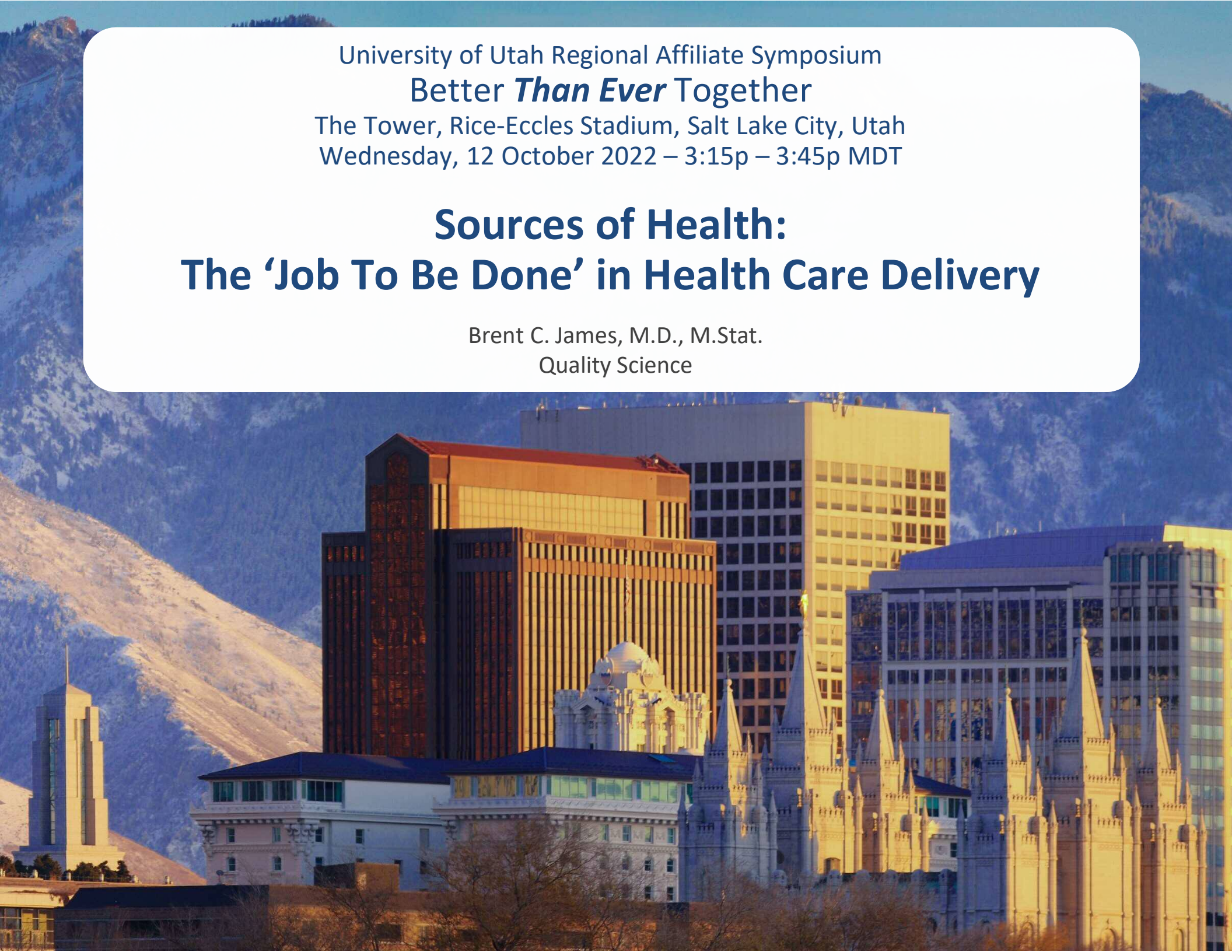


University of Utah Regional Affiliate Symposium  
**Better *Than Ever* Together**  
The Tower, Rice-Eccles Stadium, Salt Lake City, Utah  
Wednesday, 12 October 2022 – 3:15p – 3:45p MDT

# **Sources of Health: The ‘Job To Be Done’ in Health Care Delivery**

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Quality Science



# Disclosures

*I receive a monthly retainer as a part-time (3 days / month) senior advisor for **Health Catalyst**, and OWN (a small amount of) Health Catalyst stock.*

*I serve on the board of directors of **SaVia**, a start-up, privately-held software company that supports clinical workflow design.*

*I also serve on an advisory board for **Amplifire**, a privately-held company that provides computer-based health care education products.*

*Neither I nor any family members have any other relevant financial relationships to be directly or indirectly discussed, referred to or illustrated within the presentation, with or without recognition.*

# Dr. Clayton Christensen *(Harvard Business School)*

*A business model has 4 interlocking, interdependent elements that, taken together, create and deliver value:*

1. **A value proposition** – a product or service that helps customers do more effectively, conveniently, or affordably **a job that they've been trying to do.**
2. **Resources** the business must put in place to deliver the value proposition.
3. **Processes** that create the product or service – visible, codified and consciously monitored and managed.
4. **A profit formula** that defines the gross and net margins the organization must achieve in order to survive.

