2016 TECHNICAL REVIEW PANEL
ON THE MEDICARE TRUSTEES REPORT
Minutes of the Meeting Day, February 7, 2017

The Technical Review Panel met on February 7, 2017 at 9:30 AM in Room 738G of the Hubert Humphrey Building in Washington, D.C. In attendance were the following panel members and presenters:

- Ellen Meara (Professor, The Dartmouth Institute for Health Policy and Clinical Practice), co-chair
- Michael Thompson (President & CEO Elect, National Business Coalition on Health), co-chair
- Kate Bundorf (Associate Professor, Stanford School of Medicine)
- Melinda Buntin (Professor and Chair, Department of Health Policy at Vanderbilt University School of Medicine)
- Austin Frakt (Health Economist, Department of Veteran Affairs and Boston University)
- Mark Pauly (Professor, Wharton School of the University of Pennsylvania)
- Geoffrey Sandler (Senior Actuary, Health Policy at Aetna)
- Greger Vigen (Independent Health Actuary)
- Dale Yamamoto (Founder and President, Red Quill)
- Don Oellerich (Deputy Chief Economist, Assistant Secretary for Planning and Evaluation at the Department of Health and Human Services)
- Paul Spitalnic (Center for Medicare & Medicaid Services (CMS), Office of the Actuary (OACT))
- John Shatto (CMS, OACT)
- Clare McFarland (CMS, OACT)
- Stephen Heffler (CMS, OACT)
- Jonathan Schwabish (Senior Fellow, Urban Institute)
- Liz Fowler (Vice President of Global Health Policy, Johnson & Johnson)

Opening Remarks—Ellen Meara

Ellen Meara began the meeting with discussion of plans for the March panel meeting and suggested that the group consider a one-day meeting in Baltimore and another one-day meeting in May in Washington D.C. The group approved the minutes from the December meeting with minor edits from OACT.

Ellen Meara reviewed the topics for the group's discussion including 1) Assumptions used for the long-term rate of growth; 2) Sustainability of key Medicare cost growth factors under current law; 3) Future changes in utilization; 4) Transition from short-range to long- range; 5) Current and alternate projections methodologies including the high and low cost options; and 6) Areas of future research to include in the long-term projection.

A panelist asked about the process of moving toward the report. Ellen Meara noted that the work products that have been discussed to date will form the basis of the report and will need to be integrated into one document. A panelist asked the group about the format and organization

of the report and whether it will start with overall observations as introduction before moving to specific observations and recommendations. The panelists agreed on the approach of presenting higher level context before moving to specific recommendations. Ellen Meara and Michael Thompson agreed to work on a draft framework to share with the panel.

Data Visualization Presentation—Jonathan Schwabish, Urban Institute

Jonathan Schwabish from the Urban Institute presented to the panel on the topic of data visualization. He is an expert in developing infographics and in making information more accessible to audiences. In his work at the CBO, he developed approaches for presenting complex information to policy makers.

Dr. Schwabish began his presentation noting that many researchers present complex analyses in spreadsheet format and use complex tables to show the effects of different options or parameter changes. Though readers generally look immediately to graphs and figures, developing effective presentation of data through graphs and figures in not generally part of a researcher's education. He shared examples of what he calls sparkline charts which are easier ways to communicate which options or parameters matter most.

Infographics can be a way to boil down a report to the major takeaways. Dr. Schwabish shared approaches to data visualization and infographics and discussed the power of these approaches to helping people process information. He spoke to the concept of preattentive processing which is the process by which our eyes and our brains process information visually. Preattentive processing can be applied to graphs using shape, enclosure, width of lines, orientation, position, color, and saturation. He noted three themes to data visualization including visualize, unify, and focus. Visualizations should be used as much as possible, they should have a unified look, and they should focus the reader on the main points. Visualizations should be uncluttered and highlight the key points. Annotation of visualizations can also be an effective way to provide people with the knowledge they need to take away from a graphic.

