## Identifying Hazards in the Cardiac Operating Room\*



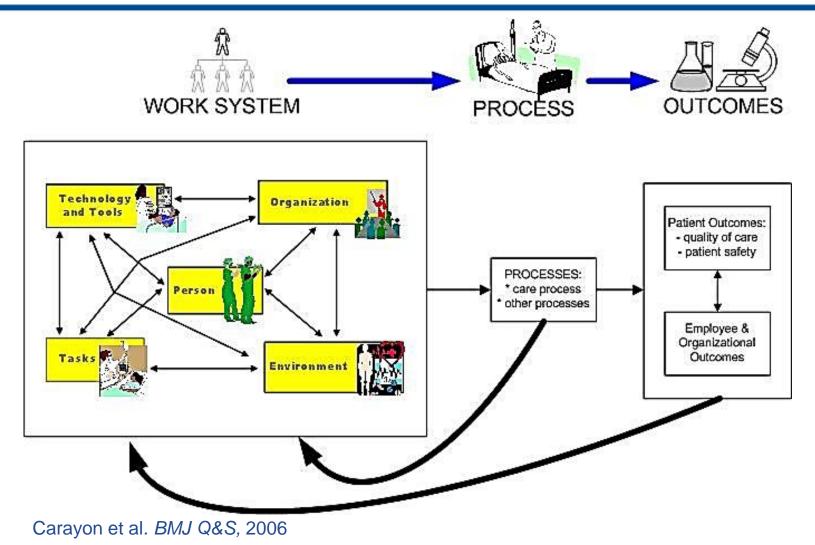
- Event-driven, nonlinear, unpredictable systems
- Team-based, high workload, interruptions
- TECHNOLOGIES in THE WILD! \*



<sup>\*</sup> Gurses et al., 2012 BMJ Q&S; Pennathur et al., Ergonomics, 2013

## **SEIPS Model of Work System and Patient Safety**





## **Systems Ambiguity\***



- Task ambiguity
- Responsibility ambiguity
- Expectation ambiguity
- Method ambiguity
- Exception ambiguity

<sup>\*</sup> Gurses et al. (2008) Systems ambiguity and guideline compliance, *BMJ Quality and Safety*, 17:351-359

## **Nurse Coordinator's Clipboard**





Whitening out non-essential items



Taping print-outs of two adjacent units



Cutting out unnecessary parts



Transferring information from the old clipboard