# **The job to be done** *in health care delivery*

*What is the “product or service” that patients seek when they come into a health care delivery setting?*

# ***The backstory of modern health care delivery***

# Charles II, *the Merry Monarch*

*the Father of His People - or, as the Duke of Buckingham added, "at least a good many of them"*

**1685: had a "fit" (seizure) while shaving**

**Was treated by:**

- bleeding him "one kwart"
- repeated forced vomiting
- use of a strong laxative
- shaving his head and applying a blistering agent to his scalp
- application of pigeon-dropping plasters to the soles of his feet
- feeding him stones from the bladder of a goat, and
- 40 drops of extract from a dead man's skull



***No record of further complaints***

# 1900, United States of America

*The most common treatments used for any health problem were ...*

- *blood-letting* (leeching)
- *purgatives* (chemically induced vomiting and diarrhea)

*(humoral theory of disease, arising with the ancient Greeks)*

# An interesting fact

*As long as there have been humans on the planet, best we can tell, the healing professions have played a central role in human society* (e.g., Babylonian Code of Hammurabi, ~1754 BC)

*But ...*

*for most of that time, when a person went to see a typical “healer,” their chances of survival went **down***



**Given that sad fact** *(no real cures) ...*

*What was it that the healing professions were supplying, that made them so important in human society?*

# The emergence of modern medicine

**~1860 - 1910:**

◆ ***new high standards for clinical education***

- *Flexner Report: more than half of all U.S. "medical schools" shut down*
- *new model: hospital-based 2 year course of study (integrated clinical exposure)*

◆ ***strict requirements for professional licensing***

◆ ***clinical practice founded on scientific research***

- *shift to germ theory, rather than "an imbalance of the 4 bodily humors," as the basis for understanding disease and treatment*
- *the true roots of "evidence-based medicine"*

◆ ***new internal organization for hospitals***

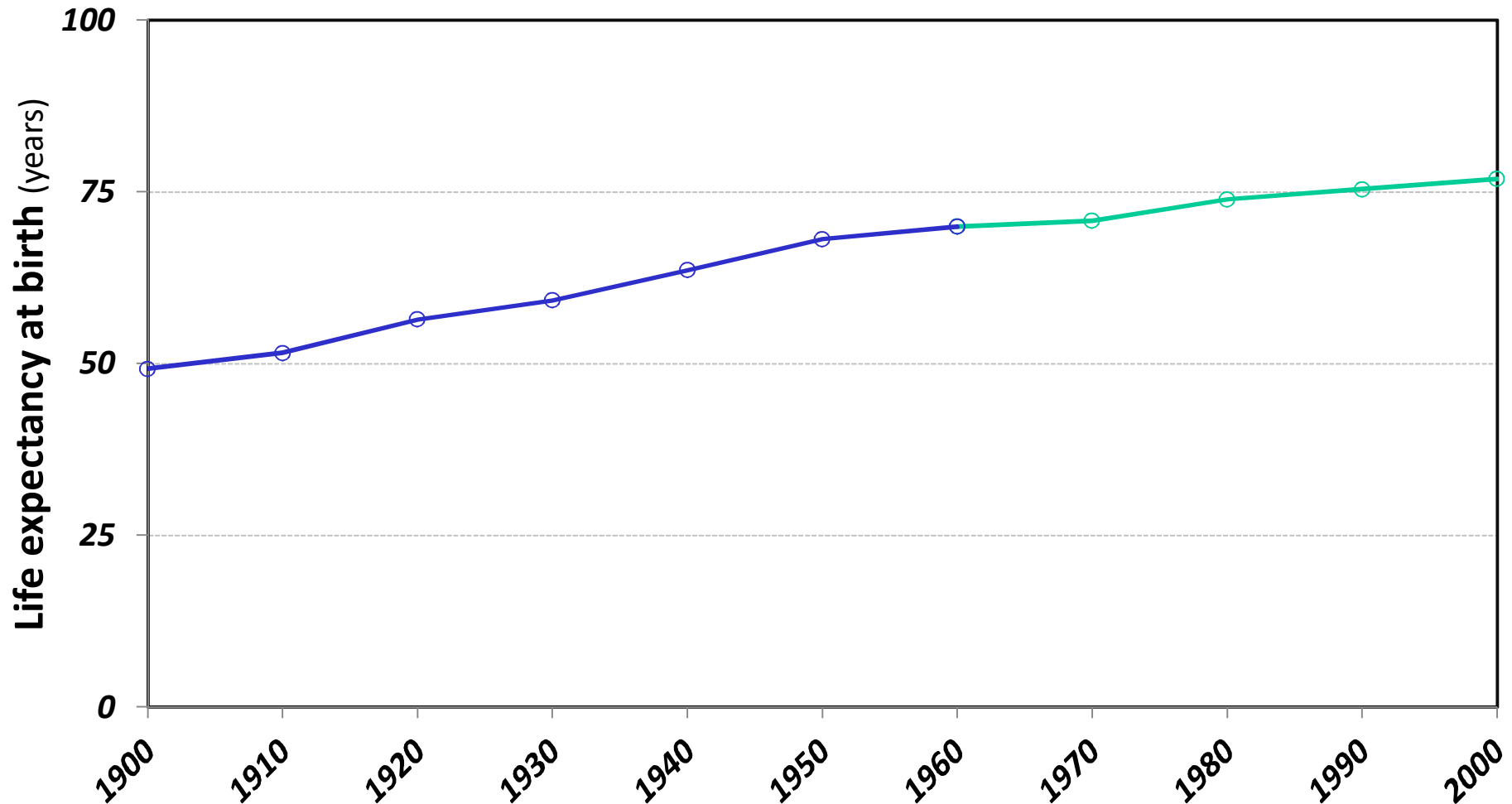
Porter, R. *The Greatest Benefit to Mankind: A Medical History of Humanity*. New York, NY: W.W. Norton and Co; 1997.  
Barry, JM. *The Great Influenza: The Epic Story of the Deadliest Plague in History*. New York, NY: Penguin Group; 2004.  
Starr, P. *The Social Transformation of American Medicine*. New York, NY: Basic Books (Perseus Books Group); 1984.  
Rosenberg, CE. *The Care of Strangers: The Rise of the American Hospital System*. New York, NY: Basic Books; 1987.