With respect to the Trustees Report, Dr. Schwabish noted that the website could benefit from additional design. He noted that some of the excel files do not correspond to figure names in the report. This can be challenging to journalists and researchers interested in accessing the data. Perhaps some of this could be available in a statistical supplement? Providing all data for any charts is important so that people can know what any given value is and recreate images.

There was discussion around how to show spread and uncertainty as this is a difficult topic to communicate. Several examples were discussed along with the idea of incorporating graphical components into tables.

Dr. Schwabish pointed out that there are very wide margins in the PDF copy of the report that is available online. OACT noted that this is driven by formatting required for the printed version of the report. The group discussed the potential of having a web formatted version as well as a print formatted version. The idea of a chart book addressing key issues was discussed as a way for providing material for a casual reader in addition to the more technical text.

Dr. Schwabish noted that redundancy is appropriate in graphical communication and text. He provided some tips for clear graphical presentation using the illustrative alternative graph as

an example which included removing borders, labeling lines directly, removing legends, lightening grid lines, and lightening the vertical and horizontal lines.

The panelists discussed the importance of standardization over time. For example, if Table 10 exists in one report, does it need to exist in future iterations of a report as well? OACT noted that keeping the same structure and order is valuable. He also agreed that the report does need to be as clear and concise as possible in presenting information rather than drawing conclusions.

A panelist asked Dr. Schwabish about the resources required for generating some of this material. Interactive material is accessible but requires significant work. Dr. Schwabish noted that there are several software packages that can support data visualization including Tableau, R, and D3, but much of this can be achieved in Excel alone.

Panelists discussed the use of a shaded fan chart to convey uncertainty and whether there are other options the group should consider such as box and whisker or a confidence interval chart. Dr. Schwabish noted that people do not understand the concept of uncertainty very clearly so there has not been a lot of worked related to its presentation. The panel raised the idea of an unbalanced fan chart to show that there is not an equal chance that something will happen.

Executive Summary and Presentation Considerations—Michael Thompson and Geoffrey Sandler

Michael Thompson began the discussion of the executive summary noting that the material in the current summary is hard to understand and does not include graphics. Many of the main messages are toward the back of the executive summary. He asked the panel to consider which takeaways should be moved closer to beginning of the text. Michael Thompson also asked the panel to consider whether there is too much emphasis on the alternative projection and not enough on the status of Medicare. The main question posed to the panel was, what is the story board that the report is trying to communicate? For example, is it that the hospital fund is projected to be exhausted by some year, the tax rate on other elements are projected to go up, and are there key sensitivities?

The panel discussed that overall, the report needs to be more accessible, clear, and intentional on what messages come through. The panel can offer these insights and let the trustees determine potential changes.

Geoffrey Sandler raised the question of how the alternative scenario should be presented given the role of uncertainty. A panelist raised the idea of recommending more graphical presentation in the report. Another panelist raised the perspective of the Medicare beneficiary and the importance of demonstrating how these issues affect beneficiaries and access to care. Additionally, the excess burden issue is something to consider communicating clearly. Michael Thompson noted that the panel might consider providing examples of areas for emphasis. A panelist raised the chart book idea asking whether the online report could be accompanied by supplemental information. Several panel members both spoke to the goal of more easily digestible information in the executive summary.

Paul Spitalnic asked if the panel can consider the key pieces of information to focus on in the executive summary. Michael Thompson agreed to take this as a takeaway.

A panel member raised the question of where in the storyboard of the executive summary the illustrative alternative fits. Geoffrey Sandler noted that there is a balance between uncertainty and the illustrative alternative and an emphasis on next five years versus further down the road. A panel member noted that the most important takeaways should be in graphical format. Michael Thompson concluded the discussion noting that he would continue working with the executive summary materials presented at the last meeting and will check in with the panelists ahead of the March meeting.

