Both international standards and best practices are necessary for a strengthened global nuclear security system. While international standards serve a vital purpose in establishing the nuclear security “floor,” best practices can serve to elevate the level of practice and can help governments and nuclear security practitioners reach the far more optimal nuclear security “ceiling.” The essential value of best practices is clear considering how they are used to develop international standards and guidelines. More work, however, needs to be done to encourage governments and nuclear security practitioners to accelerate the implementation of best practices globally.

This paper provides describes the relationship between “best practices” and “standards,” the role they should play in a strengthened nuclear security system, and practical steps for accelerating the implementation of the nuclear security mission.

**Defining Standards and Best Practices**

According to generally accepted “generic” definitions, a **standard** is established by authority, custom, or general consent and defines performance requirements, specifications, guidelines, or characteristics. A **best practice** is a method or technique that has consistently shown results superior to those achieved with other means and that, through experience and research, has proven to reliably lead to a desired result.

Standards define **objectives**, whereas best practices describe **the process** by which an actor can meet or exceed these objectives, other legal/regulatory requirements or performance goals. While standards represent a **consensus judgment** on security goals—and therefore sometimes reflect a minimum level of agreement—best practices are a means of implementing security to reach an **optimal** level of performance for a given set of conditions. The existence of a standard is not a prerequisite for the development and implementation of best practices. Standards and best practices are linked in that each can be used to inform the development of the other.

Standards are relatively static, usually evolve slowly over time, and often lag behind emerging threats or new technology. Yet they have the benefit of being politically or institutionally authoritative and can successfully define the consensus of a diverse community around a

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1 Through the Global Dialogue on Nuclear Security Priorities, leading government officials, international experts and nuclear security practitioners engage in a collaborative process to build consensus about the need for a strengthened global nuclear security system, how it would look and what actions would be needed at the 2014 Nuclear Security Summit and beyond. The Global Dialogue discussions are conducted on a not-for-attribution basis; where individuals and governments are free to use the information obtained during the meeting, but that information should not be attributed to a specific individual or government. For more information: http://www.nti.org/about/projects/global-dialogue-nuclear-security-priorities.
shared objective. But consensus may be difficult or impossible to build in a timely fashion.  

Unlike standards, which are agreed upon and adopted by an organization or body, best practices develop not by consensus but from the experience of many individuals and groups and are constantly evolving. They are dynamic and can be tailored to a specific set of circumstances and conditions. Although the characteristics of best practices and standards may be different, they are related concepts and play parallel, complementary roles in ensuring security. They share the same goal—in the case of nuclear security, to ensure that nuclear materials are secure from unauthorized access and theft and that nuclear facilities are secure from sabotage. International standards and best practices are complementary and essential concepts for the implementation of nuclear security.

**The Strategic Value of Best Practices**

To effectively manage the nuclear security mission globally, the international community must employ the tools best able to provide urgent, consistent, and effective security improvement. It would take a lot of political will, time, and resources to define a sufficiently robust set of nuclear security standards which would significantly improve nuclear security globally, and it is clear that the consensus to tackle this challenge does not yet exist. Security implementation, however, can be rapidly and effectively improved through the development and sharing of nuclear security best practices.

The international community has authoritatively established the value of best practices for rapid and effective security improvement. The 2012 Nuclear Security Summit communiqué “encourage[d] States to share best practices” and the Terms of Reference for the Global Initiative to Combat Nuclear Terrorism (GICNT) called for members to participate in “workshops to share best practices.” Best practices provide a bridge between international standards and guidelines and the necessary level of security to address real threats. Best practices can run ahead of the international consensus discussion of minimum standards and create a path toward stronger international standards in the future when political consensus is built.

Best practices also improve the overall quality of security across the globe by drawing from the experience of a wide constellation of professionals, from both governments and industry, and from different countries. These professionals pool their best ideas and share lessons learned with one another.

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2 Nuclear security standards are found in the International Atomic Energy Agency’s (IAEA) INFCIRC/225/Rev. 5, in the annex to the Convention on the Physical Protection of Nuclear Material (CPPNM), and in the security fundamentals contained in the CPPNM’s 2005 amendment. Given its near universality, INFCIRC/225/Rev. 5 is the primary nuclear security standards document. However, it is relatively static and does not provide a flexible, dynamic description of how to implement the guidelines it contains. The IAEA also offers implementation guides to support the recommendations contained in INFCIRC/225/Rev. 5, but they are not necessarily reflective of specific experience and do not comprise best practices.
In the end, best practices are effective tools for ongoing security improvement only when they are both shared and implemented. This requires practitioners who participate in best practice exchanges to recognize the value of continuous improvement and commit to a process that will support it. As with standards, best practices are just words until they are put into practice.

**Existing Mechanisms for Sharing Best Practices**

The World Institute for Nuclear Security (WINS) is the only international organization solely devoted to the development, exchange, and promulgation of nuclear security best practices. WINS offers a series of best practice guides on a wide range of topics and conducts workshops to gather and disseminate best practices. Through these activities, WINS creates a community of practice for ongoing engagement of nuclear security professionals. Best practices are transmitted informally through other mechanisms as well, such as workshops or training programs where security professionals gather from around the world and through peer reviews offered by the IAEA.

**Options for Improving Implementation of Best Practices**

While the sharing of best practices has helped increase standards of security in many places, more work should be done to expand the sharing and implementation of best practices and to garner political and financial support for these activities.

**Strengthen WINS and the IAEA:** WINS and the IAEA, in particular, play important complementary roles in supporting good nuclear security practices. Both are well placed to make the case for best practice sharing and to encourage more states to participate in exchanges and to follow through on implementation. The IAEA speaks authoritatively and directly with governments, while WINS works with security practitioners within states, the nuclear industry and at facilities. States and other stakeholders should empower WINS and the IAEA, by providing more human and financial resources for their activities. States should also encourage nuclear security organizations within their state to join WINS.

**Information Sharing:** WINS and the IAEA have demonstrated that best practices can be shared without compromising the confidentiality of sensitive information. Certainly a small subset of security information must remain secret, but the vast majority of security discussions can be shared among professionals, as occurs in the nuclear safety field.

**Training and Exercises:** Training provides an opportunity for security practitioners to meet one another to share lessons learned and best practices. Joint exercises are another means of sharing lessons learned and best practices. States can do more to facilitate these types of exchanges.

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3 To help fill a capacity gap in the nuclear security field and assist with nuclear security implementation, WINS was created to provide an international forum for developing and promulgating best practices to the boards, CEOs, security directors, security practitioners, and regulators who have responsibilities for developing, overseeing, and maintaining nuclear security.
activities with other states.

**Centers of Excellence:** Another means of promoting the sharing of best practices, particularly among nuclear security practitioners, is through Centers of Excellence (COEs), facilities where states can send professionals for training in various aspects of nuclear security. More states could commit to providing resources to existing COE’s, or commit to sending their own security practitioners to COEs for training as a means for sharing best practices, or possibly assist in the creation of new COEs.

**Expanding IPPAS and Other Peer Review Mechanisms:** The IAEA offers peer reviews through its IPPAS missions. IPPAS missions provide recommendations to requesting states on ways to strengthen their nuclear security systems (including legal and regulatory systems) and assess whether these systems comply with treaties and IAEA guidelines. IPPAS missions provide opportunities for the sharing of best practices between experts conducting the missions and security professionals in the host country. While IPPAS mission results are confidential, states could voluntarily share selected information and lessons learned with other states as a means to share best practices. Further expanding the capacity for peer review in the nuclear security field, WINS is exploring providing peer review of security management and implementation of security responsibilities by practitioners.