

Abstract

Nursing Therapeutic Education for Home Management of 5-FU via an Elastomeric Infusion Device: Development and Validation of Operational Tools

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Introduction. The growing use of home chemotherapy with 5-fluorouracil (5-FU) administered by continuous infusion through an elastomeric infusion device has improved the quality of life of patients with cancer, but has also transferred part of therapeutic management to the home, increasing the need for structured education for patients and caregivers. In the absence of structured pathways specifically focused on home management, correct use of the device may be challenging, with potential risks to patient safety and the appropriateness of access to healthcare services. The aim of this study was to design and validate operational, organizational, and care tools aimed at facilitating home self-management of 5-FU, enhancing patient safety, and standardizing the educational process.

Methods. The study was developed as part of a quality-improvement project at the Local Health Authority of Piacenza and included analysis of the clinical care context, review of the literature and relevant regulations, and identification of the educational needs of patients and caregivers. Based on this evidence, two integrated tools were developed to improve understanding of the therapy, early recognition of complications, and correct management of the elastomeric infusion device at home. The entire methodological process was validated by the multidisciplinary oncology team.

Results. An easy-to-read information brochure accompanied by multimedia support accessible through a QR code and an operational instruction for healthcare professionals were developed. The introduction of these tools is expected to promote patient and caregiver empowerment, improve consistency of communication among healthcare professionals, and contribute to reducing

inappropriate access to emergency and urgent care services.

Discussion. Standardization of nursing therapeutic education represents a strategic approach to improving the safety of patients with cancer receiving home treatment with 5-FU. The developed model is applicable to clinical practice and potentially replicable in other oncology settings. Further studies are needed to evaluate its impact on process and outcome indicators.

Keywords: Home Chemotherapy, 5-Fluorouracil (5-FU), Nursing Therapeutic Education

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