

How Health Services Research Has Made A Difference

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What Is Health Services Research?

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“Health services research is the multidisciplinary field of scientific investigation that studies how social factors, financing systems, organizational structures and processes, health technologies, and personal behaviors affect access to health care, the quality and cost of health care, and ultimately our health and well-being. Its research domains are individuals, families, organizations, institutions, communities, and populations.”

- Academy for Health Services Research and Health Policy (US), 2002

What Is “Making A Difference”

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- ◆ **A much harder and more significant question than meets the eye**
- ◆ **HSR is knowledge generated in a context**
- ◆ **The world is not an exclusively rationalist place**
 - ▶ **Many hospital workers don't wash their hands**
 - ▶ **Most clinical practice guidelines are ignored**
 - ▶ **Health care is a complex adaptive system**
 - ▶ **Not all knowledge is definitive**
- ◆ **HSR can influence thinking, culture, policy, behaviour, practice**

The World We Live In

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- ◆ **Somewhere between 30% and 50% of health care is supported by strong scientific evidence**
- ◆ **Some health care is spectacularly effective and remarkably cheap (e.g., rehydration packets in Africa, Head Start programs for disadvantaged kids)**
- ◆ **Some health care is very effective and very expensive (e.g., bypass surgery, kidney transplants)**
- ◆ **Some health care is quite cheap and quite ineffective (e.g., PSA screening for men)**
- ◆ **Some health care is expensive and harmful (e.g., misprescribed drugs, some forms of back surgery)**

Some Facts to Ponder

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- ◆ **Health care is not very safe (Baker & Norton Canadian Adverse Events Study)**
 - ▶ **9,250 to 23,750 deaths in hospitals annually – 1/3 or more avoidable**
- ◆ **Primary medical care is neither very comprehensive nor evidence-based**
- ◆ **There are many and large variations in practice (3 or 4-fold variations in intervention rates are common)**
- ◆ **It is difficult to find positive correlations between spending and result**

Why Don't We Get What We Deserve?

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- ◆ **The incentives are misaligned**
 - ▶ **We pay more for failure (a hospital readmission) than success (preventing the need for surgery)**
 - ▶ **We reward health care providers for repair work and penalize them for successful prevention**
- ◆ **The public is kept in the dark about most substandard system performance**
- ◆ **We have lowered our expectations to match the performance we expect**
- ◆ **The system is organized to meet providers' needs, not the public's needs**

What Should We Expect of HSR?

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- ◆ It should seek truth – even when it is commissioned for specific purposes
- ◆ It should shed light on phenomena where intuition and common sense are unlikely to yield explanations
- ◆ It should be programmatic – partial answers to small questions are important but progress requires connecting dots and holistic insights
- ◆ Once it identifies the *what*, it should seek to discover the *why* and the *how*
- ◆ It should be communicated effectively to the audiences for whom it is relevant

Blockbuster HSR: Some Examples

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- ◆ **The UK studies (Marmot, Wilkinson et al.) on the gradient in health status and effect of inequality on everyone's health**
- ◆ **The Dartmouth studies on variations in spending unrelated to outcomes or satisfaction**
- ◆ **The hormone replacement outcome studies in the US**
- ◆ **The studies of non-acute utilization of hospitals in Canada**
- ◆ **The IOM *To Err Is Human* study**
- ◆ **McGlynn et al. on the quality of primary care in the US**
- ◆ **The MCHP study of variations in high school completion in Winnipeg neighbourhoods**

Impact of Marmot et al.

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- ◆ **Obliterated the belief that health status is binary (well-off=healthy, poor=sick)**
- ◆ **Reassigned consider r-squared from health care to the non-medical determinants of health**
- ◆ **Reinstated class (SES) as a critical area of inquiry**
- ◆ **Made it impossible to produce a major health report that did not address fundamental social and economic circumstances (except in the US of course)**
- ◆ **Led to major inequality and disparities reduction focus in UK and continental Europe**
- ◆ ***But disparities are not shrinking***

Impact of Dartmouth Studies

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- ◆ **30 years of increasingly refined analysis**
- ◆ **Widespread intellectual recognition that variations in spending are unrelated to concrete outcomes**
- ◆ **High-performing not-for-profit systems in US typically much cheaper than low-performing systems**
- ◆ **Gawandi *New Yorker* article on McAllen, TX mandatory reading in the White House**
- ◆ **Spawned world-wide industry documenting variations**
- ◆ ***But the variations in the US are not shrinking***

