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Guidance

# Flooding and health: assessment and management of public mental health

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# Executive summary

The immediate dangers to physical health from flooding events are highly visible. However, the majority of impacts on health in England are associated with mental rather than physical health.

This guide on flooding and health provides a framework intended to address and raise awareness on the wide-ranging health impacts of flooding. It aims to provide information about the measures needed to prevent major psychosocial effects on health arising from floods in England by alerting people to the adverse impacts and enabling them to prepare and respond appropriately.

This guide is intended for public health and local authorities, emergency services, frontline health professionals and other public agencies who interact with those at most risk from the psychosocial impacts of flooding. It suggests a series of steps to be taken to reduce the health risk from flooding by:

- the NHS, local authorities, social care and other public agencies
- professionals working with people at risk
- individuals, local communities and voluntary groups

This guide provides insight into the adverse psychosocial impacts on flood-affected communities and how relevant agencies can develop plans to mitigate their effects. It particularly focuses on groups who may be at increased risk of impacts on mental health and wellbeing following a flood event. It is extremely important to provide the right help at the right time, not only when a flood event occurs but also during the recovery phase.

A phased approach to care is proposed based on the principle that support may be required over an extended period and the level of support required may change during that period. There are 4 tiered interventions for flooding that can be employed by public agencies and local resilience groups in their flood defence planning:

- Tier 1: immediate physical and social support provided during and following a flood
- Tier 2: local community, responders and support networks brought in to provide practical psychosocial support
- Tier 3: primary care provisions made accessible, through GP referrals and the Improving Access to Psychological Therapies (IAPT) programme
- Tier 4: referral to specialist mental health services for enduring psychosocial problems

Adopting this type of sequenced response will help authorities provide co-ordinated, accessible information and evidence-informed support to all those affected during flooding.

# Introduction and background

The third UK Climate Change Risk Assessment (CCRA) in 2022, identified flooding as one of the most important climate change adaptation challenges facing the UK. In all future climate change scenarios, direct and indirect flood risks are projected to rise over the course of the 21st century [1]. The mental health impacts of flooding are well known and understood, ranging from effects on wellbeing and stress or anxiety, to more severe mental health impacts which are characterised by clinical symptomatology and which require specialist health interventions.

In England, most of the health burden associated with flooding is due to the impacts of flooding on mental health and wellbeing. This guide describes possible actions to take to mitigate the mental health impacts of flooding on affected individuals and communities.

This guide contains advice on what preparations should be made to reduce flood-related mental health risks and what can be done to protect at-risk groups. This includes how to raise awareness of these risks, how to prepare and reduce exposure to risks, how to respond in the immediate aftermath of a flood, and actions that should be taken in the longer-term recovery. Each flood event will have its own unique features and challenges and the actions described in this guide are therefore neither exhaustive nor prescriptive.

This guide should be read in conjunction with more general advice on the public health management of flooding, which is available in separate [guidance on recovery from flooding \(https://www.gov.uk/government/publications/recovering-from-flooding-information-for-frontline-responders\)](https://www.gov.uk/government/publications/recovering-from-flooding-information-for-frontline-responders).

This guide does not alter any other flood risk management duties such as powers and duties described in the Flood and Water Management Act 2010.

## The public health consequences of flooding

Flooding has extensive and significant impacts on health that is frequently associated with both acute and long-term effects on health and wellbeing.

Direct health effects associated with flood water and its debris include:

- drowning
- physical trauma (for example, concealed or displaced objects, electrocution, fire)
- skin and gut infections from exposure to contaminated flood water

Longer-term health effects that may occur as a consequence of flooding:

- mental health impacts (secondary stressors)
- carbon monoxide poisoning due to inappropriate use of generators
- respiratory disease from mould and damp
- rodent-borne disease
- other health effects (for example, heart attacks)

Often only the immediate traumatic deaths from flooding are recorded. It is not always easy to identify the longer-term health effects associated with flooding, such as effects caused by displacement, destruction of homes, delayed recovery, power outages, water shortages and disruption of access to health services [2].

Over the course of the 21st century increasingly higher average rainfall and changing rainfall patterns alongside rising sea levels will contribute to predicted rises in the frequency and severity of flood events. Flood risk is predicted to increase in the future across all major flood risk categories: fluvial (river), ground water, surface water and coastal flooding. While the greatest damages are likely to remain to be caused by river flooding, the greatest increase in relative risk is projected to be coastal related, which is expected to more than two times compared to current levels [1]. This is important given that coastal flooding is associated with greater risk to life and livelihoods.

Unless there is adequate long-term planning to support adaptation and resilience to flooding, these predictions could lead to an increase in flood-related physical and mental health impacts.

## How flooding affects mental health

The immediate dangers to physical health from flooding events are highly visible, however, the majority of impacts on health in England are associated with mental rather than physical health. The English National Cohort Study of Flooding and Health (see [Appendix 1](#)) was established by Public Health England (PHE) in 2014 to investigate the long-term impacts of flooding on mental health.

This study found that people who had experienced flooding were more likely to have symptoms of post-traumatic stress disorder (PTSD), depression and anxiety between 6 months to 3 years following the event. In the first survey, people whose homes had been flooded were up to 6 times more likely to have probable PTSD, depression and/or anxiety than people who had not been flooded. Significant mental health impacts were experienced by those with floodwater in the home. The extent of these impacts was affected by the amount of time the floodwater stayed in the home and the levels of the floodwater present. Psychological morbidity was still prevalent 2 years after the event, especially for rates of anxiety [3] [4].

The study also found elevated symptoms of mental health disorders in those who lived in the vicinity of flooded homes or in a community affected by a flood event, but who otherwise were not directly flooded (that is, did not experience floodwater within the home). Experiencing disruption as a consequence of flooding can have mental health impacts even in the absence of being flooded. Loss of gas, water and electricity services, loss of access to health and social care services and health concerns are significant stressors associated with flood-related mental health burden.

# Factors associated with symptoms of mental health disorders

Secondary stressors are factors indirectly associated with flooding which may be amenable to action in order to reduce their public health impact.

Secondary stressors that are associated with poorer mental health include:

- loss of sentimental items
- loss of domestic utilities such as electricity, water, gas
- concerns about health and health of others
- financial concerns, including concerns about house repairs and value
- difficulties with home repairs
- health-related stressors, such as lack of access to healthcare, new or continuing health concerns or conditions, and lack of access to prescription medications can place people at greater risk of psychological effects of flooding – this could be particularly acute for those with learning disabilities, autism or dementia due to a change in routine and surroundings
- family and relationship stressors, such as interruption of normal routines, separation from friends and family, and difficulties with neighbours
- stress relating to education and schooling, such as loss of educational facilities and loss of socialisation associated with attending school
- feelings of loss of control and fear of recurrence of another extreme event, and heightened anxiety, especially those with existing anxiety or past trauma [\[5\]](#)
- economic stressors such as problems with insurance claims and compensation, recovery of and rebuilding of homes, loss of employment and/or income, and loss of physical possessions and resources
- stress arising from exposure to media reporting
- being evacuated or displaced

For the majority of affected people, distress caused by flooding will be temporary and they will be able to cope with the psychological effects as long as there are adequate sources of practical, social and emotional support. However, a minority of people who are affected by flooding may go on to develop more severe psychological problems such as depression or PTSD in the medium to long-term. Others may experience an exacerbation of pre-existing mental health conditions.

Often people with symptoms of mental ill health do not seek help from formal sources. It is likely there is a significant unrecognised burden of mental ill health after flooding within communities. With improved identification, those individuals, who would benefit from access to specialist psychological healthcare, can be supported to access the right support to meet their personal needs and circumstances ([Appendix 1](#)).

# Interventions to reduce the mental health impacts of flooding

A combination of interventions are required to minimise the impact of flooding on health – before, during and for a sustained period after flooding events occur. This should include interventions aimed at identifying those at highest risk and providing tailored support to individuals, as well as community-wide action.

