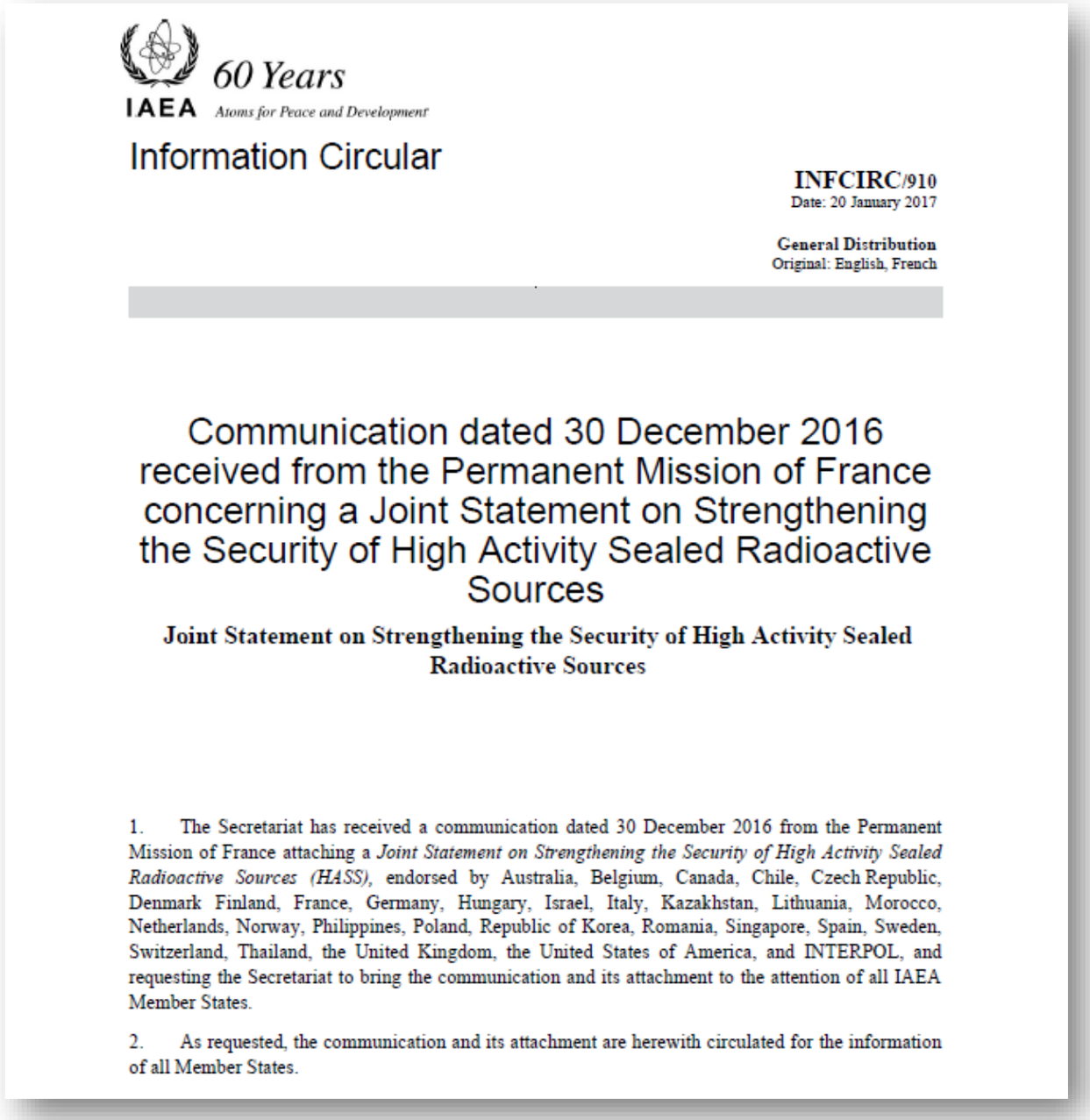
World Institute for Nuclear Security

Round Table on the Role of Standards for Strengthening the Security of Radioactive Sources used in Medical Applications

Vienna, Austria **22-23 January 2019**

Pierre Legoux, WINS

Support for INFCIRC/910



60 Years
IAEA Atoms for Peace and Development

Information Circular

INFCIRC/910
Date: 20 January 2017

General Distribution
Original: English, French

Communication dated 30 December 2016 received from the Permanent Mission of France concerning a Joint Statement on Strengthening the Security of High Activity Sealed Radioactive Sources

Joint Statement on Strengthening the Security of High Activity Sealed Radioactive Sources

1. The Secretariat has received a communication dated 30 December 2016 from the Permanent Mission of France attaching a *Joint Statement on Strengthening the Security of High Activity Sealed Radioactive Sources (HASS)*, endorsed by Australia, Belgium, Canada, Chile, Czech Republic, Denmark Finland, France, Germany, Hungary, Israel, Italy, Kazakhstan, Lithuania, Morocco, Netherlands, Norway, Philippines, Poland, Republic of Korea, Romania, Singapore, Spain, Sweden, Switzerland, Thailand, the United Kingdom, the United States of America, and INTERPOL, and requesting the Secretariat to bring the communication and its attachment to the attention of all IAEA Member States.

2. As requested, the communication and its attachment are herewith circulated for the information of all Member States.

WINS Activities Supporting the Strengthening of Radiological Security Worldwide

Sharing Operational Experience

Knowledge Centre

Training & Certification

Evaluation

Sharing Operational Experience

Training Course Announcement

Radioactive Source Security Management

World Institute for Nuclear Security

Bangkok, Thailand

30 October – 2 November 2018

Office of Atoms for Peace

The Office of Atoms for Peace (OAP) and the World Institute for Nuclear Security (WINS) are pleased to announce a Regional Training Course on Radioactive Source Security Management.

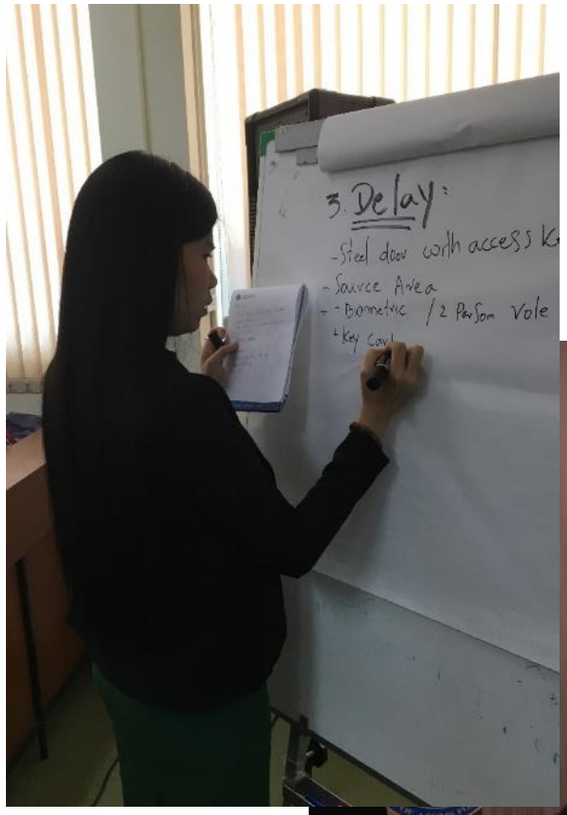
INTRODUCTION

Hospitals, research facilities and industry routinely use radioactive sources to diagnose and treat illnesses, sterilise equipment and inspect welds.

In countries with mature regulatory structures, the use of radioactive sources is highly regulated from a safety perspective. Licensees (authorised users) readily accept such regulations because they are aware of the potential consequences should a safety incident compromise the health, safety and environment of their employees and surrounding communities.