Impact of HRT Studies

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- ◆ **Showed significant adverse outcomes for women on prolonged courses of HRT**
- ◆ **Immediate media sensation**
- ◆ **Dramatic and virtually immediate decline in HRT utilization**
- ◆ **Launched ongoing conversations about the medicalization of life course events**

Impact of Hospital Utilization Studies (BC, SK, MB, ON and ongoing)

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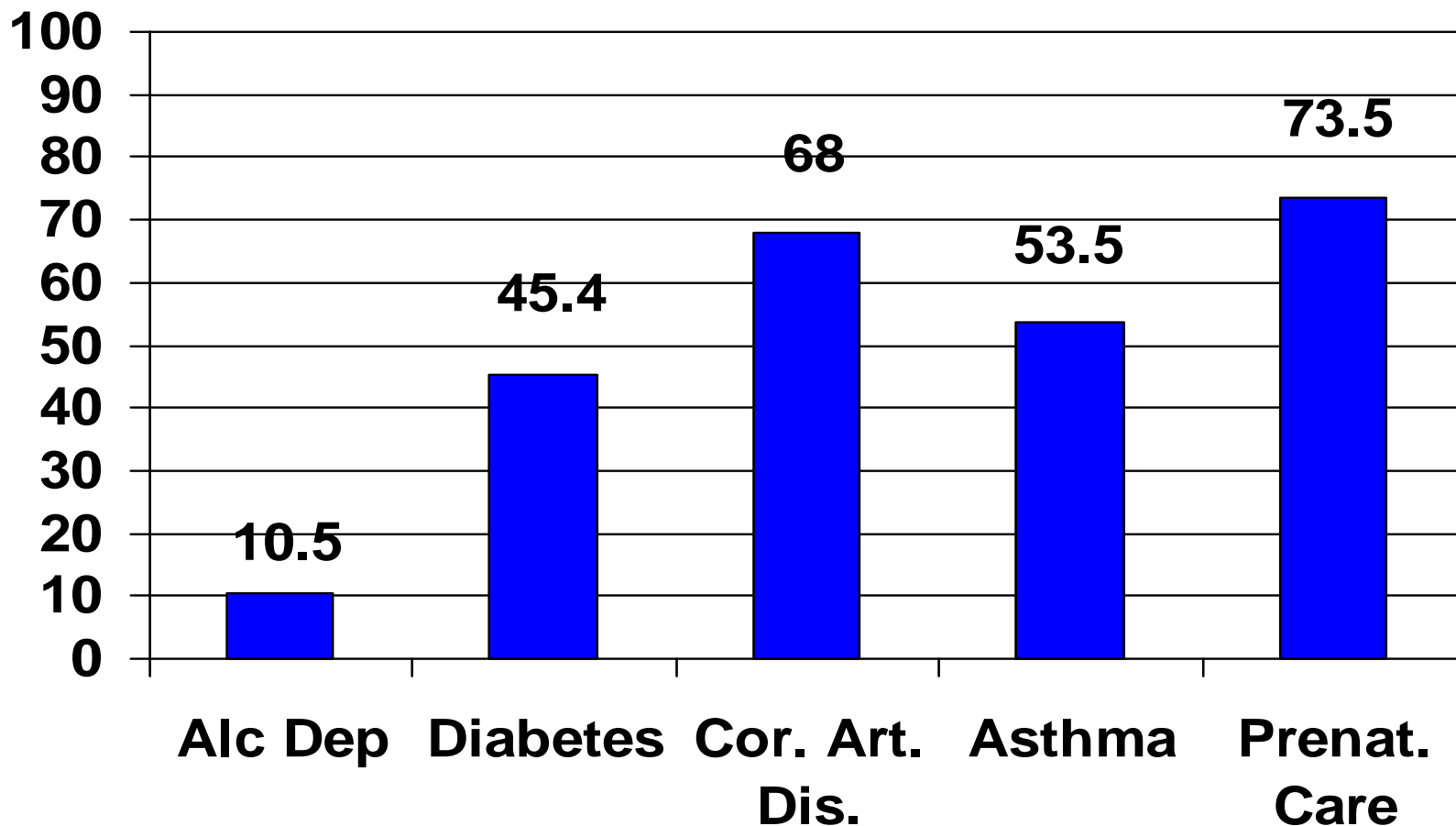
- ◆ **Studies began in early 1990s and replications through the decade**
- ◆ **Showed very high levels of non-acute use of acute care beds (up to 80% in rural hospitals and 40% in urban hospitals)**
- ◆ **Led to intensification of utilization management and discharge planning efforts**
- ◆ **Ended the debate about whether there are enough beds in at least one province (SK)**

