

**Study of the Impact of House Bill 159
Coverage of Hearing Aids and Instruments**

Prepared for the New Hampshire Insurance Department

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I. Introduction and Executive Summary

INTRODUCTION

The New Hampshire Insurance Department has engaged Reden and Anders, Ltd. (R&D) to study the impact of House Bill 159, that mandates insured individual and group policies provide coverage for fitting, dispensing, servicing, or sale of hearing instruments or hearing aids and instruments by a hearing instrument dispenser or other hearing professional. These hearing benefits can not require a deductible or coinsurance greater than that required for any other benefits in the plan.

As stated in the Request for Proposals, this study addresses the following issues and questions:

1. The social and financial impact and the medical efficacy of mandating the benefit.
2. The effects of balancing the social, financial, and medical efficacy considerations.
3. Whether a more precise definitional section should be crafted to allow for a more accurate calculation of the cost implications of the mandate.
4. Whether consideration should be given to a threshold hearing loss as a predicate to access to the benefit.
5. What the pricing implications would be if caps on benefit levels were imposed, giving consideration to two different conceptual caps; a maximum dollar amount per devise, and a defined number of years which the dollar cap would span.
6. What the policy and pricing implications would be if a mandate were limited to those persons under the age of nineteen.
7. What the pricing implications would be for consideration of a mandatory offer rather than a mandate.
8. Whether it is reasonable to consider imposition of a hearing loss coverage mandate for the individual market.

We confined this study to the under age 65 population. It does not appear to be the intent of HB159 to apply the mandate to individual Medicare supplement policies. Relatively few employer plans cover retirees and their spouses over age 65, who comprise the large majority of the over age 65 population. The employers who do provide this retiree coverage are commonly large employers with self-insured plans, which would not be subject to this mandate, and government plans. As stated in the HB159 Fiscal Note, the health plan for employees of the State of New Hampshire is self-insured, and we assume several other New Hampshire county and local government employers also have self-insured plans. The HB159 Fiscal Note states that these governmental self-insured plans would not be subject to the mandate.

Introduction and Executive Summary (cont'd)

EXECUTIVE SUMMARY

1. We projected the impact of the HB159 mandate as introduced to be an increase of 1.6% to the cost of a typical insured health plan. If the mandate were limited just to persons under age 19, the impact would be an increase of 0.3% to the cost of a typical plan.
2. We also analyzed the cost under several alternative maximum benefit levels: maximums per devise; maximum allowed charges over 2, 3, or 4 policy years; and maximum benefits over 2, 3, or 4 years. The impact we project under these alternatives, expressed as percentage increases to the cost of a typical insured plan, are:

Maximum allowed cost per hearing aid with no limit on replacement frequency	\$1,500			\$2,000			\$3,000		
	0.7%			1.0%			1.3%		
Maximums over a multi-year period	2 Yr	3 Yrs	4 Yrs	2 Yr	3 Yrs	4 Yrs	2 Yr	3 Yrs	4 Yrs
Maximum allowed cost for all hearing aids*	0.7%	0.6%	0.5%	1.0%	0.8%	0.7%	1.2%	1.0%	0.9%
Maximum benefit for all hearing aids									
High plan	0.6%	0.5%	0.4%	0.8%	0.7%	0.5%	1.0%	0.8%	0.7%
Medium plan	0.6%	0.6%	0.5%	0.9%	0.7%	0.6%	1.0%	0.9%	0.8%
Low plan	0.7%	0.6%	0.5%	1.0%	0.8%	0.6%	1.2%	1.0%	0.9%

*Two times the limit for binaural fittings.

3. In the U.S. in 2004, 2% of children under age 19 and 10.3% of adults 19-64 had hearing loss. However, only 12.6% of the under 65 population with hearing loss used hearing aids. According to one source¹, 30% of the hearing loss population cited cost as the reason they do not have a hearing aid.
4. Lack of early detection and intervention of hearing loss in young children costs schools an additional \$420,000 of special education costs per child with hearing loss, due to delayed speech and language development, plus additional costs into adulthood¹.
5. According to one study, an adult with untreated hearing loss is more likely to have a lower income than similar individuals without hearing loss. The reduction in income is attributed to several factors: less effective communication on the job, underemployment, on-the-job safety, anxiety and depression, and mistakes².