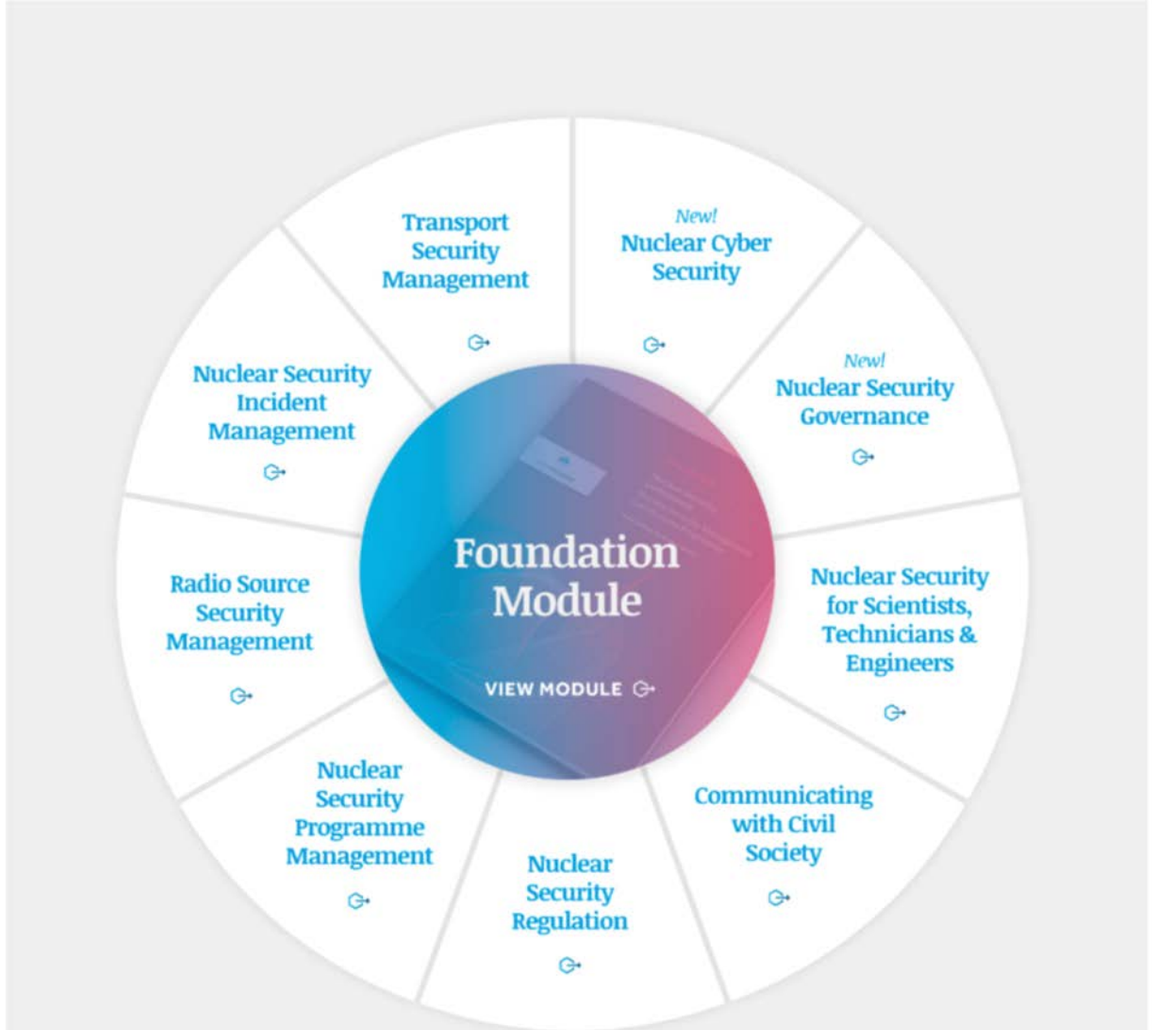
In contrast, a comparable security culture has been much slower to evolve, largely because many States, regulatory authorities and licensees have been slow to appreciate how people with malevolent intentions could use radioactive sources.

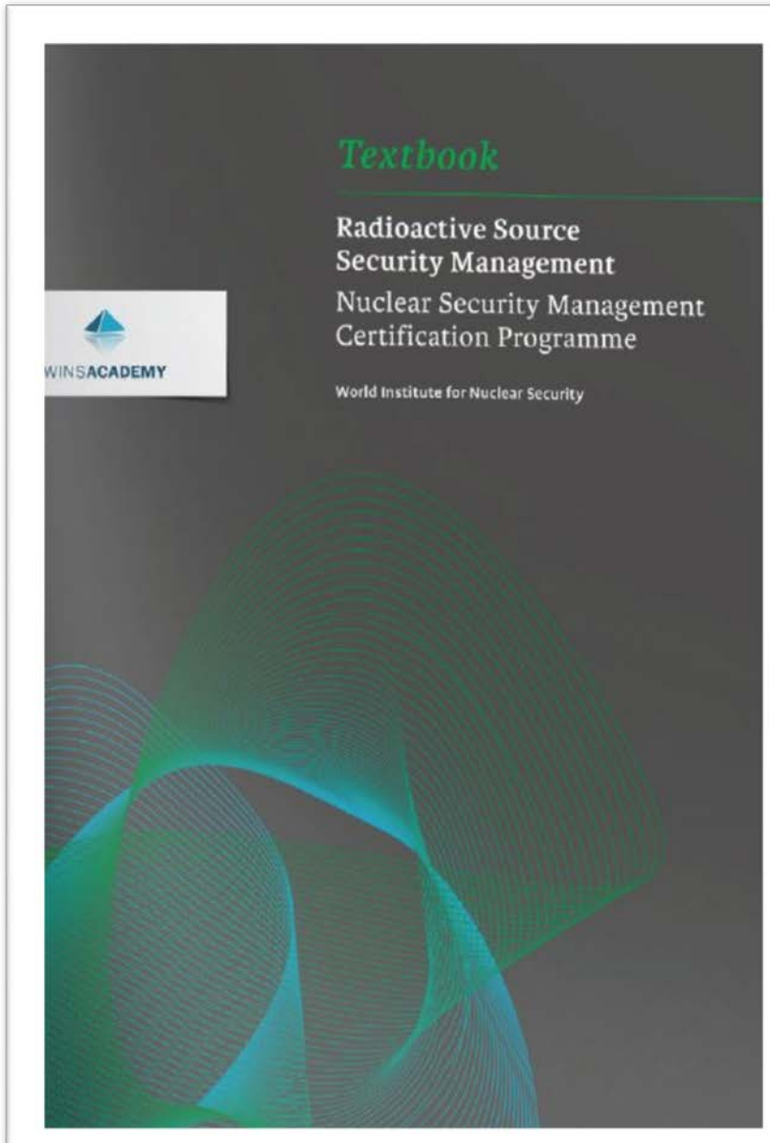
Unfortunately, even when a security programme does exist for protecting radioactive sources from malicious intent, it can be poorly implemented. Reasons for this could include a fundamental lack of awareness among leadership about the issues, lack of knowledge about how to implement a security programme that does not impede business operations, or lack of knowledge about how to provide effective security at a reasonable cost.



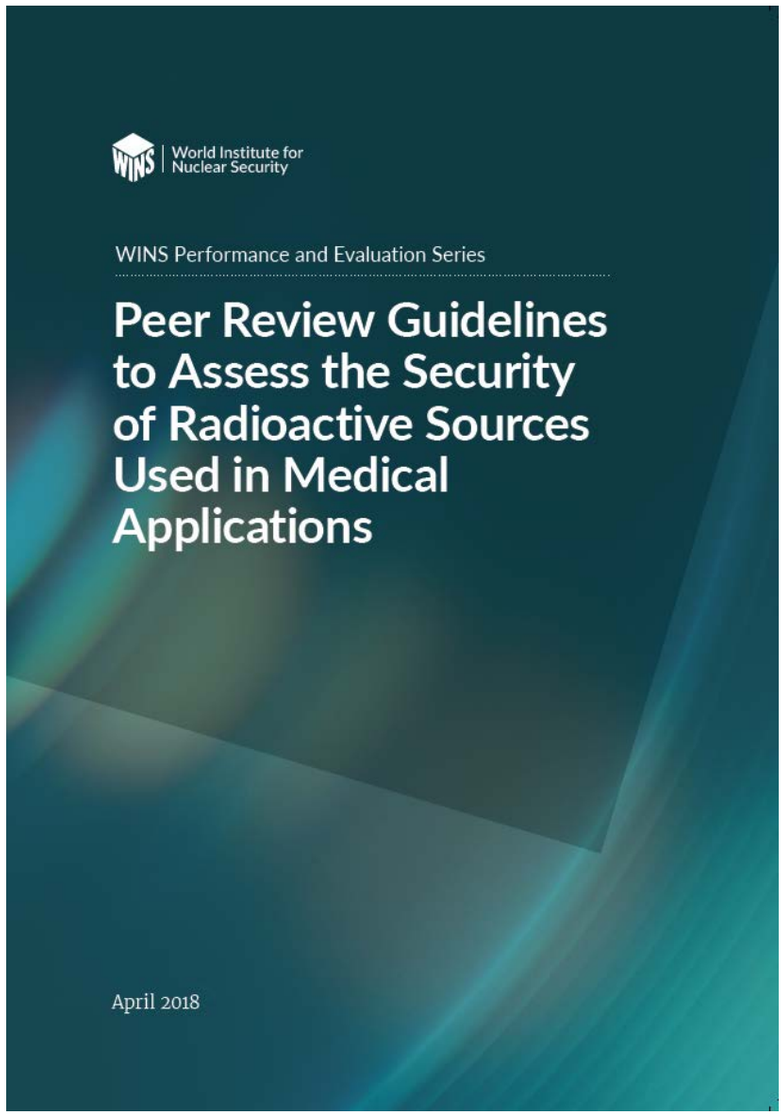
WINS Knowledge Centre: International Best Practice Guides

