City of Philadelphia
Department of Behavioral Health and Intellectual disAbility Services

MEMO

April 15, 2026

TO: Executive Directors of all agencies under contract with the Philadelphia Department of Behavioral Health and Intellectual disAbility Services (DBHIDS), Office of Behavioral Health Case Management Directors, Office of Behavioral Health Residential Site Managers, Mobile Psychiatric Rehabilitation Service Managers, Certified Peer, and Recovery Specialist Program Directors

FROM: Amanda N. David, MSW, LSW, Deputy Commissioner, DBHIDS Behavioral Health Division

SUBJECT: Heat Safety Policy

Although official long-lead seasonal forecast maps for the summer of 2026 have not yet been widely published, climate outlooks from NOAA's Climate Prediction Center and related climate scientist predictions indicate that above-average temperatures remain more likely across much of North America for the upcoming seasons. This pattern is driven in part by the long-term warming trends along with the gradual transition from a fading La Niña toward neutral conditions, a weather setup that has historically increased the probability of warmer-than-normal summers and uncertain precipitation patterns.

Last summer was particularly uncomfortable for many Philadelphia residents. The region experienced multiple bouts of extreme heat with temperatures reaching into the mid-90s and even breaking a local record at Philadelphia International Airport, along with heat indices above 100 degrees and very humid air that made nights slow to cool off. Studies and regional climate analyses show that average summer temperatures and especially nighttime lows have been trending upward over recent decades by several degrees compared to mid-20th-century norms, which increases heat stress in our urban environment.

This summer, the baseline climatology predictions remain hotter than historical averages due to this overall warming trend. Seasonal forecasts overall are generally tilting toward above-normal temperatures for the eastern U.S. overall, with local expectations that Philadelphians will again see frequent summer days in the upper-80s to mid-90s degrees, with humid conditions and periods of sustained heat. Summer thunderstorms triggered by hot, moist air interacting with frontal boundaries or afternoon convection will remain common, especially during heat spikes, but the frequency and intensity of these storms will depend on specific weather pattern setups that local forecasters will refine closer to summer. Compared directly to summer 2025, if 2026 follows the broader climate signal of above-average heat, it's likely to feel similarly warm if not marginally warmer at times, though specific heat waves and thunderstorm episodes will vary.

In short, summer 2026 in Philadelphia is expected to continue the trend toward warmer and potentially humid conditions, with plenty of days warm enough for heat advisories and a typical summer thunderstorm risk. How extreme these events are depending on short-term atmospheric patterns, but the overarching climate signal for the region remains a continuation of the hotter, stickier summers like what many residents experienced in 2025.

During a heat wave, it is not always clear how to protect yourself. Multiple City departments work in tandem to initiate advanced warnings during heat crisis and to provide resources for individuals

and families in need of education, emergency cooling areas, air conditioning, financial assistance, and utility assistance. Locally, Philadelphia's behavioral health care professionals are working hard to ensure that all mental/behavioral health and substance abuse wellness are a key part of preparing for and responding to these increasingly common heat emergencies. In the following pages you will find the City of Philadelphia Department of Behavioral Health and Intellectual disAbility Services (DBHIDS) Heat Safety Policy, training materials, and handouts.

The policy contains minimum safety requirements for these DBHIDS funded programs: residential programs (including, but not limited to, congregate settings, supported individual living arrangements, mobile psychiatric rehabilitation services, recovery houses), licensed drug and alcohol programs, behavioral health case management programs, certified peer specialist, and peer recovery programs. The policy entails training, monitoring, and mechanical cooling requirements. Updated for this summer is the resource list that begins on the next page.

Prevention measures and training of program participants on methods of staying cool (such as cool showers or spending time in air-conditioned public areas such as libraries and malls if available) continue to warrant attention. Please conduct training as quickly as possible: heat waves early in the season are often associated with higher rates of mortality. Training may be completed in two ways, via an eLearning course or by using the training materials in this packet to conduct group training. **The deadline for completion of training is May 30**.

The Heat Safety eLearning course is accessed via the DBHIDS Learning Hub (A Learning Management System). Attached you will find a document which lists steps needed to create an account and enroll in the course. For your reference here are instructions for creating a Learning Hub account (non-DBHIDS employees) should they be needed. FYI- If you already have an account, please do not create a new one. The course is in the Electives folder on the DBHIDS Learning Hub.

If you have an issue with logging into the eLearning course, please contact: DBHIDS.LearningHub@Phila.gov. If you have any questions about the heat safety policy requirements. please contact your DBHIDS representative. Certificates will be available after eLearning course completion via the DBHIDS Learning Hub. Where staff do not have access to a computer, you may use the training materials in this packet to conduct staff training and send an attendance sheet listing the agency, program, name of trainer, date of training and those who participated.

Please email it to:
Lisa Colton, Ph.D., Chief Clinical Officer, DBHIDS, lisa.colton@phila.gov by May 30. Attendance sheets are not necessary for people taking the eLearning course.

Although the Heat Safety Policy was developed for specific programs, the information contained in the policy will benefit staff and recipients of all DBHIDS services. Agency staff can prevent deaths from heat-related illness by implementing preventative measures, understanding which individuals are at highest risk, recognizing symptoms, and obtaining medical attention swiftly when symptoms occur.