The suggestions in this guide are organised around stages of:

- preparation
- response
- recovery

This also includes the warnings issued by the Flood warning information service [\[6\]](#).

## Timeline: summary of actions

The sections below present an overview of the stages of flood preparedness and response and actions to be taken at each stage to prevent and manage the mental health effects of flooding. These are explained in more detail, including whose role it is to deliver these, in the following sections.

### Long-term planning and preparedness

Take steps to:

- identify individuals at higher risk of suffering from the mental health impacts of a flood
- promote flood resistance and resilience measures in the built and natural environment
- increase personal and household flood preparedness

### Flood alert or flood warning issued

Take steps to:

- deliver timely and strategic public communications in line with alert or warning level
- involve local community organisations and networks
- ensure all health and care organisations that may face business continuity risks are alerted

### Tier 1: immediate response

Take steps to:

- address immediate physical needs
- communicate key public health messages

## **Tier 2: short-term recovery**

Take steps to:

- deliver psychological first aid involving suitably trained responders
- offer short-term one-to-one support where needed – develop a ‘check-in’ support system either face to face or by phone
- involve voluntary and community sector organisations
- continue to offer practical measures to support flood recovery

## **Tier 3: short-medium term**

Take steps to:

- provide ongoing check-in services and seek to identify and support individuals with more acute psychological support needs
- recognise the specific needs of children and provide mental health support as appropriate

## **Tier 4: long-term recovery**

This includes:

- individuals with severe or long-lasting symptoms should be advised how to access psychological support and referrals should be made to specialist clinical teams
- mental health and social care specialists should continue to offer advice to responder organisation

# **Flood preparedness and vulnerable people**

## **Long-term planning and preparedness**

### **High-risk groups**

The following groups may be at increased risk of impacts on mental health and wellbeing following a flood event and should be identified by flood preparedness and response organisations:

#### **Elderly people**

Elderly people have been found to be less likely to respond to flood warnings, and this is likely due to factors associated with ageing rather than age per se. Elderly



people who are more reluctant or less physically able to leave their homes, or who have mobility issues that make it more difficult to use property level flood gates, are less likely to respond to a flood warning [7]. They may be less likely to receive a flood warning if not registered to receive them and/or if they do not have home internet or a mobile phone.

### **People with pre-existing mental health conditions**

People with underlying mental health conditions may be more vulnerable to the psychological impacts of flooding [8]. Personal factors that may increase risk and which should be considered include a history of trauma, family history of mental health problems, an absence of social networks, stressful life events, substance misuse, bereavement or a dissociative response during the event.

### **People with chronic illness or with physical, sensory or cognitive impairments**

People with chronic conditions have been identified to experience floods as a factor that worsens or accelerates the deterioration of their health [9]. Flooding may also disrupt access to care or essential medicines and services, especially if internet connections and transport routes are disrupted [10]. In particular, it has been found people who are obese and have a BMI of over 40 may find it more challenging to evacuate.

### **Children**

Studies on the effects of flooding on children have found an association with increased mental and behavioural problems, potentially mediated by disruption of schooling and home life [11] [12].

### **People with language and cultural-based vulnerabilities**

People who face a language barrier are less likely to receive flood alerts and warnings and, therefore, to be adequately prepared for a flood event [13].

### **People who are homeless**

Those who are homeless may be less aware of flood risk and less able to access services designed to support residents following a flood.

### **University students**

May be less familiar with the local and regional area and therefore, not be signed up to local flood alerts.

### **Transient communities and people with no connection to a place or services (for example tourists, migrant workers)**

People who are not long-term residents of the affected area may not be aware of flood risk in the area and therefore are harder to reach than known residents [\[13\]](#) [\[14\]](#).

### **People experiencing temporary vulnerabilities**

People who have an illness, injury, have recently been discharged from hospital, are pregnant or have recently had a newborn baby, may face barriers to preparing for or responding to a flood.

### **People receiving complex healthcare interventions at home**

People who are receiving interventions at home such as receiving oxygen, dialysis or palliative care may face barriers to evacuation.

### **People living in rental accommodation**

People living in rental accommodation possibly have a lower income and may lack insurance coverage.

### **Risk factors**

Multiple risk factors may coincide, for example, a household with children living in rented accommodation may be especially vulnerable to flood-related distress and other mental health impacts.

It should not be assumed that having a risk factor(s) implies weakness – a person with a risk factor may also have resilience if they are prepared and have the appropriate support.

Meanwhile, people without a risk factor above may yet experience mental health impacts, and for that reason the following section covers community-wide resilience building.

## **Suggestions**

Local authorities (LAs) and agencies should seek to identify households and areas with higher vulnerability to the impacts of flooding to enable more targeted and tailored interventions, including communications, both in advance of and in response to flooding. See below for actions to reduce vulnerability at community and individual level.

### **Support community resilience building**

Community resilience and social cohesion are recognised protective factors against some of the mental health consequences of flooding. Community action can be fostered as part of preparedness action as well as in the aftermath.

Although affecting all income groups, in many rural towns and villages, and smaller urban cities and towns, the most socially vulnerable are, on average, exposed to greater flood risk. This difference in relative risk is compounded by differences in income and insurance take-up, which on average are lower in more socially vulnerable communities. This inequality is projected to widen as the frequency and severity of flood events increases in some areas [\[1\]](#).

Based on what is known about risk factors for mental health impacts of flooding, community-level risk factors include the proportion of the population who are older adults, the level of deprivation, population health indicators, and the proportion of the population who speak English as a second language.

Communities with a greater number of risk factors may have greater vulnerability to flooding in terms of their capacity to prepare for and engage with flood preparedness interventions and to respond to and recover from flooding incidents. Other communities whose residents are at greater risk of distress and other psychological impacts are those that have experienced repeated flood events. Repeated exposure to flooding may have a greater impact over time if adequate flood protection measures are not undertaken to prevent further floods.

It is important to take a long-term and holistic view of capacity building for community flood resilience. Though one-off engagement events play a role in raising awareness of floods, they may not have a long-term impact. Engagement activities should therefore consider what impact they will have on the wider community, preparedness, and the ability to manage flood risk [\[15\]](#). A sense of control and ownership is important in preparedness and recovery and people will feel more positive about processes they are involved with. Such involvement should consider the various communication and engagement needs of different groups, accepting that people who are more visible are not always those with the greatest need.

Resilience to mental health impacts can be developed by increasing the levels of resilience in a community. This can be by supporting community level networks, such as Community Flood Action Groups, and providing information and resources suited to the needs and skills of social support groups and volunteer structures, thereby helping to minimise the wider impacts of flooding on individuals and communities.

Building community resilience can also reduce the impact of the risk factors described above. A vulnerable individual or community can be resilient to the impacts of flooding if, for example, adequate protection measures are implemented, and there is an effective early warning system in place, and where response and recovery services are able to minimise the risk of physical trauma and mental distress. It is likely that some areas may have greater vulnerability and will need more intensive support to build resilience than other areas [\[16\]](#).

Having a sense of identification with other members of the community and a commitment to shared values can contribute to better mental health outcomes by reducing isolation, self-reliance and perceived inequities [\[16\]](#) [\[17\]](#). Social support can also contribute to the reduction of distress levels and other psychological

impacts of floods [18]. Whilst community action needs to be community-led, supporting these groups is a vital part of the public health response to emergencies, including floods.

Social connections, participation, trust and mutual aid can benefit public mental health and wellbeing irrespective of flood exposure [19] [20].

### **Suggestions for community resilience building**

In the preparation, response and recovery phases, responders should identify communities at greater risk from exposure to flooding and to the mental health impacts. Local Resilience Forums and Lead Local Flood Authorities should, where appropriate to their duties, engage with a range of community associations. For example, faith groups or leaders of community initiatives can distribute key messages and scale up or adapt support that is already available. Responders should also involve suitably trained and qualified voluntary, community and social enterprises (VCSE) in flood planning, and scenario-based exercises, in order to ensure effective coordination in the response stage.