WINS Academy



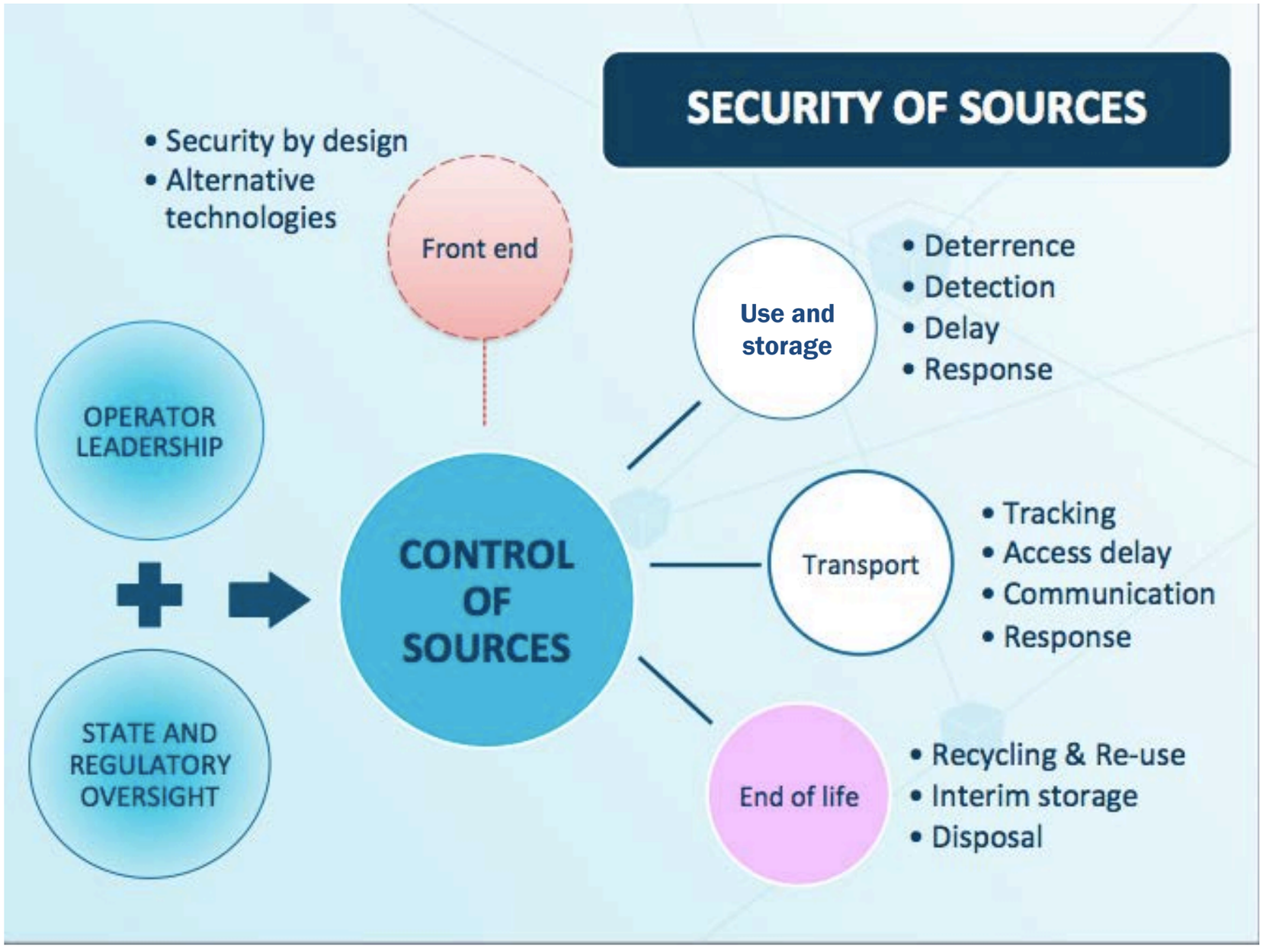


Performance and Evaluation



- 2 Pilot Peer reviews
- Guidance for medical practitioners to lead such reviews
- Multiple lessons learned and opportunities for enhancing existing arrangements

A Comprehensive Approach to Radioactive Source Security



High Activity Radioactive Sources Used in Medical Applications

Round Table Objectives

- Review the current security arrangements for high activity radioactive sources used in medical applications
- Identify possible gaps and opportunities for continuous improvement
- Explore how innovative approaches to security could help reduce remaining vulnerabilities.
- **Discuss the role of standards in strengthening radioactive source security**
- Provide opportunity to network and share experiences and best practices

What Do We Mean By Standards ?

From Oxford Dictionary:

1. A level of quality or attainment
2. Something used as a measure, norm, or model in comparative evaluations

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A standard is an agreed way of doing something.

Standards are the distilled wisdom of people with expertise in their subject matter who know the needs of the organizations they represent. They are created by manufacturers, sellers, buyers, customers, trade associations, users and regulators.

Organisations Might Use:

Quality management standards to help them work more efficiently and reduce product failures

Environmental management standards to reduce environmental impacts, reduce waste and be more sustainable

Health and safety standards to reduce accidents in the workplace

IT security standards to keep sensitive information secure

Construction standards to build a house

Food safety standards to prevent food from being contaminated

Interoperability standards to ensure that bank and credit cards fit into ATMs and can be used throughout the world

(From the British Standard Institute)

Are Security Standards Different?

www.encyclopedia.com

1. *A statement of the extent of evaluation necessary before a particular security feature can be considered for security certification as trusted*

2. *A set of security features to be provided by a system before it can be deemed to be suitable for use in a particular security processing mode, or in accordance with a generalized security policy*

BH Consulting

A security standard is like any other standard within any other industry.
A standard is 'a published specification that establishes a common language, contains a technical specification or other precise criteria, and is designed to be used consistently as a rule, a guideline, or a definition'.

Agenda

DAY 1 – TUESDAY 22 JANUARY 2019

Opening: Developing a Common Understanding

Session 1: Security of Radioactive Sources Used in Medical Applications – A Comprehensive Review

Session 2: Strengthening the Governance Arrangements for the Security of Radioactive Sources Used in Medical Applications

Session 3: Strengthening the Security-By-Design of Devices and Associated Facilities

DAY 2 – WEDNESDAY 23 JANUARY 2019

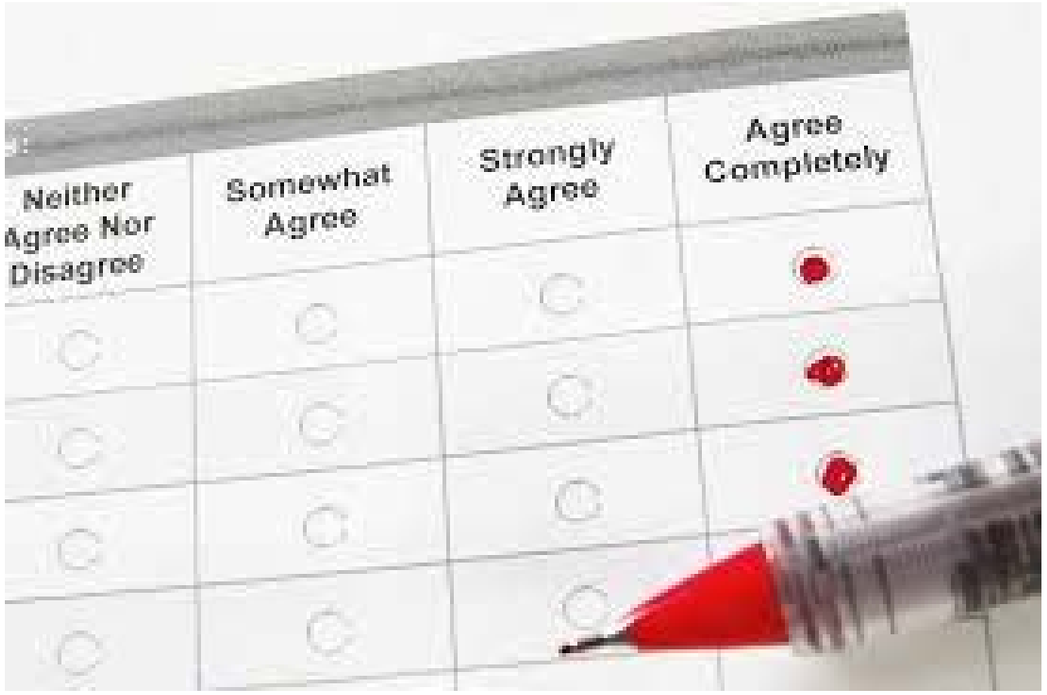
Session 4: Strengthening the Competences of Individuals with Accountabilities for the Security of Radioactive Sources

