

Building and Implementing a Multidisciplinary Team (MDT) for Vascular Access Led by Advanced Practice Vascular Access Nurses

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Objective

With advances in medical technology and evolving healthcare models, the role of advanced practice vascular access nurses in improving care quality and patient outcomes has become increasingly prominent.

Methods

Team Formation Stage: Initially, 10 part-time nurse managers PICC-specialized nurses from five departments (including Hematology) formed a collaborative team under their respective departmental management, establishing the foundational model of teamwork. **Team Development Stage:** The team evolved into a “2 full-time + N part-time nurses + N part-time physicians” collaborative model, responsible for daily management of all vascular access devices and complex case consultations, thereby establishing a specialized vascular access nursing service. **Team Maturation Stage:** After six years of development, the team matured into a well-structured MDT led by advanced practice vascular access nurses. Building upon six core functional subgroups established during the development phase, the team further refined its organizational structure and role delineation, enabling members to effectively manage complex clinical scenarios and resolve challenging vascular access–related issues.

Results

By 2025, the use of steel needles and complications associated with peripheral venous catheters continued to decline, while the utilization of midline catheters (MC) and peripherally inserted central catheters (PICC) increased. The rate of unplanned catheter removal remained among the lowest reported nationally (see Figure 1).

Conclusion

A context-specific, multidisciplinary vascular access team led by advanced practice vascular access nurses, tailored to the Chinese healthcare setting, has significantly improved successful catheter placement in complex patients, enhanced prevention of complications, and ensured reliable vascular access for critically ill patients.

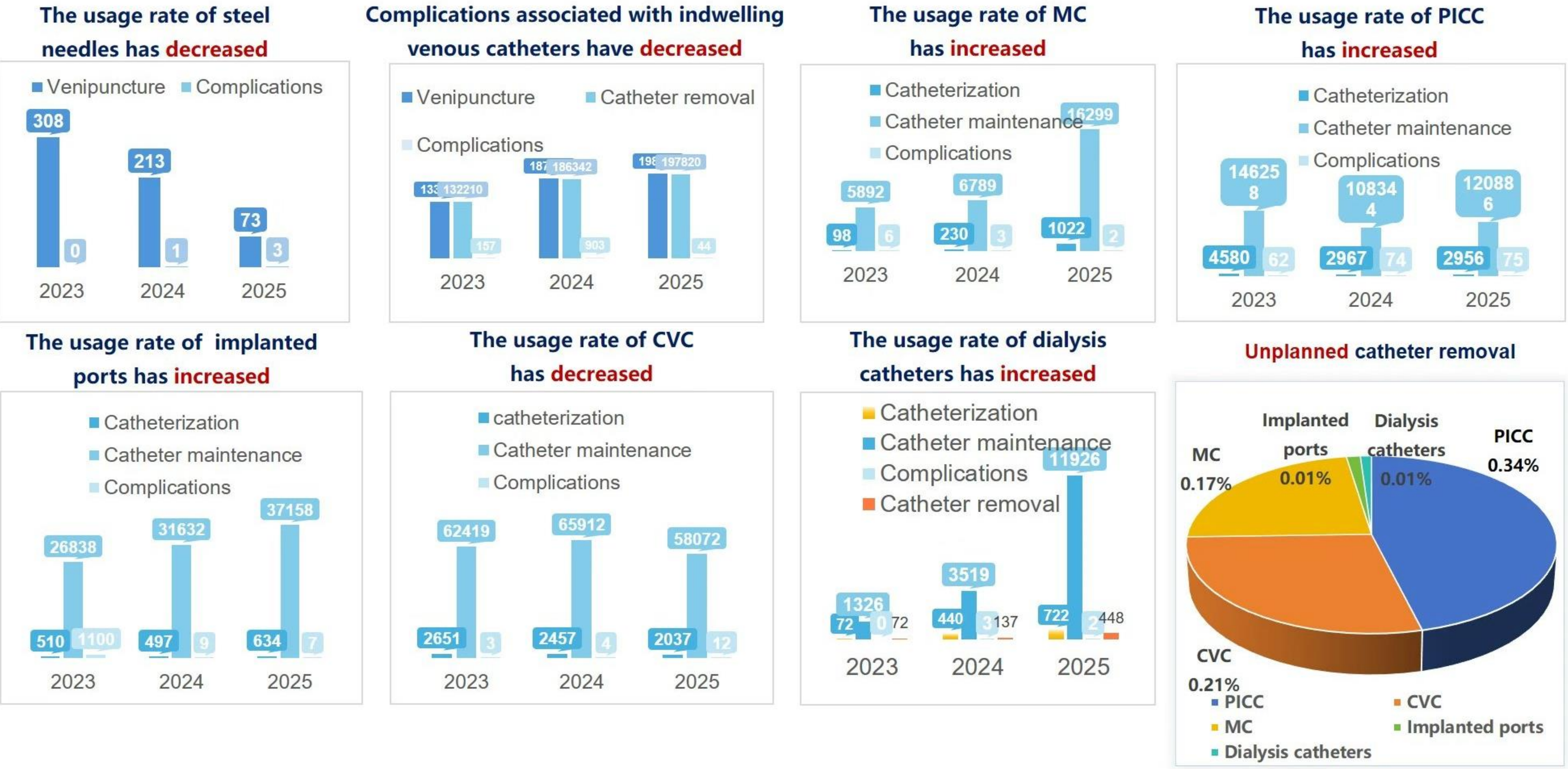


Figure 1