

# Innovative Technologies In Nursing

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**Abstract.** Innovation is the process of introducing something new into various spheres of business, production and industry. With the development of medical science, the role of nursing personnel in the healthcare system is increasing. In order to care for patients, it is necessary to master increasingly complex medical and technical knowledge and acquire new skills, as well as improve those already acquired.

**Key words:** innovation, innovative process, medical personnel, nursing practice, healthcare, innovative technologies.

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## INTRODUCTION

Modern medicine is developing dynamically and rapidly and its rapid improvement puts it at the forefront of innovative trends. With each passing day and hour, the quality of life of the planet's population is being increasingly influenced by the innovations in the medical sphere. Thus, changes are taking place, such as the introduction of new technologies that allow achieving maximum effects in the shortest time possible. The introduction of innovative technologies has significantly increased the availability and quality of medical care.

Worldwide, bringing innovations into nursing practice is considered to be the core practice, aimed to improve the quality of patient care. The need for innovative solutions is high as healthcare systems struggle to provide accessible, safe and effective services.

Today, the role of a nurse is becoming much broader than just being a doctor's assistant, and her responsibilities are not limited to the "automatic" execution of medical orders. A nurse occupies the status of a highly professional participant of general medicine at any level. The leading areas of the innovation process include the following:

- new technologies and methods in the field of treatment and prevention of diseases;
- getting rid of unprofessional work and raising the quality standards of medical care with control at each stage;

- forming personal responsibility for the patient;
- continuous improvement of qualifications and professional knowledge, and skills;
- advisory and educational work with the healthy population;
- new distribution of responsibilities between medical personnel with coordination and interaction between structures and with the empowerment of nurses with greater responsibilities;
- motivation of human resources and changes in the personnel structure with the introduction of new positions for specialists with higher medical education in the field of "nursing".

The use of innovative technologies in the daily nursing practice in hematology makes her work more professional, comfortable, ensures safety and convenience in performing basic professional duties, reduces labor costs, improves the quality of provided medical care and, accordingly, patient satisfaction.

The introduction of innovative organizational technologies in the nursing practice allows us to successfully solve such tasks as: providing highly qualified medical care of various profiles; providing services to the patient; creating an environment of psychological comfort for the patient; performing diagnostic studies in the shortest possible time; performing manipulations and procedures using disposable products; providing patients with medications in accordance with the doctor's prescription, without limiting the list; providing dietary nutrition in accordance with the doctor's prescription and taking into account the patient's wishes.

The introduction of modern medical technologies into practice defines new requirements for nursing specialists. Modernization of nursing is directly related to the introduction of a modern nursing care system into medical and preventive institutions. As shown by the study of the distribution of nurses' working time in medical and preventive institutions, more than 30% of their time is spent on performing auxiliary work that does not require her qualifications, however, with rational use of medical personnel, optimal organization of their work, it is possible to free up time reserves for the execution of nurses' main duties, which is working directly with the patient.

Innovations in nursing play an important role in improving the quality of care and patient service. Electronic medical records, mobile applications and telemedicine, smart medical equipment technologies, automation and robotization of processes, as well as the use of virtual reality are all new tools and methods that help nurses to be more effective and provide high-quality care to patients.

Among the newest tools, materials and technologies introduced into the work of nursing personnel are vacuum systems. These are disposable test tubes, needles, and holders that make it possible to quickly and comfortably collect blood, eliminate complications, and protect patients and medical personnel. The advantages also include reliable labeling and ease of disposal.

**Barcodes.** The use of bracelets with barcodes, which hold personal identification information of a patient (e.g. full name, age, ID, etc.) for a precise identification of patients. This helps to avoid errors when taking tests, dispensing medications, and performing other procedures. Barcode label systems are widely used in laboratories, blood transfusion stations, and pharmacies.

**Vein Visualizer.** A portable, hand-held device that uses infrared light to visually map peripheral veins without contact. Used for venipuncture and other vascular procedures.

Modern beds and bedside monitors. Multifunctional beds of various models for bedridden patients periodically accompany nursing care, easing medical procedures and medical examinations. Beds allow changing the position of patients, which reduces the risk of pressure sore/ulcer development. Bedside monitors help to observe the patient's condition and, in case of sudden changes of vital signs (heartbeat, pressure, etc.), immediately signals about the need for urgent assistance from medical personnel.

Medical information technologies. Today, information technologies are being actively introduced into medicine. The use of achievements in telecommunications (telemedicine) and computer technologies has a beneficial effect on the nursing process, increasing the level of service. And although computer work is currently at its infancy, and mass systematized computerization has not yet taken place, more and more medical institutions are being equipped with PCs, office equipment, and are transferring work from paper based form to an electronic one.

In connection with the previous statements, it should be noted that nurses play an important role in the innovative processes of the healthcare system, starting from the development of innovations to their implementation and further dissemination.

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