In flood vulnerable areas, particularly those with socially vulnerable people, community action and social cohesion can be strengthened by:

- formal community engagement regarding flood awareness and resilience
- institutional support for Community Flood Action Groups
- embedding flood resilience into existing programmes that are not primarily flood-related

Embedding flood resilience into existing programmes may be the most suitable approach in communities whose members have limited capacity to engage with flood preparedness [21]. An evaluation of past community flood resilience initiatives found that interventions that are led by community priorities may result in more effective flood resilience in the long-term [15].

There are a number of tools available to support this. One such tool is the UK Community Resilience Development Framework, which is a reference tool for Local Resilience Forums – see [Community resilience development framework \(https://www.gov.uk/government/publications/community-resilience-development-framework\)](https://www.gov.uk/government/publications/community-resilience-development-framework).

This framework sets out the roles and responsibilities and the following 6 steps for strategic action:

1. Identify the community networks, their characteristics, the risks, and prioritise support.
2. Align responder and community networks' understanding of risk and capabilities.
3. Enable resilient behaviours.
4. Enable community-led social action.
5. Partner with voluntary capabilities.
6. Review community preparedness and impact of activities.

A list of available resources to support community engagement and resilience building is included in [Appendix 2](#).

## The built and natural environment

The local geography, including the location of and proximity to watercourses, waterbodies and the sea, and the physical arrangement of homes, other buildings, streets, parks and agricultural land, can be factors contributing to peoples' risk of experiencing flooding. For example, homes built on flood plains are at greater risk, and basement flats may be more at risk than other flats within the same building.

Actions to reduce the risk of flooding, and its consequential effects on mental health, include building new developments in areas at lower risk of flooding. For reducing the risks to existing households in areas of flood risk, sustainable drainage systems (SuDS) should be considered. Examples of SuDS include increasing green spaces, removing paving for natural drainage, or introducing small-scale SuDS interventions such as green roofs or rain gardens can assist. These actions can contribute to co-benefits of improved mental wellbeing associated with green space, air and water quality, and increased biodiversity, as well as drainage.

In the response phase, the built environment plays a role in providing physical spaces for refuge and to offer practical and psychosocial support to affected individuals.

# Flood protection measures

## Property flood resilience

Property flood resilience (PFR) gives homes and businesses the tools to manage the impact that flooding has on their property and their lives. PFR is achieved by using a combination of measures that reduce the level of damage from floodwater. PFR embodies 2 concepts:

- resistance (keeping water out)
- recoverability (adapting the property to reduce damage from water entry)

Although not the main subject of this guide, prevention of flood water entering a property and minimising the damage to homes is the primary method of prevention of much of the burden of mental ill health.

## Flood resistance

Household resistance is designed to reduce most flood water from getting into a home or business. Resistance measures that can be installed to keep the water out include flood doors, barriers, gates and walls. It should be recognised that some resistance measures may require active interventions by the householder during an event such as the installation of a barrier. These measures are generally

only effective where flood depths are less than one metre, keeping out floodwater above this depth may impact on the structural integrity of the property. Consideration should be given to people, including those with limited physical mobility, who may not be able to deploy measures such as flood gates in an emergency situation.

## Flood recoverability

Flood recoverability measures are generally passive in nature. There are measures that can be retrofitted to a home, for example installing hard wood or tiled floors at ground level or raising electrical circuits that are close to the ground. While it is acknowledged that flood water may enter a property, flood recoverability measures help the speed of the recovery and subsequently reduce the financial burden of flooding. Which as a result, helps reduce the burden on mental health. That said, it is to be noted that resilience recoverability measures may be more effective in certain types of properties; where it is not possible to fit or operate resistance measures easily.

## Suggestions for flood protection

The main suggestions are:

- planning authorities and agencies responsible for flood defences should work together to integrate spatial planning and flood risk management measures with long-term development plans
- lead public flood authorities and local resilience forums should work with the community to review options for both active and passive property level resistance, in addition to encouraging Property Resilience Retrofitting in areas at risk of flooding
- sources of advice about property flood resilience measures are listed in the advice for the public section below and should be available locally
- resilient repair (Build-Back-Better) is now an element of some home insurance policies. Householders should be advised to contact their insurer or [Flood Re](https://www.floodre.co.uk/) (<https://www.floodre.co.uk/>) for more information on this

## Increase personal and household preparedness

For people in flood risk areas, the Environment Agency has set up an 'opt-in' process, also known as the [Extended Warnings Direct \(EWD\)](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/80231/EFWD-report-summary.pdf) ([https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/80231/EFWD-report-summary.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/80231/EFWD-report-summary.pdf)) for everyone within a household with a mobile device or landline to automatically register to receive automatic flood warnings. The households and businesses are encouraged to proactively check as well whether they are registered to the EA's system for flood warnings, as this is part of a household's or business's responsibility when creating their flood plan.

Communities and individuals that are aware of their level of risk are better able to respond to a flood as they are more likely to have prepared a personal flood plan

and receive flood warnings 12 hours in advance. This may also support people to be mentally prepared for any expected damage when returning to their home or business following a flood.

Members of the public can register to receive Environment Agency flood warnings with the [Flood Warning Information Service \(https://www.gov.uk/sign-up-for-flood-warnings\)](https://www.gov.uk/sign-up-for-flood-warnings). The ability to act on a flood warning nevertheless depends on personal and household specific capacity to respond as well as the support available in advance of and at the time of the event. Furthermore, the level of action taken may also be dependent on the perception of flood risk and an individual's ability to cope

Where implemented, developments such as cell broadcast technology, which enable Category 1 responders to send flood alerts to all mobile phone users within a flood alerting area, may ensure more people receive flood warnings. Text or other mass alert systems should be accompanied by advice on how to prepare for and respond to a flood and sources of practical support.

### **Suggestions to increase flood preparedness**

1. LAs should ensure they have an updated communication plan to communicate flood risk to the public – socially vulnerable communities may need targeted messaging and support to increase uptake and capacity to act on receipt of a flood warning.

2. Category 1 responders should ensure that any mass alerting systems used are accompanied by advice on how to prepare and respond, and sources of practical support – in particular, agencies sending mass alerts should consider the needs of people with one or more of the risk factors listed in section 4.

3. The public should be encouraged to take the following actions if living in a flood-risk area:

- [register for flood warnings \(https://www.gov.uk/sign-up-for-flood-warnings\)](https://www.gov.uk/sign-up-for-flood-warnings)
- people in vulnerable groups, including adults of pensionable age and people living with long-term conditions or disability, should be advised to register for the [Priority Service Register \(https://www.ofgem.gov.uk/consumers/household-gas-and-electricity-guide/extra-help-energy-services/priority-services-register\)](https://www.ofgem.gov.uk/consumers/household-gas-and-electricity-guide/extra-help-energy-services/priority-services-register) to receive priority support to reinstate energy supply, if disrupted
- create a personal flood plan, which should include:
  - steps to keep valuable and sentimental items safe from floodwater
  - how to limit the amount of water that may come into the home
  - details of insurance and arrangements for evacuation (and for pets, if they have any)
- engage with local flood wardens or resilience groups to develop or maintain understanding of personal and household risk

4. Register for flood warnings with the [flood warning information service \(https://flood-warning-information.service.gov.uk/warnings\)](https://flood-warning-information.service.gov.uk/warnings).

People in a vulnerable group, including adults of pensionable age and people living with long-term conditions or disability, should be advised to register for the Priority Service Register to receive priority support to reinstate energy supply if disrupted.

Create a [personal flood plan \(https://www.gov.uk/government/publications/personal-flood-plan\)](https://www.gov.uk/government/publications/personal-flood-plan), which should include steps to keep sentimental items safe from floodwater, how they can limit the amount of water that may come into the home, details of insurance and arrangements for evacuation and for pets if they have any.

Engage with local flood wardens or resilience groups to develop or maintain understanding of personal and household risk.

