Local Authorities also incorporated the text from the leaflet within their own locally tailored materials. As the flooding persisted, further health advice material (eg health related "Frequently Asked Questions" was made available as part of PHE's national response). The five existing factsheets previously published by the Health Protection Agency (HPA) were also re-branded during this time. The primary focus of this evaluation is the PHE/EA leaflet, and some of the discussion also included general comments about the five complementary factsheets that focus on specific flooding-related topics.

Acknowledgements

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Caveat

The comments, discussions and recommendations contained in this report have been summarised from the direct participant feedback. They do not necessarily reflect the views and opinions of Public Health England, or the affiliated organisations.

Aims and Objectives

The aim of this evaluation is to determine the extent to which the new PHE/EA leaflet and other resources were considered useful as part of the flooding response and recovery. To satisfy this aim, the evaluation will include the quantitative analysis of the number of leaflets distributed and the mode of dissemination. Furthermore, the study will also employ a qualitative assessment of how useful the leaflets proved in increasing awareness and knowledge of health-related flooding advice and increasing preparedness to reduce risk of health impacts before, during and after flooding.

Methods

Study Design

The quantitative component of the study describes:

- the number of times the PDF resources were visited online between 01/12/2013 and 31/03/2014 by month
- social media analysis of PHE messages in early December (04/12/2013-06/12/2013)
- any other available quantitative outputs (eg the number of leaflets printed and distributed by PHE Centres and local authority public health departments)

The qualitative component includes:

- semi-structured interviews
- two focus groups

Participants in the semi-structured interviews were recruited by email throughout May and June 2014.

Two Focus Group Discussions (FGDs) were held with members of the public recruited to the study via PHE and the National Flood Forum (NFF). The NFF is a national charity dedicated to supporting and representing communities and individuals at risk of flooding. Focus group participants were sent a copy of the leaflet in advance and asked to read it before attending the group. The notes from the FGDs were reviewed and the results were analysed thematically. The notes from the semi-structured interviews were collated to identify common themes and differences of opinion.

Study Population

Semi-structured interviews

The semi-structured interviews were conducted with key senior colleagues from within PHE and other partner agencies (eg EA, Defra, NFF, Local Resilience Fora (LRFs) and Directors of Public Health in areas affected by the floods of the winter of 2013/14. A total of nine interviewees were recruited.

Focus Group Discussions

Two FGDs were held in April 2014, one in Nottingham and one in West Sussex. The rationale for selecting these areas was (a) Nottingham had been included in the first consultation and recruitment of previous participants was considered beneficial to the study and (b) West Sussex had recently experienced flooding in December 2013 that required a recovery phase. The flooding in West Sussex was not so extensive that it might be considered insensitive to run the FGD, and the study authors are grateful for the support and advice of the NFF in hosting this event. Some of the participants in Nottingham live in the city, and others came from surrounding villages. In West Sussex, the participants came from seaside towns and rural villages.

A total of 18 adult members of public (eight male and ten female) attended the FGDs and each individual received a small incentive for their participation and input.

Data required

Quantitative data was requested from the PHE web publishing team, counting the number of times the PDF resources were opened on the HPA website flooding pages. Data was analysed by month for the time period between 1 December 2013 to 31 March 2014.

Data collection

Quantitative data was recorded in a Microsoft excel spreadsheet. Qualitative data from the FGDs and semi-structured interviews were recorded in a Microsoft word document. At the FGDs, notes were taken using a formatted discussion guide (see Appendix 1). The semi-structured interviews were conducted over the telephone using a schedule of questions (see Appendix 2).

Results

Quantitative data from PHE website and social media analysis

Table 1 shows the number of page views reported by the PHE Web Publishing team using Google Analytics. It is clear that February was a peak month for accessing health-related information about flooding online and the PHE/EA flooding advice leaflet and the frequently asked health questions were the most popular resources.

Furthermore, key messages from the communications annex of the **National Flood Emergency Framework** had good visibility on social media and were viewed over nine hundred times.

Table 1. Unique page views by information content, December 2013 to March 2014 (It is important to note that those searching for advice in their professional capacity cannot be distinguished from those seeking advice for personal reasons).