Uncertainty, High and Low Projections—Melinda Buntin and Michael Thompson

Ellen Meara opened the discussion of uncertainty by describing the topic of harmonizing the different types of uncertainty including current law uncertainty, uncertainty in the high and low projections, and sensitivity analyses. A panel member noted the considerable uncertainty around the 75-year forecast. In November, Michael Chernew noted alternatives on presenting this including stochastic, high versus low, and sensitivity analyses. The same panel member noted that the sense was that at the November meeting the panelists felt that sensitivity analysis was the best path to take and shared a draft recommendation that OACT invest in better graphical displays of its findings and the uncertainty surrounding them. Specifically that a chart be added utilizing the fan format to show uncertainty around the projections of Medicare as a percentage of GDP, that more intuitive presentations of the range of key assumptions be presented, and that alternatives be presented that isolate the effects of changes in the major drivers in future costs to allow for understanding of the effects of different components of sensitivity analyses.

The panelists discussed these options and well as how much time to spend discussing uncertainty. A panel member raised the question of whether there is a need to harmonize across these approaches versus choosing one. The number of assumptions required for the stochastic option does pose a challenge. Paul Spitalnic noted that a 90% confidence interval may be helpful for the audience though there are challenges and agreed that in the long run, stochastic is challenging. Ellen Meara raised the question of whether there is a non-equal probability of up versus down side risk.

Prescription Drugs Update—Dale Yamamoto

Dale Yamamoto began the discussion by going over the findings and recommendations from the 2004 as well as the 2010-2011 Technical Panels.

The 2004 Technical Panel was the first to review the OACT assumptions for Part D since the program was created by law in 2003 to be implemented in 2006. The panel concluded that the OACT/Trustee assumptions used in the most recent projections were generally reasonable, but they recommended three changes: 1) reduce the expected number of beneficiaries participating in Part D and incorporate an explicit model of beneficiary selection, 2) monitor the employer prescription drug program availability, and 3) assume that the employer-provided prescription drug coverage will decline over time. The panel recommended using additional data sources to inform their utilization and cost projection assumptions and using actual Part D data

as soon as they become available. The panel also recommended that OACT maintain its assumption that the Part D program will not affect utilization or costs for Part A or Part B, and that further research be done on the effect of changes in prescription drug utilization on Part A and Part B utilization and costs.

The 2010–2011 Technical Panel found that the use of national health expenditures (NHE) forecasts for drug estimates supplemented by adjustments based on industry experts was reasonable. They also found that the assumptions of induction factors (effectively, price elasticity of −0.2) and the substantial decline in employer participation in Retiree Drug Subsidy (RDS) due to ACA elimination of tax advantage were reasonable. The panel recommended that OACT identify the sources of discrepancy between recent forecasts of prescription drug spending growth and actual experience. They recommended exploring the potential for using a bottom-up model of both the NHE drug component and Part D to improve short-range forecasts (first three years). The panel recommended that OACT explore ways to build Part D experience into the short-range projections for years four and beyond. They also recommended continued monitoring of employer retiree programs.

Dale Yamamoto presented an updated version of Figure II.10 included in the 2010–11 Technical Panel Report showing NHE prescription drug cost trend projections, incorporating the latest projections in the 2016 Trustees report. He then presented three potential findings to include in the latest technical panel report: 1) projected NHE prescription drug costs have gotten better, with some explanations on why that may have happened, 2) bottom-up model for short-term trend projection used by OACT is reasonable and should be continued, and 3) the current assumption on the decline of employer provided drug coverage, including shifts from RDS to Employer Group Waiver Plans (EGWP), is reasonable.

In addition, OACT provided analysis of per-member per-month (PMPM) Part D cost trends both over and under the catastrophic limit, stratified by generic, brand name, and specialty drugs. The graphs showed a faster-growing cost trend for specialty drugs as well as for drugs above the catastrophic limit. The potential recommendation for OACT is that we can assume the long-term cost trend for the reinsurance portion of Part D to be one percentage point greater than the projected cost trend for other components of Part D. We should continue to monitor actual experience, and consider whether the combined Part D cost trend should be equal to the overall NHE prescription drug trend, or whether the gap should be larger during the transition period given recent trends.

