

Opinion: Biden should do more to prevent the accidental launch of nuclear weapons. Here's how.

By Ernest J. Moniz and Sam Nunn

On the morning of Oct. 28, 1962, the 13 days of [the Cuban missile crisis](#) came to an end with a broadcast on Radio Moscow announcing Soviet leader Nikita Khrushchev's decision to remove Soviet nuclear missiles from Cuba. What President John F. Kennedy referred to as "the final failure" — a nuclear war — had been averted. The events of 1962 may have brought us as close to nuclear war as the world has ever been, but there have been a number of other very close calls involving [false alarms and faulty computers](#).

Since 1945, a combination of prudent leadership, military professionalism, good luck and divine providence has enabled humanity to avoid the use of nuclear weapons. But the continuation of that streak is by no means assured. Over the past 76 years, nuclear weapon delivery systems have become faster, more powerful and more widespread. Today, there are [more than 13,000 nuclear weapons](#) in nine countries. In most of these nations, including the United States and Russia, one person can decide whether to launch them.

The risk that a leader will make a terrible decision to use nuclear weapons, or that a terrorist could get one, is growing. Nuclear-armed countries are allowing communications channels to atrophy. Our nuclear weapons and warning systems are facing new cyber-threats. [Advances in military technology](#) are proving destabilizing. Nuclear materials and nuclear know-how are spreading. And nuclear states are allowing arms control to wither.

All of these factors make it more likely that a leader might make the decision, in a moment of crisis, to use nuclear weapons based on false warnings of a nuclear attack or other miscalculation. There is also the potential for adversaries, including nonstate actors, to resort to cyberattacks to disrupt the command and control of nuclear weapons and early-warning systems. The need for urgent action is clear: Each nation with nuclear arms has a responsibility to reduce the risk of nuclear blunder, and nations must work together to eliminate nuclear risks.

President Biden can accelerate our efforts to reduce the risk of nuclear use by conducting a review aimed at strengthening nuclear "fail-safe," the safeguards that could prevent unauthorized, inadvertent or mistaken use of a nuclear weapon, including through false warning of an attack, and challenge other nuclear powers to conduct their own internal reviews.

Perhaps the most comprehensive review of the U.S. nuclear command and control systems was [conducted](#) almost 30 years ago during the George H.W. Bush administration, spearheaded by Defense Secretary Richard B. Cheney and led by the former U.S. ambassador to the United Nations Jeane Kirkpatrick. New technologies, the strategic environment and threats from the cyber, space and information warfare domains to the U.S. Nuclear command and control system have become more varied and complex since the end of the Cold War. However, many of the technical, procedural and policy measures to assure the highest standards of nuclear weapons control remain grounded in that era.

The ongoing U.S. strategic nuclear modernization program — and the nuclear modernization programs of potential nuclear adversaries, in particular Russia and China — offer both challenges and opportunities. In this century, the U.S. nuclear weapons system, including

command and control, will increasingly rely on digital and automated technologies, so nuclear operations and policies must be updated to anticipate these changes.

The broader aim of the fail-safe review process should be to reduce and (where possible) eliminate the risk of nuclear use as the result of an accident, a miscalculation, a false warning, terrorism or a deliberate act. The review should also consider bilateral and multilateral risk reduction measures, focusing on confidence-building and enhanced predictability, that could be taken with Russia, China and other states with nuclear weapons, including options to increase warning and decision times for leaders.

Such a review should assess options for improving technologies, processes and policies in ways that maintain required levels of nuclear weapons command and control. This could include a process for certifying the safety, security and reliability of nuclear systems and fail-safe procedures at least every two years.

Another option might be to implement, for the first time, a system that would allow for the post-launch destruction of nuclear weapons or their associated delivery systems, if launched by mistake. The review should also include cooperative measures, including the establishment of cyber-nuclear “rules of the road” and red-line understandings with other nuclear nations precluding cyberattacks on nuclear systems, as well as establishing a Joint Center for the exchange of data from early-warning systems and notifications of missile launches.

All nuclear-armed states must learn from history — and especially the errors and miscalculations that have led to past wars. We should give ourselves every feasible tool to prevent a mistake or blunder from turning into a catastrophe beyond imagination.

Former US energy secretary Ernest J. Moniz is founder and CEO of the Energy Futures Initiative. Sam Nunn, a Democrat from Georgia, was a senator from 1972 to 1997.

<https://efifoundation.org/wp-content/uploads/sites/3/2024/02/WashingtonPost-Op-Ed-Moniz-Nunn-Nov-2021.pdf>