Adverse Events (AEs)

Factors in the "A E" cascade

1. **The Test Agent / drug pharmacology**
   - The class of the drug - Actions/effects (PD)
   - Expected AE's for the drug class
   - Known effects and AE's of the drug
   - Drug kinetics (T ½ , Tm. Vd etc)
   - Physician experience with the drug

2. **The Human Subject**
   - Age range (infant, child, young adult, adult, elderly e.g.)
   - Sex (Male / female)
   - Status (Married, single other)
   - Weight range (under / target / overweight in terms of %)
   - Normal healthy / Disease state
   - Number of subjects (10 - 10K)

3. **The Adverse Event**
   - Nature (sign, symptom, lab result, disease state, environment)
   - Relationship to the Test agent
     i. Related
     ii. Probably related
     iii. Possibly related
     iv. Remotely possibly related
     v. Unrelated
   - Grouping per "MEDRA" or "COSTART"
   - Tabulation (time, severity, system)

4. **The Decision is made by a physician on the basis of:**
   - Knowledge of the test agent/drug pharmacology
   - Pathophysiology of the disease state if present
   - Timing of the AE to exposure to the test agent/drug
   - Grouping of AE's in a body system or at a time period
   - Study factors
     i. number of blood draws
     ii. volume of blood taken for the study
     iii. ability of the technicians
     iv. ambient temperature / humidity
     v. quality of the meals
     vi. opportunity for socialization
     vii. group dynamics