Introduction and Executive Summary (cont'd)

6. While hearing aids can provide significant benefits for most individuals with hearing loss, they are not always effective. Hearing aids appear to have the greatest benefit when the person has moderate hearing loss; there is minimal benefit if the person has minimal loss or profound loss³. Furthermore, approximately 21% of hearing aid owners in 2004 were dissatisfied with their instruments⁴, and 16% of hearing aids in 2000 were "in the drawer," i.e., not used⁵. However, digital and programmable hearing aids have become more common and are replacing analog units, and the satisfaction level of new hearing aid owners has increased.
7. In balancing social, financial, and medical efficacy, the Legislature should consider the differing impact of hearing loss on children versus adults and the impact of different levels of hearing loss. Mandating hearing aid coverage for children (item 4 above) appears to have the highest benefits-to-cost ratio. For adults, consideration should be given to reduced income of hearing loss workers versus the cost of the benefits (see next item 8 below).

The other consideration in balancing social, financial, and medical efficacy is the extent to which employers and individuals may reduce their overall medical plan benefits in order to offset some or all of the additional cost due to this mandate. This factor varies by group size and by a person's income. Due to the cost impact of HB159 as introduced, we project that, on average, employers will react to the mandate by reducing their overall benefits by 0.3% to 0.5%, in the form of higher deductibles or higher member coinsurance and copayments. Adding another mandate on top of existing ones may also cause some small employers to drop their plans and some large employers to switch to self-insured plans.

8. A 2005 study built a scale of 10 levels of increasing hearing loss thresholds based on a combination of subjective factors and two audiological measures². Individuals in the lowest hearing loss groups showed a relatively modest decrease in annual income due to hearing loss. If the Legislature were to authorize the construction of a similar scale and limit the mandated benefit only to individuals in the 7 highest levels of hearing loss, the added health insurance cost due to the mandate would decrease 10%, from 1.6% to 1.4% of the cost of a typical plan.
9. Besides hearing aids themselves, there are several assisted listening devices (ALDs) that help individuals with hearing aids to overcome particularly difficult hearing situations. ALDs have a wide range of costs. HB159 covers all but a few specific accessories. For some hearing loss individuals, ALDs add to the quality of life but are non-essential. For others, such as students with hearing loss that need to follow classroom instruction, ALDs provide a necessary boost to hearing in very important situations.

Coverage of ALDs would increase the cost impact of the mandate. The Legislature may want to consider a more precise definitional section in HD159 that would exclude coverage of ALDs, except for full-time students, adults taking non-job-related classroom training, or users with a demonstrated inability to control their hearing aids without remote controls.

Introduction and Executive Summary (cont'd)

10. A mandated offer of hearing aid coverage would be very difficult to price, especially for the small group and individual markets. As stated in the Maine Bureau of Insurance report, "Costs would be considerably higher, because only those who perceive a need will purchase coverage." ⁷ We do not believe that mandated offers are good public policy. The only way we see to reduce this pricing spiral somewhat would be to allow a benefit phase-in: a very limited benefit in the first year that a group has the coverage, followed by small increases in the next 3 years. Even with a phase-in such as this, the price of the optional benefit would still be high and would attract only those groups in which there were existing hearing loss individuals.
11. The individual health insurance market already has issues of affordability. We project that HB159 as introduced would either cause 0.6% of individual policyholders to drop their policies due to higher costs or cause these policyholders to reduce their overall plan benefits by 0.6% to offset the cost of the mandate.