### **Suggestions to increase insurance coverage**

Local authorities and housing associations who are responsible for the repair of the structure of buildings they own should ensure that, whether self-insuring or insuring through the market, adequate funds will be available to cover flood repair costs.

Landlords should also encourage tenants to take out contents insurance or, at a minimum, have a personal flood plan that includes a plan to protect personal possessions.

Community engagement should include addressing the barriers in the uptake of buildings and/or contents insurance.

Private homeowners should review options for flood insurance, including flood protection schemes. Policies from some insurers will allow claims to include an amount for resilient repair (build-back-better) over and above the cost for like-for-like reinstatement of actual flood damage.

The government has worked with the [Association of British Insurers \(ABI\)](https://www.abi.org.uk/) (<https://www.abi.org.uk/>), the [British Insurance Brokers' Association \(BIBA\)](https://insurance.biba.org.uk/find-insurance?schemes_61=41#filter) ([https://insurance.biba.org.uk/find-insurance?schemes\\_61=41#filter](https://insurance.biba.org.uk/find-insurance?schemes_61=41#filter)), and [Flood Re](https://www.floodre.co.uk/) (<https://www.floodre.co.uk/>) to set up a [flood insurance directory](https://www.abi.org.uk/products-and-issues/topics-and-issues/flooding/flood-insurance-directory/) (<https://www.abi.org.uk/products-and-issues/topics-and-issues/flooding/flood-insurance-directory/>), which insurers and brokers can suggest to customers when they cannot offer flood cover. Customers should be made aware that this service may help them.

### **When a flood alert or flood warning is issued**

Flood alerts are generally issued between 2 hours to 2 days in advance of flooding, whereas flood warnings are issued in shorter timeframes, often between half an hour to one day in advance. In advance of a flood there is an opportunity to engage the voluntary and community sector as well as neighbourhood networks to raise awareness and prepare to offer support.

### **Public communications**



At all alert levels it is important that public communications reach the affected communities and ensure awareness of the location and potential severity and impact of a flood. Relevant communications should reach the most vulnerable households and their communication needs should be considered. The VCSE sector also play an important role in ensuring public communications reach marginalised communities, through volunteers and community champions.

### **Suggestions when a flood alert is issued**

When this happens, residents should be advised to follow the standard Flood Warning Information Service advice to:

1. [Sign up for flood warnings \(https://www.gov.uk/sign-up-for-flood-warnings\)](https://www.gov.uk/sign-up-for-flood-warnings) (if not done so already)
2. Keep up to date with the [latest flood risk situation \(https://check-for-flooding.service.gov.uk/start-page\)](https://check-for-flooding.service.gov.uk/start-page) – call floodline on 0345 988 1188 or follow [@envagency \(https://twitter.com/EnvAgency\)](https://twitter.com/EnvAgency) and #floodaware on Twitter for the latest flood updates.
3. Have a bag ready with vital items like insurance documents and medications in case you need to leave your home.
4. Check you know how to turn off your gas, electricity and water mains supplies.
5. Plan how you'll move family and pets to safety.

Local communication channels, including voluntary and community sector organisations, should be engaged to promote key messages about who is at risk, and what action to take at each alert level.

### **When a flood warning is issued**

The main messages to be communicated in the event of a flood warning or severe flood warning have been developed by the flood warning information service. They are standardised public messages, which may also be protective against mental health effects, including:

- move vehicles to higher ground if it's safe to do so
- move family and pets to safety
- move important items upstairs or to a safe place in your property, starting with cherished items and valuables, then furniture and furnishings
- turn off gas, electricity and water supplies if it's safe to do so – never touch an electrical switch if you're standing in water
- if you have property protection products such as flood barriers, or air brick covers, use them now
- keep track of the [latest flood risk situation \(https://check-for-flooding.service.gov.uk/start-page\)](https://check-for-flooding.service.gov.uk/start-page)

### **When a severe flood warning is issued**

A severe flood warning means there is danger to life: you must act right away.

1. Call 999 if you're in immediate danger.
2. Follow advice from the emergency services and evacuate if you're told to do so.
3. make sure you have an emergency kit including a torch, spare batteries, mobile phone and charger, warm clothes, important numbers like your home insurance, water, food, first aid kit and any medicines and baby care items you may need.
4. Alert neighbours and offer help if it's safe to do so.
5. Avoid driving or walking through flood water: just 30cm (1 foot) of fast-flowing water could move your car and even shallow moving water can knock you off your feet.
6. Keep your family and pets away from floodwater – it may contain heavy debris, sharp objects, open manhole covers, sewage and chemicals.
7. Wash your hands if you've been in contact with flood water which may contain toxic substances.

### **Further suggestions on flood recoverability**

All organisations that may face business continuity issues should be alerted, with particular consideration of health and care providers and the potential impacts on service provision.

Flooding can severely affect critical infrastructure, including in the health and care sector, which can impact response and recovery efforts. During the East Coast surge in December 2013, all sectors of the healthcare system were found to suffer disruption. The cumulative effect of this was reported to be reduced overall capacity in the health sector [\[13\]](#).

## **Responding to a flood: a phased approach to care**

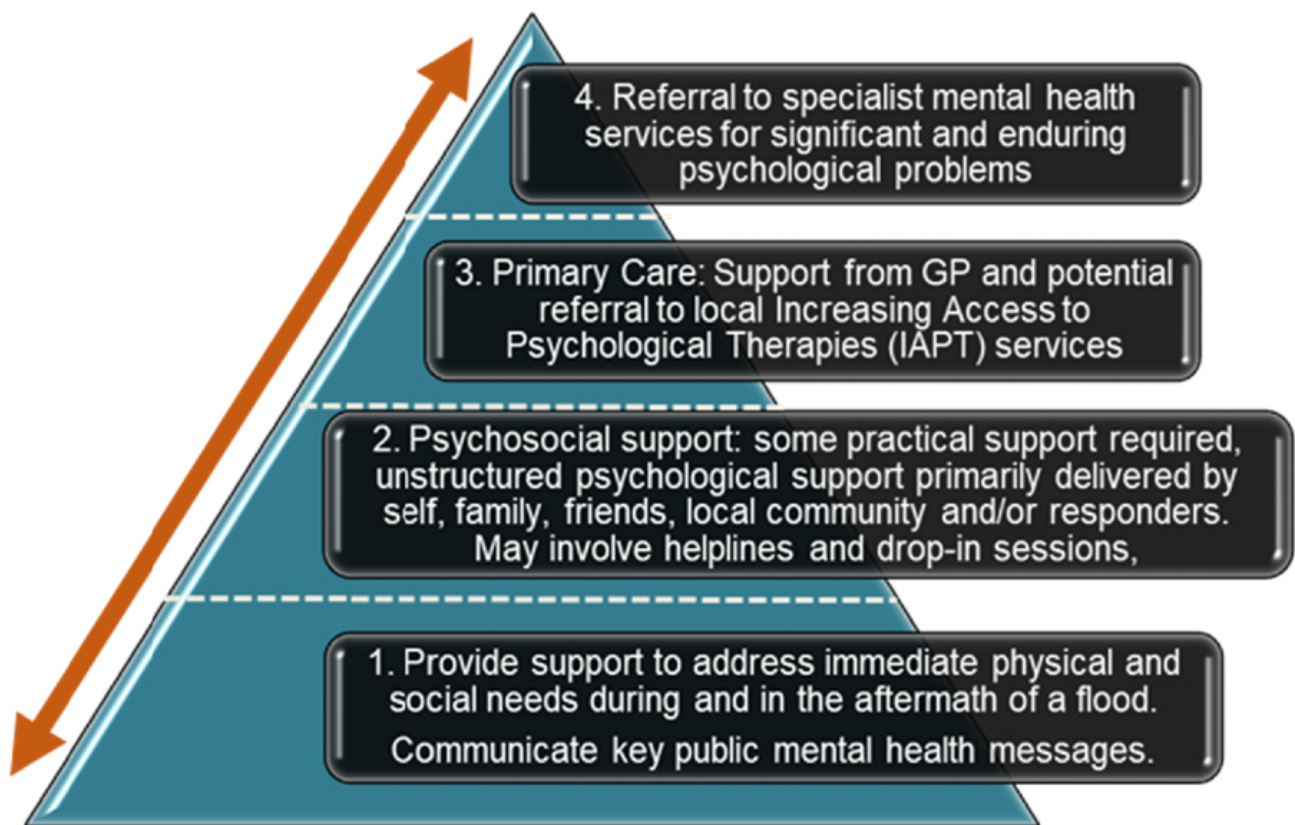
It is important to provide the right help at the right time when a flood occurs and during the recovery phase. A response should begin by attending to basic needs, such as safety, security, food shelter and acute medical problems. It should then proceed through interventions and support delivered by professionals, volunteers, communities and non-specialist support providers as appropriate. Lastly, where needed, specialist mental health care services should be considered. This type of sequenced response will help to provide co-ordinated, accessible information and evidence-informed support to all those affected during flooding.