Closing: Key Findings and Next Steps

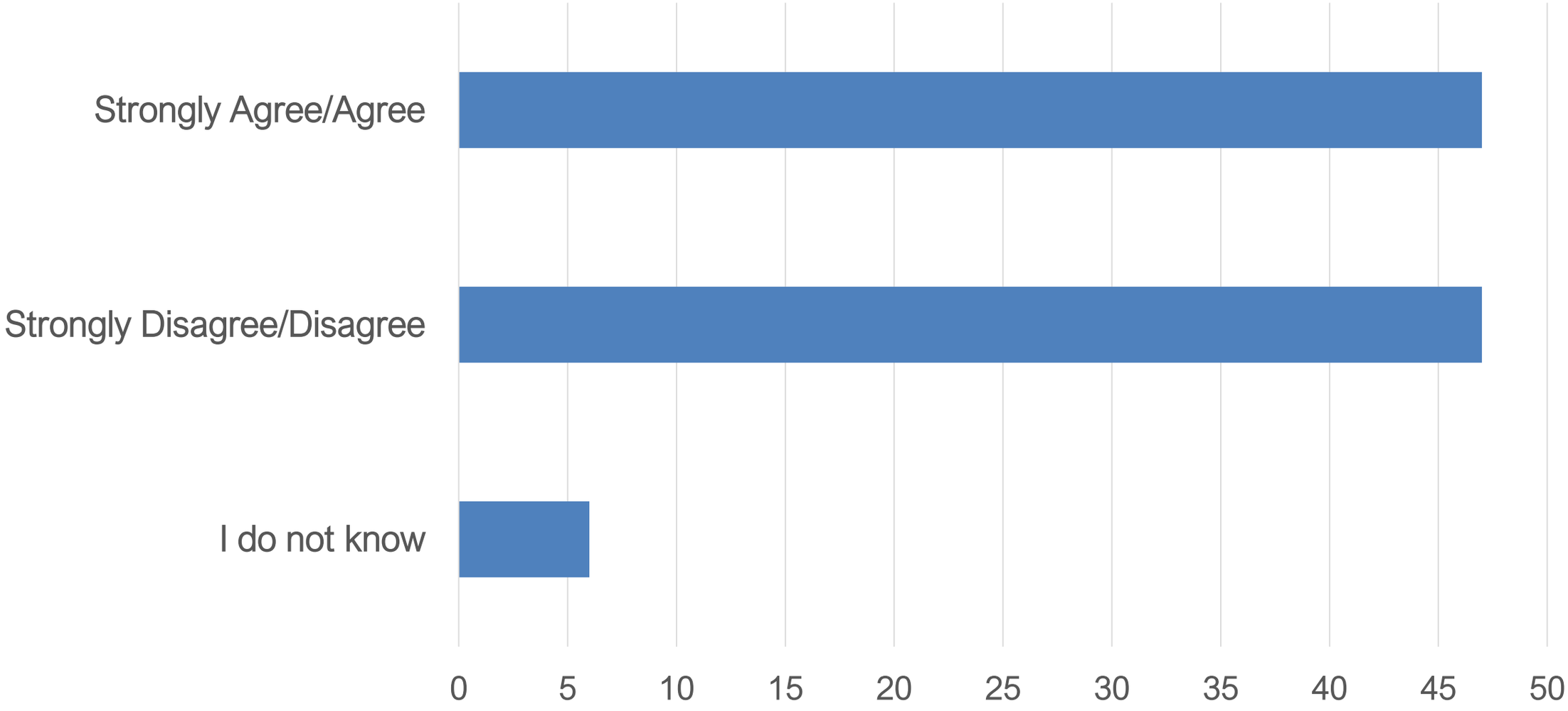
Round Table Process

- ❑ PRESENTATIONS
- ❑ PLENARY DISCUSSIONS
- ❑ GROUP DISCUSSIONS
- ❑ E-VOTING

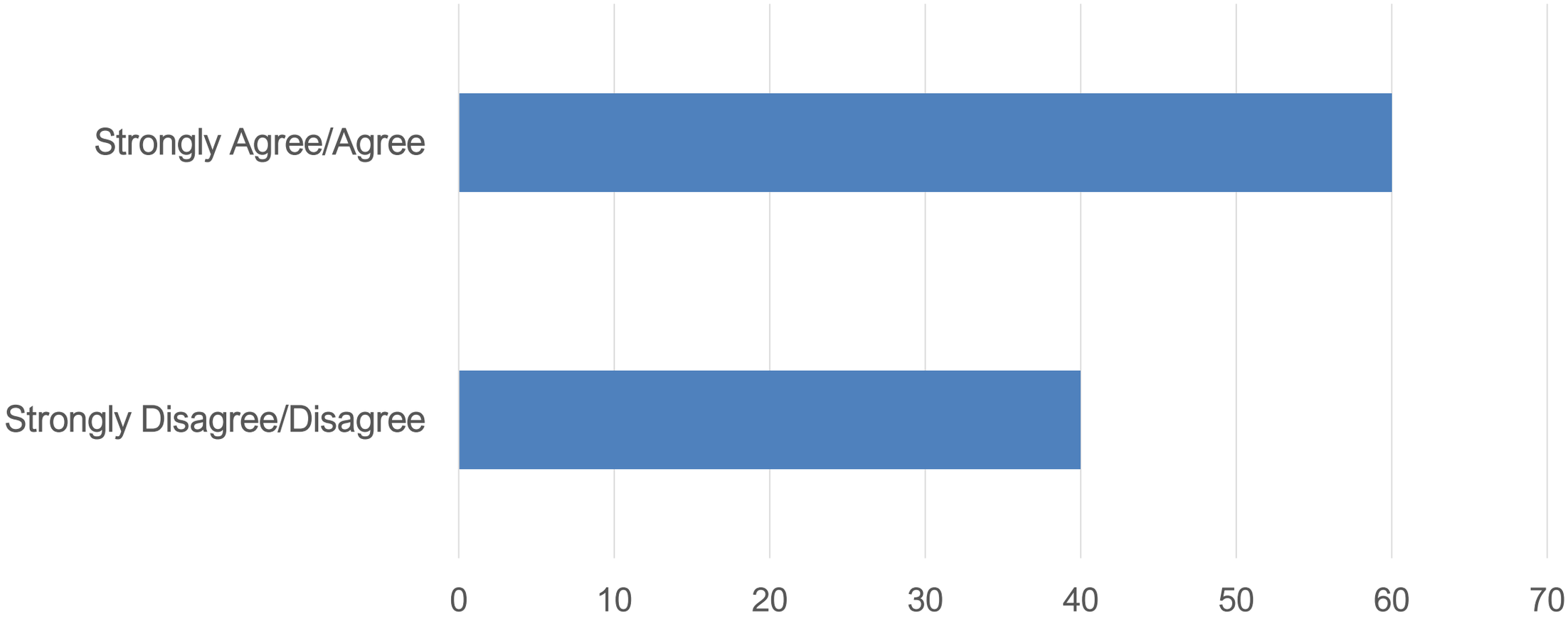
Survey Results



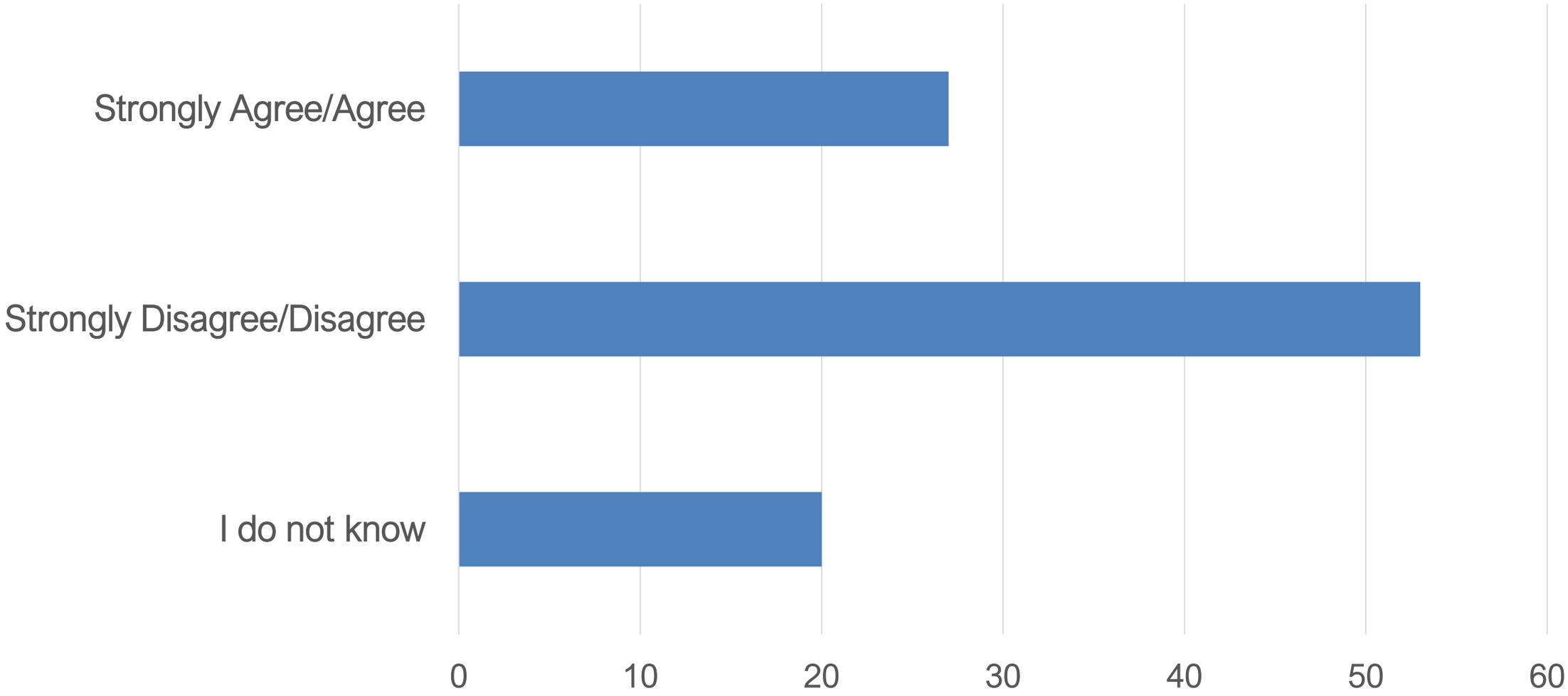
Security arrangements for radioactive sources used in medical applications are effective.