II. Discussion of Results and Projections

SOCIAL AND FINANCIAL IMPACT AND MEDICAL EFFICACY

Social Impact

We do not have an exact number of New Hampshire residents with hearing loss. Assuming that the 2004 national percentage of hearing loss individuals to total population also applies to New Hampshire, we get one estimate of 87,400 state residents under age 65 with hearing loss. However, the 2003 Maine Bureau of Insurance report estimated that there were 56,700 Maine residents under age 65 in 2003 who had hearing loss,⁷ and Maine's overall population is very close to New Hampshire's.

In 2004, 76% of the New Hampshire population under age 65 was covered by employer plans and another 3% was covered by individual plans.⁸ The remaining 21% were either uninsured (12%) or covered by Medicaid, Medicare, or other public plans. Nationally, approximately 50% of people in employer plans are in self-insured plans, which would not be affected by HB159. In New Hampshire, the plan for state employees is self-insured. This plan and any local and county government self-insured plans are also not affected by the proposed mandate, according to the HB159 Fiscal Note. We assume that 50% of New Hampshire residents in employer plans are in self-insured plans, and therefore the estimate number of New Hampshire residents potentially affected by this mandate ranges from 28,000 to 44,000.

The available literature suggests many social problems relating to untreated hearing loss. The report of one advocacy group, The Better Hearing Institute, states that working adults with hearing loss have incomes \$2,000 to \$12,000 per year less than non-hearing impaired individuals, even when other variables are controlled. The report further claims that the use of hearing instruments can mitigate 50% of the negative effects. Some of the on-the-job effects of hearing loss are impaired verbal communication, especially in dealing with the public, safety, job mistakes, underemployment, anxiety, depression, and social isolation.²

Another advocacy group discusses problems arising from untreated hearing loss in children. Their website claims that, when children are not identified and do not receive early intervention, special education for a child with hearing loss costs schools an additional \$420,000. The website further states that children with hearing loss in one ear are 10 times as likely to be held back at least one grade compared to children with normal hearing, and that children with mild hearing loss miss 25-50% of speech in the classroom.¹

Financial Impact

We started our projection by first looking at the current utilization rate and cost per unit of hearing aids. Using data from MarkeTrak VII⁴ for 2004 and U.S. Census population estimates for the same year, we found that 1.9% of the under age 19 and 10.3% of the age 19-64 populations have hearing loss. In addition, 13.3% of the under age 19 and 12.6% of the age 19-64 populations with hearing loss use hearing aids now. The Hearing Review 2005 Dispenser Survey states that the average hearing aid cost in 2004 was \$1,893, and that 73% of hearing

Discussion of Results and Projections (cont'd)

aid users were fitted binaural—aids on both ears. We assume that the cost of binaural aids is two times the single hearing aid cost.

This cost does not include ALDs. The most common ones, Telecoils and portable phone amplifiers, appear to be relatively inexpensive, ranging from \$20 to \$100. More expensive ALDs are remote controls and the FM receiver or FM boot, which can run from \$700 to \$1,000 or more. We do not have data on how frequently ALDs are now used, and we did not include them in our projected mandate cost. We discuss coverage of ALDs in the part on "More Precise Definitional Section" below.

For 2006, we assume that retail cost of an average hearing aid increases by 5% per year from 2004. This is not due to increases in the prices of particular units—those have been stable or even slightly decreasing. The increase is due to the growth in consumers' choosing more expensive digital hearing aids over analog models⁶. Even among consumers selecting analog models, more are choosing programmable units over linear non-programmable ones. We included a 5% reduction to the trended cost to reflect possible discounts that insurance carriers may be able to obtain.

Current adult (19-64) hearing aid users replace their units on the average once every 4.5 years. Units for children under 19 are replaced on the average every other year. The result is a 2006 average annual cost of \$762 per adult hearing aid user and \$1,715 per child hearing aid user. If this cost were spread over the entire insured population under age 65, it would add 0.27% to the cost of a typical health plan. Note, however, that this is based on data from purchases where the user or his/her parents pay 100% of the cost nearly all the time.

