FTA for MU Errors in Emergency Calculations

QM interventions and their Effectiveness Hierarchy *

*"Safety Is No Accident", ASTRO 2012

- Interlocks/Forcing Functions
- Automation
- Simplify/Standardize
- Checklists, reminders, double checks
- Policies and Procedures
- Training and Education

Not everything can be interlocked

Key Core Components of QM program
- Standardized procedures
- Adequate staff, physical and IT resources
- Adequate training of staff
- Maintenance of hardware and software resources
- Clear lines of communication among staff

AAPM 2013, B. Miller, et al
TG100 Advice

• “In general it is not a good idea to rely on a single QM step to interrupt the flow of failures.”
  – if that step fails, there is no protection
  – if that step succeeds, you might need to backtrack extensively to identify the root cause

• “…both QM program efficacy and overall process efficiency are enhanced by incorporating multiple QM measures along the way between a possible fault mode and the final process outcome.”

• Additionally (TG100 Appendix G is an example) QM implemented to block a cause at one FM may block others with smaller RPNs

Exercise

• List on your handout at least 4 QM measures that could be implemented to reduce the chance that the ‘wrong dosimetry data’ FM will reach the patient and mark where it could be efficiently placed
  – It is OK – in fact very interesting – to base QM interventions on your own experience