

Why the Need for Research in Health Care Technology?

Elizabeth A. Krupinski, PhD
Department Radiology & Imaging Sciences
Emory University

Southwest Telehealth Resource Center
Arizona Telemedicine Program



EMORY
UNIVERSITY
SCHOOL OF
MEDICINE



Scandium
21
Sc
44.956

Iodine
53
I
126.0

Neon
10
əN
20.180

Cerium
58
Ce
140.12

Iodine
53
I
126.0

Sulfur
16
S
32.065

Cobalt
27
Co
58.933

Oxygen
8
O
15.999

Iodine
53
I
126.0

Naysayers

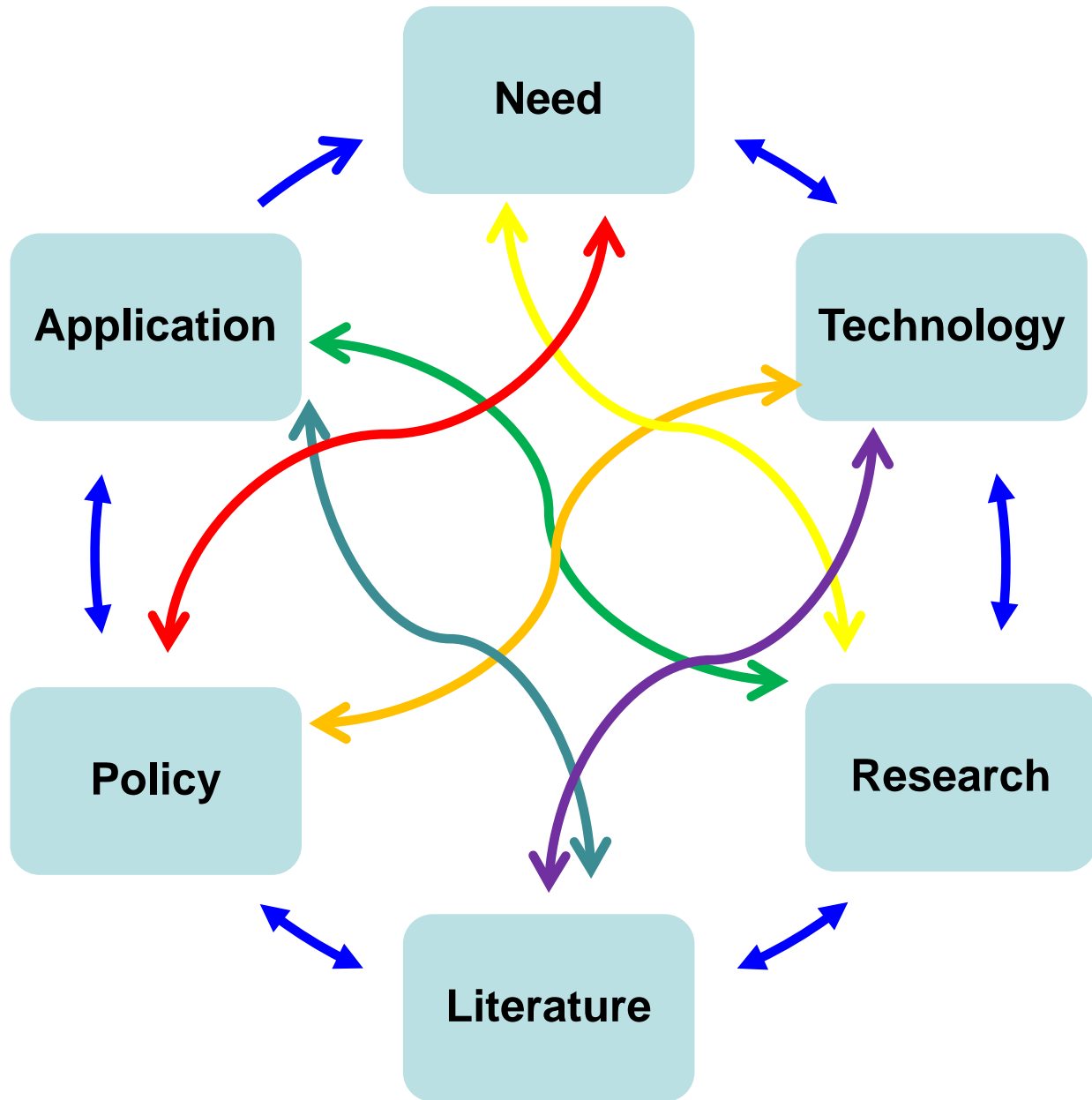
- **TH exists & being done**
- **It's up to industry now**
- **Need education & training not more research**
- **It's up to industry now**
- **Lots of systematic reviews & meta-analyses documenting evidence**
- **It's up to industry now**
- **Those darn, siloed academics**