PHE flood advice pages	Dec 2013	Jan 2014	Feb 2014	Mar 2014	TOTAL
PHE/EA Flooding: Advice for the public	739	648	2307	315	4009
Frequently Asked Health Questions	52	150	3431	173	3806
How to clean up safely following floods	-	-	759	194	953
Flooding and mental health resources	-	-	541	76	617
Guidance on Recovery from Flooding	-	-	486	159	645
TOTAL	791	798	7524	917	

Focus Group Discussions

Two FGDs, each lasting two hours, were held in April and May 2014 in Nottingham and East Wittering, West Sussex, respectively. Both areas had been flooded in 2012 and there had also been flooding in West Sussex in winter 2013/14. In both locations, the FGD was held with members of the public who had personally experienced flooding, supported a close family member who had experienced flooding, or are living in high risk flood areas. Those who had direct experience of flooding had been flooded in their homes, gardens, sheds and garages and some people had been flooded on more than one occasion.

In Nottingham, the participants were members of the public who had been recruited through an agency and the PHE Public Panel. In East Wittering, the participants were members of the public who were recruited through the National Flood Forum who have been working with communities following the recent flooding. These participants were

also members of established or newly forming community based Flood Action Groups, who work on behalf of local communities to reduce flood risk.

Theme 1: Advice about flooding needs to include information relating to gardens, outbuildings (including garages and sheds) and businesses as well as homes

The leaflet was perceived to address the needs of people in their homes. Some people felt they would like more information about flooding in gardens, outhouses, sheds and garages.

Whether businesses, gardens, outbuildings and/or homes are being flooded, people felt that they would want health advice about the likelihood of becoming ill from contact with floodwater; the safety of their toilet facilities; flood-related illnesses and how to prevent them; drinking water safety; air quality issues relating to flooding; hand hygiene and hand gels as an alternative to soap and water.

Theme 2: Concerns about the risks to health from sewage far outweigh concerns about drowning or the health risks from electrocution and having accidents whilst tidying up after a flood

When asking participants about the health impacts of flooding, sewage was the key issue. People were concerned about sewage during flooding, and also about clearing up sewage and other contaminants, particularly in gardens, after flooding. People also wanted to know when it is safe to let children and pets play in the garden after it had been contaminated with sewage. Although some participants did find their local authority helpful in practical ways with pumping out sewage, there was a feeling that the joint PHE/EA leaflet did not cover the risks to health from sewage in great detail. People also did not feel that they received a positive response from the utilities sector in this regard.

People were surprised to learn that if deaths occur during flooding it is most likely to be from drowning, although deaths in the UK during flooding are very rare. Carbon monoxide poisoning due to inappropriate use of generators is also a significant health risk. Participants felt that this should be promoted more widely without scaring people.

For those who are unable or unwilling to evacuate there needs to be more advice about the health impacts of living in a flooded home and how to minimise them. Some had to arrange for decontamination which included removing asbestos. People talked about removing the effects of 'black water' especially after the sewers burst.

Theme 3: People seek health advice and information relating to flooding emergencies from a range of different sources, including communities themselves, and agencies other than PHE are often their first port of call

Generally, awareness of PHE and the role of the organisation in providing public health advice and expertise to individuals, communities and partner organisations is limited, as could be expected from an organisation that had only been in existence for one year at the time of the FGDs. Some people would seek advice from their local authority, but did not necessarily consider the quality of the advice high. None of the participants suggested PHE as a source of information about health generally, or flooding in particular. Instead, participants suggested the 'health authority', local authority and the NHS as organisations which might provide health-related flooding advice and information.

The footer of the leaflet advises people to call NHS 111 for non-urgent health concerns. A discussion about this revealed that some people understood this to mean that non-urgent flooding-related health advice was available from NHS 111, whereas the service's primary purpose is to help people access local NHS healthcare services in England in an urgent, but not emergency, situation.

There was strong support for a single point of contact for information so it was felt that use of an existing 24 hour advice line could be explored as a national resource. This could be used during flooding with appropriate modification, rather than setting up a dedicated flooding health advice telephone line. Recorded helplines were felt to be useful, but participants acknowledged that there is no substitute for a friendly voice on the end of the phone in a crisis. Text messaging could also be used by statutory agencies to signpost people to websites providing health messages.

