

**1 Accident Aftermath**

Accident / incident investigation normally stops with human error by practitioners as the 'cause' of the event.

**5 Cycle of Error**

Organizational reactions to failure focus on human error. The reactions to failure are: blame & train, sanctions, new regulations, rules, and technology. These interventions increase complexity and introduce new forms of failure.

**2**

Practitioners work at the *sharp end* of the system. The *blunt end* of the system generates resources, constraints and conflicts that shape the world of technical work and produce latent failures.

Modified from Woods, 1991

**6**

Competing demands, dilemmas, conflicts, and uncertainty are the central features of operations at the sharp end. Technical and organizational conflicts overlap and interact.

**3 Triggers**

Complex systems fail because of the combination of multiple small failures, each individually insufficient to cause an accident. These failures are *latent* in the system and their pattern changes over time.

Modified from Reason, 1990

**7**

Work at the sharp end inevitably encounters competing demands for production and failure-free performance. Action resolves all dilemmas. Successful operations are the rule. Failure is rare.

**4**

Post-accident reviews identify *human error* as the 'cause' of failure because of *hindsight bias*. Outcome knowledge makes the path to failure seem to have been foreseeable - although it was not foreseen.

**8**

**People make safety.** Workers at the sharp end usually bridge gaps and prevent failures. The resilience of the system is the result of this activity, which forms much of *technical work*. Productive approaches support this activity. ⇒

## Readings - A Perspective for Healthcare People – 2005

Items marked with **CL** are available in PDF at the CtL website

Items marked with \* are 'read first' entry points to the subjects

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