

Over the counter naloxone nasal spray: A new hope for opioid crisis management in PakistanZmarak Ahmed Khan¹, Zainab Anfaal², Muhammad Shaheer³

Dear Madam, Opioids, derived from the poppy plant, include synthetic and partially synthetic compounds that bind to brain receptors, diminishing pain perception. Primarily prescribed as analgesics, they are often misused for euphoria, thus making opioid overdose a global health issue. Pakistan is also struggling with opioid overuse, with around 700 individuals succumbing daily to drug-related complications, resulting in about 250,000 deaths annually.¹

The high number of overdose deaths in Pakistan can be attributed to several reasons, including poor regulation of pharmaceutical drug sales. In Punjab, the most populous province, there are reportedly 70,000–80,000 unqualified quacks practicing illegal medicine.² Self-medication is widespread; a 2016 BMC study revealed 595 out of 700 (85%) subjects engaged in this practice.³ Additionally, the high illiteracy rate in Pakistan further complicates the situation due to a lack of awareness about drug use and overdose responses.

In Pakistan, opioid overdose treatment typically involves buprenorphine and naltrexone, which are not the most effective solutions. Naltrexone, with its long-lasting effect and complex administration, requires supervised withdrawal due to severe symptoms. Buprenorphine, though effective, needs careful management to avoid withdrawal risks and misuse concerns due to its opioid nature.⁴ Their administration can be challenging in emergencies, especially in regions with low literacy rates like Pakistan.

Naloxone, an opioid antagonist, is an effective universal solution for opioid overdoses. It reverses respiratory depression and coma by blocking opioid effects. Initially available in injectable form, the U.S. Food and Drug Administration approved a 4 mg naloxone hydrochloride nasal spray (Narcan) for over-the-counter use in March 2023. A Norwegian University of Science and Technology

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(NTNU) study showed that nasal naloxone had rapid systemic uptake and maintained elevated serum concentrations longer than intravenous naloxone. This pilot study suggested that a concentrated nasal spray could deliver a therapeutic amount of naloxone with just one spray,⁵ increasing survival chances. Its easy administration makes it a valuable tool for swift overdose response.

The nasal spray form of naloxone offers a promising solution to reduce overdose deaths in Pakistan. Its recent over-the-counter approval and straightforward administration could address the opioid crisis in Pakistan effectively. However, further research on its impact across different demographics, along with economic considerations and evaluations of withdrawal symptoms is necessary. Awareness campaigns, rehabilitation programmes, and first aid workshops can aid in prevention. These efforts can attract health policymakers' attention to combat opioid overdose and eliminate this societal issue in Pakistan.

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