We have learned several important lessons from heat-related deaths in previous years:

1. Some who died during periods of high heat had air conditioning but did not use it at the time of their death.
2. Staff assessing heat safety at residences should inspect bedrooms (often located on upper floors) when possible. (In one heat-related death, the resident told the case manager that his boarding home had air conditioning. The case manager erroneously assumed that the resident had air conditioning in his bedroom – the location of the death).
3. When a person complains of heat stress symptoms, staff must communicate this information to all other service providers, family members and significant others. A history of heat-related illnesses puts the person at higher risk for future episodes.
4. Adequate heat safety checks involve your staff in two ways: 1) staff assistance to program participants is necessary in May for the development of buddy systems comprised of natural supports, and 2) staff teaming during high heat periods is essential for heat safety checks for individuals at high-risk.

Please take precautions to keep facilities and program participants as cool as possible. Air conditioning or fans must be available, and it is always imperative that drinking water be accessible. We also encourage outreach to your program participants who live alone or in personal care or other types of boarding homes to help ensure their comfort and safety. Any unusual symptoms or rise in body temperature to 100 degrees or greater should be immediately evaluated by a physician.

Questions regarding medications should be directed to the prescribing physician. Finally, we ask you to provide heat safety education to program participants on an ongoing basis.

Question regarding this heat safety packet? Contact your usual DBHIDS portals for seeking information, such as the office of behavioral health unit staff, community behavioral health provider relations staff, county case management staff, intellectual disability services staff and behavioral health special initiative staff.

Question with logging into the eLearning course? Contact: DBHIDS.LearningHub@Phila.gov.

Thank you for your attention to this life saving information.

Enclosures:

1. Heat Safety Policy
2. Training Materials and Handouts/Checklists
   - Heat Brochure.
   - Don't Have Air Conditioning at Home? Cooling Methods.
   - Heat Exhaustion and Heat Stroke Symptoms.
   - Checklist for Direct Service Workers – Preventing Heat-Related Illness at Home.
   - Stay Cool Checklist – can complete it with person over the phone and mail it to them after completion.
3. Instructions for accessing the eLearning course.

Table of Contents

Heat Safety Resources

Below is a list of some of the heat safety resources available to the Philadelphians this year.

1. **Heatline and the Philadelphia Dept. of Public Heath (PDPH) Environmental Health Services:** When PDPH declares a heat health emergency, a citywide heat emergency hotline is activated: 215-765-9040. The Heatline is sponsored by PDPH and Philadelphia Corp. for the Aging and is used as a resource for Philadelphians of all ages for information and access to assistance with excessive heat. People who are already exhibiting symptoms of serious heat-stress disorders should contact 911 immediately.

For assistance in assessing the risk of a specific situation when the heat emergency hotline is not activated, the PDPH Environmental Health Services Unit may be contacted during regular business hours 215-685-7342. They can also be accessed after hours through the City of Philadelphia Municipal operator 311.

Conditions of high heat (more than 81 degrees) noted in a person's place of residence (e.g. CRR, PDR, SIL apartment, licensed personal care home, halfway houses) should be reported to the same agencies mentioned above and are listed below with times they are open:

Situation	Who to Contact
If a Medical Emergency (e.g. fever, panting, disorientation, profuse or lack of sweating)	**911**
During an official heat emergency or warning	Phila. Corp. of Aging Heatline 215-765-9040
During regular business hours Staffed 8 a.m. to 4:30 p.m., Monday to Friday	Environmental Health Services Dept (EHS) of Phila. Health Dept. 215-685-7342
After hours **Dial 311** for the Municipal Operator Staffed Monday to Friday	They will contact the EHS on-call staff person. Calls from outside of Philadelphia dial 215-686-8686

Note: The Philadelphia Property Maintenance Code requires that when a heat emergency is declared by the Philadelphia Department of Public Health, an indoor temperature not to exceed 81 degrees must be maintained at Group A-1 (supervised living) facilities. DBHIDS has interpreted Group A-1 facilities to include LTSRs, behavior shaping residences, CRRs, PDRs, SROs, SIL/MPRS apartments, shelter plus care units, specialized living arrangements, licensed personal care homes, and halfway houses.

2. The **Philadelphia Department of Public Health** website provides information on heat-related illness signs and symptoms and stay cool tips, and can be accessed at: phila.gov/services/safety-emergency-preparedness/natural-hazards/excessive-heat/heat-related-illness

3. **PECO/PGW Programs**:
   - **LIURP of PECO/CMC Energy Services** is available to qualified low-income PECO customers who are homeowners and offers free weatherization services and conservation education to help reduce the amount of electricity and natural gas used in the home. Phone number: 800-675-0222. Information about this and other PECO assistance programs can be accessed at: PECO.com/MyAccount/Customersupport/Pages/AssistancePrograms.aspx
   - **Phila. Gas Works Assistance Programs** may be accessed at: PGWorks.com/residential/customer-care/payment- assistance. During Excessive Heat Warnings issued by the National Weather Service, PECO, PWD, and PGW (in the case of gas-fired air conditioning) may cease service suspension for non-payment.
4. **Sprinkler Parks** may be open this summer. Please check the Parks and Recreation website periodically for updated information. phila.gov/departments/philadelphia-parks-recreation
5. For more information on how to prevent, recognize, and treat heat-related illnesses, please see the CDC's publication, Extreme Heat: A Prevention Guide to Promote Your Personal Health and Safety available at Wonder.cdc.gov/wonder/prevguid/p0000449/p0000449.asp

Heat Safety Policy

Revised: April 2020

Applies to the following Office of Behavioral Health Programs: Congregate Residential, Supported Independent Living Programs (SIL), Residential Mobile Psychiatric Rehabilitation (MPRS), Licensed Drug and Alcohol Programs, and Behavioral Health Case Management Programs. Also applies to Certified Peer Specialist (CPS) Programs and Certified Recovery Specialist (CPR) Programs.