Impact of *To Err Is Human*

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- ◆ **Kick-started a massive interest in patient safety and accelerated focus on quality improvement**
- ◆ **Study replicated in many countries (notably UK, Australia, Canada)**
- ◆ **Foundation of campaigns such as Safer Healthcare Now with targets for lives saved**
- ◆ **Significant foundation for IT and QI investments**
- ◆ ***But the original authors lamented the lack of progress 5 years after the report was released***

Percentage of Recommended Care Actually Received, Various Conditions, **USA**



Source: McGlynn EA et al. The quality of health care delivered to adults in the United States. NEJM 2003;348:2635-45

Impact of McGlynn et al. Primary Care Study

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- ◆ Revealed the quality of care in the “middle of the curve” was shockingly uneven (patients received all evidence-based care required about 50% - 50% of the time)
- ◆ MCHP found comparable results (Katz et al.)
- ◆ Confirmed earlier research about the highly limited impact of CPGs
- ◆ Sometimes cited in support of call to reform primary care
- ◆ *There were excellent performers before and after, but these startling data did not accelerate PHC transformation*

Impact of MCHP High School Graduation Study

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- ◆ Revealed huge neighbourhood-level variations in likelihood of a student completing high school on schedule
- ◆ Observed effect size was startling even among those who intuitively knew that SES makes a difference
- ◆ Had major self-reported impact on how the Ministry of Education viewed performance and strategies
- ◆ Led to more intersectoral discussion and analysis
- ◆ *Have variations narrowed and have disadvantaged areas improved?*

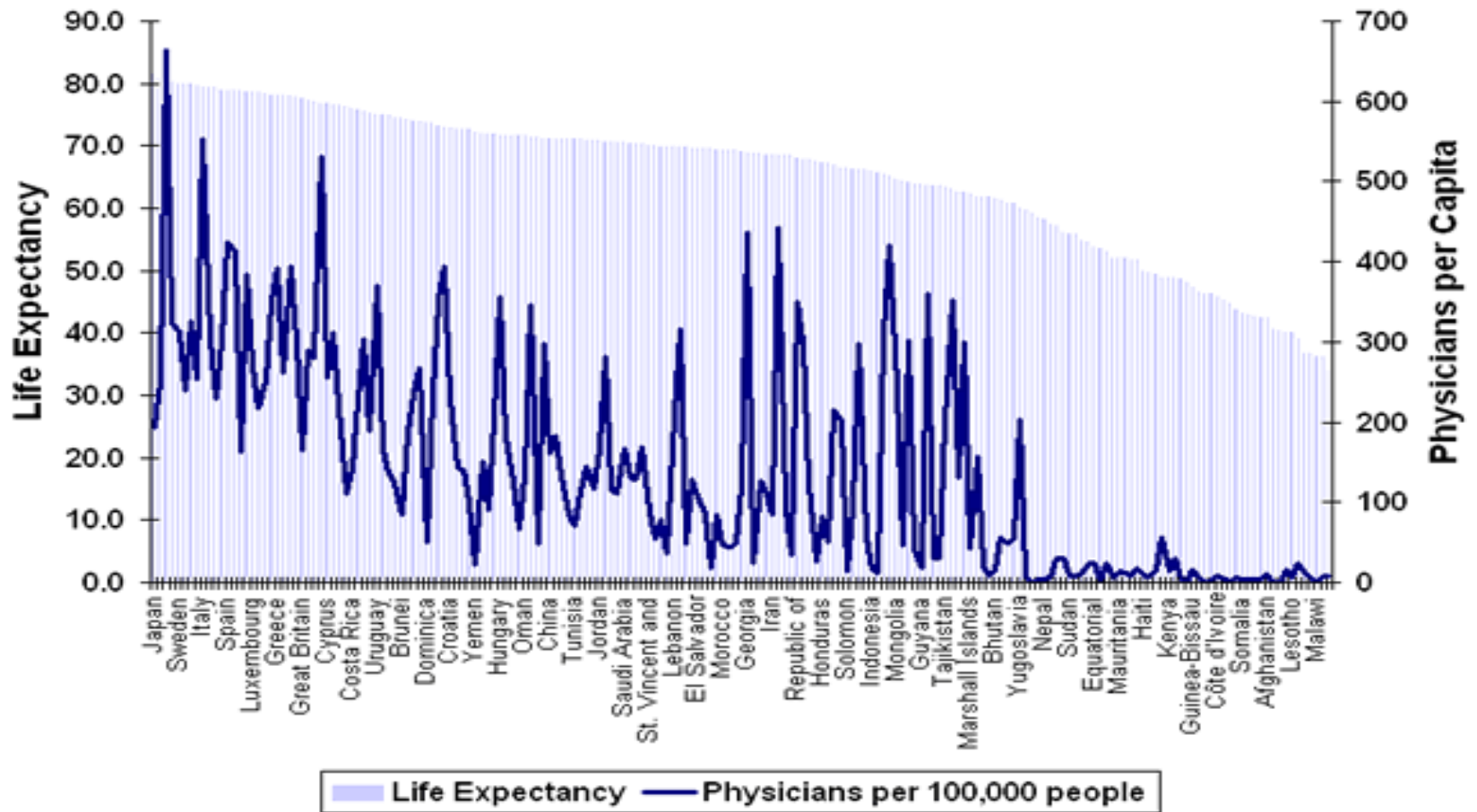
Why Are Some HSR Studies Impactful And Others Not?

