Discussion of
"Are Medical Care Prices Still Declining?"
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November 2017

Overview of Comments

- Why it is important to do the hard work to quality adjust health spending

- Why the different measures can be so different—and which should BEA be using?

- Is this just (or mostly) about health care? Can we identify industries where this type of work is necessary? Or is it everywhere?

- Practical and political questions

Why getting measurement right matters
(1) Overall productivity measurement.

Population aging and rapid health "costs" increases mean health spending increasingly large share of the economy.

Already 18% of GDP today—projected to rise to 23% by 2041.

Measured health care productivity very low -- ~.4 percent per year. Is this real or mismeasurement?

Productivity measurement matters: research agendas on why it's slowing, political debates about no real wage growth, policy proposals.

We need the right facts.

Why getting measurement right matters
(2) Is health spending worth it?

Understanding what we are getting for our money—and what we are not getting for it and in what areas—is important for making health care policy and deciding how much to raise taxes/cut other spending to afford it.

Recent health care slowdown – was this a good thing, or have we been getting less health care?

However, worth remembering that finding that health spending is "worth it" doesn't tell us where we are relative to the ideal.

Perhaps our spending is worth it, but spending in other countries is even MORE worth it because they are closer to the efficiency frontier or control prices better.

Why getting measurement right matters (3) Health care policy.

Issue of health care productivity played a r ole in ACA fight.

ACA lowered payments to health care providers by moving from annual adjustments based on input costs to annual adjustments based on input costs less economy-wide MFP.

ACA policy goal – slow growth in real health care spending per person.

Medicare actuaries view – real health spending has to keep rising because of Baumol effect: Lack of productivity in health care but need to pay market wages means relative health prices have to rise over time.

Actuaries argued cuts to Medicare were unrealistic and undermined cost projections.

So not just GDP accounting issue. Others are paying attention too!

Huge effort put into developing Satellite Health Account wasted if it doesn't include quality measures.

- Satellite health account allocates spending by disease, rather than treatment/location. (Standard account: stent in hospital, well-child care office visit, etc.)

- "Price" of heart attack treatment = spending on all treatments divided by # people receiving.

- Captures some quality improvements by calling goods that are substitutes the same thing – move from expensive inpatient to cheaper outpatient looks like "price" decrease in satellite account, but not in official accounts

- But most improvements in health care productivity come from more spending for better stuff, not less spending for the same stuff.

- Promise of allocating spending by disease was that this was essential first step toward quality adjusting.

Different quality adjustment measures

- Different quality measures have been used in literature with little discussion/recognition.

- Abe identified four measures which basically collapsed into 3 in his implementation. (But not in theory).

- LE – COLI. What is value of additional quality? Subtract that from price.

- TE – What is cost of additional quality? Subtract that from the price.

- BP – Fisher index of fixed basket. Price the <u>same</u> treatment over time. Isn't this close to what PPI is? BLS pulls hospital bills for hip repair for someone with Medicare over time, for example. Problem is that a hip repair today much better than hip repair ten years ago. Not really same treatment.

When are cost-based and utility based-measures different?

In practice, most of the time, these measures are about the same, and both reasonably measured by Fisher index. So, if no quality changes, all methods the same. If quality changes, TE and LE the same.

When is "most of the time?" When interior solutions of a standard utility/profit maximization solution. Marginal benefit = price = marginal cost = price.

When different? When additional benefit of a treatment ≠ additional cost of a treatment.

Why are cost-based and utility based-measures different?

Knowing when this condition is likely to hold might tell us where else (besides health) we should be thinking about HOW we quality adjust.

I think you need a kink in production function or indifference curve.

Paper gave example of inframarginal consumers who get higher benefit from new technology than marginal consumer.

Here need kink in utility function, because why doesn't everybody buy enough such that marginal benefit = marginal cost?

Leontieff utility – after you get one surgery to insert stents, don't get any benefit from an additional one.

Makes me uncomfortable to have to get away from representative agent model—seems like it might have lots of implications--but need to think about this more.

Alternative Model with Representative Agent

Production function has kink.

You would like to buy more years of life at today's price, but doctors don't know how to give it to you. (Think pancreatic cancer, for e.g.)

So marginal benefit of the treatment > marginal cost.

You can be better off even if the price of what you are buying increases and your income doesn't change!

Example: Treatment 1 – available in year 1 – gives you one year of life extra over no treatment. Costs $25,000.

Treatment 2 – available in year 2 – gives you two years of life extra over no treatment. Costs $60,000 – or $30,000 per year of life.

Price per year of extra life has increased from $25,000 to $30,000.