A phased approach is based on the principle that support may be required over an extended period and the level of support required may change during that period, as illustrated in Figure 1. Most distress is usually temporary, with the majority of people able to cope with the psychological effects of being flooded by accessing their existing resources. However, a minority of people who are affected by flooding may go on to develop more severe psychological problems. Others may experience an exacerbation of pre-existing mental health conditions. A small

proportion of individuals may therefore require access to specialist psychological healthcare, with some requiring care over extended periods. This range of psychological distress means that the support each person needs will be different depending on their circumstances. The required support may increase or decrease over time.

Finally, the impacts of a flood on local mental health needs may not be apparent from routine surveillance data if the proportion directly affected in the population served is small, or if some of those who experience mental health impacts are displaced and accessing services in other areas. Local joint strategic needs assessments between all the agencies involved should take account of this possible underestimate when planning support services. The actions described in this guide are not prescriptive and Tiers 1 to 4 are intended to be flexible.

**Figure 1: 4-tiered pyramid for flood response**



The response to a flood can be illustrated as a phased approach where the first 2 response activities encompass the actions needed for the majority of the population. This is followed by more focused and targeted care for those at higher risk.

## Description of the 4 Tiers

### Tier 1

At the bottom of the pyramid is the support that should be universally available to people affected by flooding and which is protective against developing symptoms of mental health disorders. These include addressing immediate practical needs of people directly or indirectly affected, whether that is restoring utilities, ensuring continuity of care for those accessing health and care services, or supporting the flood recovery process. Being flooded or disrupted by flooding is associated with poorer mental health outcomes, so minimising the impact of flooding at the time of the event is likely to be protective.

At the general level, public mental health messages should focus on normalising the distress caused by flooding and destigmatising its possible effects on mental health.

## **Tier 2**

For the majority of individuals affected by flooding, psychosocial impacts can be managed through the provision of psychosocial support by appropriately trained responders. This involves a set of self-help actions or actions which anyone in a position to help can provide,

including first responders, volunteers, members of the family or community, if they have received appropriate training. It covers both social and psychological support as well as attending to basic needs, such as safety, security, food, shelter and acute medical problems. However, there may also be individuals who only require minimal support, and a 'light touch' approach is more appropriate.

## **Tiers 3 and 4**

Tiers 3 and 4 represent increasing levels of support, for those with psychological needs that cannot be met by general responders and need more specialist support.

Individuals may not always progress between the tiers and some people with pre-existing or complex mental health needs may require specialist support more immediately. It is appropriate to signpost them to more specialist services at the same time as providing basic psychosocial support. Figure 1 illustrates the need and corresponding scale of intervention that is likely to be distributed within an affected population. Planning the response in line with this structure will help to provide co-ordinated, accessible information and evidence-informed support to all those affected during flooding.

# **Interventions by Tier**

## **Tier 1: immediate response**

### **Address immediate dangers and offer practical support**

In the immediate response to a flood the priority is crisis management, addressing the risk to life and the immediate physical needs of affected households and

individuals. Ensuring help reaches people at this stage supports psychological resilience at the point when people are most vulnerable.

In the immediate aftermath of a flood, individuals, households and communities are likely to need different levels of support to manage the secondary stressors associated with poorer mental health following flooding.

Most people's needs for support are met by people close to them, however, assumptions should not be made that everyone naturally understands how to deliver effective and safe support. Family members may not be suitable to deliver practical support during the highly stressful period after a flood [23] [24]. Consequently, help with transportation, evacuation and other practical needs should ideally be provided by trained responders or volunteers.

### **Suggestions for flood responders**

In the event of a flood and in the immediate aftermath, responders should focus on minimising the risk to life and addressing the immediate physical needs of affected households and individuals, including basic needs of food, accommodation and sleep.

PHE published 'Recovering from flooding: information for frontline responders' in 2014, which contains advice on clean up and management of immediate public health hazards, including food, drinking water and chemical hazards.

The response may involve signposting affected people to practical support available from appropriate sources such as the local authority, environment agency, flood resilience groups, or the Red Cross.

At this stage in the flood response, members of the public should be advised against trying to evacuate people or clear homes themselves, so as not to put themselves in danger. However, examples of organised 'spontaneous volunteers' can provide great support to affected communities, such as the [Khalsa Aid during the 2015 floods](https://www.khalsaaid.org/projects/uk-floods-2015) (<https://www.khalsaaid.org/projects/uk-floods-2015>), which helped provide food and other assistance to affected areas.

Utilities companies should seek to reinstate domestic utilities as soon as possible, especially to those households previously identified as most at-risk, including but not limited to those on the Priority Services Register.

### **Promoting uptake of flood insurance**

People whose homes are flooded and who do not have home or contents insurance, or who find insurance processes stressful, experience worse mental health symptoms. Insurance coverage is also uneven. According to the Association of British Insurers, as low as half of the poorest 10% of households have home contents insurance, compared to 75% of all households. Figures can be even lower in flood risk areas [1] [22].

[Flood Re](https://www.floodre.co.uk/) (<https://www.floodre.co.uk/>) is a flood reinsurance scheme designed to help households at high risk of flooding to access affordable insurance and will run until

2039. It provides both buildings and contents cover. Flood Re does not deal directly with homeowners, but instead allows insurance companies to pass the flood risk element of home insurance policies over to Flood Re for a set premium based on council tax bands. Flood Re does not apply to homes built after 2009. The [BIBA insurance directory](#) is very helpful in understanding the level of cover available.

Households in rented accommodation are also less likely to have contents insurance and will be reliant on their landlord or housing association for buildings insurance.

## Public mental health communications

Universal public mental health messaging in the event of a flood should focus on validating the feelings that people may have and normalising the stress and distress that flooding can cause. The following messages can inform public communications via a range of media, and via local VCSE organisations and volunteers:

- having flood water in your home or being evacuated can be very distressing
- distress is a common and understandable reaction to experiencing flooding. It is normal to notice changes in your thoughts and feelings
- having your life disrupted by flooding, even if you do not have flood water in your home, for example through loss of gas, water or electricity supply or health and social care services, can be just as stressful as them being flooded
- events that occur as a result of a flood can also be stressful. Common sources of stress include concerns about your own health or the health of others, concerns for the welfare of pets, added financial burden or worries, repairing your home, insurance processes and the loss of sentimental items
- it is normal to seek help from friends and family – however, if professional support is needed that is also normal and support is available

Public health communications should be tailored to all communication needs, ensuring all materials and support are accessible for all the whole population taking into consideration language, literacy and disability related needs.

[Appendix 3](#) contains advice for people affected by flooding which can also be used in public communications.

## Tier 2

### Psychological first aid

Evidence highlights that the recovery from a flood can often be more stressful and difficult than coping with the flood itself [\[11\]](#). The response to flooding events should therefore integrate early psychosocial support to avoid damaging impacts on mental health from both the flood and the recovery process. From the start of

the recovery phase, support should focus on actions to reduce the immediate distress on mental health and wellbeing and avert future negative impacts.

