SENSE AND NONSENSE IN DEFINING "VALUE" IN HEALTH CARE

Uwe E. Reinhardt,
Professor of Economics and Public Affairs
Woodrow Wilson School of Public and International Affairs
and
Department of Economics
Princeton University

National Institute of Health Care Management

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I. ‘VALUE”: THE NEW MANTRA IN U.S. HEALTH CARE

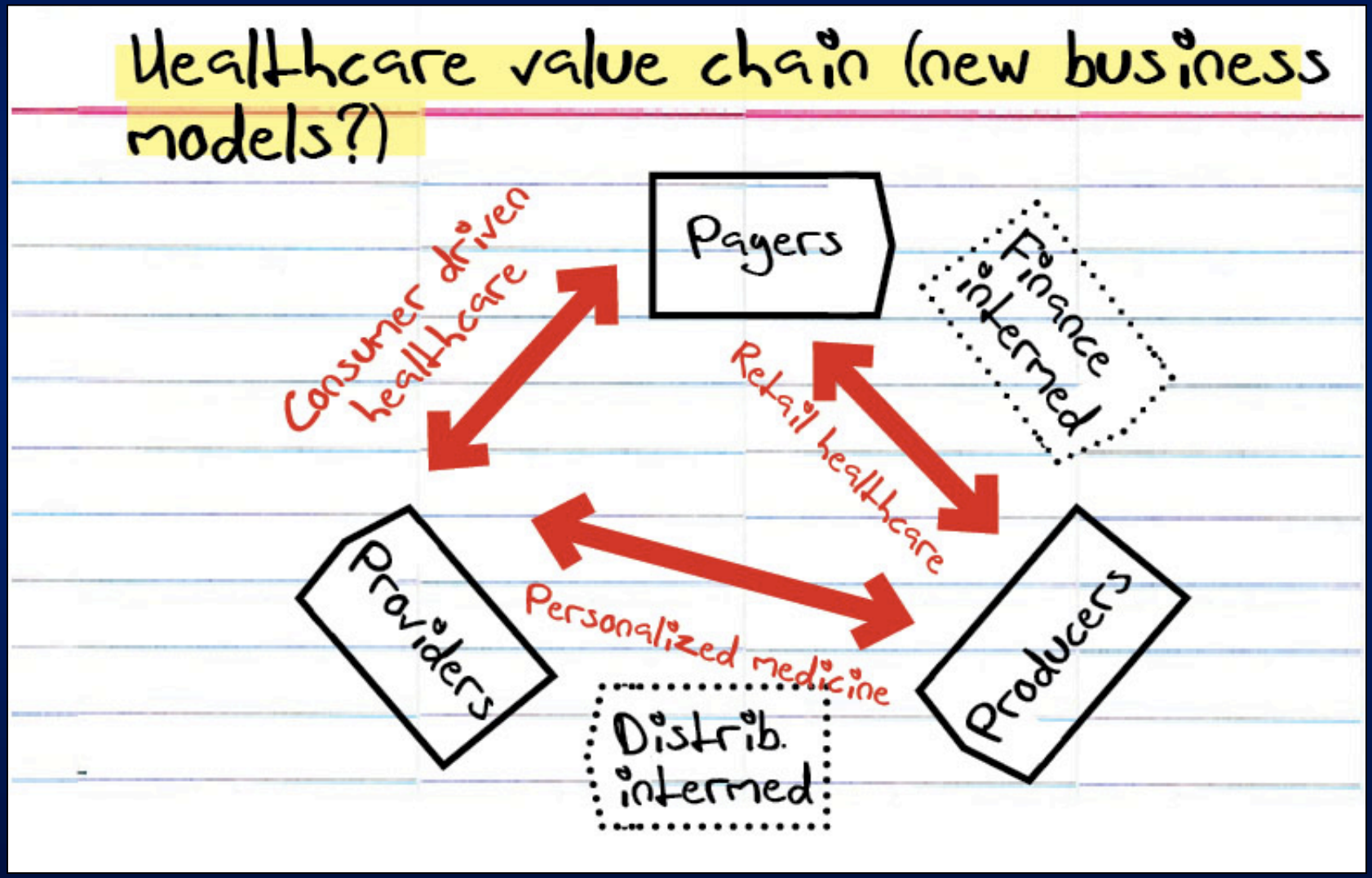
“Value” now is all the rage on the health-care speaking conference of the so-called” real world” – certainly in the U.S.