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- ◆ **The tangibly impact studies:**
 - ▶ **Are about discrete phenomena (HRT)**
 - ▶ **Users of services can change behaviour unilaterally**
 - ▶ **Evoke fear, hope, embarrassment, or other strong emotions**

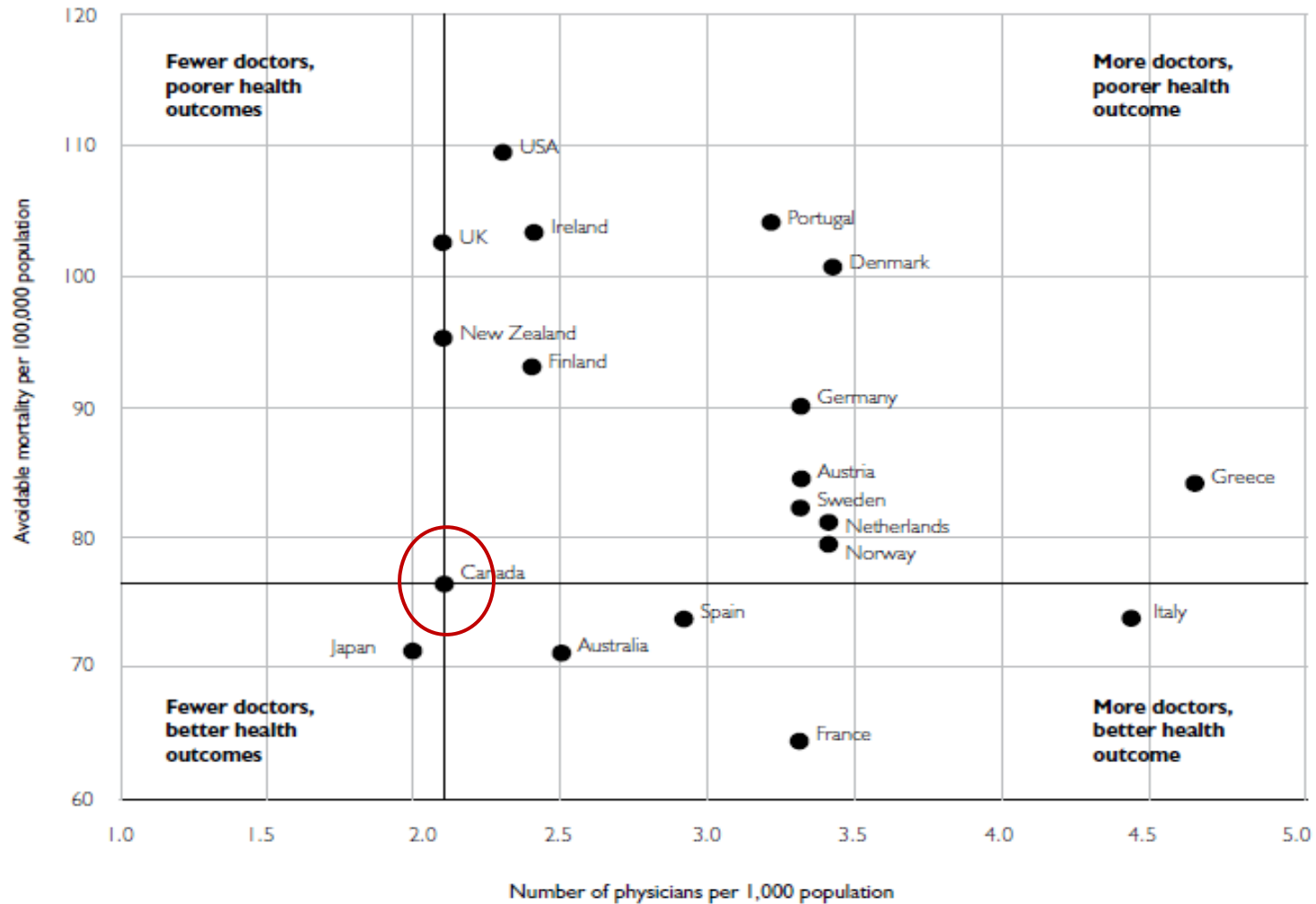
- ◆ **The less tangibly high impact studies:**
 - ▶ **Are about diverse and complex phenomena**
 - ▶ **Threaten elites, egos, incomes, and interests**
 - ▶ **Require organized, sustained effort to make changes**
 - ▶ **Lack an obvious blueprint for what to do**