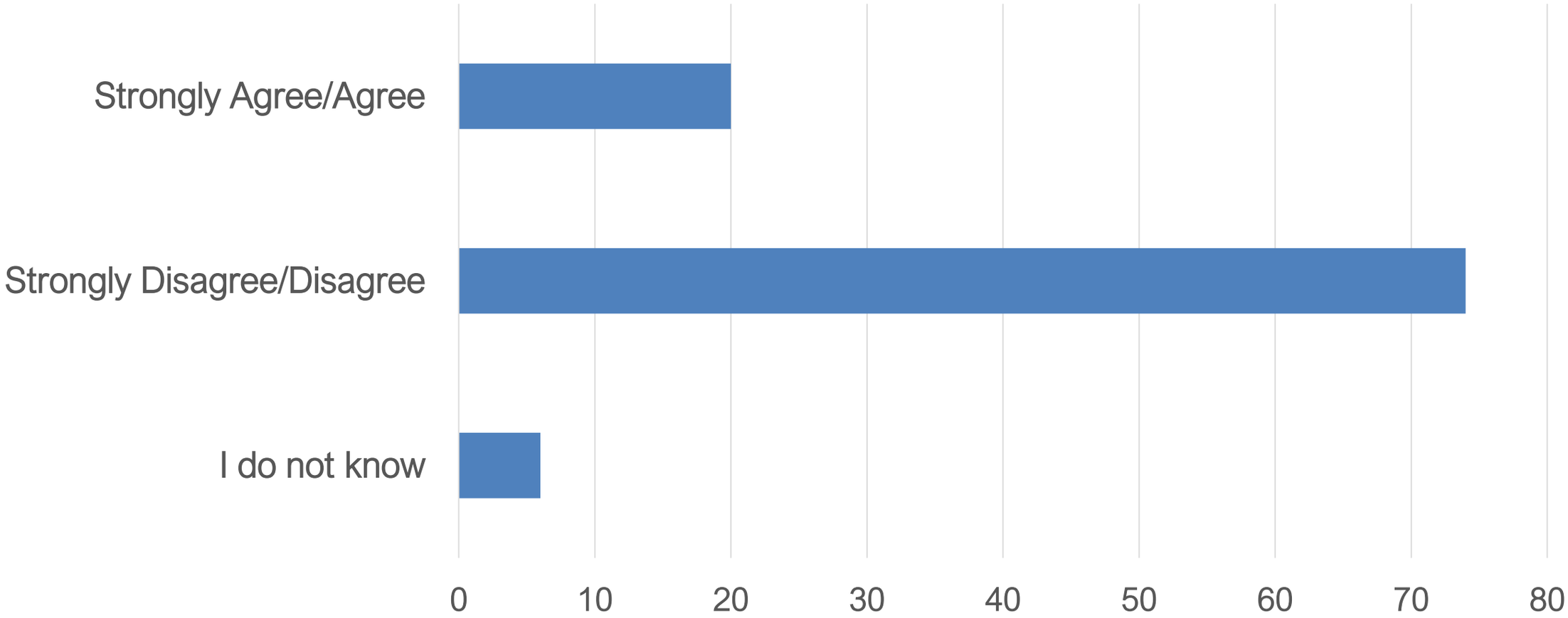
Roles and responsibilities for the security of radioactive sources used in medical applications are clearly defined and enforced.



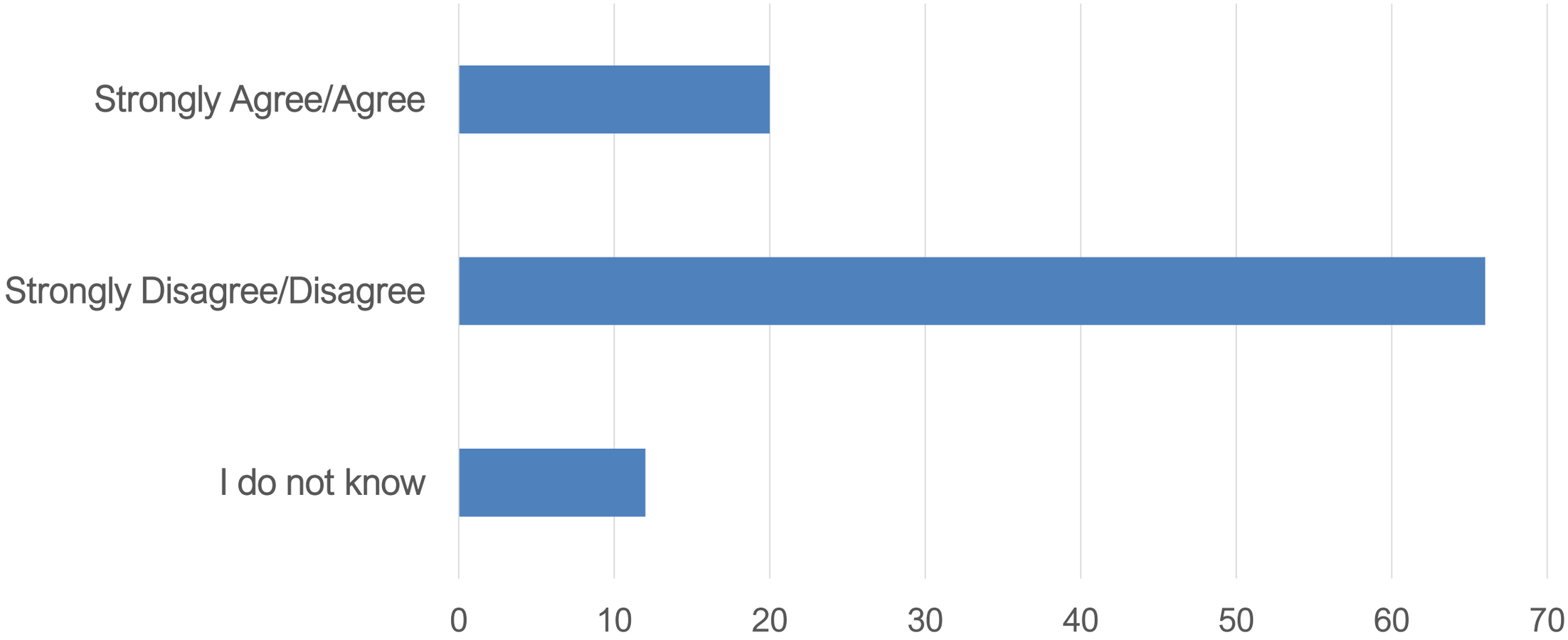
Senior managers in medical facilities take radiological security seriously.



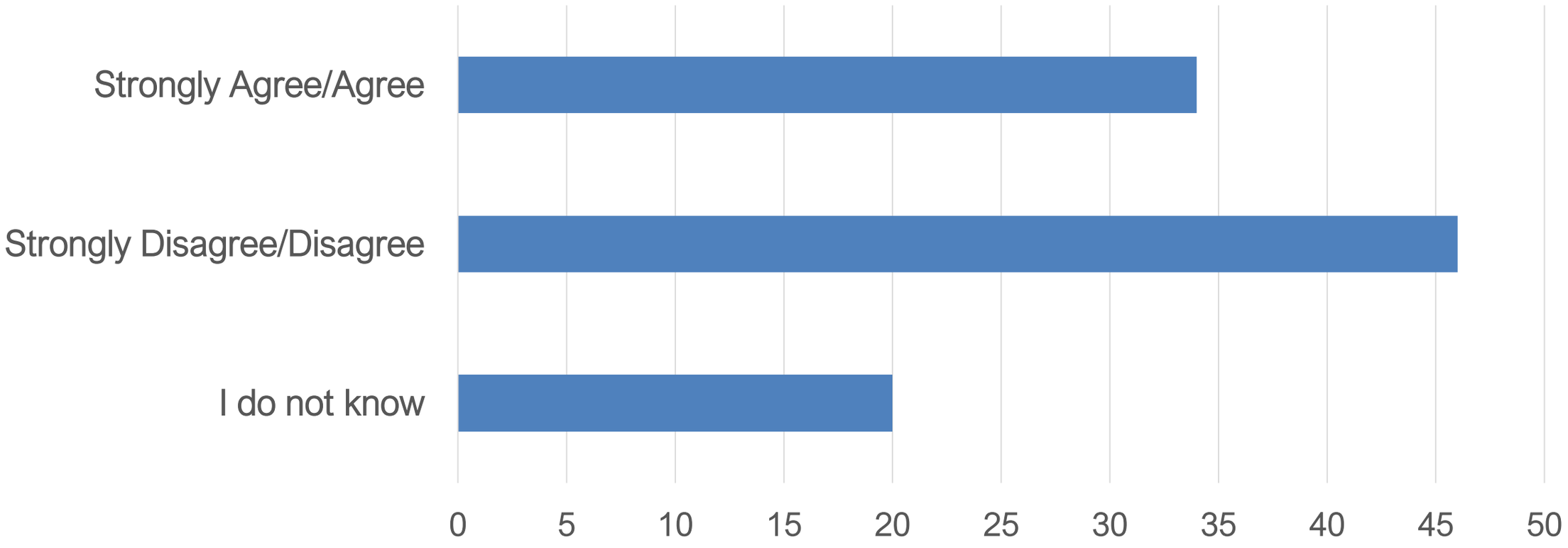
Staff at medical facilities possess necessary skills and competences to effectively implement their security responsibilities.