Recognising that trust in authorities evolves over time, other partner agencies identified as providers of high quality, trusted advice include Fire and Rescue Services and the Red Cross. Water companies are also considered useful by some, but others had experienced a lack of advice from water companies about drinking water safety and use of toilets. There was also a suggestion that insurance companies could sign-post people to health advice especially when making claims as it can be very stressful.

Participants felt that there should be initiatives that galvanise communities into action to provide support from within the community to people less able to cope including the elderly, single parents, people with disabilities and other vulnerable people.

Theme 4: Social media is not a substitute for traditional communications such as television and radio

People feel that traditional broadcast media still plays an important role in emergencies. Some cited the advertising campaign featuring Vinnie Jones performing CPR as an effective way of getting a health message across. People still rely on radio for information about weather-related disruption and felt that it might be possible to piggy-back announcements about health impacts of flooding onto bulletins.

Whilst some felt that social media, including Facebook, can be used successfully by businesses, others felt that it might be costly and is not necessarily an appropriate channel for serious information. There was some, but limited support, for technical communication solutions such as interactive maps on websites clickable to zoom in on local areas with information at home, street or community levels. People could be directed to the website with QR barcode on flooding factsheets and leaflets.

The value of radio in broadcasting warning messages when flooding is predicted, and transport disruption in the early stages of flooding was reiterated.

Theme 5: Information needs to be available out of hours and in a diverse range of formats as possible to account for reach across all different age groups and all community members. Moreover, future public health messages could include businesses as well as households and make, with greater use made of existing community groups

There was strong agreement that information needs to be available out of hours during evenings and weekends as floods can occur at any time. Websites and social media received mixed support. Whilst there are benefits in terms of contact out of hours, some have difficulty navigating to webpages relevant to their area on national websites such as DirectGov. Pop ups and ticker tape banners for news alerts relating to flooding was a suggested improvement.

Local communities in rural areas often have newsletters and noticeboards which are well-used communication tools and can be invaluable during flooding incidents as they do not rely on availability of power. In West Sussex, emphasis was placed on local Flood Action Groups and Flood Wardens as a means of information sharing and providing a single point of contact for local people. However, awareness of the work of the National Flood Forum in building community resilience to flooding is particularly high in West Sussex..

Some populations were identified who might have particular needs relating to flooding. This includes tenants and people in holiday accommodation of which there may be greater concentrations in seaside towns. Similarly, identifying vulnerable people was

also raised as an issue, with sharing of personal information with community groups a potential barrier.

One person was aware that Local Resilience Fora have a statutory duty to produce emergency plans and that this includes developing and communicating health messages.

Some participants suggested fridge magnets and wallet-sized cards could contain telephone numbers and a short checklist of actions or five top tips. Others felt that they already had too many credit card sized information cards and that a sticker would be better.

The group mentioned other places of flooding information such as parish noticeboards and rest centres. The group said a mapping exercise should take place to find out what communications channels are available locally such as flooding action groups and community groups in general. Otherwise these groups can sometimes work against each other and messages are not consistent and therefore confusing.

Theme 6: Flood kits are specific to individuals and advice needs to cover both checklists in preparation for flooding and physical kits/bags

People felt that during preparation for a flood, gathering together a flood kit should be encouraged. A suggestion was that local authorities could distribute flood kits, but the group then decided this was unrealistic as it would be expensive and the contents would need to be individually tailored. Some felt a physical bag should be packed in advance, others felt a checklist was sufficient as the contents of a physical bag would need to be kept in date and some items would not be easy to obtain in duplicate, such as prescriptions and eyewear. It was generally agreed that having photocopies of important documents like address books, driving licences and passports reduces the stress of replacing them later. Thought needs to be given as to where to place prepared flood kits or boots as some participants found these items to be inaccessible when needed.

