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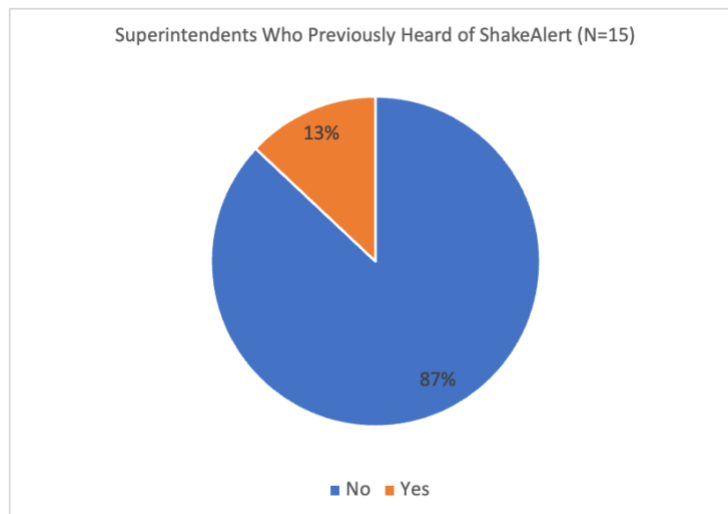
Earthquake Early Warning and Schools Survey: Alaska

Between March 30 and June 15, 2022, our research team at the Natural Hazards Center at the University of Colorado Boulder invited superintendents from every public school district in **Alaska, California, Oregon, and Washington** (N=1,516) to participate in an online survey. This briefing sheet summarizes the preliminary results for the focal state of **Alaska** from the portion of the survey that focused on the ShakeAlert® earthquake early warning system.

In total, **15** of the 51 school district superintendents in Alaska completed survey (**29.4% response rate**). Alaska was one of the two states that provided a letter of support from the State Superintendent of Public Instruction, which possibly contributed to the high response rate when compared to the other states in the four-state region included in this study.

Adoption and Funding of ShakeAlert

We found that only 13% of superintendents in Alaska had previously heard of ShakeAlert. Of those who had heard of it, half of the respondents had *not* yet considered incorporating it into district emergency preparedness or other operations plans and the other half had considered it but had not yet done so. The vast majority of all respondents (87%) indicated that the superintendent would be the person responsible for making the decision to adopt ShakeAlert.



In terms of the initial cost of installation, most respondents felt that the state government (67%) should pay for it, followed by the federal government (40%), and the local government (32%). For the annual subscription option, most respondents thought that the state government should pay for it (53%), followed by the local government (40%), school district (27%), and the federal government (27%). If the school district were to assume the expense for the annual subscription, most respondents indicated that they would be willing to pay no more than \$100 per year.

Potential Advantages of Incorporating ShakeAlert in Schools

When asked about their level of agreement with opportunities that a 10-second alert could provide students, most superintendents agreed that students would be able to drop, cover and hold on (DCHO) and could mentally prepare for shaking. Most respondents were neutral or did *not* agree that a 10-second warning would allow students to evacuate. When asked about teachers and staff, most respondents agreed that teachers and staff could DCHO, mentally prepare for shaking, and help students engage in protective actions. Most respondents were neutral about the ability for the

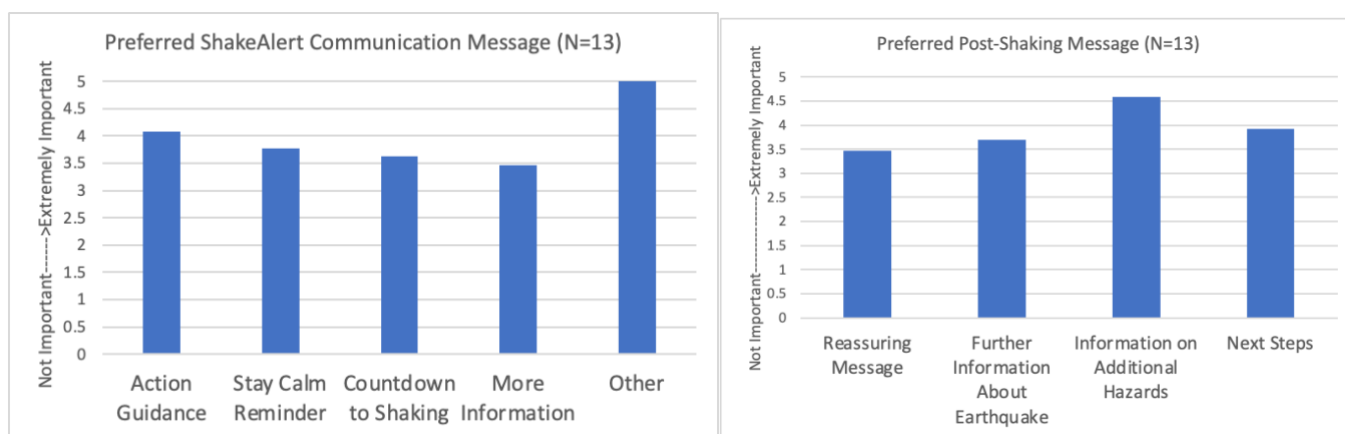
alert to allow teachers and staff to communicate with parents. They also mostly disagreed that the alert could allow teachers and staff to communicate with school leadership and allow them to evacuate.

Barriers to Incorporate ShakeAlert in Schools

When asked about barriers that would prevent schools in their district from implementing ShakeAlert, most superintendents ranked the financial costs of the system as a major barrier and diversion of funds from building maintenance/mitigation and drill/warning fatigue as moderate barriers. Most respondents indicated that drill/warning confusion would be a slight barrier and were neutral about classroom disruption as a barrier.

Preferences for Alert Messaging

When asked about the preferred method to receive alerts, most respondents in Alaska indicated SMS/text (69%), followed by smartphone app (62%), computer alert (46%), and siren/Public Address (PA) system (31%). In terms of the message provided in an alert, most respondents thought action guidance, a reminder to stay calm, and more information were extremely important and that a countdown to shaking was moderately important. For messaging after the shaking has stopped, most respondents thought a message about additional hazards and next steps were extremely important and further information about the earthquake and a reassuring note were moderately important.



Tolerance for False Alerts

On average, most participants ranked false alerts as having a major impact on classroom instruction time and warning/drill fatigue. Most respondents ranked false alert as having a moderate impact on student, teacher, and parent confidence in ShakeAlert.

Next Steps and Additional Information

Our research team is currently analyzing the results of the survey by each focal state, as well as by comparing states across the region. We plan to publish and present the findings from this research to academic audiences as well as to educators and emergency managers. In addition, this research is designed to be useful and actionable for our partners at the U.S. Geological Survey (USGS), who are working to refine the messaging for ShakeAlert to ensure it reaches a broad and diverse userbase.

The project is led by a multi-disciplinary research team from the Natural Hazards Center at the University of Colorado Boulder in partnership with researchers at the USGS. More information about the study is available at: <https://hazards.colorado.edu/research-projects/nhc-usgs-earthquake-early-warning-and-schools-study>. Please visit the USGS website for more information on ShakeAlert and earthquake early warning: <https://www.usgs.gov/programs/earthquake-hazards/science/early-warning>. If you have additional questions, please contact Rachel Adams at Rachel.Adams-1@colorado.edu.