Five recommendations for process improvement

1. Enhancing Care
   - To allocate sufficient time for the procedure
   - Delicate a brachytherapy team consisting of 1 radiation oncologist, 3 radiation therapists, 2 physicists and 1 oncology nurse

2. Knowledge based Competency Assessment
   - Development of Protocol & Work Instruction Development of Unit & Area Specific competency assessment

3. Safe & Accurate Treatment Delivery
   - Identify high risk processes that require two independent checks

Critical failures are defined as those with a RPN of greater than or equals to 1 standard deviation away from the mean. This will enable comprehensive evaluation of the process and give greater focus on the failure causes with higher priority.

CONCLUSION

- A total of 85 failure modes and 175 failure causes were identified and quantitatively assessed for risk. 8 of the 85 failure modes (9.4%) were determined to be critical failures.
- Five recommendations were proposed for the purpose of maintaining quality and ensuring patient safety during brachytherapy treatment.
- Benefits of conducting the FMEA:
  - Enabled an in-depth analysis of HDR prostate brachytherapy process
  - Brought about an increased understanding among the team members relating to the identified critical failures
  - Quantitatively identified critical areas of concern, leading to practical recommendations for significant improvement
  - With strict monitoring and awareness of these identified critical failures, the HDR Brachytherapy team had identified 2 Near Misses before actual harm can occur to the patient resulting in dire consequences since implementation of the recommended measures

REFERENCES