The argument is that the U.S. health system of the future will be paying the providers of health care for “value” rather than “volume” of services.

Thus, we hear lectures on

1. Value-based health insurance
2. Value purchasing
3. Value pricing
4. Value maximizing
5. Innovating for value
6. The value-chain in health care
7. And many more value–_____ (insert any noun)

I actually found this on the web after Googling "Value Chain in Health Care." Someone thought this was worth posting. (QUIZ: Find the patient.)



Yet to come, I am sure, is a new, new health-care concept called

Value-Valuing®

II. WHAT ACTUALLY IS THE “VALUE” OF HEALTH CARE?

It turns out that defining the “value” of anything has occupied philosophers from the time of antiquity.

Plato and Aristotle wrestled with that question.

So did the medieval scholastics.

So did Adam Smith, David Ricardo and other classical 18th century economists.

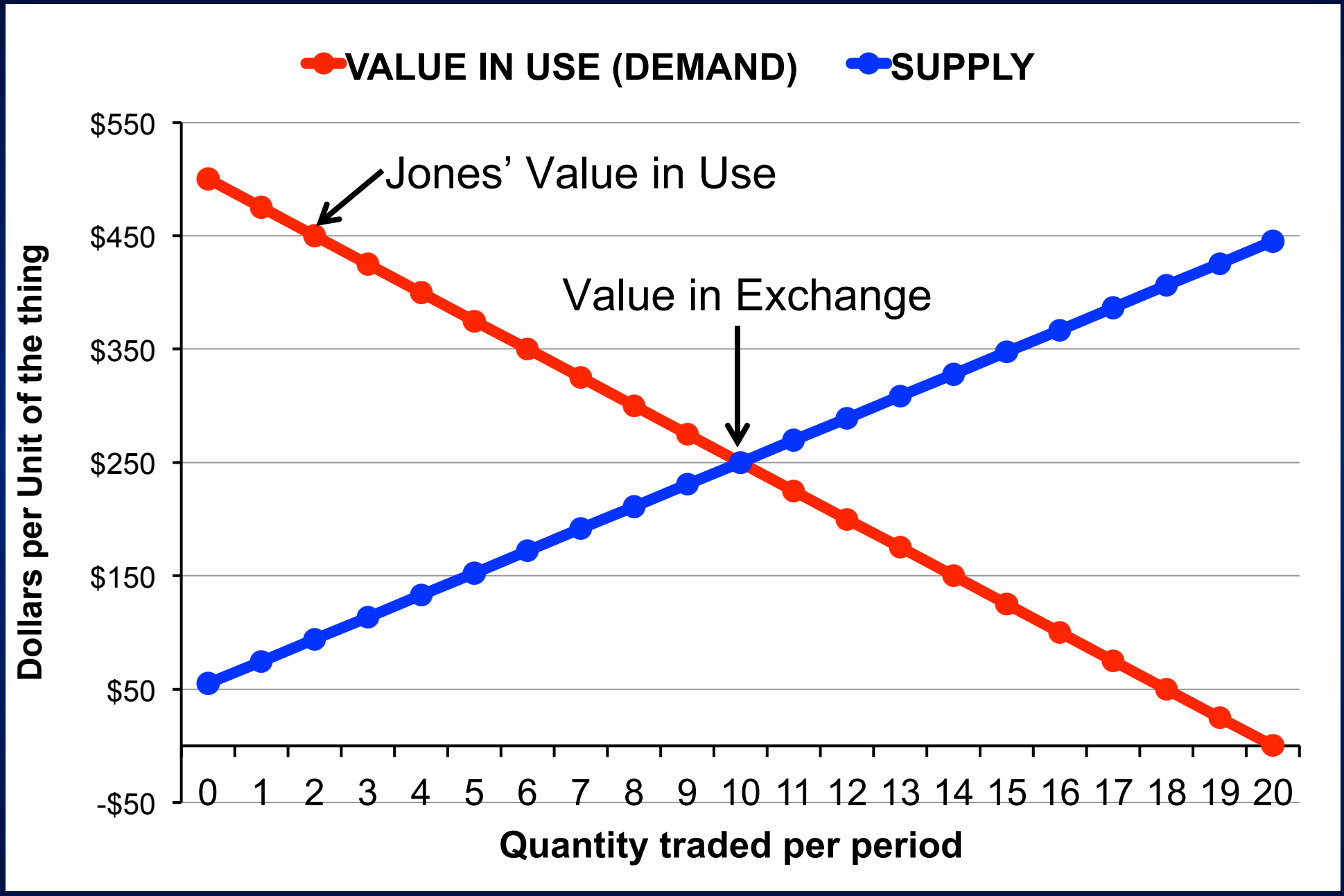
And even the neo-classical synthesis and modern “value” concepts we now teach in freshman economics cannot easily be applied to health care.