## **Suggestions for provision of psychological first aid**

These are to:

- ensure responders have received appropriate training (see box below on psychological first aid)
- provide psychosocial support to response staff and volunteers themselves during and after a flood

## **Psychological first aid**

The most appropriate approach for helping people who have been affected by flooding during the early stages of recovery is based on psychological first aid.

People involved in a flood event generally demonstrate high levels of resilience, and although some degree of distress is common, it is usually temporary. Therefore most people do not require assistance from mental health services. For those who do require support, this does not necessarily need to be from mental health service professionals, as anyone can provide psychosocial support. Providing practical care and support as well as emotional support that can be carried out by anyone. It consists of supportive responses for those who have experienced a crisis situation and may need support. The key features of psychological first aid are:

1. Assess the situation and ensure that their circumstances are safe, and help them to contact recovery agencies if needed.
2. Check that there are no immediate physical health needs, for example those that may require an ambulance or a hospital visit.
3. Ask about needs and concerns, and identify if any basic needs are not met, such as access to food, water, shelter and medication.
4. Help people to contact their loved ones, and others who can provide familiar sources of support.
5. Help to identify practical ways to address people's needs and access to services. Listen, but do not pressure people to talk about their experiences.
6. Provide information if you have it, and help people to make plans for next steps.

## **Looking after your own mental health and wellbeing as responders**

Where individuals and responders are affected, Psychological First Aid is the suggested course of action in the early stages of recovery. This is regarded as more effective than single session stress debriefing (counselling). However, some cases could be at risk of developing further mental health problems and may require specialist mental healthcare.

UKHSA has developed a [free online training course in psychological first aid for adults](https://www.futurelearn.com/courses/psychological-first-aid-covid-19/1) (<https://www.futurelearn.com/courses/psychological-first-aid-covid-19/1>).

For Tier 2 interventions, short-term one-to-one support may be required for acute feelings of distress and anxiety. This should be delivered by trained responders, face to face, for example at community rest centres, or via helplines.

In some flood-affected areas phone or face-to-face 'check-in' models have been used in the weeks to months after a flood to assess what practical and psychosocial support people continue to need.

Evidence suggests that positive health behaviours, particularly physical activity and fostering social connections, are associated with fewer mental health symptoms following a flood. Therefore, promoting and enabling a wellbeing approach to flood recovery is likely to be helpful in reducing the burden of mental distress.

This could include making use of resources produced to promote the 5 ways to wellbeing:

1. Connect with other people.
2. Be physically active.
3. Learn new skills.
4. Give to others.
5. Pay attention to the present moment (mindfulness).

## Suggestions for short-term support

### Ideas which can be tailored for a local audience

See [5 steps to mental wellbeing](https://www.nhs.uk/mental-health/self-help/guides-tools-and-activities/five-steps-to-mental-wellbeing/) (<https://www.nhs.uk/mental-health/self-help/guides-tools-and-activities/five-steps-to-mental-wellbeing/>) and also [Appendix 4](#) for advice on public messages to support a wellbeing-based approach to flood recovery.

### Making personal action plans.

This is used to address emotional and practical needs and can help increase people's sense of control over the situation and help manage distress.

### Support via health and social care services

Individuals who regularly use health and social care services and support should be supported with continued access to these services, with particular consideration of people who have been displaced by flooding. Volunteers and responders should be given a role in advising health and care services regarding health and care needs in affected communities.



# Community engagement to support response and recovery

Voluntary, community and social enterprise sector organisations and informal networks typically play a significant role in the flood recovery process and can continue to play a role in building resilience and preparedness for future events. Importantly, the psychological burden on community volunteers and frontline responders themselves can be high, although there is limited evidence of the impact on volunteers and responders in England [\[25\]](#).

## Suggestions for community engagement to support response and recovery

The following suggestions apply to commissioners of VCSE organisations, local resilience forums and lead local flood authorities.

### Collaborations with specialist organisations

Collaborate with organisations such as the Red Cross and the National Flood Forum, who can provide or coordinate suitably trained volunteers to deliver social and emotional support as required. Support continuity of support over a timescale of months to years as required, as many effects may be delayed or fluctuate over time.

### Collaborate with other voluntary and community organisations

Responders may wish to also engage non-specialist organisations, for example faith groups or leaders of community initiatives, to ensure maximum distribution of core messages and to take advantage of what is already available that can be scaled up or adapted. However, it is not advisable to deliver psychological first aid without training.

### Advice for facilitation and networking

This should involve providing practical advice to facilitate the creation or expansion of groups or networks that can promote opportunities for self-help and support community and psychosocial resilience. For example, people affected by the flood may wish to meet with others who have been similarly affected.

### Mental wellbeing support

Employers and volunteer coordinators should seek to make mental wellbeing support available to response staff and volunteers in the aftermath of a flood. This should be accompanied by a debrief process and opportunities for reflection and learning for future events.

## Case study

### The Somerset Village and Community Agents

In March 2014, 3 part-time Emotional Flood Support Workers were contracted by the Somerset Village and Community Agents to support the emotional health needs of people affected by floods. Together with the Agents, they integrated into communities affected by flooding in the Somerset Levels and attended or participated in 83 events. The majority of events were coffee mornings held at village halls, bowling clubs and visitor centres among others, with an average attendance of 15 people, with over 1,000 people attending in total. Care and attention were given to people attending these sessions involving gentle informal conversations.

Following their contact, each individual was asked how they were managing. At the start of the meetings 80% of attendees reported feeling a lack of control and 75% reported feeling anxious. At the end of the meetings, 75% reported that they were at least coping, but 25% still reported feeling either distress or despair. Over 30 individuals received extended contact with flood support workers, either face to face or by telephone, with an average of over 10 contacts per recipient of support.

Working with other agencies was key to offering appropriate support at the right level to suit the needs of the individuals. Somerset Counselling offered free counselling sessions to people affected by the floods. Several individuals followed this through with 10 sessions each. Other referrals were made to village agents, GPs and to the Samaritans listening service, set up to support victims of flooding. In addition, there was also signposting to adult social care, coffee mornings, the Environment Agency, a Men's Shed, rotary advocates, Somerset Volunteers, talking therapies and the Warrior Programme (a charity supporting ex-service personnel in Somerset).

### **Watch: Addressing emotional wellbeing as part of the public health response**

Addressing emotional wellbeing as part of the public h...



## Advice for the reinstatement of industry and utilities

Many households lack adequate insurance and will have additional needs for financial and reinstatement support following a flood. However, for those that have insurance delays to reinstatement, which is often not a transparent process to policyholders, this can cause significant stress and is associated with poorer mental health outcomes [26]. The reinstatement industry can play a significant role in reducing sources of ongoing or delayed stress following a flood event.

Insurance providers and businesses involved in the building, renovation and construction industries can help mitigate some of the stress post flooding by ensuring that they have appropriate measures in place to help affected individuals navigate insurance claims and reconstruction processes. They should provide accessible support to people to navigate claims and repair processes. Insurance companies should familiarise themselves with guidance developed by the Department for Environment, Food and Rural Affairs (Defra) on how to support resilient repair and minimise delays to the recovery process [26].

## Tier 3

### Screening and monitoring of at-risk individuals

Many affected individuals do not seek mental healthcare following a flood. In addition to the degree in which someone has been affected by a flood, there are wider risk factors that may increase likelihood of mental distress and include:

- pre-existing mental health problems
- a previous history of trauma
- family history of mental health problems
- absence of social networks
- concurrent stressful life events
- substance misuse
- bereavement

The stigma associated with mental ill health can reduce the likelihood of someone seeking care. Therefore addressing this issue early, by engaging with different sectors within the community, for example religious leaders, may be beneficial.

## Suggestions for identification and support of more acute needs

Volunteer and professional responders should be advised on risk factors and signs that someone may need additional support so that they can signpost or refer accordingly. See [Appendix 2](#) and Tiers 3 and 4 for advice on where to signpost.