Life Expectancy vs. Physicians per Capita



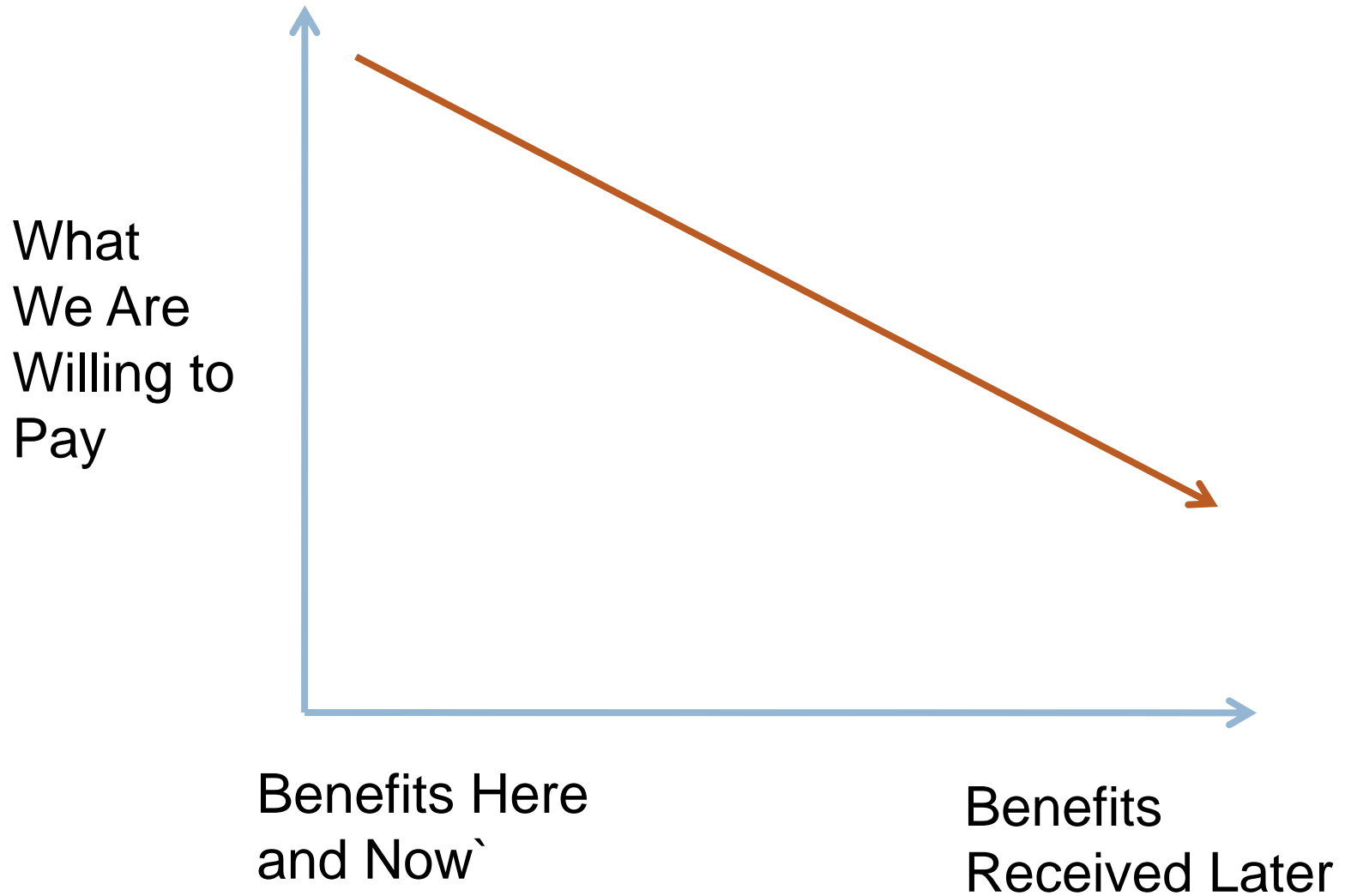
Source: Univ. of California Atlas of Global Inequality,
<http://ucatlas.ucsc.edu/spend.php>

