

# 20.2 TECHNOLOGY HAS BEEN A KEY DRIVER OF HEALTH SPENDING GROWTH\*

Christopher Conover

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## Abstract

Technology has been a far more important driver of health spending growth during the past 60 years than has population growth or aging.

Technology and other factors appear to account for approximately half or more of the growth in per capita health spending over the past 60 or more years. As figure 20.2 illustrates, the exact amount depends on the period examined and other methodological assumptions.

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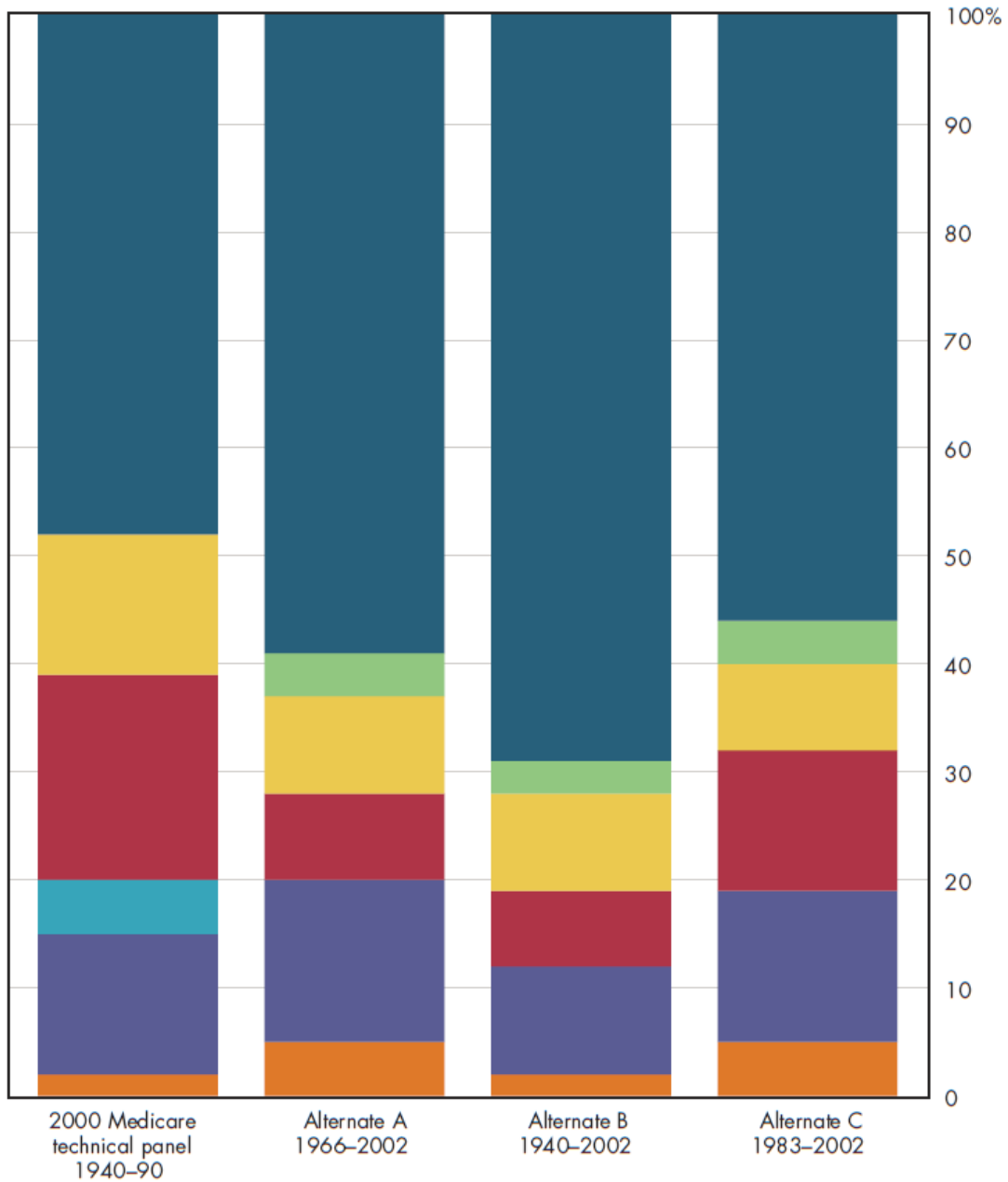
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## 20.2 The role of technology for health spending growth per person is sizable regardless of the time and assumptions used

- Technology/all other
- Defensive medicine
- Avoidable administrative expense
- Relative medical price inflation
- Income growth
- Insurance
- Aging

Components of health expenditure growth (percentage)



Note: Income growth not accounted for in alternate assumptions A, B, and C because GDP growth is accounted for separately in the projection model.

The exact contribution of technology is unknown (recall figure 17.3). When analysts have accounted for all the other major factors that contributed to the rise in inflation-adjusted health spending per person (for example, medical price inflation), most of the "residual" that cannot be explained is attributed to technology. Some of it is an income effect, a willingness to purchase medical services (for example, Lasik surgery) if a person has a higher income, but a person who has a lower income was not willing to purchase it. It is difficult to separate out accurately the effect of income from technology. Some would also argue that calculations such as these underestimate the role of insurance in encouraging the development of technology.

However it is defined, this "residual" is what government forecasters use to determine how fast health care expenditures will increase in the future. They can use demographic models to calculate how quickly the population is increasing and how the age-gender mix of the population is changing over time. Relative spending changes over the life cycle, depending on gender (refer to figure 12.5). Thus, if everything were static, it would be a straightforward mathematical exercise to determine how much total spending will rise because of such demographic changes.

However, the big unknown is how much per-person spending for everyone is likely to rise beyond growth in the general economy. To answer this question, forecasters have no choice but to look to the past. They cannot avoid making assumptions about the future. The 2000 Medicare Technical Panel estimated that per capita annual growth in health care spending would be 2.2 percent a year and that long-run real per capita GDP growth would be 1.2 percent. This implies that health spending growth would exceed GDP growth by one percentage point a year. Thus, they recommended using "GDP + 1" (that is, 1.2 percent plus 1 percent) as the basis for projecting health spending over the next 75 years. The Medicare Trustees' reports from the year 2000 forward all have used this assumption in deriving long-term projections (i.e., years 25 through 75 of the projection period).

## 1 Downloads

Download PowerPoint versions of figure.

- Figure 20.2 Image Slide (as it appears above)<sup>1</sup>
- Figure 20.2 Editable Slide (can be formatted as desired)<sup>2</sup>

## 2 References

- A. Brown JD and RM Monaco. Possible Alternatives to the Medicare Trustees' Long-Term Projections of Health Spending. US Department of Treasury. Office of Economic Policy. 2004.

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<sup>1</sup><http://https://hub.mili.csom.umn.edu/content/m10050/latest/20.2IMG.ppt>

<sup>2</sup><http://https://hub.mili.csom.umn.edu/content/m10050/latest/20.2DATA.ppt>