## Children and young people

Children also experience emotional and psychological impacts of flooding. Parents who were interviewed following the 2005 flooding in Carlisle reported their children still became distressed by heavy rain over a year after the event [27]. Children and young people may experience and display different symptoms of mental ill health to adults, for example, they may have altered moods and behaviour and disrupted sleep patterns.

In the immediate aftermath, responders, teachers, parents and others working with children and young people can use psychological first aid (PFA) given by responders who have trained in PFA for children. Following a flood, schools play an important role in meeting the mental health needs of children. Evidence suggests that cognitive behavioural programmes (CBT) delivered in collaboration with schools can help distress levels in children affected by floods, and may reduce depression and emotional or behavioural symptoms as well as symptoms of attention deficit hyperactivity disorder [28] [29] [30]. This includes both formal counselling services offered within or facilitated by schools as well as the pastoral support provided by teachers to children and their families. Education providers can also facilitate treatment of more severe mental health disorders via regular follow up screening of pupils affected by floods in order to identify delayed symptom onset [31].

## Suggestions for support to children and young people

LAs should consider how best to work with local education providers to develop plans that can be activated when needed to deliver programmes to support recovery where a flood has affected multiple pupils within a school.

Education providers should seek to follow up and screen pupils known to have been affected by flooding, directly or indirectly, to facilitate referral to appropriate treatment and support. A small proportion of children and young people may require access to specialist mental healthcare. This can be accessed via GPs, or by self-referral to a local Improving Access to Psychological Therapies (IAPT) Service for children and young people.

Training in psychological first aid [for professionals and volunteers who work with children and young people](https://www.futurelearn.com/admin/courses/psychological-first-aid-for-children-and-young-people) (<https://www.futurelearn.com/admin/courses/psychological-first-aid-for-children-and-young-people>) in emergency situations is available.

## Tier 4 interventions

In the medium to longer term recovery phase following a flood, people experiencing more severe or prolonged mental health symptoms may or may not seek help with their mental health needs or may seek help from informal sources. It is therefore likely there is a significant unrecognised burden of mental health within communities after flooding occurs.

## Suggestions for longer-term clinical interventions

Individuals who experience persistent symptoms, or have concerns about their own or others' mental health or wellbeing, should visit their GP or call NHS 111 and request help to identify further sources of support.

Individuals can self-refer to Increasing Access to Psychological Therapies (IAPT) services to access Cognitive Behavioural Therapy (CBT), which for some people can help address flood-related mental distress via cognitive reappraisal. The NHS One You webpages have further advice on how to deal with stress or anxiety as well as information about sources of support.

Anyone who identifies someone, or who meets someone who has self-assessed themselves as in need, can be signposted to this or to further resources listed in [Appendix 2](#).

For the minority of individuals whose symptoms persist in the Longer-term, psychological support provided by specialist clinical teams may be appropriate. These individuals should be identified and formally assessed in terms of their need for either health, or health and social care services.

Mental health and social care specialists should continue to provide advice to responder organisations until recovery phase responses have been completed.

## Suggested next steps: public agencies and LAs

This guide on the mental public health effects of flooding is a good-practice document. The suggested flood response activities are sourced from real-time flood case studies and literature reviews, to provide evidence-informed support to vulnerable and affected populations. The guide is to support LAs, resilience forums, volunteer groups and relevant agencies in their considerations, actions and activities, when planning for flooding events. This document contains information that can be adapted and incorporated as appropriate to local situations.

This guide presents good practice suggestions. The main messages can be summarised into the following points:

1. To prepare vulnerable communities in advance of flooding, LAs and agencies play a key role in helping build community resilience. This can be through identifying households and areas with higher vulnerability to the impacts of flooding to offer targeted and tailored interventions and communications. Activities that support social cohesion at local level are known to mitigate some of the mental health consequences caused by flooding where social action supports long-term preparedness.
2. Public agencies and local authorities should review this guide across the local health and social care systems to satisfy themselves that their response activities reach those that need to take appropriate actions, both in preparation and in response to flooding. [Figure 1](#) illustrates the phases of the response actions required during and following a flooding. Local areas need to adapt

these to their particular situations and ensure that the cascades are working appropriately.

3. Local authority commissioners, together with Local Resilience Forums, should seek assurance that organisations and key stakeholders are taking appropriate actions for flood alerts or warnings.
4. The suggestions identified in sections 4, 5 and 6 are based on the best evidence and practice available. It is for local areas to amend and adapt this information and to involve local groups and organisations to help develop plans that can be actioned when needed.

## Appendix 1. The English National Cohort Study of Flooding and Health

In the immediate aftermath of flooding, people can suffer from injuries, infections, exposure to chemical hazards and disruption to health services. These risks are generally well understood. However, the longer-term impacts of flooding on health have been less well described and until recently there has been limited evidence available to help us understand the scale, intensity, or duration of these impacts.

The storms of winter 2013 to 2014 brought the wettest winter to England in 250 years. Following them, PHE established the 'English National Cohort Study of Flooding and Health', working with academic partners at the NIHR Health Protection Research Units on Evaluation of Interventions at the University of Bristol; Emergency Preparedness and Response at King's College London; and Environmental Change at the London School of Hygiene and Tropical Medicine.

The study investigated the participants annually for 3 years, in order to identify the duration of psychological impacts of flooding, to help inform preventive and follow up actions and to reduce harm from future floods.

Psychological impacts from flooding often range from natural feelings of stress or anxiety that pass naturally with time, to more severe mental health impacts, which may have long lasting complications and require specialist interventions. The English National Cohort Study investigated how flooding affected rates of anxiety, depression, and PTSD in affected communities.

The study found that there can be a substantial mental health impact in communities affected by flooding. The main findings were:

- the percentage of people with probable depression, anxiety or PTSD was highest amongst people whose homes were flooded, and the risk of having these mental health issues was approximately 6 times higher in this group than in those who were unaffected by flooding
- the percentage of people with probable depression, anxiety or PTSD was also elevated amongst those who did not have floodwater in the liveable part of their homes, but whose lives were otherwise disrupted by the flood
- amongst those whose homes were flooded, the risk of poor mental health outcomes was greater the deeper the floodwater

- the risk of poor mental health outcomes was greater amongst those whose homes were flooded for more than 24 hours compared to those who were flooded for less than 24 hours
- amongst those who were flooded, having to evacuate further increased the risk of probable anxiety and PTSD
- amongst those whose homes were flooded, experiencing disruption to certain services including key domestic services, particularly so for domestic utilities or access to health/social care services, further increased the risk in those who needed and usually accessed them
- amongst those whose homes were not flooded, but whose lives were still disrupted by the flood, losing access to health and social care services (if such services were required) further increased the risk
- seeking help from any source during the first year post-flooding was increased amongst those whose homes were flooded or whose lives were disrupted
- the prevalence of probable psychological morbidity remained high among people whose homes were flooded 2 years after the event (depression 10.6%, anxiety 13.6%, PTSD 24.5%)
- 14 % of people reported persistent flood related damage in their homes 2 years after flooding. These people had higher odds of mental health problems compared to the unaffected group. This was also statistically significantly higher than the odds of mental health problems among people who did not report persistent damage
- among the displaced, those who reported receiving no warning before flooding and subsequent displacement from their home were significantly more likely to report symptoms of probable depression and PTSD but not anxiety

Secondary stressors are also factors indirectly associated with flooding which may be amenable to action in order to reduce their public health impact. These include loss of personal items or financial losses, and difficulties with insurance and compensation. These 'secondary stressors' were associated with symptoms of probable depression, anxiety and PTSD in the aftermath of flooding.

The most frequently experienced secondary stressors were concerns about house value, additional financial burden resulting from exposure to flooding, home repairs, and finding jobs or chores around the house more difficult.