FIGURE 1. Avoidable mortality by physician supply in 19 OECD countries, 2002

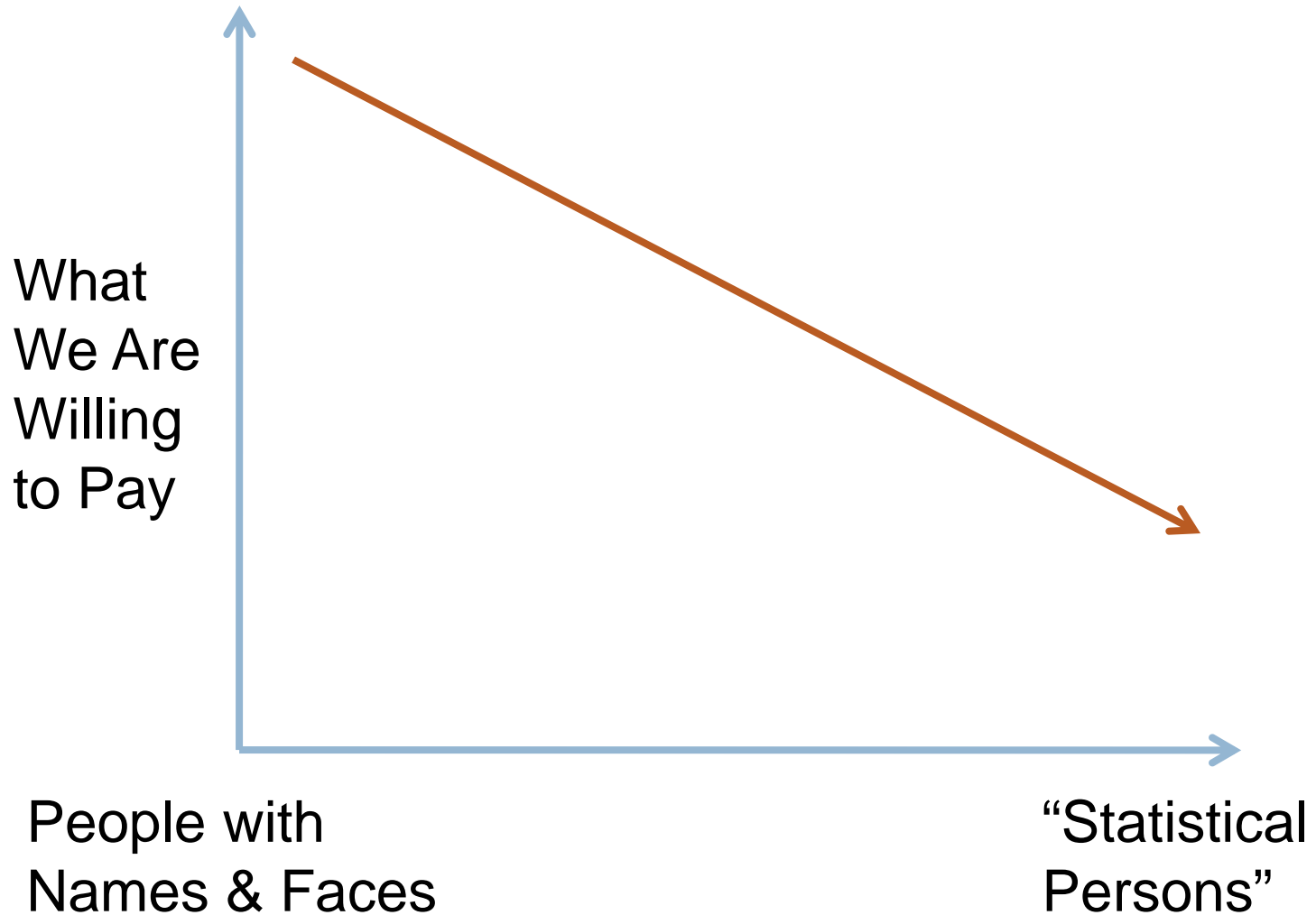


Source: Physician-to-population ratios from 2005 OECD Health Data for 2002/03. Avoidable mortality as reported by Nolte and McKee (2008).

We Pay More for Immediate Benefits



We Pay More to Help Identifiable People



A Broader View of Impact

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- ◆ **The world is changed most by ideas and intellectual frames that have no immediate tangible object:**
 - ▶ **The invention of zero (as in the number)**
 - ▶ **The Qu'ran**
 - ▶ **Kepler, Galileo, Copernicus**
 - ▶ **Newton, Einstein, Hawking**
 - ▶ **Watson & Crick and DNA**
- ◆ **Great ideas make it impossible to see the world in the same way again**
- ◆ **They ultimately change whole domains of life in unpredictable but irreversible ways**

Cultural Change Is More Powerful Than Concrete and Measurable Change

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- ◆ **Cultural change evolves as knowledge diffuses**
- ◆ **Diverse strands of HSR have forced us to think differently about health, health care, and value**
- ◆ **Thinking differently does not automatically translate into behaving differently or spending differently**
- ◆ **Eventually the old ways cannot survive as their adherents die off or their obsolete paradigms collapse**
- ◆ **HSR is only a few decades old but it has shattered myths and beliefs and kindled new policy debates**

The Impact Paradox

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- ◆ **The more obvious the need to change, the less we need the HSR to justify and support the change**
- ◆ **The more concrete and immediate the impact of HSR, the less likely it is to find broad applications**