Theme 7: The mental health impacts of flooding on families, including pets, are significant and can be likened to other major life events

Participants thought that the stress of flooding is significant and likened the experience to divorce or bereavement in terms of severity of impact. One participant mentioned a couple who divorced following flooding which caused them to be evacuated from their property, believing the flooding to be the major contributory factor. Participants acknowledged the emotional and mental health impacts of flooding agreeing that the biggest risk to health was dealing with the aftermath, expressing the feeling that losing

your home and personal possessions can result in a loss of identity. Mental health impacts are also felt from losing personal items of great sentimental value.

Community support and kindness and compassion from friends and neighbours can help reduce anxiety and stress enormously. Provision for pets in shelters is also important as sometimes pets are the only emotional connection that people living alone have and pets are usually considered part of the family. One woman described seeing a woman who was sleeping in her car with her dog because many shelters refuse to take pets. Yet pets are often the only personal contact/family that elderly/single people have. Therefore the separation can be extremely stressful.

It was agreed that the stress of dealing with insurance companies, for example feeling guilty about making a claim, contributes to loss of emotional health and well-being.

Theme 8: For some people, there are gaps in the health-related advice during recovery from flooding that are not adequately addressed by the leaflet

Some people were worried about the health impact of mould, expressing shock at how quickly mould had grown when their homes were drying out after flooding. People wanted to know about the increased risk of asthma and other long term health effects there might be from the drying out phase.

Others commented that it would help during the recovery stage if advice in preparation for flooding included information about what cleaning products and protective clothing should be purchased in advance to have at hand during clean-up.

Theme 9: The new PHE/EA leaflet is easy to use and concise, helpfully signposting people to further advice

Participants liked the language, which reads well and is clear and easy to understand. They agreed that the structure is logical, taking the reader through the before, during and after stages of a flood. The tone is right, being informative but not causing alarm. People felt it is about the right length with enough content to give people food for thought and prompt them to seek further advice from the other agencies signposted within the leaflet. Too much would be missed out if the leaflet was reduced to a single sheet of A4. The structure is considered helpful with bullet points and concise paragraphs of information.

The font size was praised for readability not just for people with visual impairment but the group said they could read it without reading glasses which could easily be misplaced in a flood.

Participants felt that one general leaflet is useful, and supplementing it with more specific factsheets on particular topics for those who may require more detail should be considered.

Theme 10: There are some aspects of the new PHE/EA leaflet that could be improved, mainly in relation to potentially mixed messaging, choice of images and icons and additions to useful contacts

Participants suggested the following improvements:

- the hand washing advice was confusing as it was not clear whether this related to floods in the local area when the mains water was still running or when the water had been cut off
- while the images were good and acted as a prompt they felt that the photograph of the woman sitting in her flooded home was a bit depressing and contradictory to the advice which said keep out of the floodwater
- phone numbers to be available alongside website addresses
- the main flood line number to be displayed prominently at the top of the factsheet
- the contact section could be expanded with spaces for the numbers of the water companies and people's own mobile numbers
- the local authority should be prominent on the front page as it is often the first point of contact
- the local flood action group should be inserted into the contacts page. For those who are not aware of the flood action group it could raise awareness and prompt contact

Semi-structured interviews

The semi-structured interviews were conducted using a schedule of questions (Appendix 2) which began by gaining an understanding of how the participants' role relates to emergency planning in general before focusing on flooding. The interview then moved on to more detailed questions about how best to communicate the health risks of flooding and what information is of most use to the public and front line responders.

Most LRFs had used the PHE/EA leaflet alongside the five separate factsheets which they saw as complementary, providing front-line responders with more detailed, specific advice and information. Some public health departments had used the messages from the leaflet within their own bulletins and all of the respondents had made the leaflet available electronically. One PHE Centre printed around 5,000 copies of the leaflet and sent it to individual LRFs to distribute either directly or to local authorities for distribution. LRFs have signposted people to the leaflets through media messages,

produced their own leaflet together with the Public Health department and given it a local flavour, delivered the previous factsheets during the early phase of the flooding, and tailored information about contaminated furniture and incorporated this into their media messaging. Most LRFs directed callers ringing with queries about the health impacts of flooding to the PHE/EA leaflet. In addition, the NFF have provided hundreds of copies of the leaflet through their recovery work.