Definitions:

Heat Caution – A notification made by the Philadelphia Department of Public Health to heat response partner agencies to activate enhanced public messaging about heat safety and homeless outreach activities based on weather conditions that are likely to put vulnerable populations at risk for heat-related illness.

Heat Health Emergency – Based on conditions most likely to cause heat-related morbidity and mortality, this declaration by the Philadelphia Health Commissioner activates PCA's Heat line, city cooling centers, outreach to homeless populations, and suspension of utility shut-offs for residential non-payment.

Relevant City of Philadelphia Ordinances:

The Philadelphia Property Maintenance Code requires that when a heat warning/ emergency is declared by the Philadelphia Department of Public Health, an indoor temperature not to exceed 81 degrees must be maintained at residential facilities (e.g. CRR, PDR, SIL apartment, licensed personal care home, halfway house).

The Philadelphia Department of Behavioral Health and Intellectual disAbility Services has established additional heat safety requirements (see policy, below) as an addendum to the above

ordinance to provide additional protection to people receiving services from the Behavioral Health System. These additional protections are necessary because of the serious risk factors associated with mental illness (e.g. psychotropic medications) and/ or substance addiction.

For All Programs Specified Above:

1. Training of all above-listed program staff is required each April on heat-related illness and prevention. The training may be completed using the DBHIDS eLearning course or may consist of a review of the Heat Safety Packet (policy, training curriculum, article, and case reviews) at a staff meeting. It is recommended to have a medically trained person present to answer questions. The training must be completed by April 15 of each year. If the eLearning course is not used, a copy of the training attendance sheet is required to be mailed or emailed to the Office of Behavioral Health to the attention of the Director of the Office of Behavioral Health by May 1. Heat waves early in the season are often associated with higher rates of mortality.
2. Provide ongoing education and reminders to program participants on heat safety.
3. Above-listed program staff should advocate for resources or special services when needed to ensure an individual's safety. Examples of areas in which advocacy may be needed is in accessing resources such as fans, being moved to a lower floor when risk for heat-related illness is high, negotiating a budgeting plan with the energy company, etc.
4. If an individual refuses to use safety precautions and appears to be in danger of developing a serious heat-related illness, Crisis Services at the Office of Behavioral Health 215-685-6440 should be called to determine whether an involuntary commitment (302) is needed for clear and present danger to self. If an individual is showing symptoms of heat exhaustion, contact his or her nurse or physician immediately or 911 if it is a medical emergency. If an individual is showing symptoms of heat stroke or neuroleptic malignant syndrome, call 911 immediately (see attached article).

   Note: Any unusual symptoms or rise in body temperature to 100 degrees or greater should be immediately evaluated by a physician. Questions regarding medications should be directed to the prescribing physician.
5. It is always imperative that cold drinking water be accessible.
6. The attached article and "Know These Heat Disorder Symptoms" should be posted on staff bulletin boards and in staff offices.
7. There must be air conditioning or fans in bedrooms (congregate living) and apartments during the summer months (May through September). WARNING: Use of fans is safe only in certain conditions. Please refer to the attached article and information sheet regarding the use of fans. Post information sheets on program participant bulletin boards and distribute to participants.
8. Individuals at increased risk for developing heat-related illness should live in lower floor apartments or on the lower floors of congregate living facilities when air conditioning is not available. It will be expected that Residential Program Directors review the health status of each person in their residential facilities to determine whether they should reside in lower floor apartments or on the lower floors of congregate facilities.

Risk factors for heat-related illness include age (below age 5 and 50+), obesity, many physical conditions, use of certain medications (including psychotropic medication), and substance use. Risk should be determined in consultation with the individual's Primary Care Physician. Refer to the attached article for a more complete list of risk factors.

Residential

9. Residential settings must have safety procedures (monitoring the environment and residents) that go into effect during hot weather conditions. Refer to attached information.
    a. All housing units must have a temperature gauge that is operable year-round in all the living areas of the building, including each bedroom, or in each apartment. A thermometer should also be posted on the exterior of the building (out of direct sunlight).
    b. Thermometers should be placed in an area that is not subject to drafts and temperature extremes, such as in direct sunlight, close to a window, or in the direct path of a heating vent or above a radiator. Placing the thermometer in a hallway is not recommended, since it is a passageway and not a living space.
10. When the outside temperature rises above 80 degrees, the indoor temperature must be monitored closely. The heat index can rise quickly indoors, rapidly creating heat overload on a person's body.
    a. Procedures for monitoring the environment should include checks on the temperature in the living areas of the building, airflow, availability of cool water, and proper use of fans. Procedures for monitoring residents include a time frame for conducting rounds, checking for early symptoms of heat-related illness and dehydration, and checks for proper clothing. Persons who do not arrive for medications, meals, or other scheduled appointments should be checked immediately. Other safety measures include routine education of residents about safety precautions, encouraging increased hydration (unless medically contraindicated), and making available foods with high water content, such as fruits and salads.
    b. When the indoor temperature reaches 82 degrees, residents must be moved to a cooler area, not exceeding 80 degrees. Options for access to air-conditioning during heat waves must be identified.

