Hazard Mapping for Early Care and Education Programs

Hazard Mapping is a process that Head Start programs can use after an injury occurs. It helps to: 1) identify location(s) for high risk of injury; 2) pinpoint systems and services that need to be strengthened; 3) develop a corrective action plan; and 4) incorporate safety and injury prevention into ongoing-monitoring activities. Hazard mapping is employed effectively in emergency preparedness planning.

## Goals and Benefits of Hazard Mapping

Hazard mapping provides:

- An easy method for ongoing, systematic data collection and analysis about where injuries occur in Head Start programs
- A way to identify the "how", "what", "when", "who", etc. by building on injury and incident reports
- A strategic approach to safety and injury prevention problems by studying patterns of injury rather than isolated incidents
- Compelling visual data for decision makers, staff, and families to make informed decisions about solutions
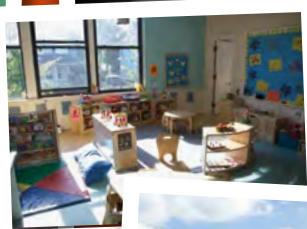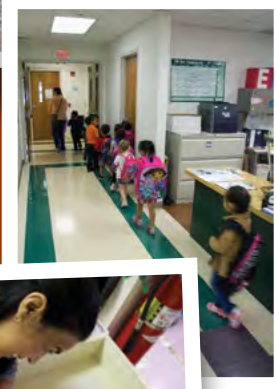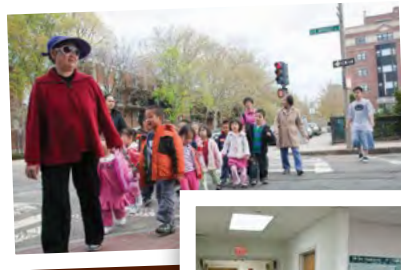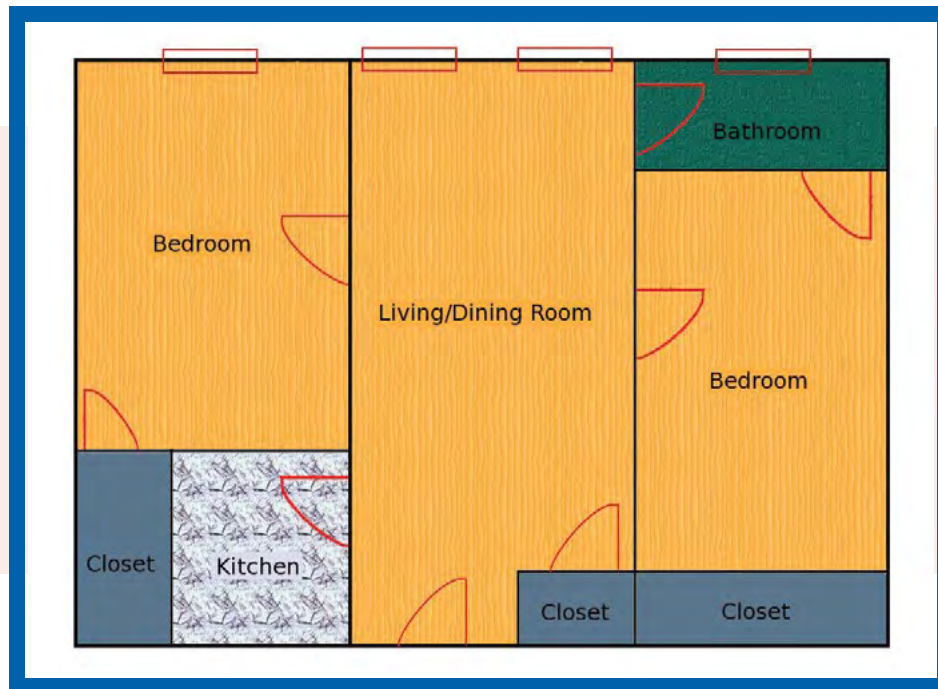
Step One—Identify high risk injury locations

1. Create a map of the home, classroom, center, family child care home, Head Start bus or playground area. Label the various places and/or equipment in the location(s) that is being mapped. Make the map as accurate as possible.

2. Have staff, administrators, or anyone who observed the incident place a "dot" or "marker" on the map to indicate where the specific incident and/or injury occurred.

3. Depending on the size of the program and number of injuries reported, use data from injury/incident reports for the past 3-6 months. Add more "dots" or "markers" to identify additional locations where injuries occurred.