# 1912 : The 'Great Divide'

***"... for the first time in human history, a random patient with a random disease consulting a doctor chosen at random stands a better than 50/50 chance of benefitting from the encounter."***

*Harvard Professor L. Henderson*

# "We routinely achieve miracles"



**Since 1960, 6.97 years gained over 4 decades = 1.74 years / decade**  
(from 1900-1960, 20.7 years gained over 6 decades = 3.45 years / decade)

*Cutler DM, Rosen AB, Vijan S. The value of medical spending in the United States, 1960-2000. New Engl J Med 2006; 355(9):920-7 (Aug 31).*

# Current health care *is the best the world has ever seen*

## *A few simple examples:*

- *From 1900 to 2000, average life expectancy at birth increased from **49** years to almost **77** years (28 year gain).*
- *Since 1960, age-adjusted mortality from heart disease (#1 killer) has decreased by **56%** (from 307.4 to 134.6 deaths / 100,000); and*
- *Since 1950, age-adjusted mortality from stroke (#3 killer) has decreased by **70%** (from 88.8 to 26.5 deaths / 100,000)*

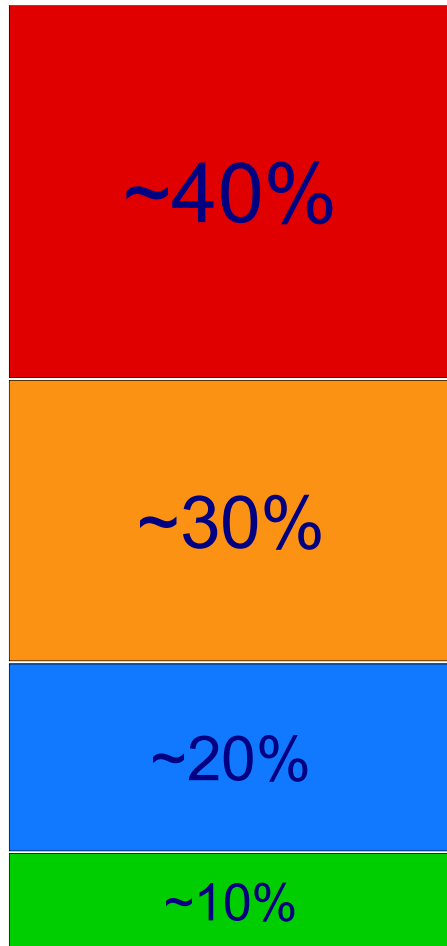
*Initial life expectancy gains almost all resulted from public health initiatives -- clean water, safe food, and (especially) widespread control of epidemic infectious disease. But since about 1960, direct disease treatment has made increasingly large contributions.*

Centers for Disease Control. Decline in deaths from heart disease and stroke--United States, 1900-1999. *JAMA* 1999; 282(8):724-6.