It was felt that there is no substitute for physically distributing the leaflets to people both at risk of flooding and during the response and recovery phases:

- EA and the NFF carry the leaflet in their trailers and mobile response units
- it is important to keep producing hard copies
- leaflets need to be posted to every house, which is the only way to ensure distribution

There needs to be more engagement within agencies and greater linkages between partners to ensure messages are consistent:

- stocks of previous versions of EA leaflets should be recycled so that people are using the joint, branded version
- the NFF has a newsletter and a national reach – better use could be made of this

There are existing forms of communication that could be modified slightly to include messaging about flooding:

- piggy back on to free local newspaper
- negotiate with internet search engines – add an insert to say what the key messages around flooding are
- mobile phone companies – arrange for them to broadcast text messages signposting people to relevant websites
- pre-recorded messages on health service numbers (similar to the norovirus warnings for local hospitals)

There is a place for traditional media:

- local radio, local TV, libraries and local communication networks are the best channels to use to disseminate the messages
- local radio is good and commercial stations sometimes have a better reach than local BBC stations

Different floods require different responses and different stages of floods require different forms of communication:

- different flooding scenarios require different responses - in the east coast storm surge event, there was a short, sharp shock. In coastal flooding, the tide comes in and then goes out, and no-one is worried about sewage, as their main

concerns are about insurance and clarity of evacuation decisions made by the EA

- twitter and radio are not useful in the planning stage but are useful during response and recovery. The police have a dedicated officer tweeting updates every 15 minutes
- leaflets will be used during the incident at local response committees (STAC and SCG) but they are not necessarily thinking about recovery
- caution that too much warning and informing during the preparation phase can lead to criticisms of “scaremongering”

The EA also commented that personal, community and business flood planning templates are available via the EA – people are being encouraged to make personal flood plans online and some of the content from the leaflet could be included in this, which would ensure that consistent language is used.

Strengths of the flooding leaflet

- all of the participants felt that the leaflet had real strengths in being simple, straightforward and using very clear language, with the flood identity “Floods Destroy”. One participant particularly liked the photographs, adding that it is “superbly laid out”. Participants liked the use of colour and highlighted text as well as the space for useful phone numbers. Not only was there broad support for the layout and the content, but another great benefit of the leaflet was felt to be the fact that it signposts people to further information and does not suggest that it provides all the answers. There was also a general view that separating the advice into the different stages of flooding works really well
- EA colleagues value the fact that the information is credible, accurate and up to date, and that it demonstrates a joined up approach. In addition, EA colleagues also like the clear images, some of which are shocking and stark, expressing the view that showing the damage makes flooding real

Areas where the leaflet could be improved

- most participants agreed that they would not express any “dislike” of the leaflet, but that they thought that there are aspects that detract from the usefulness and acceptability of the leaflet
- a view repeatedly expressed is that the leaflet is too generic, and that key messages are useful as starting points, but there is not enough detail and it needs fleshing out with supplementary information. There is clearly a balance to be struck between brevity and comprehensiveness of information. Similarly, another participant felt that the size of the text makes the document quite lengthy and might cause problems with printing (which contradicts the positive

comments about spacing and font size) and that if the document is viewed online only, this is not important