Case Management, SIL, MPRS, CPS and CRS Teams

11. BHCM, SIL, MPRS CPS and CRS team staff must have safety procedures for people assigned to their teams. We caution staff to pay close attention when the outside temperature reaches 80 degrees, as the heat index can rise quickly indoors. Options for access to air conditioning during heat waves must be identified for program participants. Additional visits and/or telephone contacts should occur to:

    a) ascertain the temperature in the dwelling, the individual's physical health and mental health status, use of cooling measures and

    b) provide education on preventative measures and symptoms of heat-related illness. This additional support is especially important for individuals living alone and in boarding homes.

12. The above-listed staff need to develop a triage plan in early April to determine each program participant's risk levels during heat waves, i.e., who needs to be seen face-to-face daily, who should receive daily telephone contacts, and who has a support system that will conduct daily checks and communicate with the team (family members, neighbors, landlords, etc.). Individual plans may be detailed in a demographic form or other prominent place in the person's record. Where more than one of these services works with the same individual, they will together coordinate planning to ensure the person's safety.

13. Physicians and nurses can best ascertain the level of risk. When not available on a team, staff can consult with the person's psychiatrist or primary care physician. During heat waves, the triage plan should be implemented to ensure that those falling into the moderate to high need categories are checked at a minimum of once daily. A buddy system with neighbors/ friends should also be encouraged. The following chart may be used as a general guide:

MILD

LIVING ARRANGEMENTS and SUPPORTS

1. DBHIDS residential setting
2. Family setting
3. Independent living situation where another mobile service support team has agreed to make daily contact.
4. Any other living situation where another responsible party is checking on participant daily.

    OR

    Has other supports such as visiting nurse, case management or residential support team who agree to make daily checks or spends much of the day at outside programs.

PHYSICAL FACTORS

Program participants are stable and has mild to no physical risk factors.

MODERATE TO HIGH

LIVING ARRANGEMENTS and SUPPORTS

1. No telephone available
2. Personal care home
3. Independent living

AND

Lacks other support such as residential staff / other mobile service support team, family who could work with your team to make daily checks.

PHYSICAL FACTORS

Any of the following factors:

1. Compromised physical condition
2. Use of psychotropic medications
3. Age (below age 5 and age 50+)
4. Substance use
5. Obesity
6. Prior history of heat stress illness

Heat Safety Training Curriculum

The information referred to in this curriculum is provided in this Heat Safety Packet: 1) cover memo with resources listed, 2) Heat Safety Policy, 3) article, "Reducing the Risk of Heat-Related Illness for Persons Receiving Behavioral Health Services" and 4) handouts.

1. **Prevalence**
   - The number of heat fatalities is often underreported due to lack of reports and misreports. Heat exposure is often a factor in deaths attributed to cardiovascular, cerebrovascular, and respiratory disorders during heat waves and not documented as heat related. Philadelphians who receive behavioral health services are at higher risk for developing heat-related illnesses and dying from these conditions.
   - Heat related deaths have notably increased over the past few years. National reports reveal that in 2019, sixty-three people died due to extreme heat, during 2020, fifty-one people died due to extreme heat, summer of 2021 led to the deaths of at least 595 people, and the most recent record-setting temperatures from summer 2022 indicate that the largest number of excess deaths was the second heat-period (10 to 25 July), with 2,227 excess deaths (10.4 percent above average) .

- During a record-setting heat wave in Chicago in 1995, approximately five hundred heat-related deaths occurred (more than from all other natural disasters combined that year).
- During two separate heat waves in the summer of 2015, approximately 2,500 people died in India and another 2,000 died in Pakistan.
- It is reported that in the summer of 2003, there were 35,000 heat-related deaths in Europe in a prolonged, 3-week heat wave. Other reports are as high as 70,000 deaths. It is estimated that 14,802 of those deaths occurred in France alone.
- Estimates are that a heat wave in Russia in June 2010 led to 56,000 deaths to11,000 deaths in Moscow alone. The heat conditions led to hundreds of wildfires and deadly smoke/smog.
- Among the following natural hazards, only the cold of winter - not lightning, hurricanes, tornadoes, floods, or earthquakes – contributes to more deaths.

2. **Heat-related illness:**

- What is it?

Review symptoms of heat exhaustion, heat stroke, neuroleptic malignant syndrome

- Steps to take if you see symptoms.

Emphasize: heat stroke can develop very quickly from heat exhaustion.

3. Who is at greatest risk? Review individual risk factors.
4. Weather factors that increase risk Hot dry winds, humidity (heat index) (explain how this affects the ability for sweat to evaporate), heat, direct sun.
5. **Prevention**

Review heat safety policy requirements and internal procedures to meet the requirements. Stress the importance of program participant education, review safety measures listed on handouts, including fan safety and hydration, and assist the individuals in developing a personalized heat safety plan.

6. **Resources**

Review those listed in cover letter and ask participants to share others, particularly places to go to seek air-conditioning (shopping mall, friend's home, library, etc.) Share handouts and checklists with staff.

7. **Individual reviews/ lessons learned**

Reducing the Risk of Heat Stress Disorders for Persons Receiving Behavioral Health Services:

Questions and Answers

What is heat Related Illness?

