



LETTER TO PRINCIPAL

Effective Nursing Communication in Chemical Accidents: Enhancing Emergency Care and Response

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Dear Editor:

The province of Matanzas is a major industrial hub in Cuba, hosting activities related to the storage and transportation of hydrocarbons, chemicals, and hazardous materials. Critical infrastructure—including refineries, ports, and industrial zones—increases the likelihood of chemical accidents with significant implications for public health, the economy, and the environment. A chemical accident or chemical emergency is defined as an unexpected event resulting from the uncontrolled release of one or more hazardous chemical substances, potentially causing harm to human health, the environment, or facilities.⁽¹⁾

Managing such events poses a significant challenge for health systems due to their potential impact on the population, necessitating medical and paramedical care, management of acute poisonings, and, when required, coordinated decontamination of victims.^(2,3) In this context, nursing professionals play an essential role—not only in providing direct care to victims but also through effective communication, which constitutes a crucial tool for ensuring an appropriate emergency response.^(4,5)

Communication during chemical accidents encompasses multiple dimensions, including the clear and timely exchange of information among healthcare teams, the affected population, and emergency management institutions. Nursing personnel must therefore be able to interpret and convey technical information in an understandable manner, especially in high-stress, uncertain scenarios.⁽⁶⁾

In the authors' view, poor communication can lead to misunderstandings, delays in care, and increased exposure to risks—for both affected individuals and healthcare workers. Consequently, it is essential that nursing professionals receive specific training in communication protocols for chemical emergencies. These protocols should include the use of standardized language, rapid identification of care priorities, and effective coordination with other stakeholders such as firefighters, toxicologists, and local authorities.⁽¹⁾

Moreover, technological tools—such as real-time monitoring applications and early warning systems—can facilitate immediate communication and support data-driven decision-making. However, their effectiveness hinges on adequate training of healthcare teams, highlighting the need to integrate these competencies into ongoing nursing education programs.⁽²⁾

Finally, the authors emphasize the critical importance of community communication. In such scenarios, nursing professionals must not only disseminate protective measures but also build trust, reduce panic, and promote responsible behaviors that mitigate the event's impact (Fig. 1).

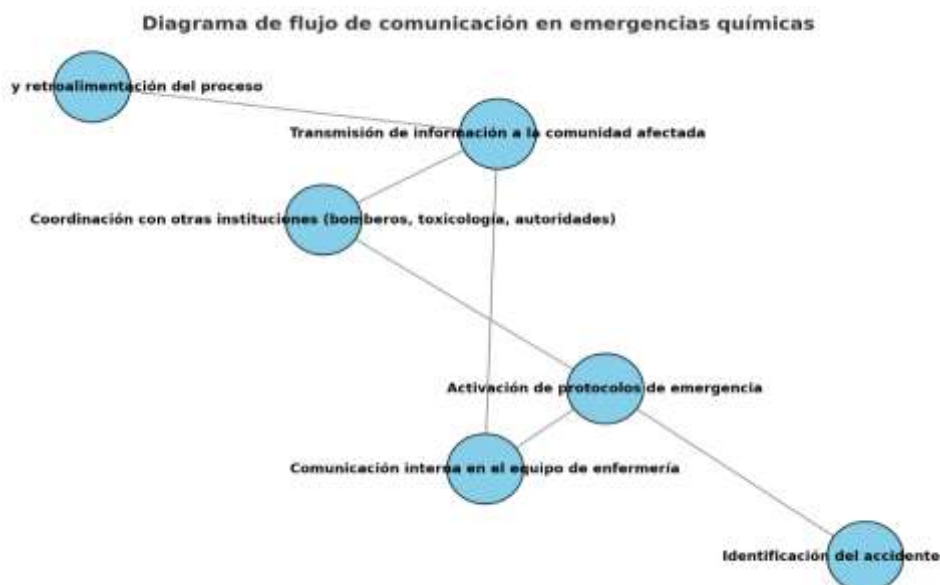


Fig. 1 Communication flowchart for nursing professionals' response during chemical accidents or chemical emergencies.

In conclusion, effective communication by nursing professionals is a cornerstone in the management of chemical accidents. Investing in their training and in the development of efficient communication tools is essential to strengthen public health emergency response and protect communities from such hazards.

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