4. Establish a safety and injury prevention committee to review and analyze incident data. The committee may include administrators, staff, Head Start parents/ families and community partners. Programs may use their Health Services Advisory Committee or some of its members as their Safety and Injury Prevention Committee.

5. Analyze and chart the findings. To do this, count the number of incidents in each location.

6. Count how many of the incidents resulted in an injury and the level of severity of each injury. Use incident and/or injury reports to collect this additional data.

7. Determine where most incidents occur and where to focus initial efforts for a corrective action plan.
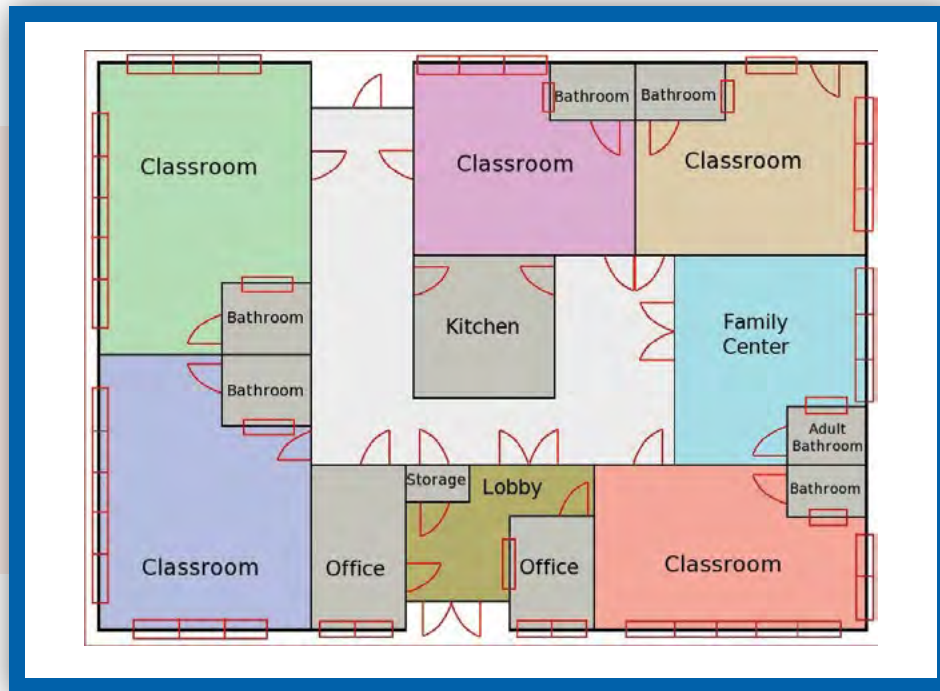
Step Two—Pinpoint systems and services that need to be strengthened

1. To identify and understand patterns of injuries at locations throughout the program, review additional information from injury and/or incident reports.

   - **Who** was involved in each injury? (child/children; staff, volunteers, parents)
   - **Where** did the injury occur?
   - **What** happened? (What was the cause?)
   - **What** was the severity of each injury?
   - **When** did each injury occur?
   - **Who** – e.g., what staff were present and where were they at the time of each injury?
   - **How** could each injury have been prevented?

2. Using your/the program plan, determine areas where systems and services affect these findings.

3. Translate these findings into recommendations that strengthen systems and services.
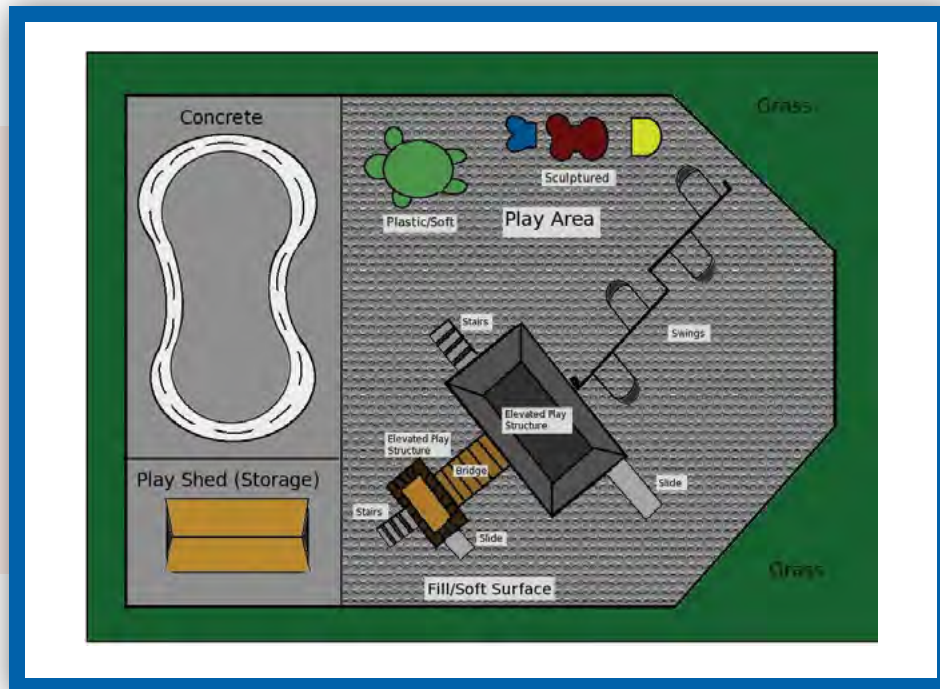
Step Three—Develop a corrective action plan

