

UNDERSTANDING CRISIS COMMUNICATION: THE INTERPLAY OF SOCIAL MEDIA, TRUST, SCIENTIFIC KNOWLEDGE AND PUBLIC POLICY

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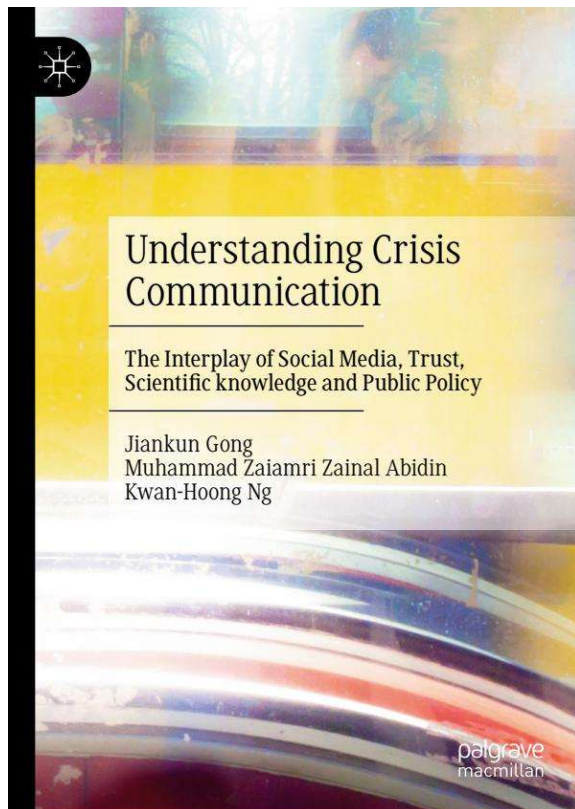
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I. PUBLISHER

Publisher: Springer Nature, Cham, Switzerland, 2026.
Hardcover ISBN: 978-3-031-97493-5
eBook ISBN: 978-3-031-97494-2
DOI: 10.1007/978-3-031-97494-2
Number of pages: 203



II. OVERVIEW

Understanding Crisis Communication provides a comprehensive examination of the principles, theories, and

practical applications of crisis communication across high-risk sectors, with particular emphasis on nuclear incidents. The authors present an interdisciplinary analysis that combines communication science, organizational behaviour, public policy, and risk management to demonstrate how communication influences public trust, institutional credibility, and policy outcomes during crises. While the book addresses crisis communication broadly, its extensive treatment of nuclear accidents makes it especially relevant to professionals in medical physics, radiation protection, nuclear engineering, and emergency preparedness.

III. CONTENT AND ORGANIZATION

The book is logically organized into thematic chapters that progressively build the reader's understanding of crisis communication. It begins by introducing foundational theories, including Situational Crisis Communication Theory (SCCT), the Social-Mediated Crisis Communication (SMCC) model, Image Restoration Theory, and the science-policy interface. These theoretical concepts provide a framework for evaluating institutional responses to crises and are effectively applied throughout the book.

A major strength of the publication is its detailed examination of four landmark nuclear accidents: the SL-1 reactor accident (1961), Three Mile Island (1979), Chernobyl (1986), and Fukushima Daiichi (2011). Each case study follows a consistent structure, examining the historical background, communication strategies adopted by responsible institutions, public and media reactions, lessons learned, and implications for future crisis management. The authors demonstrate how differences in political environments, media ecosystems, and institutional transparency shaped public perception and trust during these events.

Particularly noteworthy is the analysis of the Three Mile Island accident, where delayed disclosure, inconsistent messaging, technical jargon, and fragmented institutional communication significantly undermined public confidence despite relatively limited radiological consequences. The discussion illustrates that communication failures can

become crises in their own right, independent of technical failures.

IV. RELEVANCE TO MEDICAL PHYSICS

Although primarily written from a crisis communication perspective, the book offers important lessons for medical physicists and radiation safety professionals. Modern healthcare increasingly depends on advanced radiation technologies, including diagnostic imaging, radiotherapy, radionuclide therapy, and artificial intelligence. While these technologies operate under different circumstances from nuclear power plants, they similarly require effective communication whenever incidents, accidental exposures, equipment failures, or public concerns arise.

The principles discussed throughout the book, including transparency, timely communication, stakeholder engagement, empathy, and acknowledgement of uncertainty, are directly applicable to radiation medicine and nuclear healthcare. Medical physicists, who increasingly serve as technical advisors and safety leaders, will find valuable guidance on communicating complex scientific information to patients, healthcare professionals, regulators, and the general public.

Furthermore, the discussion on maintaining institutional trust is highly relevant to radiation protection programmes, emergency preparedness planning, and hospital incident management.

V. STRENGTHS

Several features distinguish this publication. First, the integration of communication theory with real-world nuclear case studies provides readers with both conceptual understanding and practical application. Rather than merely describing historical events, the authors critically evaluate communication decisions using established theoretical frameworks.

Second, the writing is accessible despite addressing complex multidisciplinary topics. Technical concepts are explained clearly, allowing readers from communication, engineering, public health, and nuclear science backgrounds to benefit equally.

Third, the extensive referencing demonstrates thorough scholarship and encourages further exploration of crisis communication literature. The inclusion of contemporary communication theories alongside historical accident analyses enhances the academic value of the book.

Finally, the emphasis on trust, transparency, and stakeholder engagement reflects current international best

practices in emergency preparedness and risk communication.

VI. OVERALL ASSESSMENT

Understanding Crisis Communication is a timely and well-researched contribution to the growing literature on crisis and risk communication. By demonstrating that effective communication is as critical as technical competence during emergencies, the authors make a compelling case for integrating communication planning into organizational risk management strategies.

The book serves as a valuable reminder that communication itself constitutes an essential component of radiation safety culture. As medical physicists increasingly assume leadership roles in quality assurance, radiation protection, emergency preparedness, and public engagement, the lessons presented throughout this volume are both relevant and practical.

VII. RECOMMENDATION

This publication successfully bridges communication science and nuclear technology, offering practical insights that extend well beyond the nuclear industry into healthcare and medical physics practice. Its emphasis on transparency, trust-building, and evidence-based communication makes it a valuable addition to the professional library of anyone involved in radiation-related disciplines.

The book is highly recommended for medical physicists, radiation protection professionals, nuclear scientists, healthcare administrators, emergency managers, policymakers, researchers, and postgraduate students seeking a deeper understanding of crisis communication within technologically complex environments.

VIII. REFERENCES

1. Gong J, et al. *Understanding Crisis Communication*. Cham: Springer Nature Switzerland; 2026. eBook ISBN: 978-3-031-97494-2. doi:10.1007/978-3-031-97494-2.

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