Under HB159, which mandates hearing aid coverage with the same deductible and coinsurance as other services, current hearing aid users will pay dramatically less for their hearing aids, as shown below for three typical plans:

Plan Tested	Benefit Ratio *
High plan: \$250 deductible, 20% coinsurance, \$2,250 OOPL**	80.0%
Medium plan: \$500 deductible, 20% coinsurance, \$3,000 OOPL	74.4%
Low plan: \$1,000 deductible, 20% coinsurance, \$4,000 OOPL	67.0%

*Ratio of average net benefits to average allowed costs.

**OOPL = out-of-pocket limit, which includes the deductible and all member coinsurance.

Expressed as percentages of non-hearing aid benefits, the added cost of the hearing aid mandate varies little across these three plans. We project that providing the same insurance coverage as other services will have a significant impact on the three key factors: cost per devise, utilization (the number of individuals with hearing loss who use hearing aids), and the unit replacement rate.

Discussion of Results and Projections (cont'd)

1. **Cost per unit:** One of our data sources³ showed that the cost of a high-end digital unit exceeded the cost of the average purchased unit by 69% in 2003. If the average represents essentially a user-pay-all cost, then the same user could buy the high-end model at less out-of-pocket cost if s/he had insurance coverage for hearing aids under any of the three typical health plans. We therefore assume that the cost per device for *current* hearing aid users would increase by 62%, or 90% of the difference between the current average and the high-end cost. For *new* users, most of whom have put off purchasing due to lack of affordability, we assume their average cost per unit will be 130% of the current average, if they have the mandated insurance coverage. Overall, we project the average cost per unit would increase by 45%.
2. **Utilization:** Of the population with hearing loss, only 25% now use hearing aids. Thirty percent do not have hearing aids because they cannot afford them. Of the remaining 45%, the reasons for non-use are denial of hearing loss (33%), not being aware of hearing loss (7%), and having hearing loss so profound that surgical or medical treatment is required (5%).¹ To project increased utilization, we focused solely on the 30% who cited affordability as the problem. We assume that 90% of these people will obtain hearing aids if they have an insurance benefit equal to what they get for other services. This yields a 108% increase in the number of hearing aid users.
3. **Unit replacement rate:** With insurance coverage the same as for other services, we project that the average number of years a unit is used before it is replaced will drop in half to one year for children under age 19 and 2.25 years for adults age 19-64. We base this on a net out-of-pocket cost comparison: if insurance would now be paying well over half of the cost, a current user can replace her/his unit twice as often at basically the same out-of-pocket cost s/he had when s/he was paying the full cost her/himself.

With the assumptions of 1-3 above, we project that the cost of the HB159 mandate in 2006 will be 1.6% of the cost of a typical health plan. This cost increase expressed as a percentage of a health plan's non-hearing aid benefits varied insignificantly among the 3 benefit plans we tested.

Medical Efficacy

While hearing aids are clearly a significant benefit for most individuals with hearing loss, the 2004 data show that only 68% of all users were satisfied with their units. Over 16% of hearing aid owners don't use them—referred to in data sources as “in the drawer.” However, users owning hearing aids less than one year had a 78% satisfaction rate, due to the higher proportion of digital and programmable units among the new users.⁴

According to a 1999 study, the main reason for dissatisfaction was that the unit provided little or no benefit. Other reasons for dissatisfaction were background noise, poor amplification, and discomfort with the way the unit fitted. This study also showed that the satisfaction rating of programmable units (analog or digital) was 16% higher than that of non-programmable units, and the rating of digital units was 13% higher than that of analog units.⁵

Discussion of Results and Projections (cont'd)

According to Dr. Timothy C. Hain, "Hearing aids are not indicated for an ear with minor hearing loss, and are also not very useful in an ear with profound hearing loss."³ In the later situation, he considers either a cochlear implant or a bone-anchored hearing aid (BAHA) to be the effective treatments. Individuals who need these treatments are not those who are getting normal hearing aids. BAHA requires a surgical implant and not just an external devise. Many health plans already cover cochlear implants, and we do not expect any significant reduction in these costs due to the HB159 mandate.

