



# ***HELICOPTER FACTS***

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## **USHST Supports Safety System of Human Performance Improvement (System Now Integrated Into HAI’s Revised UPAC Safety Guide)**

Members of the U.S. Helicopter Safety Team have completed their collaboration with safety experts within the HAI Utilities, Patrol and Construction (UPAC) Working Group to revise the *UPAC Safety Guide for Helicopter Operators*. A key section added to the revision focuses on the safety system of Human Performance Improvement (HPI). This is an approach that combines education, methods and controls designed to eliminate latent and active organizational weaknesses, identify areas of improvement, and increase performance and efficiencies.

HPI principles are centered around an individual’s inherent tendency to make mistakes. The HPI goal is for individuals and organizations to understand when and where an individual could err and to use knowledgeable sources to employ error prevention methods.

The revised UPAC Safety Guide, found on the USHST web site ([www.USHST.org](http://www.USHST.org)) linked with Helicopter Safety Enhancement 13-A (<https://ushst.org/h-se-details/>), now includes a chapter on Human Performance Improvement and a section on HPI tools. These tools are intended to make sure that individuals are self-aware of potential risks and that they understand the necessary, effective mitigation methods. The following table describes the HPI tools that are commonly used in UPAC activities.

### **HPI Tools**

Pre-Job Walk Around	Review your work location and associated paperwork to ensure existing environment conditions are error free.
Tailboards / THA	Perform a pre-job briefing. The tailboard should include the person in charge, all involved crewmembers, and organizational members as needed. A good pre-job briefing involves a discussion about possible traps, triggers, and HPI tools to be used as mitigation measures.
Verbalize, Point, and Touch	Verbalize intended actions. Point to equipment to be operated. Engage the equipment to be operated.

Self-Check	Pause and double-check before performing an action. Focus attention, verify the action, anticipate planned results, and apply a questioning attitude. Verify that results happened as planned.
Peer-Check	Have a second knowledgeable crewmember verify that the planned action is correct before the action is performed.
Three-Way Communication	Initiate verbal communication. The receiver shall acknowledge the communication by repeating it back either verbatim or paraphrased. Then, acknowledge the repeat back. Ensure that no question goes unanswered. A common example of three-way communication is the use of a “challenge and response” when running a system checklist.
Situational Awareness	Pay attention to your surroundings to understand any changes to the work environment while a task is being performed.
Questioning Attitude	Maintain a healthy sense of uneasiness in order to recognize hazards or error-likely situations that could cause an unplanned event.
Stop Work Authority	Stop your work to regroup if there is uncertainty or confusion about a task or action about to be performed. Seek further information from a subject-matter expert, task-related documents, or process controls.

## HPI in UPAC Activities

HPI is a valuable system that works together with existing programs to sustain cohesive safety and performance values across organizations. It helps by developing a systematic approach to decision-making, self-awareness, and communication among multiple perspectives. It proactively prevents unwanted outcomes caused by human error.

Aerial work requires foresight in planning and performance, consistency in methods, and accurate decision-making skills to effectively communicate, process, and react to situations. Error reduction is an effective approach to ensuring consistency. By utilizing HPI to recognize that humans are inherently fallible and to understand error traps, individuals and organizations can predict, manage, and prevent error-likely situations. In this industry, that means reducing equipment damage, damage to the electrical grid, injury, and even death.

More details about Human Performance Improvement can be found in the revised UPAC Safety Guide and in the U.S. Department of Energy’s HPI Handbook (<https://www.standards.doe.gov/standards-documents/1000/1028-BHdbk-2009-v1/@/@images/file>).