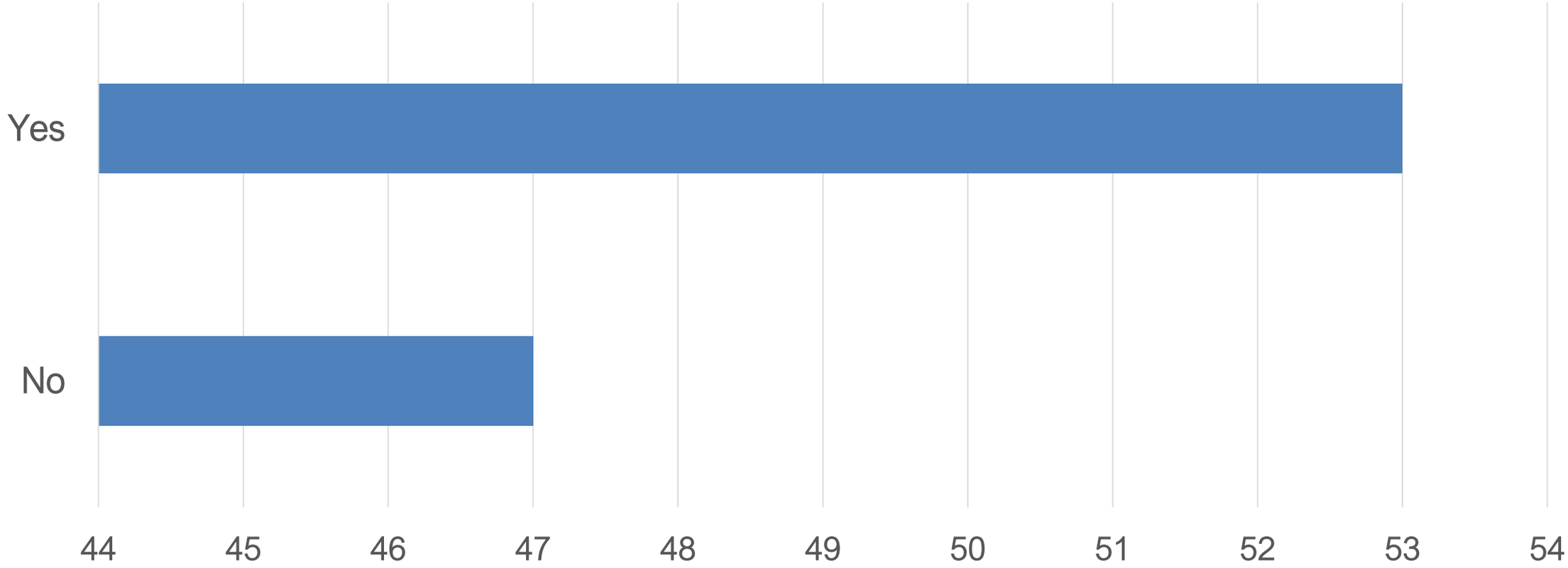
It is easy to find relevant professional development opportunities in radiological security for staff who are working at medical facilities.



Medical organisations have a continuous improvement process in place to ensure that their security arrangements remain relevant and are updated based on good practices.



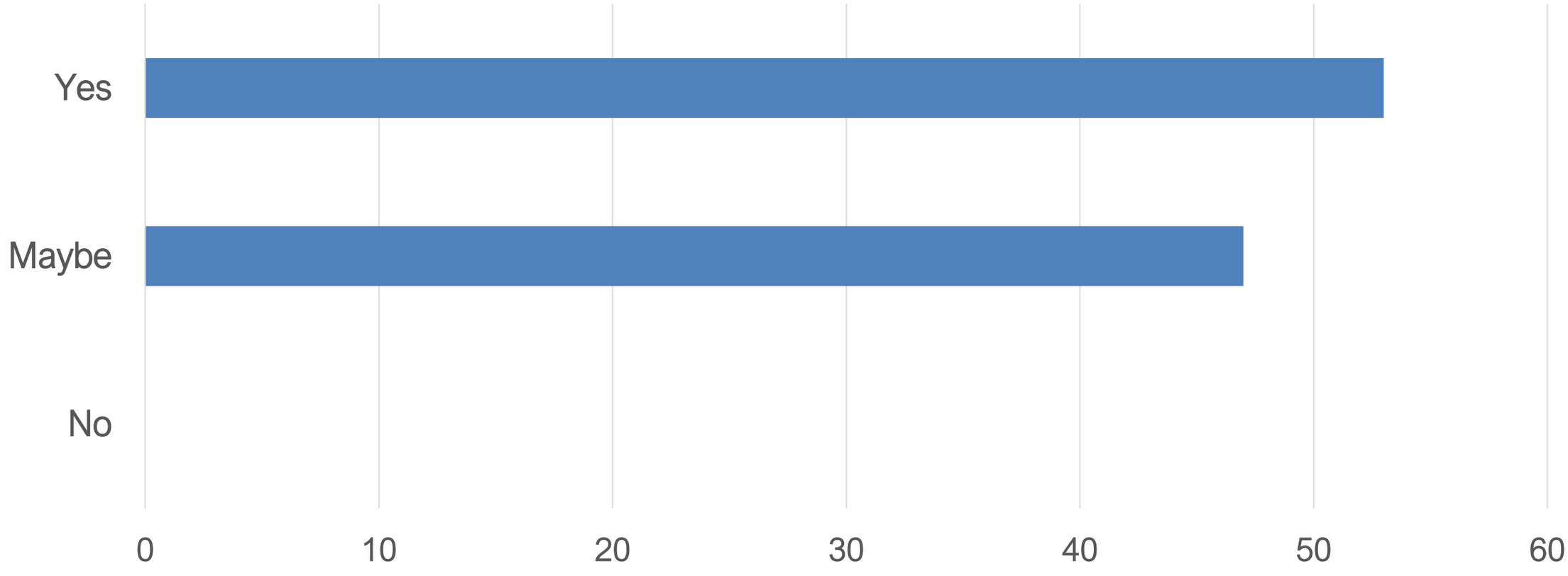
In addition to regulatory inspections, are you aware of any other form of third-party review to assess the security of radioactive sources used in medical applications?