A distinction must be made between

1. **Value in use (a purely subjective concept)**
2. **Value in exchange (price) an objective magnitude**

“Value in use” in monetary terms is the maximum price a potential buyer would be willing to pay for a thing if push came to shove.

“Value in exchange” is the market price of a thing.


VALUE IN USE (DEMAND)
SUPPLY
Jones' Value in Use
Value in Exchange
$550
$450
$350
$250
$150
$50
-$50
Dollars per Unit of the thing
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Quantity traded per period

What complicates the definition of “value” in health care is that in many instances those who receive health care are not the same persons who pay for it.

Consider a life-saving specialty drug.

Is the value of the clinical outcome the drug can achieve the same regardless of who benefits from that outcome – e.g., I personally or some stranger? (Think Solvadi and Harvoni).

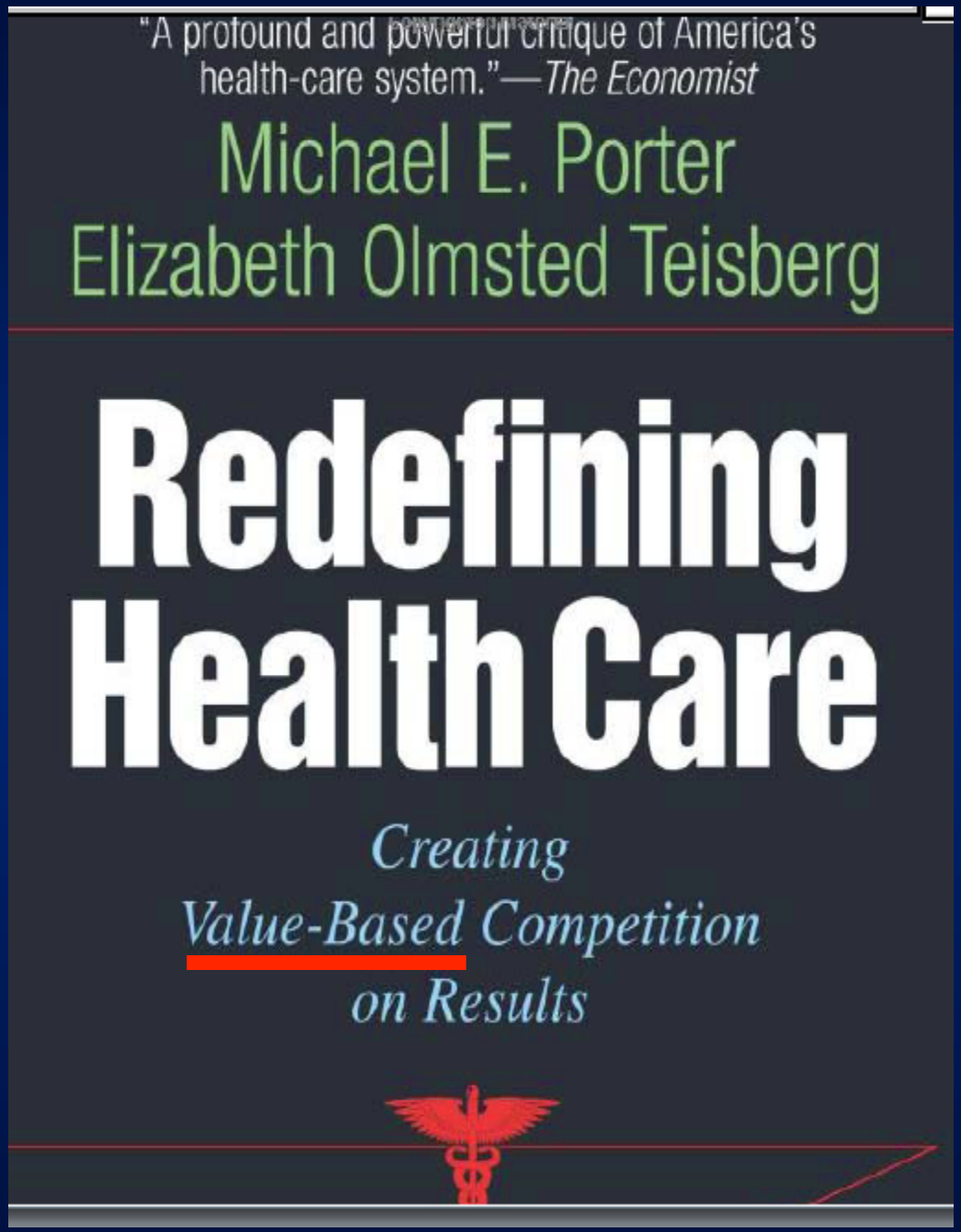
Who would determine what “value” is in this case?

III. THE MANAGEMENT CONSULTANT'S DEFINITION OF VALUE

On the health-care conference circuit we frequently see this definition of "value" in health care:

$$\text{VALUE} = \frac{\text{OUTCOME}}{\text{COST}}$$

We also find it in the literature on health policy.


"A profound and powerful critique of America's health-care system."—The Economist
Michael E. Porter
Elizabeth Olmsted Teisberg
Redefining Health Care
Creating Value-Based Competition on Results

On page 5 of their book, the authors define value as follows:

“Value in health care is the outcome per dollar of cost expended.”

That definition, or slightly different variants of it, is repeated over and over again throughout their book.

As an economist, I demur, for at least two reasons.

The first and rather mild objection to this simplistic definition of value is that "quality" or "outcomes" typically have multiple dimensions – in economic jargon, are vectors of several metrics.

We can try to solve that problem, however, by collapsing multi-dimensional outcomes into the one-dimensional QALY, which stands for "quality adjusted life years" – even though that approach still remains highly controversial.

So we might rescue the Porter-Teisberg definition of value as follows:

$$\text{VALUE} = \frac{\text{QALYs}}{\text{COST}}$$

i.e., QALYs added by a treatment

i.e., dollars spent on the treatment

But my second and much more serious objection to that definition of “value” is the proposition, known to every properly bred economist, that the value of a thing has nothing whatsoever to do with the cost of producing that thing.\

As an old Roman dictum put it, defining “value” in monetary terms:

Res tantum valet quantum vendi potest.

(A thing is worth what you can sell it for).

Basically, that dictum inspires the economist’s concept of value.

Note that costs do not enter this definition.