But if value of year of life is $50,000, it is worth it and you are better off.
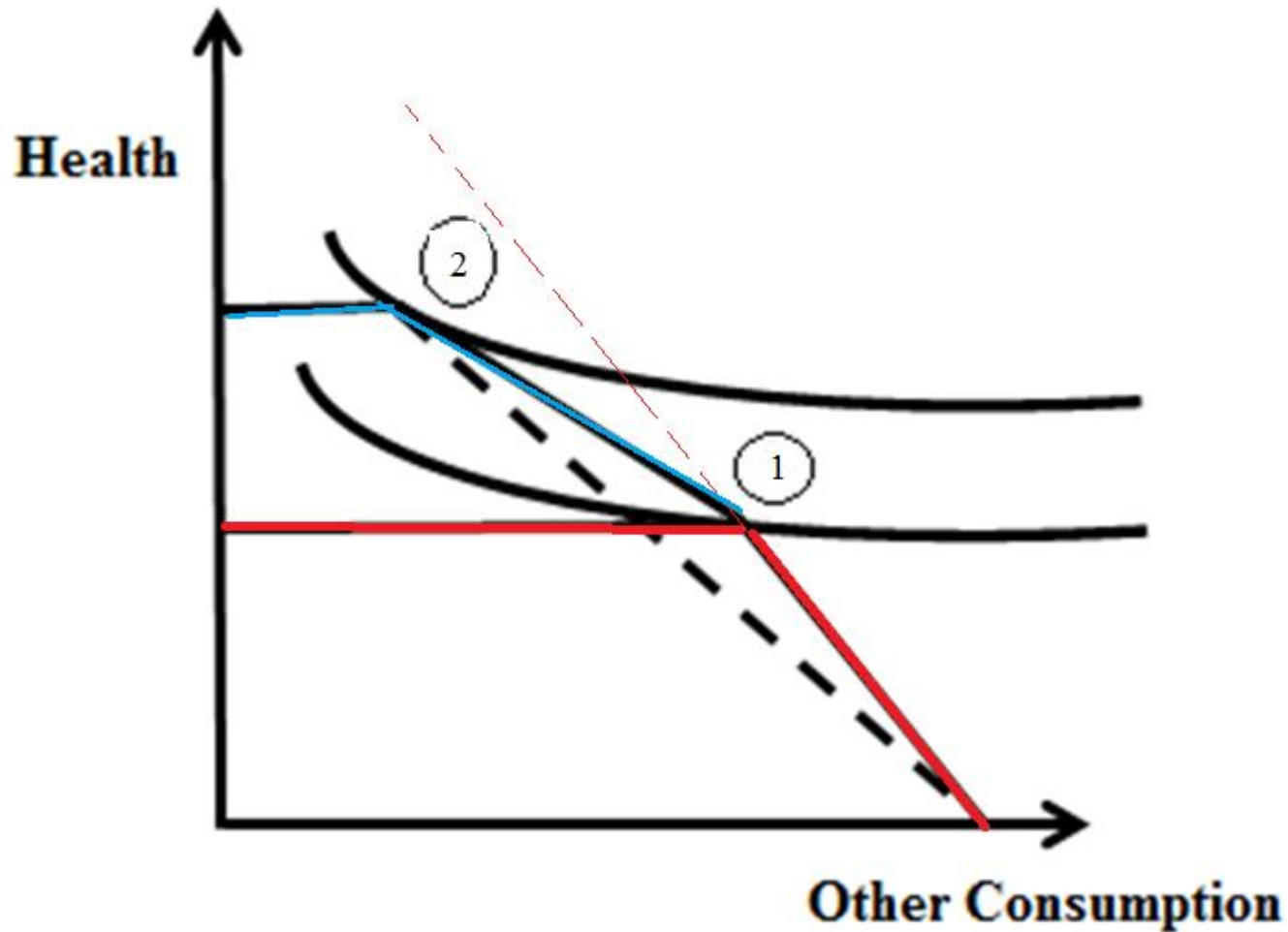
- Kink in production function where technology can't produce more health moves up over time.

- In period 1, person wants more health and less consumption (move along dotted line) but not possible.

- In this example, cost per unit increases over time, but utility increases.

- Also—production possibilities frontier shifts out – so should look like productivity improvement even from production perspective.

Paper's Results

- For three conditions—<u>price declines</u> using COLI. Change in spending has been worth it, and growth in quantity/quality of health care>growth in spending.

- TE approach – not much increase in cost of achieving mortality reductions – all of spending increases have been in quantities.

- Interesting that unadjusted, TE, and LE all seemed to have flattened out in recent years – would be worth thinking about health care slowdown from this perspective? What drove it?

Which measure is right?

Both better than no quality adjustment.

Only COLI answers question of welfare.

With TE, real income can go down (prices increase, income stays the same) even when ppf has shifted out and utility is higher.

GDP Deflator/PCE deflator – mix of PPI and CPI – CPI supposed to be "COLI" like index; PPI not.

Seems murky. Is there official view?

Methodology Questions

- Short mortality window, and then the assumption that, if you survive 1, 2, or 3 months, you are "cured." Bias?

- Underestimating benefits: everyone survives 3 months. Only treated survive longer.

- Overestimating benefits: some treatments only extend life six months. Assuming same survival probabilities after 3 months would be wrong.   (cancer treatments, for example.)

- Brings up question of how you should be valuing benefits.

Valuing life – thorny issue.

- Not sure how paper does it, but economic approach would have different valuations by age.

- OMB issues Value of Statistical Life , but not Life-Year. I have been told they tried this, and pushback from AARP was intense.

- OMB adjust the Value of Statistical Life each year for price and real income growth. Is right approach for measuring benefits of health? It might be.   But then real income growth would by itself lead to price reductions in health.

- How comfortable would BEA or BLS be in using value from outside the statistical system (value of life) to adjust prices?

- Are there parallels in other areas? Perhaps BLS use of Hospital Compare scores to quality adjust hospital prices is similar.

Are these problems unique/more important in health?

Problem is large in health because quality has been changing a lot and we have almost no way of capturing it.

Increased life expectancy over time widely viewed as one of most important elements GDP is "missing" if we want to use it as proxy for welfare (Jones and Klenow, 2016). Although, with health care in GDP, not really missing, just mismeasured.

But would quality adjusting health in this way "over" quality adjust relative to the way we treat other goods?

Can we identify the areas where the problems are likely large? Free goods/FB/apps? Where else?

Other issues

Difficult to get correct price adjustment in timely matter.

But NIPAs impute stuff all the time and revise later. Could you assume continuation of past trends until have newer data?

Important to analyze a wide array of "representative" conditions. Some types of health spending has shown little improvement in outcomes, for example, and others is very labor-intensive without much change in treatment intensity – long-term care, for example.

Don't want to cherry pick areas where we know outcomes have been improving.

If don't have great data on quality-of-life, is there something better than assuming 0? Even if rough?