We conclude that conventional digital or analog hearing aids are effective treatment for a large percentage of people with moderate, but less than profound, hearing loss.

BALANCING SOCIAL, FINANCIAL, AND MEDICAL EFFICACY CONSIDERATIONS

In balancing social, financial, and medical efficacy, Legislature should consider the differing impact of hearing loss on children versus adults and the financial impact to individuals of different levels of hearing loss. Considering the cost cited above by an advocacy group¹ for remedial education for children with untreated hearing loss, mandating hearing aid coverage for children appears to have the highest benefits-to-cost ratio. For adults, the highest benefit to cost ratio appears to be for those with moderate hearing loss, based on lost income due to hearing loss versus the cost of hearing aids.

Offsets to Other Health Care Expenses

We do not see many situations in which mandated hearing aid benefits will reduce other medical expenses now being covered. The main area where there may possibly be some offsets is mental health. The Better Hearing Institute paper² mentions reduction in quality of life due to untreated hearing loss—*anxiety, depression, social isolation, and emotional stability issues*. If a person's hearing is improved significantly by the use of a hearing aid, there could be some offset in the form of lower mental health costs for that individual. Because this would likely be a small part of the plan's overall mental health cost, we are not able to quantify the amount of this offset.

Elasticity of Demand

Elasticity of demand means the percentage increase or decrease in consumption of an item for every 1% decrease or increase in the cost of that item. In the context of this study, where the mandated benefit will add to the cost of the health plan, the elasticity of demand is the estimate of the percentage of employers and individual policyholders who will discontinue their insured health insurance coverage, or the percentage by which they will reduce their coverage (by increasing deductibles, coinsurance, or copayments) to offset the increase in cost due to the mandate. Large employers are unlikely to discontinue their plans but may convert their insured plans to self-insured, if the cumulative burden of all state mandates becomes too high.

Discussion of Results and Projections (cont'd)

To estimate the elasticity, we reviewed studies performed by the Congressional Budget Office⁹ for low-income individuals, by The Lewin Group¹¹ for subsidization of coverage, and by Rand¹². Based on this review, we estimate that group plan sponsors will reduce their coverage by the following percentages for every 1% of premium increase beyond trend:

- Small groups: 0.3% (reduction in coverage or incremental plan termination rate)
- Large groups: 0.2% (reduction in coverage or incremental plan conversion to self-insured)

These factors imply that, as a result of HB159 as introduced, existing insured health benefits will be reduced by 0.5% for small group plans and by 0.3% for large group plans.

WHETHER A MORE PRECISE DEFINITIONAL SECTION SHOULD BE CRAFTED

Besides hearing aids themselves, there are several assisted listening devices (ALDs) that help individuals with hearing aids to overcome particularly difficult hearing situations. HB159 covers "any instrument designed, intended, or offered for the purpose of improving a person's hearing and any parts, attachments, or accessories..." It specifically excludes "Batteries, cords, and individual or group auditory training devices and any instrument or device used by a public utility in providing telephone or other communication services..." It is our interpretation that HB159 as introduced would require benefits for most ALDs.

Among the common ALDs are:

- Remote controls, which are useful for people with manual dexterity problems.
- Telecoils, for telephone use (30% of hearing aid users now have these).
- FM receivers, also called FM boots, which are commonly used to improve hearing at lectures and concerts and in classrooms. According to one vendor website, these can cost between \$745 and \$1,025.⁶
- Various other direct audio input devices, including television listening devices.

All of these ALDs enhance the quality of life of people with hearing loss, but they also impose an added cost to this mandate. For example, FM receivers alone could increase the cost by 20% to 30% if all hearing aid users purchased one. For many individuals in particular situations, ALDs are important to their everyday life. As an example, students need to be able to understand and clearly hear their classroom instruction.