Go back to the management consultant's equation for "value":

$$\text{VALUE} = \frac{\text{QALY}}{\text{COST}}$$

It's inverse is the so-called Cost-Effectiveness Ratio (CER)

$$\text{CER} = \frac{\text{QOST}}{\text{QALY}}$$

Now suppose I tell you that a particular treatment that costs $150,000 yields an estimated 3 added QALYs.

Using the management consultant's definition of value, we then get that

$$\text{VALUE} = \frac{3 \text{ QALYs}}{\$150{,}000}$$

Does that mean anything to you?

Does it tell you what the value of a QALY is?

Turn the value-expression on its head to get the cost-effectiveness ratio CER:

$$\text{CER} = \frac{\$150{,}000}{3 \text{ QALYs}} = \$50{,}000 \text{ per QALY}$$

Does that ratio tell you what a QALY is worth?

The CER will tell you what the cost per additional QALY gotten by this treatment is.

It does not tell you what that additional QALY might be worth, that is, whether it is worth enough to justify the expenditure of $50,000 per QALY.

I come on strong like that because the value equation popular on the speaking circuit is infecting the minds even of physicians.

An article by Andrew Pollack entitled "Cost of Treatment May Influence Doctors" (The New York Times, April 18, 2014) reported that some medical societies

"plan to rate the value of treatments based on the cost per quality-adjusted life-year, or QALY — a method used in Britain and by many health economists.

The societies say that treatments costing less than about $50,000 a QALY would be rated as high value, while those costing more than $150,000 a QALY would be low value."

These physicians ideas about "value" are just plain wrong.

IV. WHAT DRIVES THIS CONFUSION OVER “VALUES”?

In a nutshell, those who proffer the value equation value = outcome/cost confuse the definition of the "value" of a thing with the process of comparing that value, however we define and measure it, with the cost of producing that thing.

Consider the following equation:

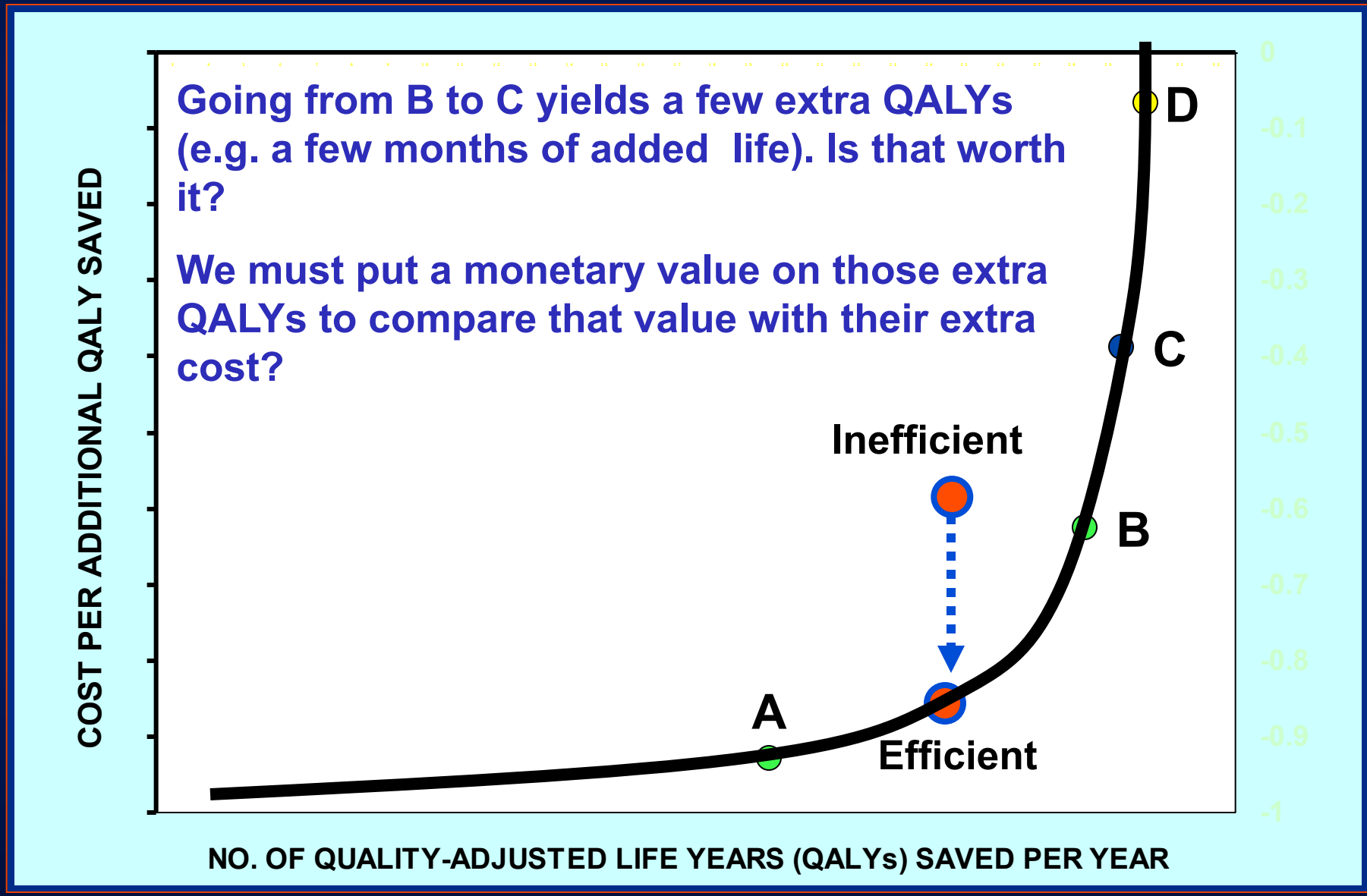
Net value added by a medical treatment	=	Gross value of the outcome produced by that treatment	-	Total cost of producing the treatment