National Center for Health Statistics. *Health, United States, 2000 with Adolescent Health Chartbook*. Hyattsville, MD: U.S. Dept. of Health and Human Services, Center for Disease Control and Prevention, 2000; pg. 7 (DHHS Publication No. (PHS) 2000-1232-1).

U.S. Department of Health and Human Services, Public Health Service. *Healthy People 2000: National Health Promotion and Disease Prevention Objectives*. Washington, DC: U.S. Government Printing Office, 1991 (DHHS Publication No. (PHS) 91-50212).

# Sources of health *(life expectancy)*



**Behavior:** *Tobacco*  
*Ethanol and other non-therapeutic drugs*  
*Obesity (diet and exercise)*  
*Sexually-transmitted disease (AIDS)*  
*Unwed pregnancy (weak support network)*  
*Suicide, violence, & accidents (young men)*

**Genetics**

**Environment:** *physical (air, water, housing, food),*  
*social (status levels, networks), and public health (control*  
*of epidemic infectious disease thru sanitation and immunization)*

**Health care delivery** *(hospitals and clinics)*

McGinnis JM & Foege WH. Actual causes of death in the United States. *JAMA* 1993; 270(18):2207-12 (Nov 10).

McGinnis JM, Williams-Russo P, & Knickman JR. The case for more active policy attention to health promotion. *Health Affairs* 2002; 21(2):78-93 (Mar).

Kaplan RM & Milstein A. Contributions of health care to longevity: A review of 4 estimation methods. *Ann Fam Med* 2019; 17(3):267-72 (May/June).

# The Great Equation:

***Health*** = ***medical care***  
= "access to care" = ***health insurance***

***"But the Great Equation is wrong ..."***

# #1: Caring

***A man stricken with disease today is assaulted by the same fears and finds himself searching for the same helping hand as his ancestors did five or ten thousand years ago. He has been told about the clever tools of modern medicine and somewhat vaguely, he expects that by-and-by he will profit by them, but in his hour of trial his desperate want is for someone who is personally committed to him, who has taken up his cause, and who is willing to go to trouble for him.***

D. Emerick Szilagy, MD: *In Defense of the Art of Medicine*, 1965

*(with thanks to Dr. Steven Kappes, Milwaukee, WI)*



# It's all about relationships

*The clinician as*

- a trusted advisor*
- a wise counsellor;*

*Based on the **clinician-patient relationship**;*

*Help with **suffering** – mental discomfort: pain, anxiety,  
knowledge about what happens next*

# Relationships – a sense of connection and continuity

**Trust** – that the caregiver is “non-judgmental, skilled, and appropriately trained”, with the patient’s best interest at heart. **This confidence is actually more important than patient involvement in decisions.**

**Control** – patient’s input invited, choices respected

**Insight & Foresight** – ‘why illness?’ and ‘what now?’, from trusted clinician

**Compassion** – empathy and respect, with a balance of hope and realism

**Kindness** – listening, “what matters to you,” willingness to make a real effort, timely response

## #2: Curing

*Help with and treatment for*

***specific clinical problems or conditions,***

*expressed as*

*mental and physical **function** (up to and including death)*

*A continuum:*

- from acute self-limited (minor) problems (e.g., a cold)*
- to outpatient / same day procedures (including imaging)*
- to chronic diseases*
- to acute life-threatening problems (e.g., major trauma)*

# #3: Rule of Rescue *(rapid response to critical need)*

***Jonsen AR, 1986: The imperative people feel to rescue identifiable individuals facing (avoidable?) suffering or death.\****

- ◆ ***subconscious personal identification at an emotional level;***
- ◆ ***a person instead of 'just a number'; a name and a face***
  - *The child down the well*
  - *Whales trapped in the Arctic ice*
  - *The dog on the abandoned boat*
  - *"60 Minutes" program on pertussis vaccination*
  
- ◆ ***People respond to stories, not tables of numbers:***

***"A single death is a tragedy, a million deaths is a statistic."***  
***Joseph Stalin*** *(who killed more than 17 million of his own Russian people)*

\* McKie J & Richardson J. The rule of rescue. *Soc Sci Med* 2003; 56(12):2407-19 (June).

Richardson J & McKie J. *Working Paper 112: The Rule of Rescue*. West Heidelberg, Victoria, Australia: The Centre for Health Program Evaluation; 2000.

