

12<sup>th</sup> ICCRTS  
“Adapting C2 to the 21<sup>st</sup> Century”  
Worried Well: State of Research, Proposed Metrics, Promising Modeling Directions, and  
Requirements for Experimentation

Potential Topics: Modeling and Simulation; Cognitive and Social Issues; and Metrics and  
Assessment

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## ABSTRACT

The threat of severe consequences from an uncertain exposure to a dangerous agent may compel major behavioral changes. For example, in 2001 following the anthrax attacks involving the US Postal Service, 22 people developed illness and five died, but over 32,000 began treatment with antibiotics. Emergency managers anticipate a need to understand and handle the needs of “worried well” individuals who have not developed illness, but are concerned that they have been exposed to a serious threat of illness. Appropriate management of these needs requires a more comprehensive understanding of the motivations and behaviors of the worried well, and also demands tools supporting experiments to test strategies for minimizing the burden the worried well will place on the healthcare delivery system.

This paper comprehensively summarizes the research that has been reported on the motivations, behaviors, and control of the worried well. We then suggest metrics for describing the worried well phenomenon. From this basis, we proceed to suggest promising approaches to modeling the behavior and responses of the worried well in a range of situations. Finally, we describe experiments to validate and utilize the modeling techniques, and identify additional research required to refine these tools.

End of abstract. Draft Outline follows

1. Description of phenomenon
2. Summary of research
  - a. behavior
  - b. motivations
  - c. response to communications and control
3. Metrics (what is appropriate for measuring the worried well phenomenon, and the behavior of individuals seeking care for illness they fear they may have)
  - a. Description
  - b. Defense
4. Modeling considerations, based on the phenomenon and the metrics
  - a. Information required
  - b. Gap analysis
  - c. Approach recommendations
5. Experimental proposals
  - a. Validation
  - b. Utilization (how would one use the models to support experiments)
6. Additional research recommendations