Discussion of Results and Projections (cont'd)

Considering the added cost of ALDs compared to their benefits, Legislature may want to consider modifying HB159 with a more precise definitional section that provides coverage of ALDs only for:

- Full-time students attending grade schools, colleges, or technical colleges and institutes.
- Other users requiring ALDs for job training not required by their current employer. We assume that employers will provide ALDs for on-the-job use and for employer-required training, as required by the Americans with Disabilities Act as a "reasonable accommodation."
- Individuals who are physically unable to control their hearing aids adequately without remote controls.

THRESHOLD HEARING LOSS AS A PREDICATE TO ACCESS THE BENEFIT

Audiologists have developed measures of hearing loss. Dr. Sergei Kochkin, in a paper for the Better Hearing Institute², developed a scale of 10 deciles—10% gradations of hearing loss from minor to profound—using the following inputs: the number of impaired ears, the person's score on the Gallaudet Scale and on the Unaided Abbreviated Profile of Hearing Aid Benefit (APHAB), a subjective score based on a survey response. For each decile, Dr. Kochkin then looked at the level of hearing instrument use and the amount of income reduction, compared to individuals without hearing loss, controlling for other variables that may influence income.

The author found that individuals in the 3 lowest deciles with the lowest amount of hearing loss—30% of the hearing loss sample population—had an income differential under \$4,000 per year. He said that hearing aid use can mitigate 50% of this effect. These individuals now purchase 10% of all hearing aids. Using this scale as an example, if the mandate were re-written to require the individual to have a hearing loss level greater than the 30th percentile—that is, to be among the highest 70% in hearing loss—then the cost of the mandate would be reduced by 10%, to 1.4% of the cost of a typical medical plan.

A recommendation for a specific hearing threshold scale as a qualifier for the mandated benefit is beyond the scope of this study. We mention the scale from the above-cited paper as an example of a way to grade hearing loss and measure the economic trade-off of providing a benefit at an added cost to employers and all covered members, compared to value derived by those individuals needing the benefits. If the Legislature wishes to pursue the idea of a threshold hearing loss qualifier for the benefit, we recommend that it form a panel of audiologists, economists, and actuaries to develop a workable scale and a threshold level that balances costs and benefits.

Discussion of Results and Projections (cont'd)

PRICING IMPLICATIONS OF CAPS ON BENEFIT LEVELS

We projected costs for several variations of hearing aid mandates:

- As a maximum allowed cost (before member cost sharing) per device with no limit on the frequency of replacement.
- As a maximum allowed cost (before member cost sharing) for all devices over 2, 3, or 4 years.
- As a maximum benefit (after member cost sharing) over 2, 3, or 4 years.

To project these costs, we started with our assumptions of increased average cost per unit, utilization rate, and replacement rate that we used for the HB159 mandate as introduced. For the variations with maximum allowed costs per unit, we then changed these assumptions to reflect the different out-of-pocket expenses that users would have with these various benefit limits. We chose these new assumptions to be consistent with the assumptions for the full HB159 mandate. The Appendix has an exhibit with the key assumptions we used in this part.

Table 1 in the Executive Summary shows the variations in extra costs due to these variations on the mandate. For the variations with caps on allowed charges per device, with or without a multi-year maximum, we did not find that the added cost, expressed as a percentage of the underlying base medical plan cost without hearing aid coverage, varied significantly between the high, medium, and low cost plans (see Table 2, page 6, for plan descriptions). As one would expect, the cost increases with the caps are always lower than the 1.6% increase we project for HB159 as introduced. The cost increases range from 0.7% to 1.3% for mandates with allowed cost caps per device but without any limit on the frequency of replacement. For mandates with multi-year allowed cost caps, the cost increases range from 0.5% for a total allowed cost cap of \$1,500 over 4 years to 1.2% for a \$2,500 cap over 2 years (both caps doubled for binaural fittings).