- another participant expressed the opinion that it is an expensive leaflet to print out with use of photographs and colour. During recent flooding, many people had lost access to the internet and the local authority incurred costs in printing out materials for people. Similarly, at 5.3 MB it might give some people problems in size, and could be seen as geared towards people who are IT literate
- in practical terms, in order to prevent the leaflet from getting wet, it really needs to be laminated and this could also pose logistical problems
- there were also felt to be some gaps in the content. Some examples of what was not covered include pets in gardens (about which many people were very concerned) and water testing. Again, there is not enough detail for some (especially after a flood for first responders when there are questions about leptospirosis, allotments, what to clean with – what kind of detergent to use), and it does not cover sewage around homes, which is a key concern for the public. Sampling of floodwater is irrelevant and the leaflet should really re-emphasise this. One participant felt that a fundamental point that was missed is the personal health implications of staying in flooded homes if people have no option to evacuate. Other gaps relate to sewage, and there is nothing specific about what to do if the water is backing up in the home and people are still living there. Greater clarity about the responsibilities of different public sector organisations was also felt necessary
- there was a general view that the images could benefit from a review. Some are inconsistent with the messaging, an example is the photograph of the lady sitting on a sofa in a flooded living room when advice is given to stay out of flood water
- an EA colleague felt that organisational engagement needs to be increased and a next step towards this, to increase credibility with the public, would be by getting more public sector organisations on board, enabling HM Government branding. Following on from this, another participant commented that it seems like an EA document, and that the PHE identity has not really come through
- another comment related branding and style is that the front page is not considered very user friendly, and the headlines appear bureaucratic. It feels that there is a disconnect between the inner pages and the front page, which does not look like it is intended to be public facing. The front page is too full of information about websites, which would not be user-friendly for some populations (eg the elderly)
- a specific criticism from a local authority colleague was that it was disappointing to see a reference to a flood kit containing formula milk, which is at odds with public health advice promoting breast feeding. Another participant felt that the leaflet lacks advice on personal protective equipment specifically for frontline responders, and their LRF produced guidance to fill this identified gap

Suggested improvements to the content

- include information from other organisations (eg Met Office)
- phone numbers could be more prominent
- give other partners such as water companies and the voluntary and charity sector a stronger focus
- provide more detail about becoming resilient before a flood and the health implications of flooding
- provide a summary or checklist to support the more detailed leaflet
- use illustrations or graphics, not just photographs
- lots of other organisations are putting out similar general advice, but expert advice about health impacts needs to be communicated in more detail

Suggested improvements to the format

- change so it feels less internal - currently feels more like a planning document and less like a public facing document
- smaller format, A5, one that could be folded, or a snappier alternative version also available, handy for the home (more like an action card)
- other formats – such as credit card size with top five tips – especially useful pre-flooding (Met Office may have produced something similar, or Environment Agency with three symbols for flood warning)
- providing the content to local authorities in a format so they can re-brand the leaflets with local numbers might increase the profile of the health messages

Suggestions for other ways in which the flood advice contained within the leaflets can be communicated to the public

Most of the participants acknowledged the importance of communications during flooding, and the difficulty of doing it well. Some issues commonly raised were:

- there should be better liaison between PHE Centres and LRFs, as each have warning and informing the public as a duty. Media and comms are important in getting the message out, websites, radio, emails and printed materials are all useful, but could be done more strategically through LRFs
- make sure that all statutory sector organisations link to each other in terms of communications
- ideally, there would be a joined-up proactive campaign run across all agencies about extreme weather and flooding, but this is resource intensive and can be difficult during 'peacetime' due to competing priorities
- it is challenging to is to engage people with messages, rather than expect them to search for information

- PHE and the LGA could work together on improving comms messaging, supporting Local Authority Public Health teams to feed into Local Resilience Fora
- the dissemination of health messages could potentially be improved through greater collaboration between Public Health and emergency planning within the local authority context

Views and opinions related to the use of technology

- tweets are not targeted, and may not reach those at greatest risk
- the Red Cross has an app – could give some thought to creating an app to download
- electronic distribution might be better than leaflet drops during a flooding event, but battery life for devices will be an issue when charging is not available
- some sub-populations (eg the elderly) may not use technology
- bullet points from the leaflet can be used on twitter / facebook
- the content might be good as an app, perhaps linked to other agency with a greater profile (eg EA), but ensure works offline and can be downloaded for use offline. Suggested something interactive would be good
- it is important to check that the information is consistent across the EA and PHE websites
- PHE needs to continue to improve its brand identity and continue to work with other appropriate organisations' social media teams

Limitations

FGDs are a suitable methodology for discussing the views and experiences of people in-depth in a small group where interactions between group members also generate debate and discussion. Some of the limitations of the methodology are that there is no intention to generate a consensus and if not carefully moderated, powerful personalities can dominate, and equally, some group members can lack the confidence to contribute. These limitations are acknowledged, but it is not felt that the findings were compromised. Both the groups in Nottingham and in West Sussex were attended by purposively selected participants with personal experiences of flooding which they shared openly and the discussion was professionally facilitated by the PHE Engagement team with a Public Health Registrar in attendance providing topic specific advice and information when required.