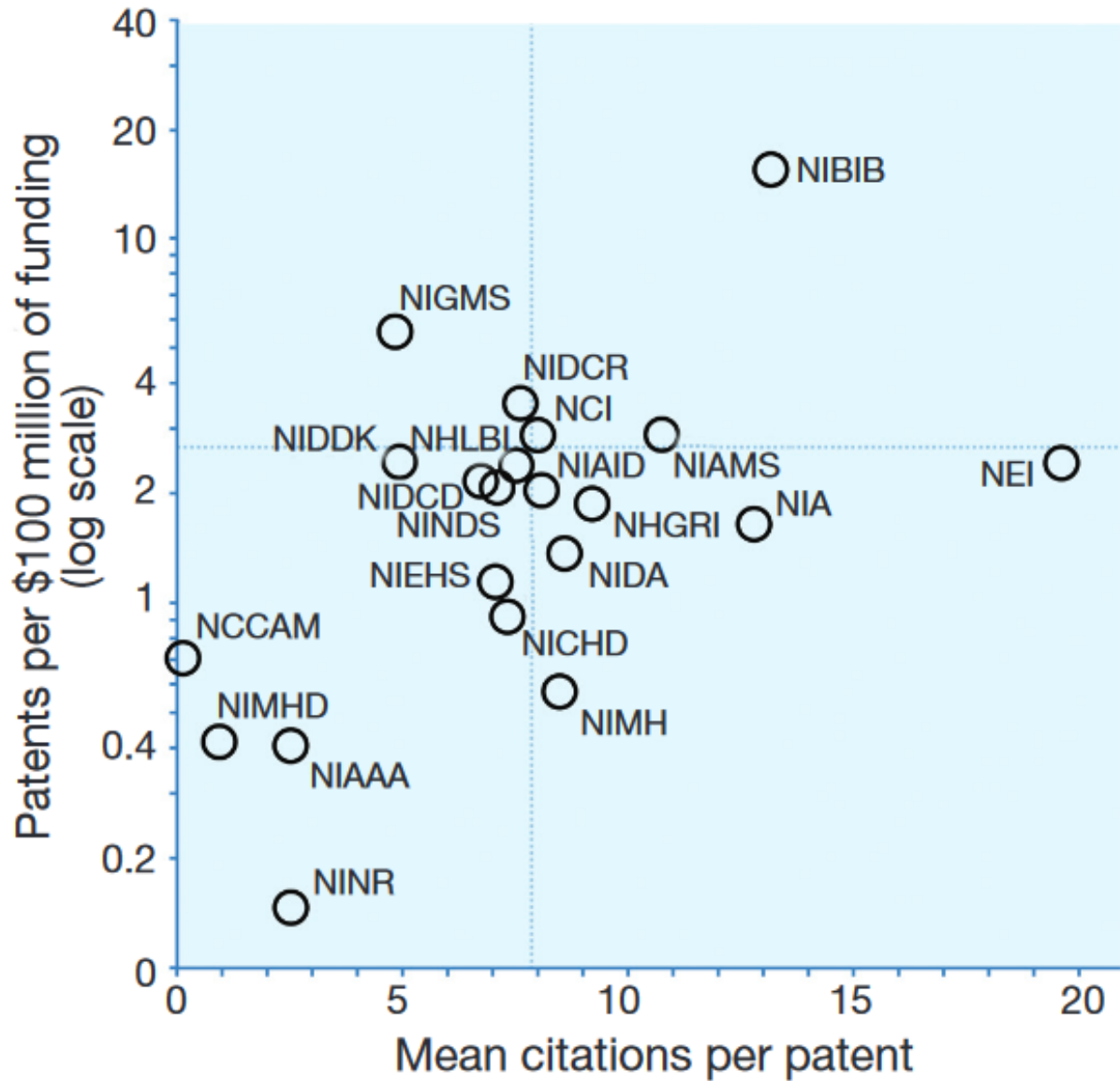


Yeasayers

- “All I’m armed with is research.” **Mike Wallace**
- “The more important reason is that the research itself provides an important long-run perspective on the issues that we face on a day-to-day basis.” **Ben Bernanke**
- “Research is creating new knowledge.” **Neil Armstrong**
- “Google' is not a synonym for 'research'.” **Dan Brown**







Kalutkiewicz & Ehman Patents as proxies: NIH hubs in innovation.
 Nature Biotech 2014;32:536-537

Telehealth Overview: The Reality Check, Please

The trend lines and bar charts are marching up. Investors are investing, insurers are extending coverage, health care systems are getting on board. But there are some skunks at the telehealth garden party: research suggesting quality and utilization problems and lingering uncertainty about reimbursement.

So, if not a full-on buzzkill, the results from a study reported last month in *Health Affairs* were a bit sobering. Lori Uscher-Pines, a respected Rand researcher who has conducted many of the most important telehealth studies, and her colleagues found that the Teladoc services provided to California Public Employees' Retirement System beneficiaries increased annual spending on acute respiratory illness by \$45 per telehealth user. What's more, about 88% of the usage was new utilization, not a replacement for more expensive care at a physician's office or in an emergency department.

