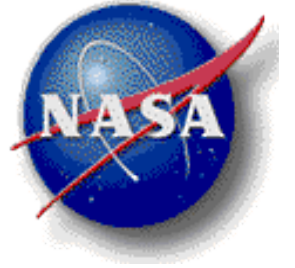




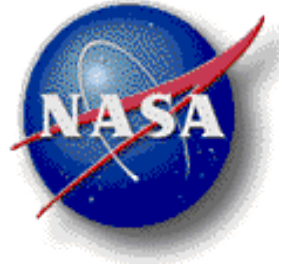
**Society for Pediatric Anesthesia &  
American Academy of Pediatrics  
2019 Annual Meeting**



# *Why You Might Feel Drained at the End of the Day: Workload and the Anesthesiologist*

**Barbara Burian, Ph.D.**  
NASA Ames Research Center  
Moffett Field, CA





# Disclosure Information

*SPA-AAP 2019 Annual Meeting*

*Barbara K. Burian, Ph.D.*

I have no financial relationships to disclose although SPA is graciously covering most of my travel expenses to this meeting.

I will not discuss off-label use and/or investigational use in my presentation.

# Overview

---

1. What is Workload?
2. Multitasking and Concurrent Task Management
3. Common Workload and Task Management Assumptions
4. Workload Self-Sabotage
5. Workload Management Techniques and Strategies

# *What is Workload?*

---

**Workload** = number of tasks to perform?

Literature refers to this as “taskload” not “workload”

**Workload** = number of tasks to perform in a given amount of time?

**Workload** = number of tasks to perform in a given amount of time  
and amount of effort require to perform the tasks?

# *What is Workload?*

---

## **Multiple aspects of workload:**

**Physical** – physical exertion/effort required, level of activity

**Cognitive** – mental effort required, task complexity, habitual vs. novel tasks, number and types of manage at the same time

**Social/Interpersonal** – how many people, who, roles relative to yours?

**Temporal** – absolute amount available, rushed vs. relaxed, steady vs. variable

**Contextual and Personal** – work schedule, personal evaluation of task performance, fatigue/hunger/thirst, physical health, external work/life

# Multitasking & Concurrent Task Management

---

**More tasks than time? Several tasks must be accomplished at the same time?**

**Multitasking** – completing two tasks at exactly the same time

- Rarely actually accomplished
- Typically limited to tasks requiring separate sensory modes (visual, auditory, tactile, etc.)
- Unless all tasks are habitual, there will be a cognitive/temporal cost

**Concurrent Task Management (CTM)** – Interleaving tasks

- Also cognitive costs: remembering what you last did, what you need to do next, that you need to switch between/among tasks (creates a prospective memory task)

# Common Workload and Task Management Assumptions<sup>1</sup>

---

**Linearity** – tasks are comprised of subtasks that are completed in a linear, step-by-step fashion

**Predictability** – tasks to be performed can be predicted, the order in which they are to be performed is predictable

**Controllability** – you have control over how/when you perform your tasks

<sup>1</sup> Loukopoulos LD, Dismukes RK, Barshi I. *The multitasking myth: Handling complexity in real-world operations*. Ashgate. Surrey, England, 2009.

# Workload Self-Sabotage

Linear  
Predictable  
Controllable

1. Lack of adequate preparation/anticipation
2. Chew up/lose time
3. Create chaos/disorder
4. Mis-prioritize tasks
5. Allow yourself to be distracted
6. Go it alone
7. Don't communicate clearly
8. Forget to create adequate prospective memory cues
9. Forget to create Plan B, Plan C, and Plan "in case of emergency, break glass"
10. Inadequate self-care, impoverished sense of humor, limited community



# Workload Management Techniques and Strategies

Linear  
Predictable  
Controllable

1. Accept that you don't "multitask" as well/efficiently as you think you do
2. Treat yourself as an N of 1 case study – do a short de-brief at the end of each workday for a week – write your observations down
3. Identify and evaluate how you may be self-sabotaging your workload management – be more mindful of when you are doing this, try to develop new habit patterns
4. Identify choke points in your workload/task management, look for themes, brainstorm and experiment with ways to eliminate them
5. Identify systemic/organizational changes that could reduce workload

# *Thanks!!*

---

## Questions? Comments?

**Barbara Burian, Ph.D.**

**Barbara.K.Burian@nasa.gov**

**Flight Cognition Laboratory**

**<http://humansystems.arc.nasa.gov/flightcognition/>**