Semi-structured interviews also have methodological limitations. The findings can be difficult to analyse and generalise. It is also sometimes difficult to be confident that the responses are valid. The limitations have been minimised in the current study by using a standardised interview question schedule (see Appendix 2), which was shared with a behavioural scientist beforehand. Several of the respondents raised similar points, which suggest there was a degree of internal validity within the evaluation.

Conclusions

This evaluation includes the views and opinions of around thirty people, including members of the public and professionals from key stakeholder organisations working at local, regional and national levels. It builds on an earlier evaluation undertaken by the Extreme Events and Health Protection team supported by the PHE Engagement Team.

Producing advice and information for the public is an iterative process, and it is clear that the leaflets, together with the supplementary factsheets, are a useful tool. Minor amendments are required in relation to the content. Further work could be undertaken to promote both PHE as an organisation and the PHE flooding resources. A flooding communication strategy could be developed that maximises uptake of health advice and information using a range of media to communicate to all subgroups of the population, with the leaflet and factsheets being the central plank.

Appendix 1: Topic guide for flood leaflet evaluation

PHE Focus Group Discussions
Nottingham & West Sussex - members of the public
25 April 2014 and 23 May 2014

10:30am Participants arrive: coffee/tea, sign in

- collect demographic data
- confirm all participants are happy for written notes to be taken

11:00 am Introduction

- Aims of the session
 - improve the flood information and advice provided by PHE by:
 - exploring awareness and usefulness of available health advice
 - exploring a real-life flood scenario
 - any questions?
- Housekeeping
 - timings (lunch at 1:00)
 - fire safety (fire exits and alarms)
 - mobile phones (please turn off)
- Ground rules
 - honesty – no right or wrong answers
 - confidentiality – what we discuss stays in the room
 - recording – confirm that participants are happy for written notes to be taken
 - it's best if one person speaks at a time (as more confuses the note taker)
 - written feedback provided at the end of the project about:
 - how the discussion will inform the way PHE produces public information and advice on flooding
 - any questions?
- Introductions
 - name, experience of flooding, why you agreed to participate
- Introduce PHE
 - Iain and Angeline presentations
 - any questions

11:20 am Part 1: Exploring understanding and awareness of health advice and guidance available for flood emergencies

PHE is reviewing the health advice and guidance that is currently available for flood emergencies. This builds on work undertaken in May 2013, which led to the production of a joint PHE / Environment Agency leaflet. We are constantly seeking to

improve the quality of our health advice to the public in flood emergencies. The recommendations from the consultation last year were:

- a single cross-agency flood guidance factsheet should be designed, produced and stored in a central location, with information simplified, arranged temporally and the inclusion of icons/imagery to support people with low levels of English. An easy-read version could also be considered. This will be an iterative process
- local authorities could be used to distribute health-related flood message
- the internet should not be over-relied on as a communication channel

With your recent experiences of flooding in mind (if this is applicable), could you suggest:

- who is expected to provide health advice in flood emergencies?
- in a flood what sort of health advice is needed?
- where would this advice be accessed? For example, where would one look for this advice?
- what do you think of PHE's flooding health advice? Are you aware of health advice provided by other agencies? Have you used any of this advice in previous flood emergencies? [If yes, supplementary questions: can you give examples? How did you find this information – was it helpful?

11:40 am Part 2: Emergency response scenario (in order to better understand what advice is needed during each phase of a flood emergency)

- **Phase 1: Preparing for a flood**
 - what (health) information would you need in order to prepare for a flood?
 - ideally, what format would this information be in? (eg leaflet, email, website, digital TV, local radio, text message, etc?)
 - how should this information be delivered? (eg information through the door, face-to-face with emergency staff, etc?)
- **Phase 2: Flood emergency**
 - what information about health risks would you need at this stage?
 - who is expected to provide this information? Alternatively, who *should* provide this information?
 - during a flood emergency, how is it best to deliver health information? (eg through the door, face-to-face with emergency staff, online, text message, social media, etc?)
 - what specific risks to health have you observed during an actual flood emergency?
- **Phase 3: Flood recovery**
 - what information about health risks might you need at this stage?
 - who is expected to provide this information? Alternatively, who *should* provide this information?
 - during flood recovery, how is it best to deliver health information (eg through the door, face-to-face with emergency staff, online, text message, social media, etc?)