Heat-related illnesses occur when the heat level in the body is greater than the amount it can normally release, or when there is impaired ability by the body for heat loss. There are three ways for the body to cool itself: **1)** varying the rate and depth of blood circulation, **2)** sweating and **3)** panting. When the internal body temperature rises, the heart pumps more blood, blood vessels dilate to accommodate an increase in blood flow, and the blood is circulated closer to

the skin's surface to release excess heat into the cooler atmosphere. It is the process of evaporation that pulls heat away from the skin and into the cooler atmosphere that cools the body. Heat-related illnesses develop when the body cannot remove the heat and the inner core body inner temperature begins to rise above 98.6 degrees.

Heat-related illness ranges from mild weakness, dizziness and fatigue, heat cramps, heat edema, heat syncope (fainting), and heat exhaustion, to the life-threatening conditions of heat stroke, and neuroleptic malignant syndrome (NMS). Although NMS can also occur at normal temperatures, it is like heat stroke. Milder heat- related symptoms can be treated with non-diuretic fluids, rest, and placement in a cooler setting. Additional cooling measures include applying cool, wet clothes and use of fans and air conditioning. **Heat stroke and neuroleptic malignant syndrome can be lethal and require immediate, in-hospital emergency treatment.**

The progression from mild symptoms to heat exhaustion to heat stroke can be quite rapid. Early recognition of symptoms and prompt treatment is critical. Once heat stroke develops, the temperature can become so elevated that brain damage and death may occur in less than ten minutes unless medical help is immediate.

By recognizing which individuals are at risk, observing environmental conditions, and taking preventative measures (e.g. ensuring the consumption of appropriate fluids, knowing the symptoms and swift actions to take), heat-related illness can be minimized, and lives can be saved.

Who is at greatest risk for heat-related illness?

People who are at greatest risk for heat-related illness are those who:

- Are infants to age 4 or who are age 50+.
- Are taking a variety of medications, including neuroleptic medication - especially antipsychotic medications, tranquilizers, and antidepressant medications and other medications such as antihistamines, anti-seizure medications, lung, heart and blood pressure medication.
- Have chronic medical conditions such as obesity, heart, lung or kidney disease, uncontrolled diabetes, high blood pressure, hyperthyroidism, poor circulation, skin disease, and eating disorders.
- Have acute medical conditions such as dehydration, fever, history of previous heat stroke, and prolonged exertion.
- Are agitated/increased psychomotor activity.
- Abuse alcohol and/or drugs.
- Lack air conditioning/ don't turn it on or lack proper.

ventilation for heat and humidity.

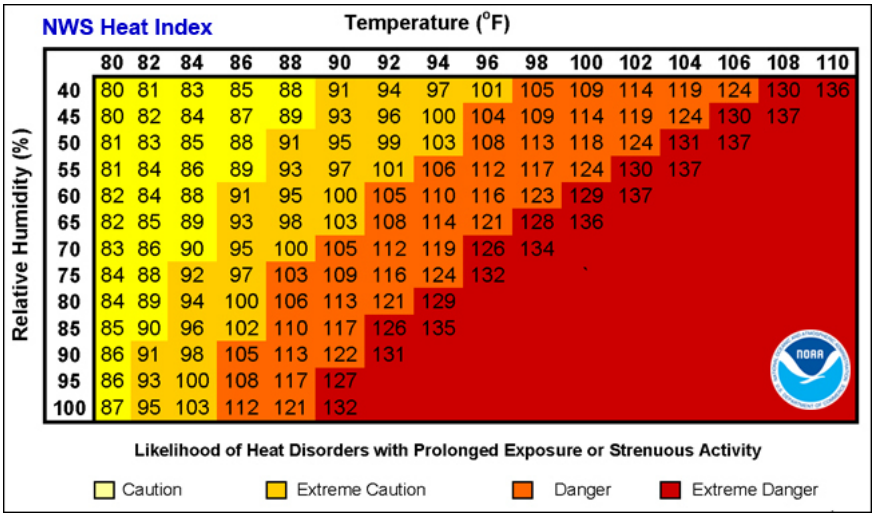
- Live on upper floors.
- Wear heavy clothing.

About 80 percent of heat stroke deaths occur in persons aged 50 and older, because they are more likely to have other risk factors such as disease, decreased cardiac output, dehydration, use of medications, poor mobility (which diminishes the ability to remove excess

clothing, get a drink of water, or relocate to a cooler room), and impaired ability to regulate body temperature, (e.g. reduced sweating response to heat).

Individuals at greater risk for developing heat disorders need to be closely monitored, particularly when: 1) environmental conditions increase the amount of heat stress 2) when people exhibit side effects of medications or 3) when it is known that they are actively using substances such as alcohol, amphetamines, cocaine, ecstasy, heroin, PCP and LSD.

Heat index (HI) values were devised for shady, light-wind conditions. Exposure to full sunshine can increase HI values by up to 15 degrees Fahrenheit. Also, strong winds, particularly very hot, dry air, can be extremely hazardous.



RH \ Temp (°F)	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

The shaded zone on the HI chart is above 1050F. This corresponds to a level of HI that may cause increasingly severe heat disorders with continued exposure and/or physical activity. The charts do not consider the specific risk factors affecting individuals (e.g. health factors, insulative factors for clothing).

