

**Application of failure mode and effect analysis model to reduce the incidence of venous indwelling needle.**

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**[Abstract]**

**Objective:** To explore the effect of the application of failure mode and effect analysis (FMEA) to reduce the incidence of venous indwelling needle.

**Methods:** By draw method: 100 cases of patients who were treated in the Department of Hematology rehabilitation ward of our hospital from January 2015 to September 2015 and needed with venous indwelling needle, were chosen as object of observation, were divided randomly into observation group and control group, with 50 cases in each group. Observation group applied with FMEA in treatment, and the control group were treated with traditional method of retaining. They were evaluated by catheter blockage, extravasation, accidental pull off / off tube, puncture point infection, indwelling days.

**Results:** Observation group patients with catheter blockage, extravasation, accidental needle removal / de tube incidence was significantly lower than that of the control group, group

differences are significant, with statistical significance ( $P < 0.05$ ); group of patients with infection of the puncture point was observed in the PRN values and indwelling duration was significantly better than the control group, the group differences of ratio was statistically significant ( $P < 0.05$ ).

**Conclusion:** FMEA risk manage mode is advantageous to reduce the incidence of catheter prolapsed, ensure transfusion safety, reduce complications, prolong indwelling time. It is worthy of promotion in the Department of Hematology rehabilitation ward.

**[Key words]** medical failure mode ; effect analysis ; venous indwelling needle; removal rate