Prescription Drug Trends—Liz Fowler, Johnson & Johnson

Liz Fowler, the Vice President of Global Health Policy at Johnson & Johnson presented to the group on prescription drug trends. Her presentation addressed several questions raised by the panel. The panel is interested in hearing about how the accelerated rise in drug spending might look like 10–20 years from now; how drugs in the pipeline might influence long-term trends, what spending offsets there might be to prescription drugs; and how to think about rebates and drug prices in the long run. Dr. Fowler noted that speculating beyond five years in the prescription drug industry is very challenging.

Prescription drug spending is close to 14 percent of overall spending. Spending trends are moderating compared to what they were several years ago. Dr. Fowler noted that every aspect of health care spending is more expensive in the United States, but drug spending as a percent of all health spending is lowest in the United States.

Dr. Fowler spoke to the pace of new drug development and indicated that oncology drugs drive the pace of new drugs to market and oncology drugs are a significant portion of the drug pipeline. She noted that 25 percent of the drugs currently in the pipeline are biologics as opposed to small molecule drugs. Small companies are doing a lot of the innovation in prescription drug development whereas the large companies do the trials and drug launches.

The time of filing to launch has decreased and the time of exclusivity is also decreasing. Dr. Fowler discussed targeted drugs based on genomics and that these drugs target fewer patients though at higher costs. Dr. Fowler noted the use of outcomes based arrangements in relation to short term versus long term use. Outcomes based contracts are being used in Europe to learn more about the effectiveness of new drugs.

With regard to the pipeline, Dr. Fowler noted that there is an emphasis on oncology drugs followed by central nervous system which include Alzheimer's followed by anti-invectives and antivirals. The first five years of launch is a key time of focus. There is now a regulatory pathway for biosimilars which may impact spending and create savings. Policy around biosimilars is developing.

Prescription drugs may offer offsets to other healthcare spending. They may lower mortality, lower hospital admissions, and reduce hospital readmissions. Medication adherence leads to lower healthcare spending. Dr. Fowler noted that other countries require an assessment of new drugs and technologies which gives a sense of impact and value, whereas that is not the case in the United States.

Dr. Fowler noted that Part D Plans are effective negotiators. Part D plans receive an average of 35.3 percent discount from manufacturers. The use of generics is increasing though there was discussion of this increased used as a proportion of dollars versus prescriptions. Dr. Fowler noted that the price increases that people talk about with respect to prescription drugs are not the prices that anyone is actually paying it is therefore necessary to look at the net price growth and the role of rebates and discounts.

Overall, spending trends from drugs are in line with other drug spending. There is an increased pace of innovation, but this will be countered by factors such as loss of exclusivity and the impact of biosimilars. Generic utilization is high, though understanding a generic efficiency measure might be valuable, and prescription drug plans negotiate substantial discounts.

A panel member asked Liz Fowler what has been surprising to her about what the pipeline holds. Dr. Fowler responded that there has been a lot of focus on high-value breakthrough drugs and this has been the case since the passage of the ACA, rather than a focus on me-too drugs. The focus is on value to patients and payers. Another panel member asked a question regarding transparency in pricing and Dr. Fowler commented on the complexities and incentives regarding prices versus rebates and discounts.

Action Items on Prescription Drugs and Site Shifting—Dale Yamamoto and Greger Vigen

Ellen Meara requested that the group review the status of action items for the prescription drug work. With respect to specific recommendations, Dale Yamamoto noted that OACT is doing great work in terms of short-term projections. A potential recommendation may be that the long-term trend assumptions be broken down into over and under the catastrophic limit, as well as by type of drugs. Paul Spitalnic raised the concern that allowing differential growth rates in the long-range projections may sometimes yield questionable results.

A panel member noted that in the short run under the current law, there are incentives for specialty drugs to pile on at high prices over the catastrophic limit, and the cost growth over the catastrophic limit has a disproportionate federal share. The short-run projections can be affected by major therapeutic innovations such as the introduction of the Hepatitis C drug, but those major price fluctuations are nearly impossible to predict. However, despite the volatility and fluctuations in the short-term Part D cost trend, it may be more predictable in the long term.