(Darling, Allan. National Oceanic and Atmospheric Administration, National Weather Service Internet Weather Source. (6/27/2000). Heatwave.)

Neuroleptic medications and other drugs (e.g., ecstasy) can create neuroleptic malignant syndrome, a hypermetabolic state generating excessive heat and suppressing the body's ability to cool itself -- leading to a sequence of events like heat stroke.

What environmental conditions place participants of behavioral health services at greatest risk?

Environmental factors that affect the body's ability to heat and cool itself include air temperature, humidity, sun exposure, wind, and clothing. During high air temperatures, body heat cannot be sufficiently lost. During humid, windless weather, heat loss by evaporation of moisture on the skin is also impaired (it is the actual evaporation of perspiration that cools the body by drawing away heat). When the relative humidity in the air is high, the air is less able to support further moisture from the evaporation of perspiration. Strong winds, with very hot, dry air are also very dangerous.

The National Weather Service has devised the "Heat Index" (also referred to as "felt air temperature") to accurately measure how hot it really feels when relative humidity (RH) is added to the actual air temperature. The Heat Index is the most accurate measure to use when assessing the level of precautions to be taken for the prevention of heat- related illness. As the above chart

indicates, heat stroke, heat cramps and heat exhaustion are possible at a Heat Index of 90 degrees ("felt air temperature"). When the relative humidity is 100 percent, a heat index of 87 degrees occurs at an actual air temperature of just 80 degrees.

Why is drinking fluids so important?

Heat exhaustion is described as a form of shock due to loss of fluid in the body (dehydration). Dehydration can occur when there is decreased fluid intake, decreased ability to experience the sensation of thirst, increased sweating, and increased fluid loss from acute illness and from some medications. With exposure to direct sunlight and temperatures more than 90 degrees, an individual can lose as much as a half-gallon of water every ten minutes. This dehydration can seriously interfere with the body's internal thermostat.

Reducing the Risk of Heat Stress Disorders

During times when individuals are at risk of becoming dehydrated, they should be encouraged to increase consumption of non-diuretic beverages.

Drinking of non-diuretic fluids needs to occur before a person experiences thirst, since we do not become thirsty until we have already lost 1.5 to 2 liters of fluid. Non-diuretic fluids are non-alcoholic, non-carbonated, caffeine-free beverages such as water and juice. Alcoholic beverages (including beer) should be avoided, as they are diuretic (increase fluid loss through urination).

Early symptoms of dehydration include lowered urine output, tiredness, anxiety and irritability. Symptoms of severe dehydration may include uncoordinated gait and spastic muscle movement as well as altered consciousness. Unreplaced fluid loss can raise the body's temperature to heat exhaustion which can quickly progress to heat stroke.

People who **(1)** have epilepsy or heart, kidney, or liver disease, **(2)** are on fluid restrictive diets, or **(3)** have problems with fluid retention should consult a physician before increasing their fluid consumption.

Aside from air conditioning and fans, what can be done to keep temperatures inside buildings cool? Shades, drapes, awnings, or shutters should be used to reduce the amount of heat coming into a building. Awnings are the most effective.

Temperature in a specific area is affected by the heat index, the amount of sun exposure of windows (air from windows with sunny exposures will be hotter), and the amount of cross-ventilation, particularly on upper, hotter floors (because hot air rises, a cumulative effect of heat can occur on the upper floors of a building). Air flow is a major factor in cooling.

How can fans best be used?

Fans in or next to a window, particularly box fans, help to bring in cooler air from the outside. When the heat index is below 99 degrees, electric fans help sweat evaporate which cools the body. However, fans must be used with caution: when the heat index is above 99 degrees, air movement from a fan can make the effects of heat even worse. A heat index of 99 degrees exceeds normal body temperature (98.6 degrees) and the hot air from the fan will heat the body instead of facilitating the cooling process!

Fans should not be used at temperatures above 90 degrees when the humidity is over 35 percent. Fans are especially dangerous when used in areas where windows are closed, as the indoor temperature may rise above 90 degrees more quickly. During high temperature conditions, individuals should be moved to and/or seek air-conditioned areas.

What can be done for people who don't have air conditioning, or who have air conditioning and are concerned about their electric bills?

If air conditioning is not available, people should stay in the coolest area of the building (usually the lowest floor), out of the sunshine, and use fans, cool showers, shades, drapes and awnings as described above, with special attention to air flow. Humid air from bathrooms and cooking in the kitchen should be vented out in the absence of air conditioning.

When the temperature in the living space reaches a high level, individuals should go to an air-conditioned environment each day for several hours. **Air conditioning is the number one protective factor against heat-related illness**. Being in air conditioning, even if only for a few hours, can mean the difference between reversing or worsening heat-related illness. Options might include a neighbor or a relative's air-conditioned home, a movie theater, supermarket, shopping mall, public library, senior center or other cooling center. Even

running the air conditioner for just a few hours a day can give the body the opportunity to reduce the heat stress to the level needed to cope with the heat load.

People who have air conditioning but are concerned about their electric bills can reduce their bills by seeking other air-conditioned environments for part of the day and can make specialized payment arrangements with the electric company.

Agency support staff should advocate on the individual's behalf with the energy company regarding a budget plan when an individual may have a difficult time articulating their concerns/ needs themselves.

