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FMEA- small act can save - or cost - a life

Background

Venous needle dislodgment (VND) from peripheral vascular access during dialysis can cause serious bleeding and is a life-threatening complication of dialysis patients. This is a known event and is described extensively in the medical literature. There are several guidelines to prevent VND from different countries, probably due to the different practices around the world. Given the lack of consensus, we set out to develop our own guidelines according to the practices and experience of our dialysis unit.

Aim

To prevent the incidence of VND in our dialysis unit by implementing new guidelines based on an analysis of needle insertion and fixation.

Method

Failure mode and effect analysis (FMEA) was used to identify key weak points during the needle insertion and fixation, which could lead to possible VND. A team of dialysis nurses and risk management personnel were involved in the process.

Seven stages were identified in the process, with seventy-five possible failures.

Accordingly, we established new guidelines and set up an intervention plan for teaching the team.

A special component was added to the software in which the nurses check the safety of the needles fixation.

We observed nurses and patient behavior before the implementation of the new guidelines and after.

Results

After our intervention, we increased the awareness of this potential complication and succeeded in educating our staff and the patients in managing these events in the following areas: patient education, patient behavior (open area of the AVF, clean arm, and clear cloths) and nursing follow-up of specific components according to the guidelines. Talking to the patients, they felt safer with the new attitude.

Recommendations

To continue follow-up on regular bases