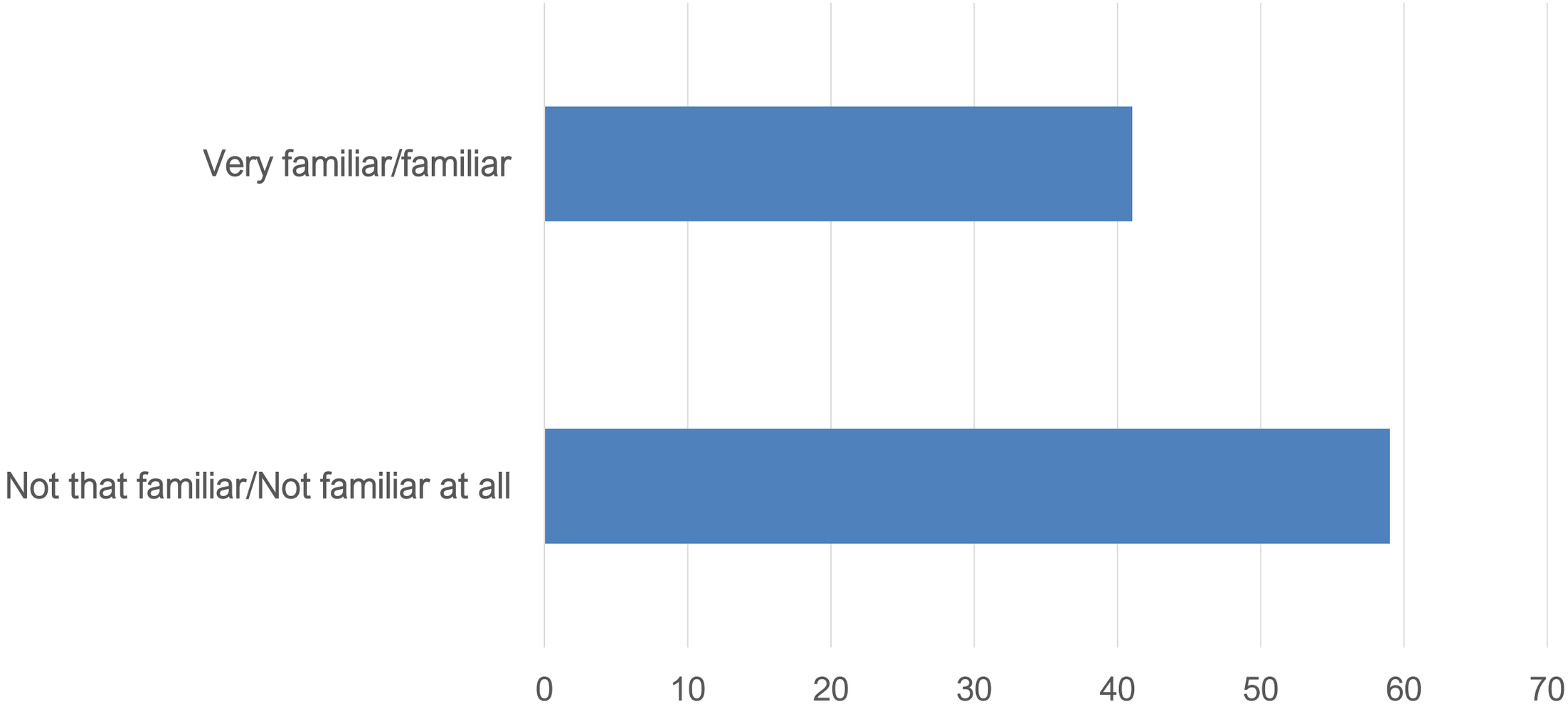
Examples of Third Party Reviews

- The US DOE through the NNSA provides an initial evaluation and security enhancements (voluntary assessment)
- IAEA IPPAS Module 4
- WINS Peer Review Guidelines
- Mystery guests from another hospital focused on security
- Standard industrial solutions that are applicable to all security professionals

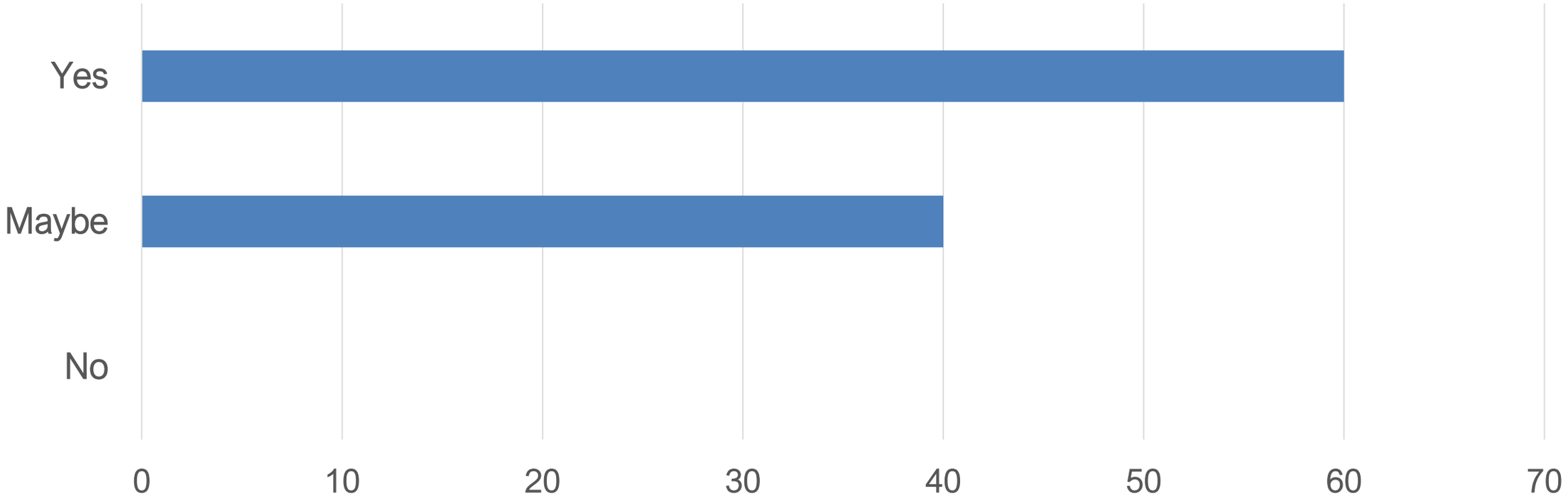
Medical organisations should be encouraged to request voluntary third-party assessments of their security arrangement in addition to possible regulatory inspections.



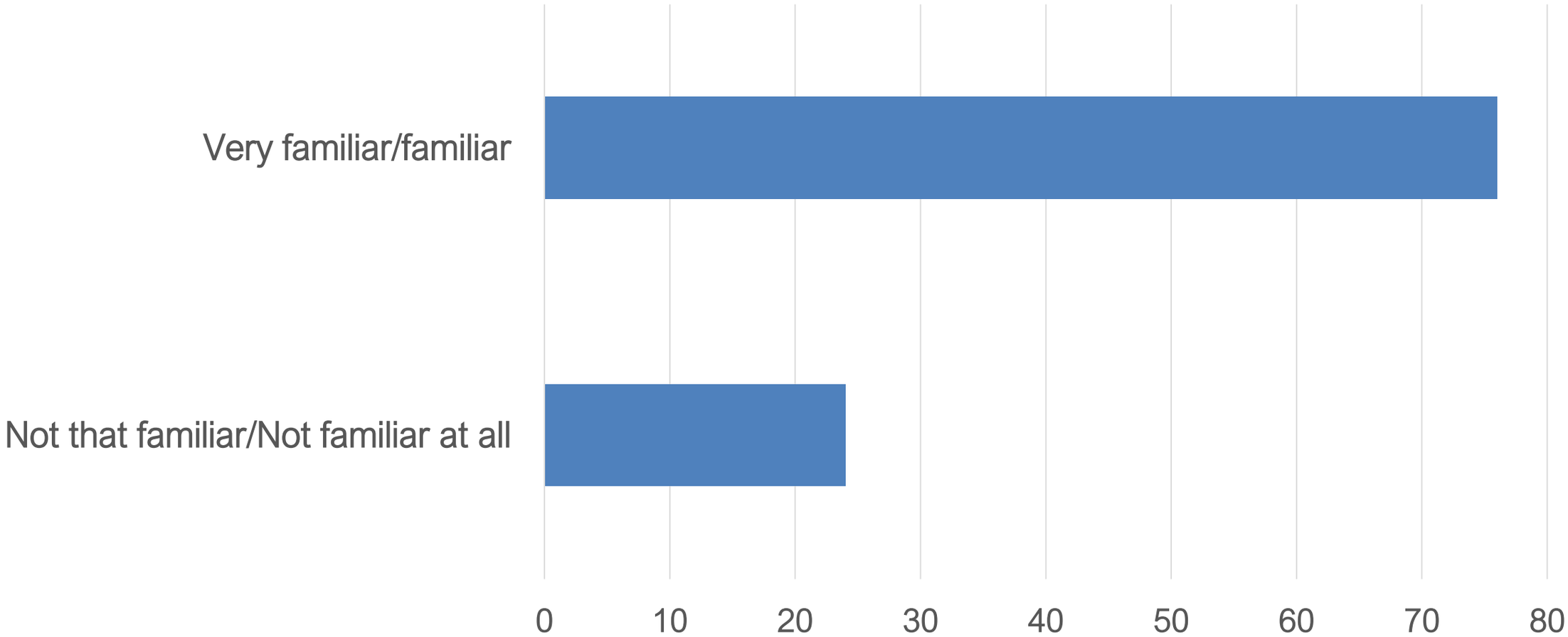
I am familiar with the concept of accreditation in the medical sector.



(If familiar) Do you believe that a quality standard for the security of radioactive sources in medical facilities and an accompanying assessment programme (accreditation) would strengthen the security of radioactive sources?



I am familiar with the on-going efforts to increase the intrinsic robustness of devices containing radioactive sources.