Reducing the Risk of Heat Stress Disorders

Further information on heat disorders, symptoms, first aid, and heat wave safety tips can be accessed through the National Weather Service Website at
nws.noaa.gov/os/brochures/heat_wave.shtml

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SAFE FAN USE

DO

1. Use your fan in or next to a window. Box fans are best.
2. Use a fan to bring in cooler air from outside at night or to vent hot air out during the day.
3. Use your fan by plugging it directly into the wall outlet. If you need an extension cord, be sure it is UL (Underwriter Laboratory) approved.

DON'T

1. Ever use a fan in a closed room without windows or doors open to the outside.
2. Use a fan anywhere near water.

3. Believe that fans cool air. THEY DON'T! A fan will only move air around and can help you feel cooler by evaporating your sweat.
4. Use a fan to blow directly on you when the temperature is 95 degrees or above. This can increase your temperature and cause heat exhaustion.

If you are age 60 or older, have been sick lately, or live alone without air conditioning, it is strongly recommended that you spend a few hours in air conditioning each day during a heat warning.

For more information or help, call the PCA Senior Helpline 215-765-9040

Heat Safety Training: Critical Incident Reviews

The reviews below are based on actual individual histories. Some information has been changed to preserve the confidentiality of those involved. Several the actions listed apply to case management staff while other actions are more applicable to residential staff.

Suggestions for the facilitating the review:

Begin the reviews by giving little initial information. Allow the audience to ask questions to assess risk factors. Example: "We are going to review four different residential situations. I will briefly introduce each. I would like you to ask questions to assess the individual's amount of risk for heat-related illness. Then we will go back and discuss each case more thoroughly. The first situation involves a 45-year-old woman living in a SIL apartment. What would you like to know about her to assess her risk factors?"

Examples of questions to assess the amount of risk include:

Age? Health status? Weight? Drug or alcohol addiction? Type of residence? Behavioral health status? What floor does person reside on? Is this the top floor? What rooms have air conditioning? Is it used properly? Are fans available? Are they used properly? What are the weather conditions? Is the person keeping hydrated? Do they have any condition where fluids should be restricted? How is the airflow in each room?

After initial discussion of risk factors for each case, inform participants that all were persons who died from heat-related illness. Return to each review to provide additional material and discuss the actions to be taken and lessons learned.

Situation I

A 38-year-old woman, 5'8", 160 pounds, resides in a Supervised Independent Living (SIL) apartment. She is prescribed Lithium and Clozaril. There is no history of drug or alcohol abuse. In March, she is found in bed in a catatonic state, it appears she has not taken her medications for several days. She is treated to an inpatient unit for several days and her medications re-started. Shortly after returning home, she develops diarrhea and complains of weakness.

Support staff makes frequent contacts during this time and schedules a psychiatry appointment. When she misses her psychiatry appointment (she states she was too tired to make the trip), the psychiatrist evaluates her at home and orders blood tests and a follow-up psychiatric

appointment. Temperatures are predicted to be in the high 90's during the week. The woman is found deceased in her apartment several days later. She is sitting on the sofa with the television on. It appears she had been taking her medication until the previous evening dosage. The air conditioner is off. The only airflow into the apartment is through an open sliding glass door. The environment is hot (mid-90's) and there are signs of body decomposition from the heat.

City of Philadelphia
Department of Behavioral Health and Intellectual disAbility Services

Revised: April, 2012

LESSONS LEARNED:

1. People with fevers and/or dehydration and/or in weakened state are at higher risk!
2. All other things being equal, the mortality rate is higher for people during heat waves earlier in the season, as the body has not yet acclimated to the higher temperatures.
3. Air conditioning is helpful only if it is used.

ACTIONS:

1. Phone calls or visits at least once daily during periods of high heat (the ideal is two checks daily). These checks may include coordination with a buddy system.
2. Program participant education on heat safety.

Situation II

A 39-year-old woman is living in an unlicensed rooming house. She is average size. An annual physical examination in February shows her to be in good health. She has a history of drinking approximately five shots of liquor a week. When asked, she reports that the rooming house is air-conditioned. In mid-summer she receives emergency room treatment for heat exhaustion on a day when the temperature reaches 990. The weather during the four weeks that follows is in the high 80's and 90's. A heat warning/ emergency is declared for six days during this four-week period.

Three days after receiving emergency room treatment, the woman complains of not feeling well related to the weather. She insists on going alone to her scheduled follow-up medical appointments but does not follow through. There is no follow-up documentation by case management of the reason her visits were missed. In the four weeks that follow, she appears agitated and confused. In week three, she meets with her psychiatrist. There is no documentation in the psychiatrist's notes regarding the symptoms of confusion and agitation, nor about the episode of emergency room treatment for heat-related illness. During week four she is discovered dead in bed. The room is not fully ventilated: one window is slightly open, and other windows are closed and covered with plastic.

