



Hospital Peer Alert

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Hospital Peer Review is a monthly newsletter sponsored by the Rural Healthcare Quality Network to alert Critical Access Hospitals regarding findings from the Peer Review Program. Summarized are a few of the key findings and best practices that would be helpful for other critical access hospitals to be knowledgeable about. This newsletter is edited by Myron Bloom, Medical Director and he can be reached at drmbloom@msn.com

Complexity Theory and the risk of Entrained Thinking

A clinician's framework for decision-making

Adapted from a "Leaders Framework for Decision Making" November 2007, Harvard Business Review.

Often clinicians are surprised when previously successful treatment plans fail. But before choosing a treatment plan, the clinician needs to recognize the degree of complexity or what "context" is present because the complexity or "context" of the case may require a different course of action. As order dissolves and the individual particulars of a case become more complex, plans built on generalizations and expectations built on previous experiences may fail.

Complexity theory is a way of systems thinking. A system is dynamic, with a number of interacting elements; the interactions are nonlinear and minor changes can produce disproportionately greater consequences; the whole is greater than the sum of its parts; and solutions can not be arbitrarily imposed but must be consistent with the context of each case.

Complexity theory sorts situations into five contexts defined by the state of (dis)order and the relationship between cause and effect. Four (simple, complicated, complex and chaotic) require clinicians to identify the situational context and to act in a contextually appropriate way. Clinicians must tailor their treatment plan to fit the complexity of the circumstances. The fifth context, chaos or disorder - applies when it is unclear which of the other four contexts is operant.

Simple Context - the domain of accepted best practice

The "Simple Context" is characterized by order, and a clear cause and effect relationship; and the correct "answer" is usually self evident and undisputed. The "simple context" is the realm of "**known knowns**" and all caregivers will share in a common understanding. Clinicians need to only **PERCEIVE, CATEGORIZE and then ACT**: that is assess the facts, make a diagnosis, and then base their plan on established best practice. Adhering to best practices and processes make sense. The "simple context" when correctly assessed will require only straightforward management. A simple **command-and-control** style works and is efficient. Orders are straightforward and subsequent decisions can be easily delegated. The clinical functions are more or less automated. Extensive communication among physicians and staff is not required because there is agreement about what needs to be done. Nevertheless problems can arise even in the simple context: 1) the **issue may be incorrectly categorized** because the situation has been **oversimplified** (Practitioners who ask for condensed information regardless of the true complexity of the of the situation particularly run this risk), 2) practitioners are susceptible to **entrained thinking**, a conditioned response that occurs when people are blinded by the opinions

they have acquired through past experience, and 3) when things appear to be going smoothly the clinical management becomes **complacent** and then unanticipated change is likely to be overlooked and correction comes too late.

Complicated context - the domain of experts

The "Complicated context" suggests multiple possible "solutions", and though there is a relationship between cause and effect, it is more difficult to see. This is the realm of **known unknowns**. In a complicated context clinicians must **INVESTIGATE, ANALYZE and then ACT**. Diagnosing is not simply categorizing and requires more expertise, and **entrained thinking** is an even greater danger. Unfortunately even the "experts" are prone to entrained thinking, and questions or suggestions raised by the "non-expert" may be ignored or overlooked. Another potential obstacle is analysis paralysis with the decision-maker hitting a stalemate unable to determine a course of action. When the adopted solution no longer fits the situation, answers must be sought rather than fixes imposed.

Complex context - the domain of emergence.

While in a complicated context correct answers exist, in a "Complex context" correct answers are more difficult to ferret out if they exist at all. Instead of imposing a course of action, it is necessary to allow the unique correct path forward to reveal itself. First **EXPERIMENT, then ANALYZE and then RESPOND**. Conduct experiments that are safe to fail as well as succeed. A concern is the temptation to fall back into a command-and-control management style which will preempt the opportunity for informative patterns to emerge. Trying to simply impose order in a complex context will inevitably fail.

Chaotic context - the domain of rapid response required.

In a chaotic context searching for "right answers" is pointless; the relationship between cause and effect are impossible to determine because they shift constantly and no simple management pattern exists. This is the realm of **unknowables**. And the practitioner's immediate job is not to discover patterns but to staunch the bleeding. The practitioners must first **ACT to establish order and control, and then ANALYZE where stability is present and where it is absent, and then RESPOND** as emerging patterns can be identified to help prevent deterioration and discern the best course of treatment. There is simply no time to ask for input, immediate action is necessary.

Chaos -Disorder – the domain in which there is no discernable relationship between cause and effect. Initiate command and control and divide the situation into more manageable parts.

	CHARACTERISTICS	THE LEADERS JOB	DANGER SIGNALS	RESPONSE TO DANGER
SIMPLE CONTEXT Categorize then best practice	KNOWN KNOWNS Fact based management Repetitive obvious patterns Clear cause and effect relationships evident to everyone Identified answers exist and corrections easy	PERCEIVE CATEGORIZE then ACT Ensure the proper processes are in place Communicate in clear direct ways Delegate best practices Extensive interaction may not be necessary	Comfort and Complacency Mistaking complicated problems as more simple Entrained thinking Not challenging current perception Reliance on best practice as the context shifts	Effective communication Staying connected without micromanaging Challenging perceptions Not assuming things are simple Recognize both the values and the limitations of best practices
COMPLICATED CONTEXT Analyze then respond	KNOWN UNKNOWNNS Fact based management Expert diagnosis required Cause-and-effect relationships are discoverable but not immediately apparent	INVESTIGATE ANALYZE then ACT Question perceptions Seek other's expert opinion and advice Solicit conflicting as well as confirming opinions More interaction required	Practitioners overconfident in their own solutions Entrained thinking and the efficacy of past solutions Expert opinions are heard but those of non-experts excluded Analysis paralysis	Encourage other care providers to offer opinions Challenge opinions to combat entrained thinking Divide the situation into more manageable parts invoking command and control
COMPLEX CONTEXT Test for solution emergence	UNKNOWN UNKNOWNNS Pattern based management Change and unpredictability Many competing ideas Emergent instructive patterns requiring consultation and innovative approaches	EXPERIMENT ANALYZE then RESPOND Experiment to allow patterns to emerge that are safe to succeed or fail Increased levels of probing, observation, staff interaction, communication, consultation, and deliberation required	Temptation to look at facts, declare truths and impose solutions rather than allowing patterns to emerge and be discovered Temptation to fall back into command-and-control model Desire for premature resolution	Use approaches that encourage interaction so that patterns can be discovered Be patient and allow time for discovery, analysis and response
CHAOTIC CONTEXT Immediate action required	UNKNOWABLES Pattern based management No clear cause and effect relationships Looking for simple right answers unproductive if not impossible Many decisions to make with little time to think	ACT ANALYZE and RESPOND Look for what works instead of seeking answers Command-and-control Clear direct communication Take immediate action to establish some order	Applying a command-and-control approach when it is no longer needed and is counterproductive Missed opportunities Chaos unabated	Encourage others to challenge the operant point of view once the crisis has abated Work to shift the context from chaotic back to complex