- ◆ **The more important and game-changing the research, the greater the likelihood of pushback, resentment, and fear**
- ◆ **The more fundamental the research insights, the less predictable the potential applications**
- ◆ **The greater the ultimate impact, the harder it is to trace the origins back to particular research**

Accountability for Impact

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- ◆ **Researchers control only their research; they do not control whether or how it is used (ask Barer-Stoddart)**
- ◆ **There are limits to “Listening for Direction” because there is no algorithm for knowledge demand, nor does all wisdom lie in crowds**
- ◆ **Often the low-hanging fruit is inedible, or tastes have changed by the time it is harvested**
- ◆ **The goal should be to add to the inventory of important and actionable HSR and present it clearly**
- ◆ **A great strength of the MCHP is its diversified portfolio and negotiated and investigator-driven studies**

HSR: Products or Cast of Mind?

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- ◆ **HSR reports are fish, and you can give people fish**
- ◆ **HSR is bait, rods, and casting, and you can teach people how to fish**
- ◆ **The goal is not to implement the findings of HSR, but to improve outcomes, quality, efficiency, and justice in health**
- ◆ **The goal is not an exclusive diet of fish, but good nutrition**
- ◆ **Great HSR offers not only compelling data and analysis, but also a way of thinking about health and health care**
- ◆ **The world will change faster and for the better when decision-makers become “the priesthood of all believers” with deep attachments to rigour and respect for data**

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