## Appendix 2. Additional resources

### Community engagement and resilience building

Online resources:

- Community-centred Public Health: Taking a whole system approach
- advice on [flood-related community engagement](https://nationalfloodforum.org.uk/working-together/community-engagement-hub/) (<https://nationalfloodforum.org.uk/working-together/community-engagement-hub/>)

- community-centred approaches to health improvement, [e-learning module \(https://www.e-lfh.org.uk/programmes/community-centred-approaches-to-health-improvement/\)](https://www.e-lfh.org.uk/programmes/community-centred-approaches-to-health-improvement/)

## Major incident response

[Get help \(https://www.gov.uk/help-during-flood\)](https://www.gov.uk/help-during-flood) during a flood.

## Mental health support

Mental health support is available from GPs and NHS 111, who can also help to identify further sources of support.

[NHS Every Mind Matters \(https://www.nhs.uk/every-mind-matters/\)](https://www.nhs.uk/every-mind-matters/) guidance has advice on how to deal with stress or anxiety as well as information about where one can access further support.

[NHS Mental Health Services \(https://www.nhs.uk/nhs-services/mental-health-services/\)](https://www.nhs.uk/nhs-services/mental-health-services/) is a good source of local health information, including about local mental health services.

Helplines, such as the Samaritans, can provide support to anyone in emotional distress or struggling to cope. The Samaritans free helpline is available 24 hours a day on 116123

[Mental Health First Aid England \(https://mhfaengland.org/\)](https://mhfaengland.org/).

# Appendix 3: Advice for those affected by flooding

## Public warning

The advice below is aimed at the public and should be delivered at the appropriate time point in advance of or when recovering from a flood.

### Sign up for warnings

Think about flooding before it happens. Sign up for free flood warnings and if flooding has been forecast where you live, monitor local news via radio, television and online for updates. Your local authority or the Environment Agency can tell you about the risks of flooding where you live.

Alerts and general flooding advice are provided by the Environment Agency. Floodline, alerts for your area can be sent via phone, email or text message by signing up for flood warnings or calling Floodline: 0345 988 1188 or 0845 988 1188.

## Ground and surface water flood risk



In England, Lead Local Flood Authorities (LLFAs) are responsible for managing flood risk from ground and surface water at a local level, and can direct you to who is responsible in your local area. You can also [check your flood risk based on your postcode \(https://check-long-term-flood-risk.service.gov.uk/postcode\)](https://check-long-term-flood-risk.service.gov.uk/postcode) – this also informs you on your LLFA.

## Household flood protection

There are a number of organisations that can help householders to find out more about flood defence technology such as the [National Flood Forum \(https://nationalfloodforum.org.uk/\)](https://nationalfloodforum.org.uk/), through their [Blue Pages guide \(http://www.bluepages.org.uk/\)](http://www.bluepages.org.uk/) and the [Property Care Association \(https://www.property-care.org/\)](https://www.property-care.org/).

### Insurance

Not having household insurance, or dealing with insurance processes after a flood, can be stressful.

Flood Re is a joint initiative between the government and insurers that aims to make the flood cover part of household insurance policies more affordable – [find out how they help insurers \(http://www.floodre.co.uk/\)](http://www.floodre.co.uk/) to help householders at risk of flooding. Additionally, it is encouraged for residents and homeowners to check whether they have adequate insurance cover for floods. Especially those who perhaps cannot afford full cover – they are urged to check the level of insurance cover they have.

Further information is available on [how to prepare and keep your home safe in a flood \(https://www.gov.uk/prepare-for-flooding/future-flooding\)](https://www.gov.uk/prepare-for-flooding/future-flooding).

## Preparing for a flood

There is a guide available detailing the simple steps that can be taken before a flood to protect wellbeing. For example, preparing a grab bag that includes medications and insurance documents and creating a personal flood plan. A plan should include steps to keep sentimental items safe from floodwater, how to limit the amount of water that may impact a home, details of insurance and arrangements for pets if required.

Advice is available for creating a personal flood plan and [protecting yourself from future flooding \(https://www.gov.uk/prepare-for-flooding/future-flooding\)](https://www.gov.uk/prepare-for-flooding/future-flooding).

## Short-term actions

There are actions that individuals can take to look after their own and others' wellbeing and mental health during a flood event.

## For yourself

Take the time to consider your mental health and wellbeing. There will be lots of practical work that needs to be done but making time to talk to someone you trust can be helpful. Your friends and family are there to support you and making the time to talk to and support each other to get better is important.

It can help to start repair efforts as soon as you feel ready to remove flood water and reduce lasting damage where possible but do not overdo it when cleaning up. Remember, anxiety, stress, tiredness and difficulty sleeping are normal in these circumstances.

Help with practical difficulties can be of great importance to maintaining your wellbeing, so keep in touch with your local authority who will be able to support you in resolving issues.

Connecting with your local community is an important source of practical and psychological support. You may be able to access support groups, local recovery hubs and community centres in your area.

## For others

If you are helping someone who has been affected by flooding, there are simple ways to offer support. Providing practical care and support as well as emotional support, for example listening to and comforting people, is often called psychosocial support or Psychological First Aid (PFA).

Before attempting to deliver PFA it is worth taking a training course to understand what it does and does not involve.

A course to deliver PFA to children is also available.

If someone has concerns about their own or others' mental health, they can visit their GP, or call NHS 111, who can help to identify further sources of support.

[NHS One You \(https://www.nhs.uk/oneyou/\)](https://www.nhs.uk/oneyou/) guidance also has advice on how to deal with stress or anxiety as well as information about where one can access further support.

[NHS Choices \(https://www.nhs.uk/service-search\)](https://www.nhs.uk/service-search) is a good source of local health information, including local mental health services.

Helplines, such as Samaritans, can provide support to anyone in emotional distress or struggling to cope. The Samaritans free helpline is available 24 hours a day on 116123. A small proportion of people may require access to specialist mental healthcare. This can be accessed through GPs, or by self-referring to a local Improving Access to Psychological Therapies (IAPT) Service.

## Longer-term actions

If you have concerns about your own or others' mental health or your distress continues over an extended period of time visit your GP, or call NHS 111, who can

help to identify further sources of support.

[NHS Choices \(https://www.nhs.uk/service-search\)](https://www.nhs.uk/service-search) is a good source of local health information, including local mental health services.

[NHS One You \(https://www.nhs.uk/oneyou/\)](https://www.nhs.uk/oneyou/) guidance also has advice on how to deal with stress or anxiety as well as information about where one can access further support.

Helplines, such as Samaritans, can provide support to anyone in emotional distress or struggling to cope. The Samaritans free helpline is available 24 hours a day on 116123.

A small proportion of people may require access to specialist mental healthcare. This can be accessed through your GP, or by self-referring to a local Improving Access to Psychological Therapies (IAPT) Service.

## Appendix 4: A wellbeing approach to flood recovery

This table provides information about helpful things to do and to avoid in the aftermath of a flood event. It is based upon the NHS 5 steps to mental wellbeing.

Action	Do	Don't
Connect	<p>Connect to information and signpost people to appropriate sources of information and support.</p> <p>Connect to services if needed, for example voluntary services and helplines.</p> <p>Connect with each other.</p> <p>Reach out to your families, friends, and colleagues.</p> <p>Keep in touch with others affected and offer each other social support.</p>	
Take notice	<p>Make time for yourself – go to a place where you feel calm and safe.</p> <p>Take time to rest, relax, get sufficient sleep and eat healthily</p>	<p>Force yourself to go over the events or pressure others to talk about events or their concerns.</p>

Action	Do	Don't
	and regularly.  Recognise the difficulty that others may also be having following the event.	
Keep learning	If you have any questions or concerns, access community support groups and/or advice and information centres.	Try and take on anything new or any new responsibilities too soon.
Give to others	Take the time to consider you and your family's mental health and well-being – support them listen to them and help them feel calm.	
Be active	Start clean-up efforts within your home when you feel ready.  Exercise can help you feel better – attempt something manageable such as walking. If you exercise regularly it is important that you try and keep to your regular routine, if possible.	Overdo it during the clean-up and recovery process – remember, anxiety, stress, tiredness and difficulty sleeping are normal in these circumstances.

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