# Patients primarily seek

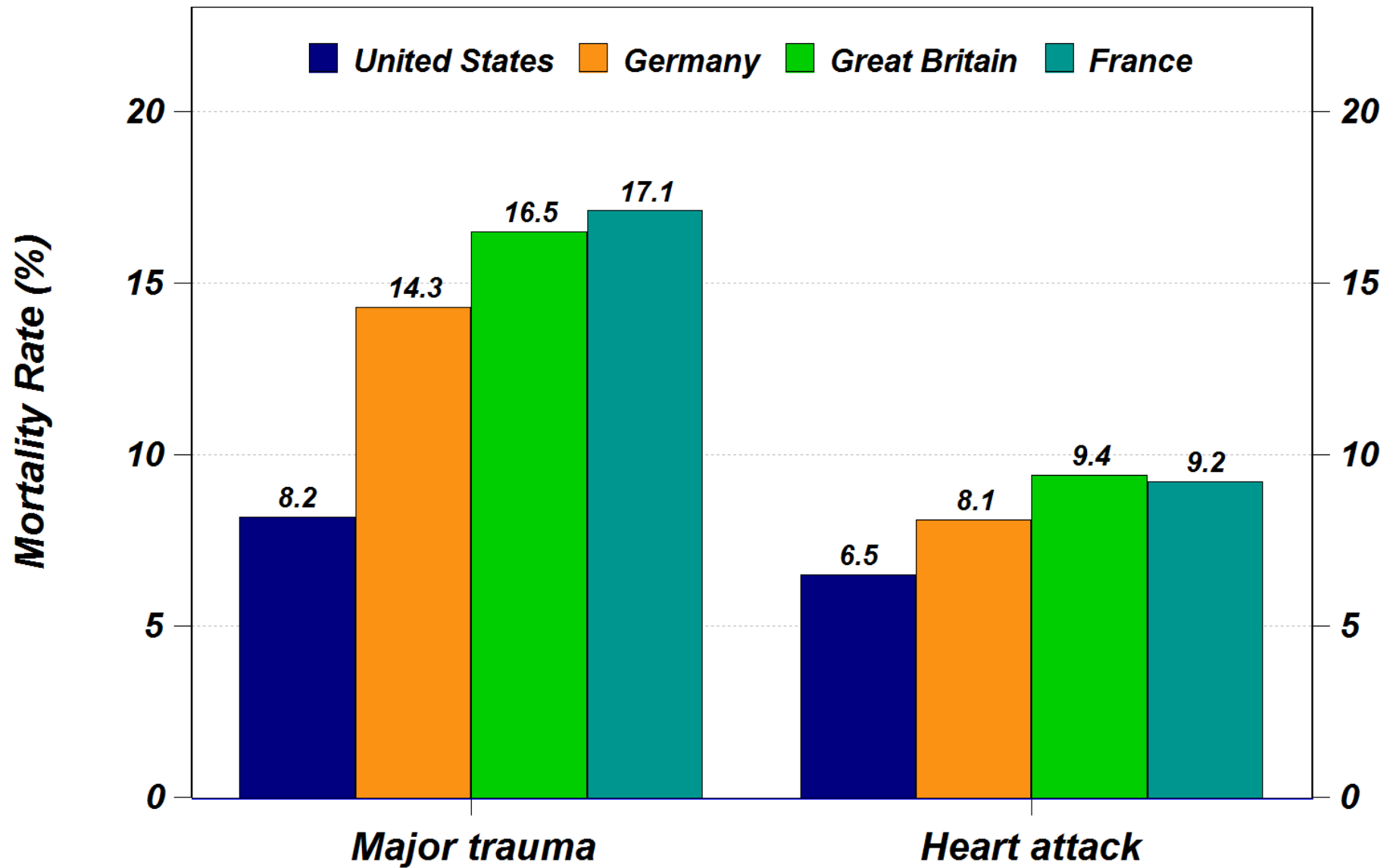
## *Peace of mind*

*that they are doing the best they can with the hand that they've been dealt ...*

