

## Clinical Engineering Project

### Risk Assessment for Kaiser Permanente Clinical Technology Services

By Matthew F. Baretich, P.E., Ph.D.

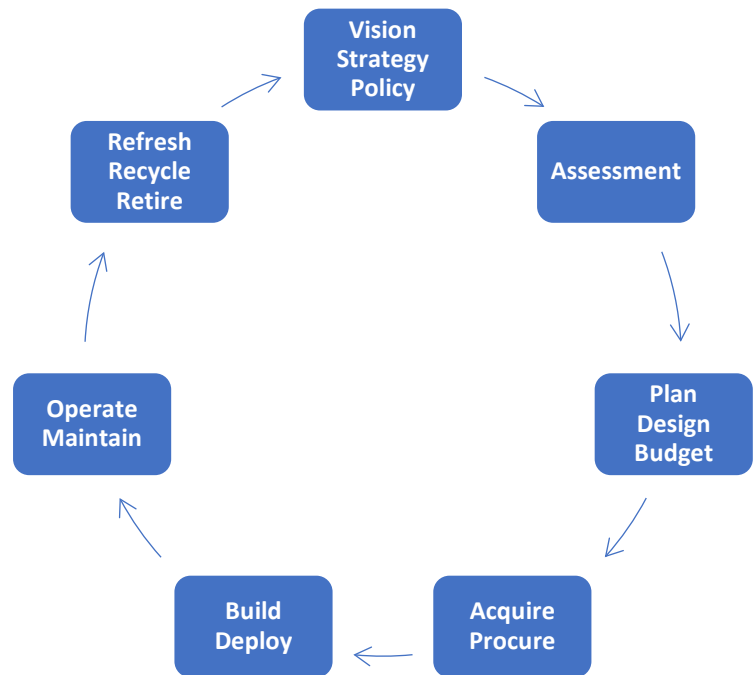
Kaiser Permanente is a healthcare system with operations across the United States. The system is divided into regions that are relatively independent of each other. Clinical engineering — which KP calls *Clinical Technology Services* or *ClinTech* — is also divided into regions. The regional *ClinTech* programs differ in terms of organizational structure, policies and procedures, and CMMS (Computerized Maintenance Management System) software.

KP also has corporate-level functions headquartered in Oakland, California, including a national office for *Clinical Technology Services*. The national office serves an advisory and coordinating body for the regional programs.

In 2012, KP initiated an *Integrated Risk Management* program to address increasing complexity in the healthcare delivery and regulatory environments. In 2014, the *IRM* program began to look at medical technology management with the objective of identifying operational risks associated with *Clinical Technology Services* across the country. Specific types of risk to be assessed included:

- Risks to patient and staff safety
- Regulatory and compliance risks
- Financial risks
- Reputational risks
- Operational and liability risks

Kaiser Permanente contracted with Baretich Engineering to conduct the risk assessment in collaboration with Technology Management Solutions. The project was to address the entire medical technology life-cycle.



The assessment process included more than 40 telephone interviews with a total of over 200 individuals. It also included four site visits across the country. Findings were evaluated in terms of the

impact (magnitude of effect on KP) and likelihood (probability of occurrence), which allowed calculation and prioritization of risk.

The project is described in detail in the Spring 2015 edition of *AAMI Horizons*.

Baretich Engineering conducts numerous assessments of clinical engineering programs across the country including, in Colorado, programs at Denver Health Medical Center and Children’s Hospital

Colorado. We also conduct accreditation compliance assessments across the entire range of Joint Commission Environment of Care and Physical Environment standards organizations ranging from small independent hospitals to large hospital systems.

**References**

Carol E. Davis-Smith, Frank R. Painter, and Matthew F. Baretich. “Assessing Risk in the Kaiser Permanente Clinical Technology Program.” *AAMI Horizons*. Spring 2015.

Tara C. Brady and George Panagiotopoulos. “An Integrated Nine-Step Approach to Managing Clinical Technology Risks.” *Biomedical Instrumentation & Technology*. Sept./Oct. 2017.

Impact	Catastrophic	High	High	Very High	Very High	Very High
	Significant	Medium	Medium	High	Very High	Very High
	Moderate	Low	Low	Medium	High	High
	Limited	Very Low	Very Low	Low	Medium	Medium
	Minimal	Very Low	Very Low	Very Low	Low	Low
		Remote	Unlikely	Possible	Likely	Almost Certain
		Likelihood				