Paul Spitalnic made the observation that new drugs nowadays are likely to enter the market at a much higher price than existing drugs. Existing market and established drugs are more likely to have lower drug trend increases, which is something we have been observing throughout the recent past, and is something we expect to see in the short-range future. Paul Spitalnic then asked what might be the long-term implications of this market dynamic, such as whether or not we would see a level or trend change after the drug exclusivity period. Panelists then broadly discussed precision medicine, oncology drugs, and Alzheimer's drug, and what might be the implications of these emerging medicines.

Regarding shifting in service sites, Greger Vigen recommended continued monitoring, but we currently do not have enough research evidence to suggest certain service shifts across different parts of the Medicare program. Dale Yamamoto raised the possibility of infusion-type drugs being made into pills, thus potentially moving the Medicare expenditures from Part B to Part D. Greger Vigen offered to write up a short memo with background materials on this topic, as well as the impact of prescription drug cost offsets. A panel member mentioned that there is a fair amount of new evidence on what form the drug cost offsets take and for what types of drugs.

OACT Responses to Age Distribution and Time-to-Death Questions—Ellen Meara and Stephen Heffler

Ellen Meara provided an overview of the memo where OACT responded to the panel questions on the contribution of demographic changes to spending growth. There were three questions/considerations raised by the panel as follows:

1. Should the ratio of spending per enrollee by age cohort vary over the projection?
2. How do effects of controlling for shifts in enrollment by time-to-death (TTD) vary across types of services?
3. Consider a simpler alternative to the proposed Age-Sex-TTD methodology that would control for variation in spending per enrollee for two categories (decedents and survivors) rather than multiple TTD categories.

OACT answered each question as follows:

1. Our analysis of the patterns in spending growth by age cohort breaks down the data into more detailed categories by types of service and by time-to-death (TTD). We find that there are two causal factors that when combined, fully account for the increase in the ratio of spending per enrollee for the 85+ years age cohorts relative to the 65–69 years age cohort: 1) rapid growth in utilization of skilled nursing facilities (SNF) and hospice care, and 2) the change in the distribution of enrollment by TTD within age cohorts. Changes in the distribution of enrollment by time-to-death will continue to be an issue over the 75-year projection. This suggests that it may be reasonable to take TTD into account in the demographic adjustment in order to build in the effect of this factor over the projection. The rapid growth in SNF and hospice care is effectively controlled for over the short-term projection under the current OACT assumption, which projects different rates of growth by type of service. The rapid growth in SNF and hospice care over the historical period is assumed to taper off in the early part of the projection and not require further adjustment over the 75-year projections horizon.

2. There is indeed variation in the estimated effect of demographic change by type of service that is a function of the base-year distribution of spending per enrollee. The distribution of spending for some types of services tends to be more concentrated in older age cohorts (e.g. SNF, hospice, home health) relative to others (professional and outpatient services). There is also considerable variation in the impact of controlling for TTD by type-of-service, since the distribution of spending for some types of services is relatively concentrated in the last years of life (inpatient, hospice). The implication is that controlling for the effects of shifts in TTD could be expected to reduce the contribution to spending growth attributable to demographics by a greater degree for Medicare Part A than for Part B.

3. A panel member suggested a simplified alternative method that would track only variation in two TTD categories: TTD=0,1+. This is equivalent to tracking shifts in enrollment between decedents and survivors in any projected year. The extent of the difference in impact for varying levels of detail by TTD is related to the rate of improvement in the mortality rate. For the period 1991–98, there is little difference between the estimates, because there is little movement in the distribution of enrollment across TTD. However, for the period from 1999–2008, where mortality rates improved substantially, the difference is significant. A negative differential resulting from controlling for TTD at a higher level of detail is implied for any period where improvements in mortality continue, which implies that a negative differential would persist over the 75-year projection. Given that the projected rate of mortality improvement over the 75-year projection is slower than was the case for the period from 1999–2008, the differential between these methods would be smaller than we see historically.