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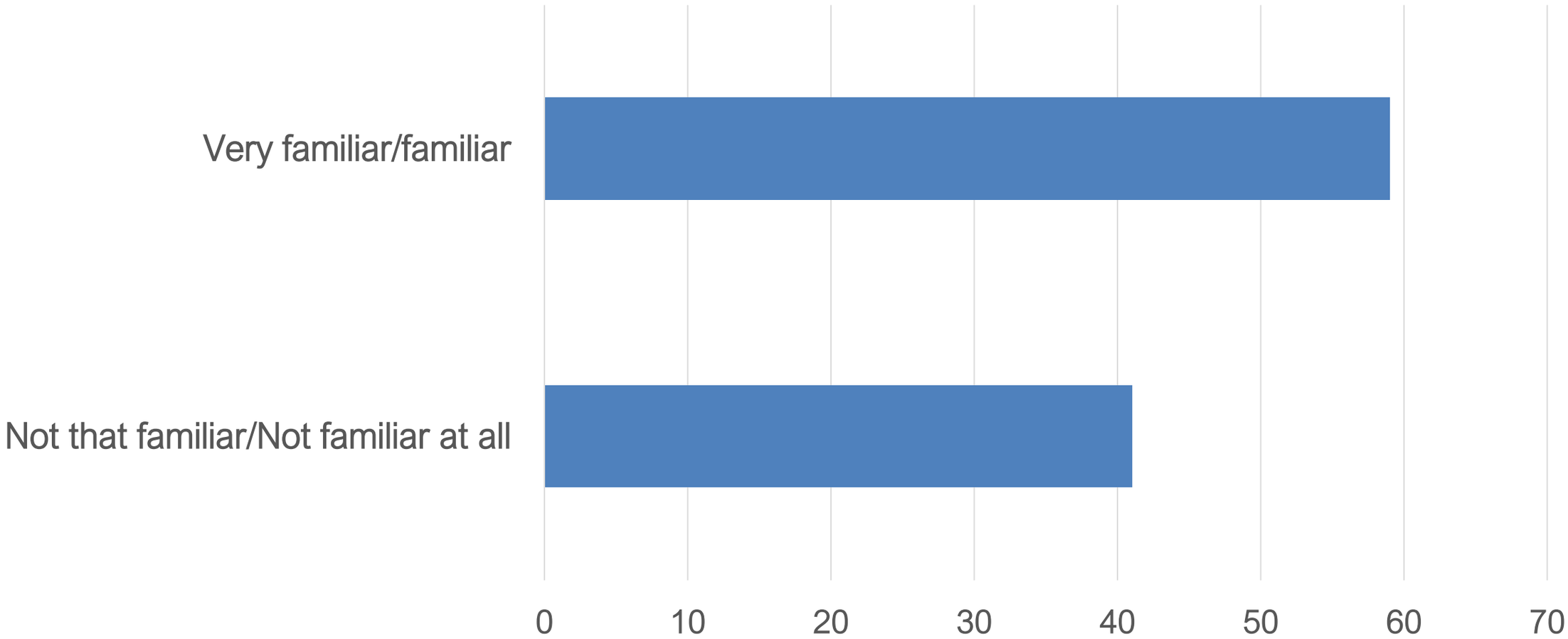
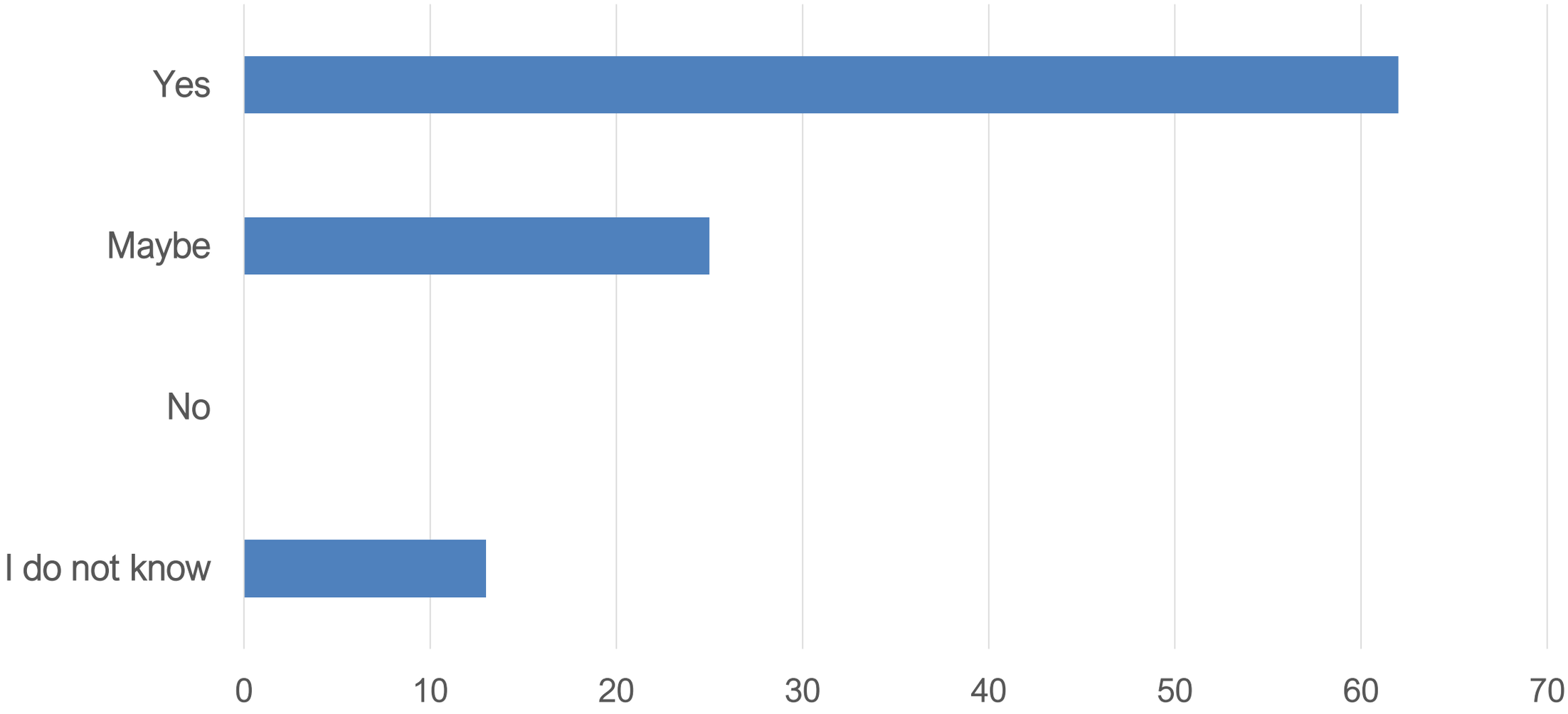


(If familiar) I believe developing such a standard is a good idea.



Would Developing Standards for Security Be a Good Idea?

I do not know, but I believe it would be worth having a discussion. There are already standards addressing safety issues. Why not for security?

Standards would provide consistency (normalize security implementation).

Standards would allow security to be tested by multiple institutions and different users, making it more robust.

Involving multiple stakeholders in the development process would ensure 'buy-in' for enhancing security arrangements.

A standard would need to be performance-based, attractive for the targeted audience, and affordable.

If regulators adopted security standards, it would provide an opportunity (and incentive) to obtain an accreditation for security.

Your Expectations (Extract)

Review the current status of medical source security.

Contribute to the strengthening of current arrangements. Discuss how to set up the same rules worldwide. Identify an approach to security that is both convenient and suitable for the medical environment.

Provide a manufacturer perspective. Obtain important/general information on security issues and potential ideas for further development.

Learn more about the proposed standard and its implementation. Learn how feasible such a standard might be and the direction in which industry and regulators might go. Discuss whether or not we should start working on an international standard now.

Network, share experiences, benchmark and update knowledge.

Participate in interesting, expert level discussions! Get inspired!

Examples of Remaining Barriers to Effective Security

Lack of support from senior management, who undervalue the threat and associated risks posed by radioactive material. (They have to realize the need.)

Financial constraints. Limited support from Healthcare Administrators to invest in appropriate and reasonable security measures.

Absence of security culture, standards, and well-trained security professionals. Inadequate security systems (technologies).

Some regulations are not yet issued or mature enough. No peer pressure. Different countries have different approaches.

A lack of international consensus on the level and type of security required makes it challenging for medical centers to know what kind of security they need. International programmes (multilateral and bilateral) are useful, but they do not always provide consistent and sustainable achievements.

Some Solutions!

Implement proper risk management by integrating radioactive source security into the overall risk management framework.

Systematically consider security by design for both devices and facilities.

Develop standards. Offer accreditation programmes.

Train staff and management on the security measures to be taken.

Obtain consensus on what international standards for security are all about!

Ensure that all countries have and apply the same rules. Regulations are a prerequisite. Strengthen the compliance assessment process. Monitor compliance with the rules and sanction non-compliance.

Improve international cooperation and the sharing of experiences in radioactive source security.

Success Criteria

- ❑ LEARN, SHARE, CONTRIBUTE
- ❑ MEET & NETWORK
- ❑ ENJOY YOUR TIME
- ❑ FOLLOW UP ACTIONS

Examples of outcomes

- Revise the WINS BPG 5.4
- Understand if a standard is feasible/useful/of significant impact
- Commit to host a peer review; consider accreditation
- Identify and outreach a national ISO organisation
- identify and outreach IEC
- Read more on accreditation

Thank You for Your Attention.

Enjoy the Round Table!

Learn more at:
www.wins.org

World Institute for Nuclear Security