Perspective

The Usage of Artificial Technology for Dispensing Medications

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ABOUT THE STUDY

In recent years, the growth of the intravenous medications allocation centre (Pharmacy Intravenous Admixture Services, PIVAS) has been rapid, and the rational use of pharmaceuticals has become the basis of the significant content of pharmaceutical care. However, there are a number of dangers in the drug formulation process, such as splashing of liquid medicine and aerosol leakage, which are hazardous to the health of the preparation personnel, as well as drug pollution, air pollution, and environmental pollution; thus, it is a new trend in hospital clinical development to actively carry out advanced intravenous drug dispensing technology. Artificial intelligence is a cutting-edge technology in contemporary scientific and technological development; it is widely employed in the medical profession in a variety of ways, including clinical medical diagnosis, surgery, neural network technology, expert systems, and medical imaging diagnosis. Furthermore, it has been used in home care for the elderly.

Different devices contribute in the dispensing task to accomplish the automation of the dispensing process in the pharmacy, and the automatic setup of intravenous infusion is a vital aspect of the automated dispensing in hospital pharmacy. At the moment, most hospitals in China have intravenous infusion preparation in intravenous drug preparation centers and wards, and problems such as difficult dispensing process, high labour intensity, occupational injury, time-consuming and laborious, and personnel shortage are common; this has significantly reduced the quality and efficiency of intravenous infusion preparation and is easy to cause nurseries and patients' disputes, which has attracted great clinical attention. A new trend in hospital pharmacy development is the active development of sophisticated intravenous medication dispensing technologies and unique management modes.

According to studies, the use of information technology has an impact on the quality of patient care. Drug intravenous infusion is an important component of hospital clinical drug therapy that is closely related to patient drug safety. As a result, there is an urgent clinical demand for autonomous and intelligent solution dispensing equipment that can overcome the afore mentioned challenges. Intravenous medication dispensing robots are a result of contemporary information and medical technology, and their application impact and safety in clinical intravenous infusion dispensing are now highly focused in clinical practise. The dispensing robot is primarily used for dispensing sodium carlosulfonate, brain protein hydrolysate, complicated coenzyme, cefazoxime sodium for injection, Salvia miltiorrhiza phenolic acids, bone peptide for infusion, and the detachment of predissolved cefathiamidine and piperacillin after initial practise.

The dosage of four types of drugs, carlosulfonate sodium, cefazoxime sodium for injection, complex coenzyme, and cefathiamidine, was relatively large in the hospital's PIVAS; different types and counts are used sodium carbosulfonate and complex coenzyme are common drugs, usually 4 and 2 capsules/bag, respectively, cefazoxime sodium for injection is an antibacterial powder, and predissolved cefathiamidine is by use of a configuration robot in intravenous infusion drug preparation improves the quality and efficiency of drug preparation, reduces the workload and psychological pressure on nursing staff, encourages it to invest more time in patient care, improves the relationship between protecting patients to some extent, and improves the hospital's nursing service image.

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