Draft Recommendations on Age and Time-to-Death—Ellen Meara and Austin Frakt

Given the answers from OACT above, Ellen Meara and Austin Frakt went on to present the following findings and recommendations relating to the age-sex distribution of spending.

Finding 1: The age distribution of spending has changed over time in ways that currently are not accounted for in the Trustees Report. Accounting for changes in the growth of spending by age over time has sizeable impacts on the relative contribution of demographics to spending projections, but these differences are small compared with overall Medicare spending.

Finding 2: Medicare spending has grown much more rapidly at older ages (85+) compared with younger groups (65–69) over recent decades for two reasons: increased use of post-acute care like skilled nursing facility care, and changes in expected time to death as longevity increases and pushes expensive end of life spending to older ages.

Finding 3: Incorporating time-to-death (TTD) into long range projections would convey a more accurate sense of the contribution of demographic trends (and improvements in both health and survival) to projections, although the impact of demographic trends relative to total spending in Medicare is small.

Recommendation: OACT should seek to incorporate time-to-death (TTD) in its projections to account for the impact of rising longevity and changes in health on the age-sex distribution of spending over time.

Due to the lack of data and consistent definition to measure health status, the panel felt that TTD is a good proxy to include in the model. Overall, the panel members are supportive of the recommendation above, although editorial changes in the findings are needed to provide more clarity on the subject. In addition, TTD is probably only relevant for Parts A and B, but not Part D.

Draft Recommendations for Medicare Advantage Spillovers—Austin Frakt

Austin Frakt shared a memo with the draft recommendations for Medicare Advantage (MA) to Traditional Medicare (TM) spillovers. The findings and recommendations are as follows:

Finding 1: With respect to MA to TM spillovers, the Panel finds that the Trustees' current methodology is reasonable.

Recommendation 1: The Panel recommends that the Trustees Report and/or supporting methodological documents it references elaborate on how current projection methodology incorporates MA-to-TM spillovers, as well as other endogenous, market and institutional changes to health insurance and the Medicare program.

Recommendation 2: The Panel recommends that the Trustees consider developing an explicit model of MA-to-TM spillovers to illuminate how future changes in MA market penetration may affect TM.

A panel member noted potential wordsmithing as part of the process. Another panel member suggested citing published sources in the footnotes or references to strengthen the recommendations. Austin Frakt will edit the recommendations after the panel decides on the general storyboard so that the overall message in the report is synthesized across topics. Overall, the discussion of the topic on MA-to-TM spillovers is close to finished.

Draft Recommendation for Transitions—Ellen Meara & Austin Frakt

The panel was asked to consider long-range growth assumptions for Hospital Insurance (HI) and Supplementary Medical Insurance (SMI) and the transition from short-range to long-range forecasts. For each projection in the Trustees report (Part A, Part B, and Part D), estimates are based on prices (from current law) and a measure of volume and intensity. The volume and intensity of services are estimated differently in the short run (years 1–10), long run (years 26 to 75), and transition period (years 11 to 25). Because different approaches for short-run periods and long-run periods are used, the growth rate at the end of year 10 is substantially different than the growth rate that would have occurred if the long-run approach (the factors contributing to the growth model based on NHE) were used. Given the panel's general agreement with short range and long range approaches to the projections, the panel considered alternative, less abrupt transitions between short and long range. No evidence was presented, nor were panel members aware of any evidence that would lead to changing the length of the 15-year transition period.

At the request of the panel, the staff at OACT prepared detailed examples of an alternative approach to the current transition period by blending the short-range and long-range assumptions. For each program – Part A, Part B, and Part D – these alternative blended transition approaches yielded trends nearly identical to those using current methods. The current methods used in the Trustees Report are slightly more straightforward than the blended method. Thus, the panel concludes that there is no need to alter the approach to modeling the transition period. One suggestion was made, though, to break out and show only years 11–25 so that readers can see the transition period better. Another suggestion was made to include the graphs of excess cost growth from Part A, Part B, and Part D.

Public Comments

There were no public comments.

The Technical Review Panel adjourned at 4:15 PM on February 7, 2017 and will resume February 8, 2017.