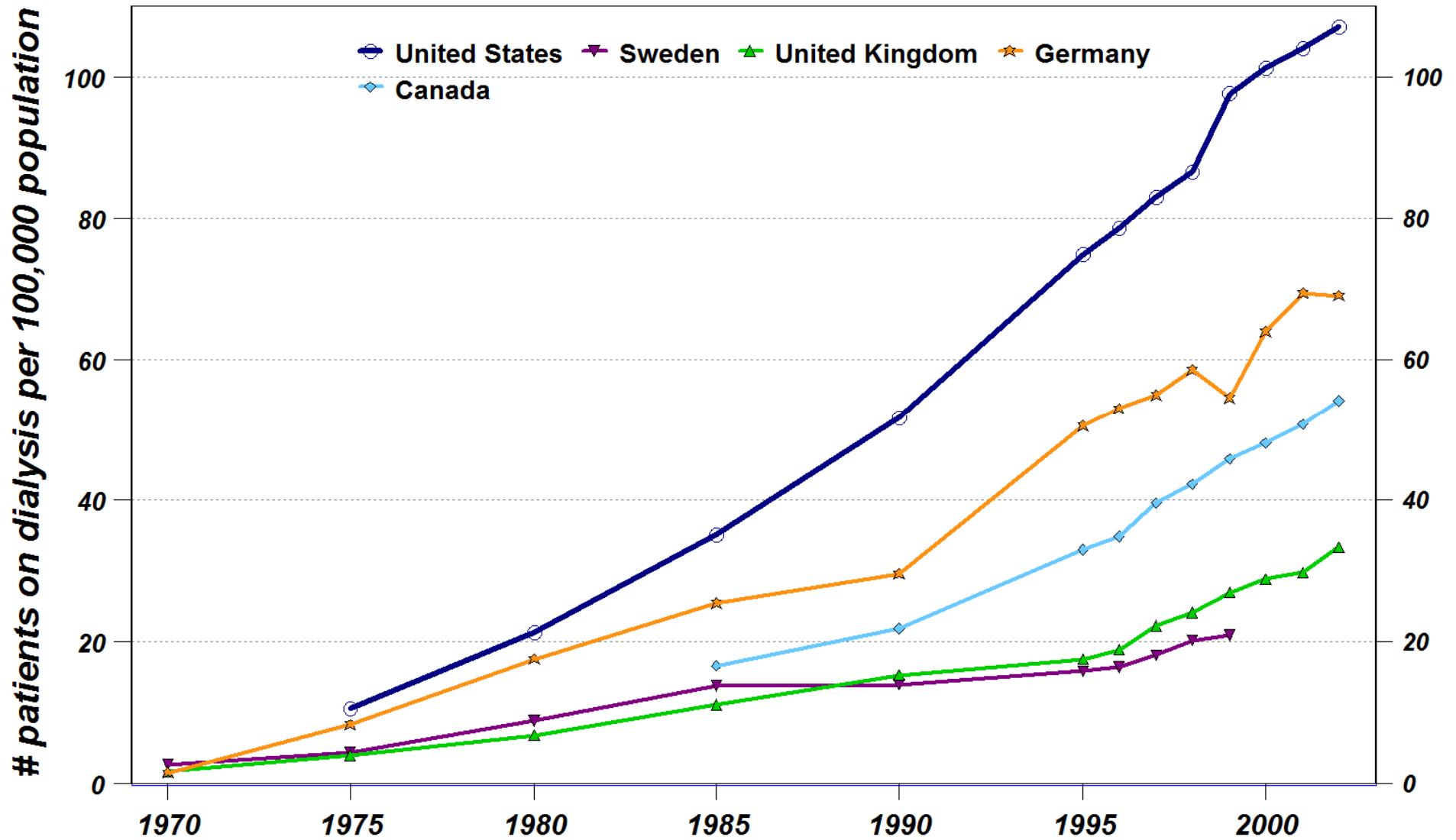
***Likelihood to recommend*** (“top box” response) *depends upon:*

1. ***Confidence in clinicians*** *(good people, top of field)*
2. ***How well the clinical team works together*** *(consistent messages, mutual respect)*
3. ***Clinicians*** *(in order)*
  - (a) show concern for worries*
  - (b) listen carefully*
  - (c) demonstrate high courtesy and respect to patient and family*