What we really want to know is whether the net value is positive or negative.

And to know that we need to know the gross value (in $ terms) of the outcome produced by the treatment, assuming we know the cost.

There is no way around it.

Ultimately, we cannot avoid putting a dollar value on the extra life-years or QALYs we wrestle from nature with medical treatments.



But we cannot agree in this country what a life year or QALY is worth, can we say anything about "value" in health policy?

Even if we don't know what a clinical outcome is worth in dollars, we can say something about *likely changes in value*.

We can make what economists call "ordinal" statements – e.g., that a new treatment or management change is likely to *improve or reduce net value added*, whatever its absolute level may be.

V. VALUE BASED PRICING

The term "value-based pricing" is now interpreted in three distinct ways:

1. **Concept I:** Not paying for junk, that is, for unnecessary services that either produce no or little value to patients or may even be harmful.
2. **Concept II:** "Value" here is measured by the ability of a new product or service to reduce the overall treatment cost of responding to a medical condition.
3. **Concept III:** "Value" is the maximum payment an individual (or an insurance carrier or government) is willing to make to see a patient receive the new product (e.g., Harvoni) or a new procedure.

It seems that the pharmaceutical sector has been slouching more and more toward the Sahara model of value pricing in recent years.

But value pricing of the third type – pegging price on the value of a procedure or product to the value patients impute to its effect – is highly controversial.

Recent Congressional hearings on drug pricing suggests that the American public is not enthusiastic about that approach to value pricing.

VI. CONCLUDING OBSERVATION

In general, our national conversation about health care would improve if people used the word “value” more sparingly, and only if they have can define it for practical use.

Fuzzy language can beget fuzzy thinking.

In conclusion, I would like to leave you all with this piece of advice.

If you plan to attend in the near future a health-care conference that has “value” in its theme, be sure to carry with you this, like, totally nifty device (next slide).

The best advice I can give you that to your next health care conference bring this nifty device:

Thank you for your attention