- what specific remediation issues (related to health) have you observed?
- Have you used PHE's health advice to help manage each of these phases of a flood emergency?
- Recap:
 - what I think you said about preparing for, coping with and recovering from a flood was...
 - does that sound right?
 - is there anything else you'd like to add?

12:20 pm Part 3: Review of printed materials

PHE and the Environment Agency have jointly produced a single leaflet providing all the health advice previously contained within five separate factsheets. The five separate factsheets are still available on the website. The flooding factsheets cover: general information, how to clean up following a flood, coping without mains water, mental health (for the public) and mental health (for frontline flood responders). We would like to know what you think of the new leaflet, the quality of the advice provided, how the advice is presented and how it could be improved. We'd like to know if you think that the single leaflet covering the topics previously presented as separate factsheets is a more useful resource.

Thinking about the new joint PHE/Environment Agency leaflet, please offer your critique on the following issues:

- Language
 - is the language clear and easy to understand?
 - is the language too technical and/or full of jargon?
 - does the leaflet actually explain/provide advice on what it intends to?
- Style/structure
 - is the information structured logically and correctly?
 - do you understand the advice provided?
 - was there too much/too little information provided, or is it about right?
 - are there any areas that have not been covered but should be?
 - how can the information be improved?
- Distribution/access
 - how should this information be accessed/distributed (eg through the door, on a website, email, text message, directly from emergency staff, on a bowser). Who should distribute?
- Have you ever used either the new PHE/Environment Agency leaflet or the separate factsheets in a flood emergency?
- Recap
 - what I think you said about the information we provide was...
 - does that sound right?
 - is there anything else you'd like to add?

12:55 pm Part 4: What happens next?

Thank you for participating in this discussion group. We will be talking to other members of the public at discussion groups around the country. Once we have gathered as much information as possible, we will begin the process of revising and improving our flood health advice and guidance. A report will be written using what we learned today and from the other discussion groups. A copy of the focus group findings will be available upon request.

1:00 pm Lunch and informal networking (participants also to complete evaluation forms)

Appendix 2: Semi-structured interview question schedule

Outline and purpose of the project

The Environment Agency and Public Health England have recently jointly produced a Flooding Advice leaflet. In the Extreme Events Health Protection team, which is part of Public Health England, we'd like to hear your views about the usefulness of the leaflet in the recent flooding events. We want to ensure that we are able to communicate the risks of flooding as effectively as possible and we also want to continue to make improvements to our resources for both professionals and the public.

Introduction to the interview

I expect this interview will take about 10 minutes to complete. I will be making a written record of this telephone interview, with your permission. If you would like to see an electronic copy of the interview, I will be very happy to send it to you by email. If you would like to say anything to me in confidence, I will respect that in the final report. Similarly, if you wish to remain anonymous, that can also be arranged. However, it is not envisaged that any information discussed within the interview will be of a personal or sensitive nature.

Starting the interview:

Is it ok to make a start now? If not, arrange another time to call.

Can I just confirm your preferred name, title and organisation?

What is your job title?

Could you briefly explain your role within the organisation generally?

How does that specifically relate to preparing for or responding to flooding?

Topic guide – questions about the leaflet itself:

Has your organisation provided professionals or members of the public with copies of the leaflet?

How did you do this (eg print out and distribute or signpost to electronic versions)?

What do you like / dislike about the leaflets?

What could be improved about the leaflets?

Have others suggested any improvements to the leaflets?

Can you think of other ways in which the flood advice contained within the leaflets can be communicated to the public?

Concluding the interview:

Can I just summarise the main points we have covered?

Is there anything else you'd like to tell me?

Would it be ok to contact you again if I have any further questions?

Thank you very much for your time. If you do think of something else I ought to be aware of, please do let me know either by phone or email.