# System performance, by nation

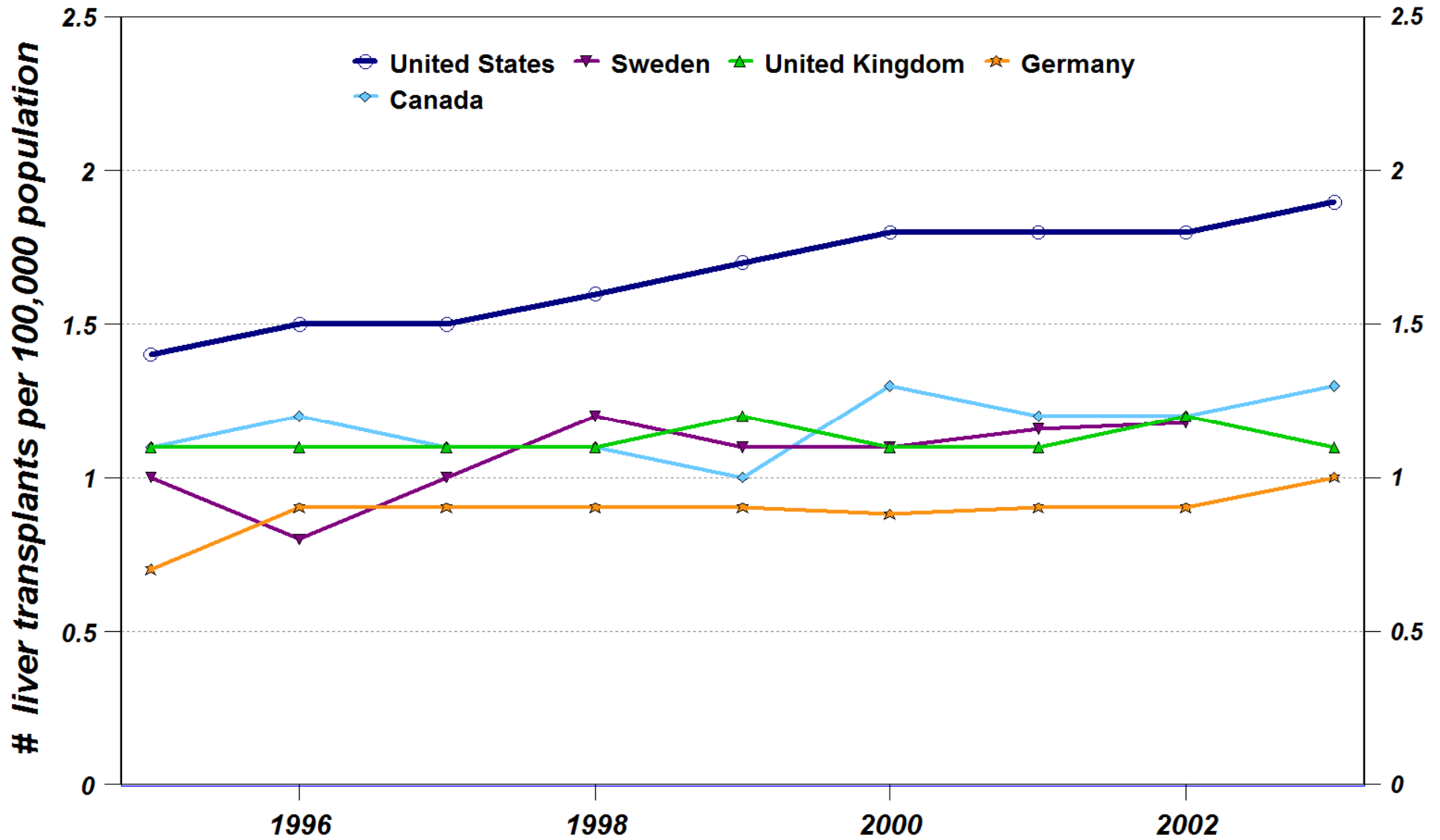


# Renal dialysis per 100,000



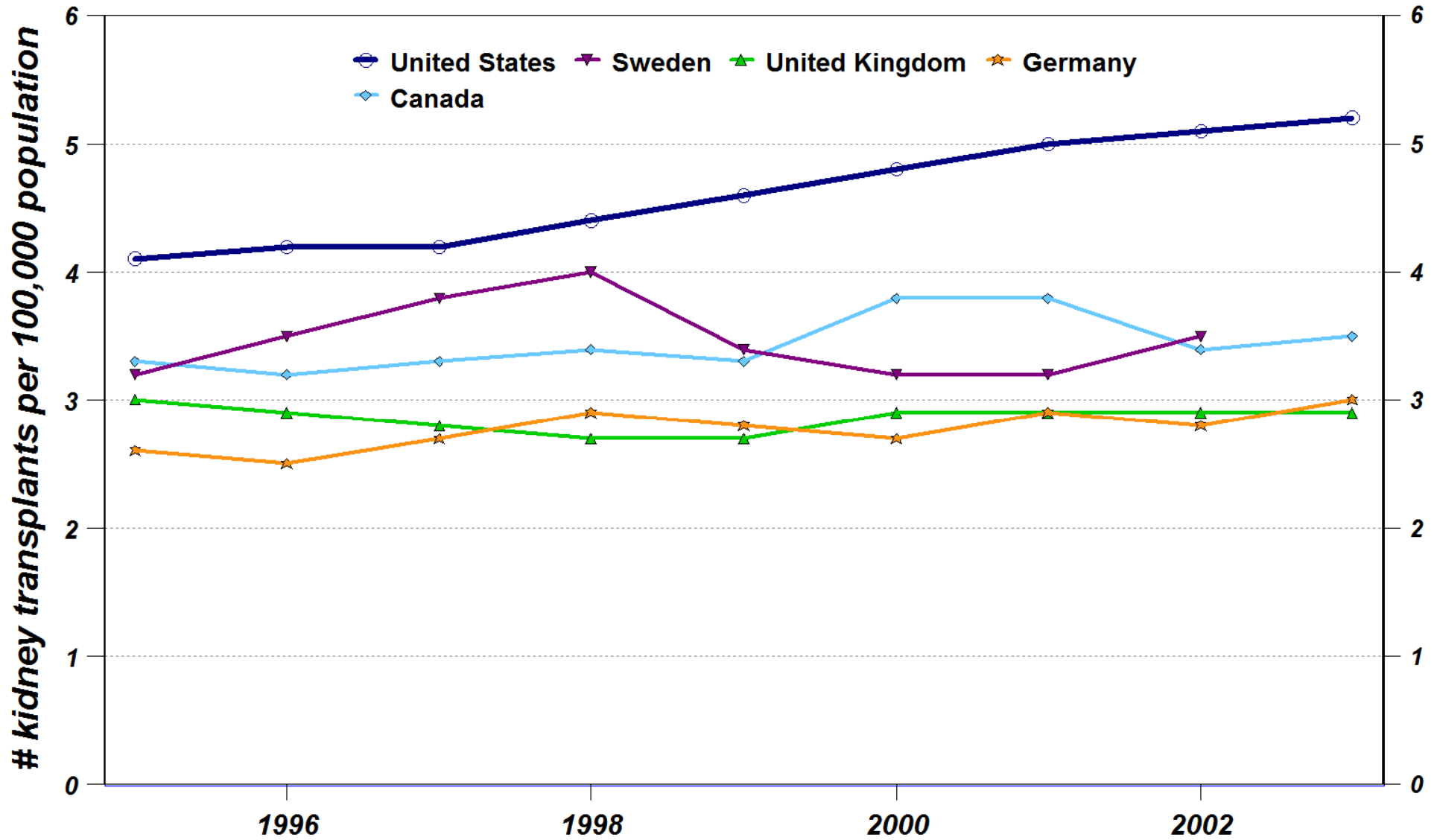
Source: OECD, 2003

# Liver transplants per 100,000





# Kidney transplants per 100,000



# Rescue care

*has little impact on  
population-level life expectancy.*

- 1. In most cases, people who get rescue care have very low life expectancy to begin with; that means little potential gain in life expectancy, **even when rescue care works.***
- 2. Usually, you must treat several individuals to get one “miracle;” but **life expectancy averages across all cases** (so the many treated people who got little or even negative benefit, pull down the large benefit obtained for the one individual who “won the lottery”).*

# International health comparisons

- ◆ *On a macro basis, **many countries out-perform the U.S.:** This is primarily attributable to healthier behaviors, better public health, and a heavy emphasis on easily accessible primary care (easy access = "high touch" = better satisfaction; primary care is relatively cost effective)*
- ◆ ***the U.S. system performs significantly better** for those with severe illness or injury. This is due to several factors:*
  - ***Better access to technology***
  - ***Less explicit and implicit rationing***
  - ***Easy access to subspecialists** -- better / more extensive health professional training; very much less waiting in line for specialty care (queueing)*

# NRC evidence review

- **Compared 22 high-income countries**
