ALARM MANAGEMENT: RESEARCH GAPS  
(Identified by AAMI alarm summit attendees)  
(Highest priorities are marked with an asterisk)

1. **Risk analysis of patient populations within acute care facilities to question who should not be monitored rather than who should be monitored. If patients should be monitored, what should be monitored?** Look at earlier indicators of patient deterioration.  
   - respirator rates  
   - pulse rate/heart rate  
   - systolic blood pressure  
   - pulse oximetry  
   - other

2. **Include in research additional equipment that alarms in patient care systems (e.g. infusion pumps, bed alarms and call bell systems)**

3. **Consolidation of research on alarms management**

4. **Human reliability of clinicians response to alarms**

5. **Work with vendors to ensure you have most recent technology and proper configurations**

6. **Medical devices that live in out-patient and home settings--we need to understand the different challenges**

7. **Look at patient outcomes, not just decreasing the number of alarms**

8. **Look at the staff if we're driving them away; what's the effect of alarms on staff turnover and performance.**

9. **Better techniques and measurement for monitoring respiratory rates**

10. **Determine whether auditory signal should be by priorities and/or type of equipment.**

11. **Trials are appropriately designed with appropriate team; Ensure trials are designed to generate highest level of evidence; Establish good surrogate outcome measures at the front end**

12. **Sleep studies that look at optimal volume of alarms relevant to ambient noise and time of day.**