LESSONS LEARNED:

1. A previous history of heat-related illness is a risk factor.

2. People living in boarding homes, particularly unlicensed homes, may be at higher risk (also true of people living alone in apartments).
3. Unlicensed personal care homes currently do not fall under the jurisdiction of the Philadelphia Property Maintenance Code. The Code requires that when a heat emergency/ warning is declared by the Philadelphia Department of Public Health, an indoor temperature not to exceed 81 degrees must be maintained in residential facilities (e.g. CRR, PDR, SIL apartment, licensed personal care home, half-way houses).
4. Whenever possible (with permission of the resident and the owner), the bedroom should be routinely checked by case managers and residential staff to ensure adequate air flow through windows and that air conditioning and fans are being used properly. In this case, there was no air conditioning in the person's bedroom!
5. Airflow is extremely important for cooling the building when air conditioning is not available, particularly when temperatures are lower at night. In this case, neither the building nor the resident cooled down overnight because of the obstructed airflow.
6. When permission to go into the bedroom is not given, staff must be very clear in their communication with the residents to ensure an accurate assessment of his or her risk factors.
7. Buddy systems are important for everyone, even those not at high risk.
8. Combativeness, confusion and agitation may be symptoms of heat-related illness

ACTIONS:

1. Following an episode of heat-related illness, a person should be considered at high risk, and a safety plan should be revised to reflect this.
2. When an episode of heat-related illness occurs, staff must alert all other service providers, family and significant others (as appropriate) and communicate safety measures to be taken.
3. When a resident misses a follow-up medical appointment after emergency room treatment, extra measures need to be taken to ensure that the next medical appointment is kept. All the follow-up measures must be carefully documented.

Situation III

A 58-year-old man is living in an apartment setting. The apartment is located on the 3rd floor of a three-story building. The temperature outside is 98 degrees and the heat wave is expected to continue over the next several days. The man has an air conditioner but refuses to turn it on because it uses too much electricity. He has a small fan that is operating on the floor. Symptoms of paranoia are evident, and he refuses to open the windows. His health status is unknown: he refuses to see either a psychiatrist or a physician. He does not take any medication. There is no thermostat or thermometer present in the apartment. Heat in the winter is controlled at a central location in the building.

LESSONS LEARNED:

1. This gentleman is unable to properly care for himself. The situation is precarious because of the location of the apartment on a higher floor, closed windows and lack of air conditioning. This resident needs to leave the environment over the next few days (and stay with a relative/friend or in a heat emergency shelter) and receive another permanent placement as soon as possible.
2. Fans are dangerous to use as the temperature approaches 90 degrees.
3. Airflow is extremely important when the air outside is cooler than the air inside. Fans work best when placed in or near the window.
4. Thermometers inside and outside the building are necessary so that the person can monitor the temperature level.

ACTIONS:

1. Avoid placing individuals in housing above the second floor if possible.
2. Assess amount of risk for each person in March and make appropriate residential changes before the heat wave season begins and a crisis develops. We do recognize however, that mental status can change, despite our best planning efforts.
3. If the individual is willing to leave his or her residential setting and has a safe environment (family/friend) at which they can stay temporarily, measures should be taken to assist this process.

   4. If the person is willing to leave his or her residential setting and does not have a safe environment (family/friend) at which they can stay temporarily: **1)** facilitate the Riverview referral process and **2)** initiate arrangements for another permanent residential placement.
5. If a person refuses to leave despite repeated attempts to remove him or her from the life-threatening environment, as a last resort, contact the Acute Services Unit/ Delegates line to seek a petition for an involuntary mental health commitment (302) under the “unable to care” criteria. If the 302 petition is not approved, then monitor the situation as closely as possible so that if heat-related illness symptoms do occur, a 302 petition can be sought again. Call 911 immediately if an emergency medical situation develops. If a 302 petition is not approved initially, the Dept of Behavioral Health Targeted Case Management Unit (TCMU) staff and/or Budgets and Contracts Program Analyst should be notified as appropriate. If a staff person is not available, contact their Supervisor.
6. People with air conditioning who are concerned about their electric bill should seek other air-conditioned environments during the day. Targeted Case Management (TCM) and SIL staff can assist them in developing a budget plan with PECO where the payments are averaged across months.

Situation IV

A 38-year-old man, living in transitional housing, 6’2”, and weighing 370 pounds, is living in on the fourth (top) floor of the residence. His psychiatrist notes in his annual psychiatric evaluation that the resident has been gaining substantial weight over the past year related to the psychotropic medication he is prescribed. As a result, his medication dosages have been reduced, and his

weight will be monitored closely. This resident has no history of drug or alcohol use. Two resident lounges and the staff offices on the first floor have air conditioning. All bedrooms have ceiling fans.

Temperatures are running in the mid-90's. This individual was last known to be alive at 8:30 a.m. He collapses sometime between 8:30 a.m. and 8:45 a.m. while dressing (he did not respond to further calls by staff to come down.) A van driver, who arrived at the residence to pick him up, leaves without him when he does not appear. He is found two hours later, lying on the floor, having succumbed to the heat while dressing. The Medical Examiner estimates that he died shortly after he was last seen alive by another resident in the morning.

LESSONS LEARNED:

1. Obesity is a high-risk factor.
2. Wherever possible, people with high risk factors should have bedrooms on lower floors.
3. People who do not appear for breakfast, medications, or for a van ride should be checked on immediately. It is critically important that morning shift residential staff arrive on time to ensure that everyone is accounted for during this hectic time.

ACTIONS:

1. People at higher risk (e.g. obesity) should be placed on lower floors.
2. Residential staff should routinely check airflow and temperature in areas that do not have air conditioning.
3. Each room should be carefully inspected in the morning to ensure residents have either left their bedrooms or if they remain in the bedroom, that the temperature in the room is within a safe range.

For more information and resources, visit dbhids.org/about/organization/behavioral-health-division/heat-safety.