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February 7, 2005

Mr. John D. Olsrud
Director
North Dakota Legislative Council
600 E Boulevard
Bismarck, ND 58505-0360

Re: Analysis of Senate Bill 2169

Dear Mr. Olsrud:

Thank you for your letter of January 18 requesting a cost-benefit analysis of the colorectal cancer screening mandate included in Senate Bill No. 2169. You asked that we provide information to help determine the following:

a. the extent to which the proposed mandate would increase or decrease the cost of the service;
b. the extent to which the proposed mandate would increase the appropriate use of the service;
c. the extent to which the proposed mandate would increase or decrease the administrative expenses of insurers and the premium and administrative expenses of insureds; and
d. the impact of the proposed mandate on the total cost of health care.

This letter is intended for use by North Dakota legislators and officials for the purpose of considering this proposed legislation. It should not be used for other purposes and was not prepared for the benefit of any third party. In doing our work, we have relied on the data and information cited in this letter. This information includes the Senate Bill attached to your letter. If there are changes to this bill, the comments here may no longer be appropriate.

Background

This bill requires carriers to cover the cost of colorectal cancer screening examinations and laboratory tests of asymptomatic individuals in accordance with generally accepted standards of medical practice. For the first two years, this mandate would apply only to the state employee group. After that, the mandate would apply to other commercial individual and group health insurance products.

The American Cancer Society (ACS) estimates that in North Dakota there will be 360 new cases of colon and rectal cancer and 140 deaths due to these cancers in 2005. The Agency

for Healthcare Research and Quality of the US Department of Health and Human Services reports that colorectal cancer is the 2nd leading cause of cancer death in the U.S.

The American Cancer Society recommends men and women at average risk for developing colorectal cancer follow one of the follow five testing schedules beginning at age 50:

- yearly fecal occult blood test (FOBT) or fecal immunochemical test (FIT)
- flexible sigmoidoscopy every five years
- yearly FOBT or FIT plus flexible sigmoidoscopy every five years
- double-contrast barium enema every five years, or
- colonoscopy every 10 years.

People who are at above average risk for developing colorectal cancer (such as those who have a personal or family history with colorectal cancer or a personal history with adenomatous polyps or inflammatory bowel disease) are recommended to begin screening earlier and/or undergo testing more often. The recommendations of the American College of Gastroenterology are similar. Therefore, we expect that this benefit would be used by a significant portion of the population.

Impact on Premium Rates

Direct Impact

We analyzed the potential impact of a similar bill in 2003 (House Bill 1349). In our analysis of House Bill 1349, we estimated that mandate might increase insurance premiums in the range of 0.1% to 0.3%, for those health insurance products that do not currently include such coverage. We believe that estimate is still reasonable. We do not have information about the extent to which these screening exams are currently covered by health insurance products in North Dakota. If you wish, we can extend our analysis by seeking such information.

In calculating this estimate, we used the mandate pricing model we developed in 2002 for North Dakota, along with some relatively conservative assumptions regarding the compliance with the recommendations outlined above. In particular, we assumed that each year:

(1) 25 percent of adults between the ages of 50 – 65 received a FOBT, and
(2) either 10% received a sigmoidoscopy or 5% received a colonoscopy. These figures correspond to the guidelines above. They assume that 50% of affected members will elect either a sigmoidoscopy or colonoscopy.

As a point of reference, a study published by the Centers for Disease Control and Prevention (CDC) in 2004 reported that in North Dakota in 2002, just over 60% of adults aged 50 years or older reported *not* having had a sigmoidoscopy or colonoscopy in the previous five years.

We did not include the cost of any office visits or other services that may be incurred along with the actual colorectal screening test.

The actual increase will depend on a number of factors, including the demographics of the covered population, out of pocket costs (such as deductibles, coinsurance, and copays), and the degree of compliance with screening recommendations. The estimates provided above, assumed cost sharing of a $250 deductible and 10% member coinsurance. In terms of demographics, the state employee group, to which this mandate would apply over the first two years, may well be older than the typical commercial (non-Medicare) group in North Dakota. The estimated cost of this mandate could easily increase by 15% or more from the estimates provided above, to the extent that a higher proportion of the population is in the age group where routine screening is recommended.

This will be important to keep in mind when you are analyzing the experience of the state group. In fact, as part of that analysis, we would recommend collecting data on the distribution by age of the insured population in North Dakota and comparing it to the demographics of the state group.

According to information from the CDC, the following costs are a typical range of rates for colorectal cancer screening tests.

- flexible occult blood test (FOBT) - $10-$25
- flexible sigmoidoscopy - $150-$300
- double contrast barium enema - $250-$500
- colonoscopy - $800-$1,600

You should also be aware that there are potentially more expensive procedures that may be used for these screenings, such as nuclear magnetic resonance, although this is uncommon and not currently recommended by the CDC.

We were asked if mandating this coverage would increase the appropriate use of services. Given the costs associated with some of the tests as shown above, we do believe that providing coverage will increase compliance with ACS guidelines, although we do not have data to confirm or quantify this. In addition, costs may be higher the first year the mandate is in place, since many insureds may be behind schedule and may be incented to undergo screening after it becomes an insured benefit. On the other hand, to the extent that health plans have the ability to negotiate and appropriately monitor fee levels, we would not expect this mandate to increase the per service cost for these services dramatically,

This mandate will introduce some added administrative costs. These include updating contracts and other policyholder communications, changes in claims processing systems to allow payment of these claims, and additional agent or broker commissions where they apply. However, we would not expect any extraordinary administrative expenses due to these mandates.

Indirect Impact

There could also be offsetting benefits related to the early detection and treatment of colorectal cancer. A few years ago, the state of Pennsylvania recently considered a similar mandate and issued a report in which the American Cancer Society is cited as reporting

offsetting benefits. In particular, they report that a precancerous polyp can be removed during screening for about $1,100. They go on to say that if that polyp goes undetected and develops into Stage IV colorectal cancer, treatment costs can reach up to $58,000. They also stated that "the initial cost of treating rectal cancer that is detected early is about $5,700. This is approximately 75% less than the estimated $30,000 - $40,000 that it costs to initially treat rectal cancer that is detected further in its development."

This report was published in May 2002, and costs have likely risen since then. In addition, new and expensive therapies, such as Avistan which is used to treat advanced colon cancer, have and continue to become widely available since then. In addition, in interpreting these results, it is important to keep in mind that approximately 90% of colorectal cancers occur after age 50, so the financial benefit of early detection will largely be realized later in life when most people are covered by Medicare.

Also worth noting is the significant rate of false positives associated with the FOBT, which may introduce added follow up costs. The follow up test is typically a colonoscopy. We are not able to quantify this cost without additional research.

Additional expenses to insureds may include health insurance cost sharing and time taken off work to go to the exam. On the other hand, insureds may realize some savings in disability and life insurance costs over the long run, if morbidity and mortality costs decline due to these screenings.

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This letter contains estimates of future experience, based on the assumptions described here. It is certain that actual experience will not conform exactly to the assumptions used in this analysis. If actual experience is different from the assumptions used in the calculations, the actual amounts will also deviate from the projected amounts.

John, I hope this letter is helpful to you as you consider these bills. If you have questions regarding this letter, or would like us to do additional analysis, please feel free to contact me at (952) 820-2481 or leigh.wachenheim@milliman.com.

Sincerely,

Leigh M. Wachenheim

Leigh M. Wachenheim, FSA, MAAA
Principal & Consulting Actuary

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