A motivational model of medical error response – Preventing disclosure or promoting improvement?

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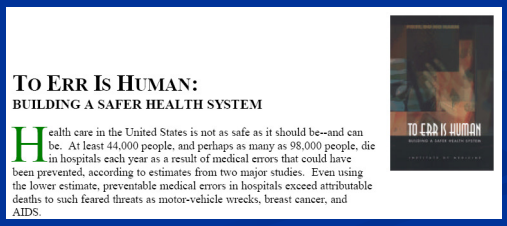
What is the problem in medicine?

Human variability

"Men and machines are just different"

Because "To err is human" the system needs to be made safer through standardization and guidelines (build in system defenses)…



TO ERR IS HUMAN:
BUILDING A SAFER HEALTH SYSTEM

Health care in the United States is not as safe as it should be--and can be. At least 44,000 people, and perhaps as many as 98,000 people, die in hospitals each year as a result of medical errors that could have been prevented, according to estimates from two major studies. Even using the lower estimate, preventable medical errors in hospitals exceed attributable deaths to such feared threats as motor-vehicle wrecks, breast cancer, and AIDS.

Effects of standardization

- Easy things have become easier and more routine (though not entirely accomplished)
- Complex things are still complex
- Complexity is threatened by the ease of simplicity – it is so nice to just follow a rule and stop thinking
- In simplicity, doctors become "documentation drones" – the task process overrides the content

The life after standardization…

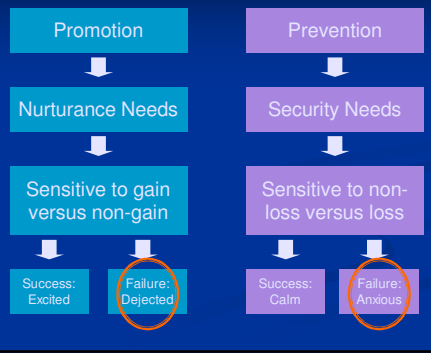
- There is still variability although
  - There are many rules
  - Doctors are supposed to be perfect and not make any mistakes ;-)
- This raises the question whether
  - The system approach has solved the problem of human variability and whether
  - It is still the human being who makes decisions in health care based on his/her preferences…

Human error response counts!

Getting from blaming to learning opportunity…

Exploring the role of individual motivation in managing medical errors

Regulatory Focus Theory (1997)



A motivational model of error response

	NEEDS	MOTIVES	MOTIVATIONS	STRATEGY	*AFTER-ERROR RESPONSE*
Promotion	nurturance	*Achieve* growth & advancement	*SELF* (extra-role behavior)	Ensuring *hits* through exploring new knowledge, less generalization, pos. counterfactuals	Open error discussion, Willingness to *admit* error, *Taking on* accountability, *No blaming* of others
Prevention	security	*Fulfill* duties & responsibilities	*EXTERNAL* (role-conformity)	Ensuring *correct rejections* by relying on heuristics, past knowledge and neg. counterfactuals	*Difficulties to talk* about error, *Denial* of error, *Refusal* of accountability, *Blaming* others

Hypothesis: promotion motivation is associated with effective error response

After-error response	High promotion	High prevention
Attitude to error (openness, denial, accountability)	***Open to error***, willing to accept the responsibility {Succeed b/c of learning from the errors}	***Deny error***, deny the responsibility {Fail b/c of committing the errors}
Blame Others	No	Yes

Research Method

Step 1	**Face to face interview on three sets of questions:** **a) Standard practices;** **b) Reaction to errors;** **c) Tactics to handle errors**
Step 2	**Word frequency count to identify:** **a) Individuals' motivational systems;** **b) Affective experience when talking about errors.**
Step 3	**Experience coding:** **a) Attitude towards error;** **c) Blaming actions.**

Identify Individuals' Promotion and Prevention Orientations

Word Frequency as a way to identify Individual difference: the no. of the words in the category / the total no. of the words in the interview.

- Use word frequency to define a character (Pennebaker & King, 1999)
- The promotion vs. prevention lists were developed by experts and used in past decision making studies.
- Promotion: M = 0.53, Sd = 0.24
- Prevention: M = 0.32, Sd = 0.17

Promotion	Prevention
ideal	ought
hope	responsibility
wish	necessity
advance(ment)	protect(ion)
eager(ness)	vigilant/vigilance
hit	correct rejection
promote	prevent
aspire/aspiration	cautious
add	careful
maximize	avoidance
open	duty
attain(ment)	obligation
support	defend
nurture	safety
challenge	security
new	must
novel	should
	stop
	omit
	stable

Regression analyses

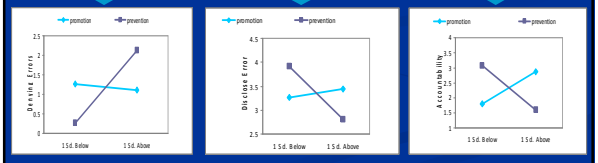
- Control Variables: Sex, Age and Experience
- Independent Variables: Promotion and Prevention
- Dependent Variables: Attitude to Errors (Openness, Denial, Accountability) , and Blaming Tactics

Attitude to Error

Prevention-focused physicians are more likely to deny error.

Prevention-focused physicians are less likely to disclose errors.

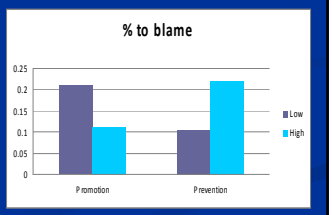
Promotion-focused physicians are more likely to feel accountable for errors.



* Standardized Bs > 0.4 , $p_s < .04$

Blaming tactics

Highly prevention-focused physicians are more likely to blame others for errors.



* **Logistic Regression**, $B = 6.42, p < .06$

Implications

- Past and current error management strategies in health care organizations use traditional prevention strategies (SOPs, guidelines etc.).
- Higher promotion motivation seems to be the basis for enhanced error management (online chatrooms, promotion of learnings etc.).
- Physicians are redefining their role in highly complex organizations – addressing their motivations through targeted incentives is key.

Many thanks for your interest and attention.

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