1. Review all of the findings and recommendations regarding injuries and incidents.

2. Prioritize and select specific activities/strategies to resolve problem areas. These should focus on the everyday service delivery level and the higher systemic level.

3. Develop an action plan to correct the problem areas you identified. Include each of the activities/strategies selected in this corrective action plan. Identify the steps, the individuals responsible, and the dates for completion.

4. Create a plan for sharing the corrective action plan with management, staff, and families to get buy in for injury and/or incident responses.
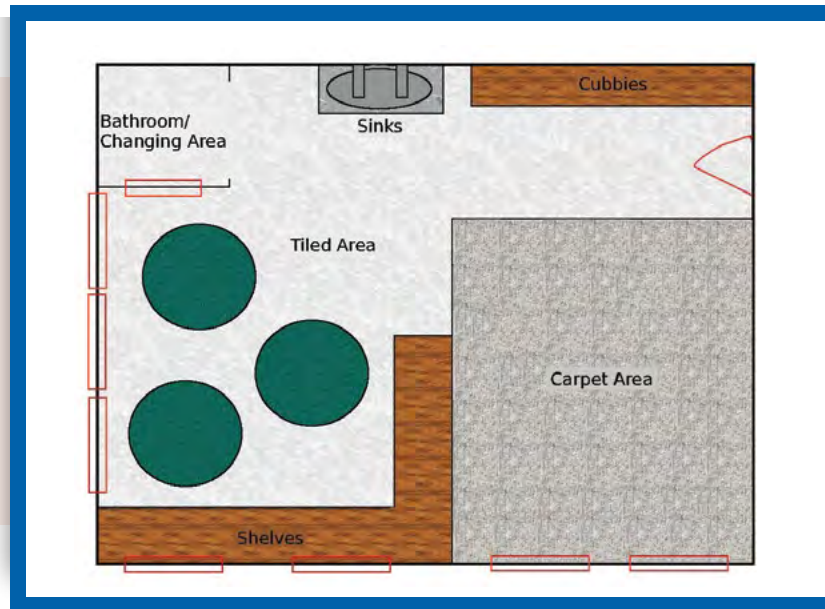
Step Four—Incorporate hazard mapping in ongoing-monitoring activities

- Based on an analysis of these data, determine what action(s) needs to be taken to avoid future injuries in the location(s) identified. Determine if any additional questions should be added to injury/incident report forms to obtain this missing information.

- When developing corrective action plans, consider prioritizing more serious injuries, even if they have occurred less often.

- A reduction in injuries and/or incidents happens over time if the correct set of interventions is selected based on analysis of the data about patterns of injuries.

- Continuously review incident and/or injury data to make sure that interventions are reducing the number of incidents and the severity of injuries. They may include:
  - Educational opportunities about safety and injury prevention for staff
  - Environmental modifications
  - Procedures to monitor compliance with program policies, and/or
  - Other necessary corrective actions.

- Discuss how to share injury data from ongoing monitoring activities and the self-assessment process with staff, families, the Health Services Advisory Committee, and Governing Board and Policy Council. Determine:
  - How will managers share the results of hazard mapping activities with all staff to advise them of risks or hazards that may exist at their center or location?
  - How will managers share the hazard mapping and incident and/or injury report results with the program's Health Services Advisory Committee (HSAC) (when it is not the same as the Safety and Injury Prevention Committee) to problem-solve the issues that are identified?
  - How will managers use hazard mapping as part of ongoing-monitoring activities to (1) develop and maintain corrective action plans, (2) assure continuous program improvement, and (3) reduce the incidence of future injuries to enrolled children?

National Center on

Health, Behavioral Health, and Safety

June 2023