In an interview with MANAGED CARE, Henry DePhillips, MD, Teladoc's chief medical officer, said the company's research, which has not been published in a peer-reviewed journal, has found just about the opposite: considerable cost savings and a minor increase in utilization (see page 30). And the company had criticisms, noting that the study was at odds with "numerous other independent studies," that the cost calculations were based on a limited period (the day of the Teladoc "visit" and two days after), and that it used claims data that are a few years old.

Duality Dilemma

- **Clinical outcomes: overall metrics specialty**
 - # patients receive diagnosis after consult
 - Adherence to recommended FU
 - Reduction disease incidence, burden, etc.
- **TH outcomes**
 - Accuracy IP vs tele
 - # receive consult when not locally available
 - Reduction wait times, travel, anxiety
 - Cost comparisons



Topics

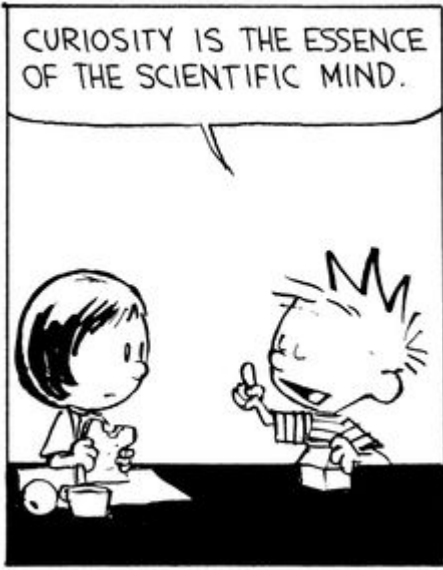
- **Wearable sensors & related**
 - **Safety, data reliability/validity/utility/ownership**
- **Long-term (really)**
- **Direct-to-consumer**
 - **Safety, data reliability/validity/utility/ownership**
- **Multi-institutional trials**
 - **Diverse populations, large sample sizes, standardized protocols, standardized controls etc. etc. etc.**



SEARCH

- **Support for advancing connected health initiatives & improving connected healthcare**
- **Unbiased, impartial research**
- **Education/training in connected health research methods, interpretation & dissemination**
- **Advancing evidence-based connected health**
- **Informing health policy leadership on connected health research & its importance**





EMORY
UNIVERSITY
SCHOOL OF
MEDICINE



Questions?

ekrupin@emory.edu



EMORY
UNIVERSITY
SCHOOL OF
MEDICINE