- **Differences in life expectancy dominated by what happens after 50 years of age**
- **IHD and cancer – U.S. does better than other countries**

**Smoking** = 78% of survival gap for women, 41% for men

**Obesity** = 20-33% of survival gap in general

**Social networks** = questionable relationship, evidence not clear

*... these contextual factors are not randomly distributed in the population; rather, they are more likely to affect the health of people of lower social status and those who are less likely to have lifetime access to health care.*

*It is clear ... that failures to prevent unhealthy behaviors are costing Americans years of life compared with their counterparts in other wealthy countries.*

National Research Council Panel on Understanding Divergent Trends in Longevity in High-Income Countries. *Explaining Divergent Levels of Longevity in High-Income Countries*, Crimmins EM, Preston EH, and Cohen B, editors. Washington, DC: National Academy Press, 2011.

# The job to be done *in health care delivery*

1. **Caring** *always* *(heal the spirit; reduce suffering)*
2. **Curing** *when possible* *(heal the body / mind)*
3. **Rescue** – *we did everything possible*

# One final thought ...

**Life expectancy**

*is a **very poor metric** indeed,*

*to compare*

***quality of health care delivery***

***across countries.***

**HEALTH  
IS MADE  
AT HOME**

**HOSPITALS ARE  
FOR REPAIRS**

BUILDING A HEALTHY AND  
HEALTH-CREATING SOCIETY



**NIGEL CRISP**

***Better has no limit ...***

*an old Yiddish proverb*