The Future of Nutrition Support Research: Putting Principles into Practice?

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JPEN NEEDS REVIEWERS !!

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The Ideal Therapeutic

- Clinically Effective
- Widely applicable
- Little or no adverse effects
- Inexpensive
- Physiologically Justifiable/Translational Data
- Easy to administer
- Can be used as pre-treatment to prevent disease and complications

- Only one class of agents can make these claims:

Nutritional Therapeutics
SO... the real questions are...

- What data do we need to do to begin to answer our questions
- But first a brief word about evidence-based medicine and...
- How we apply new data to practice
First things first…

What evidence should you rely on to guide your clinical decisions…
Outcomes

- Mortality
- Morbidity
- Quality of life
- Length of stay
- Costs
- Metabolic milieu
- Physiological functions
- Lean body mass
- Body weight
- Gut flora
Evidence-based Medicine is only meaningful when...

WE EXAMINE ENDPOINTS THAT MATTER!
PHILADELPHIA—In a medical breakthrough that should come as welcome news for millions of at-risk Americans, University of Pennsylvania cardiologists announced Saturday that taking one aspirin tablet and a fifth of bourbon daily can significantly reduce an individual's awareness of heart attacks.

“This study represents a major victory in the fight against heart disease, America's number-one killer,” Dr. Arthur Katzeff said. “Each year, two million Americans clutch their chests in terror...
Americans are excited about the findings.
“My four heart attacks were all hellish,” said Ronald Diering, an Evansville, IN, auto mechanic. “I was aware of everything that was happening, and I was gripped by the fear that I was going to die. But with this new aspirin-bourbon treatment, future heart attacks should be much less traumatic.”

“Who wants to spend what could be their last moments on Earth in sheer terror?” said Alex Broadhurst of San Jose, CA. “Better to enjoy another bourbon and lie on the floor waiting for the ambulance to show up.”

Researchers said individuals who take aspirin and bourbon in an attempt to prevent heart attacks may experience various side effects, including slurred speech, impaired vision, and vomiting.

Upon waking up from a heart attack, researchers said, there is also a chance of having “a wicked hangover.” In such cases, victims are strongly advised to avoid bright lights and not move around too much.
How do we make our decisions ???

1) Do we follow the evidence or our biases ?
2) Do we actually understand the evidence or just follow the crowd ?
3) Are we critical thinkers ??
Critical Thinking

- “A great many people think they are thinking when they are merely rearranging their prejudices.”

William James
Tolerate uncertainty

- Science is self-correcting
- What appears to be persuasive today, may not look so persuasive tomorrow...
- ...Such as tight glucose control
Evaluating the research..the ideal

Ideal:

- Several well-conducted RCTs,
- With consistent results,
- All with patients like yours,
- Summarized in one objective and comprehensive systematic review
The Goal

✧ Keeping up with and critically evaluating information so as to provide quality patient care and feel good about what we do.
Are We Failing?

- Recognizing Failures In Communication And Learning
- Pre-Internet “Tipping Points” were hard to achieve
  - Fineberg 1987: Of 28 “Landmark” trials, only 2 had immediate (1-2 year) effect on clinical practice
Lag time from time of “knowing” to time of implementation

✧ 13 yrs for thrombolytic therapy.

✧ 10 yrs for corticosteroids to speed fetal lung maturity.
<table>
<thead>
<tr>
<th>Group</th>
<th>Reading Time Per Week</th>
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<tbody>
<tr>
<td>Medical students</td>
<td>60 min.</td>
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<tr>
<td>Interns</td>
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<tr>
<td>Senior residents</td>
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<tr>
<td>Fellows</td>
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<tr>
<td>Attendings graduating</td>
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<tr>
<td>Post 1975</td>
<td>60 min.</td>
</tr>
<tr>
<td>Pre 1975</td>
<td>30 min.</td>
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Do We Read?

✦ University of Virginia
✦ Mailing to primary care physicians
✦ 50% had not read medical journal article in last year.
✦ The most commonly sited source of information was pharmaceutical representatives.
So what does lead to big changes in medical practice in the modern information age?

✦ Do they happen fast enough?
✦ More often then before...

✦ Do they happen to fast ??
✦ Sometimes...
So How Should We Proceed ??