When the mandate is changed to a maximum benefit (net of member cost sharing) over a multi-year period (as opposed to maximum allowed cost), the increase does vary between the high, medium, and low plans. The revised mandate's cost as a percentage of the base plan benefit increases as the deductible and out-of-pocket limit (OOPL) increase. This is because the base plan's cost is less with higher member cost sharing, and the hearing aid expense would cover a significant part of the plan's deductible and OOPL that normally would have to be covered by other medical expense. The range of additional cost due to this mandate is 0.4% for the high plan with a \$1,500 maximum benefit over 4 years to 1.2% for the low plan with a \$2,500 maximum benefit over 2 years.

Discussion of Results and Projections (cont'd)

Elasticity of Demand

The lower projected costs of these alternative mandates would obviously put less pressure on employer groups to reduce benefits, to eliminate plans (small employers), or change to self-funding (large employers). We project these mandates with caps would cause benefit reductions, small group plan cancellations, or large group changes to self-funding ranging from 0.1% to 0.4% for small groups and 0.1% to 0.3% for large groups.

MANDATE LIMIT TO PERSONS UNDER AGE 19

If the mandate for coverage as any other service were limited only to persons under age 19, then the revised mandate would increase the cost of a typical medical plan by 0.3%. We assume the same average cost per device for children as for adults, and the same percentage of binaural fittings. However, children's hearing aids do have a higher replacement rate: currently every other year, versus every 4.5 years for adults. With the mandate, we project that the replacement rate for children would increase to yearly.

By modifying the mandate to include the various benefit caps mentioned in the section above, we project the cost of a typical medical plan will increase by 0.1% to 0.2% due to a mandate limited to persons under 19. The elasticity of demand impact of this mandate on plan cancellations, changes to self-funding, or benefit reductions would be minimal.

Maximum allowed cost per hearing aid No limit on replacement frequency	\$1,500			\$2,000			2,500		
	0.1%			0.2%			0.2%		
	2 Yr	3 Yrs	4 Yrs	2 Yr	3 Yrs	4 Yrs	2 Yr	3 Yrs	4 Yrs
Maximum allowed cost for all hearing aids over a multi-year period*	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%	0.2%	0.2%	0.1%

*Two times the limit for binaural fittings.

MANDATORY OFFER

A mandatory offer is very difficult to price. There will be a high level of anti-selection with an optional benefit, particularly in the individual and small group markets. This is true to varying extents with any mandated offer, but we believe it is particularly true for this coverage. Hearing aids have a fairly predictable cost. As shown by the large percentage of individuals with hearing loss who don't have hearing aids, most potential users can postpone their purchases until either they or their employers purchase the optional coverage.

Discussion of Results and Projections (cont'd)

There is no way to eliminate anti-selection, but it can be reduced somewhat if the mandated offer phases in the benefit and has a low cap on the benefit. The following is an example:

- Maximum \$400 benefit in the first year that the plan has the optional benefit.
- Maximum \$800 benefit in the first two years that the plan has the optional benefit.
- Maximum \$1,200 benefit in the first three years that the plan has the optional benefit.
- Maximum \$1,600 benefit in the first four years that the plan has the optional benefit and for any four year period thereafter

MANDATE FOR THE INDIVIDUAL MARKET

The individual health insurance market already has issues of affordability, and the issue of elasticity of demand is even more pronounced in this market.

We base our assumptions about the elasticity of demand on a 2002 study of the impact of tax credits and other subsidies to expand the availability of individual health insurance to the uninsured population⁹. This study suggests that every 1% decrease in premium results in an increase in the number of insureds by 0.30% to 0.46%. We assume that the converse is also true—every 1% increase in premium results in a decrease in the number of insureds by 0.30% to 0.46%. An equivalent statement would be that every 1% increase in premium causes some individual policyholders to offset the increase by reducing their benefits by 0.30% to 0.46%, by increasing deductibles or other out-of-pocket items.

We project that HB159 as introduced would either cause 0.6% (40% of 1.6%) of individual policyholders to drop their policies due to higher costs or cause individual policyholders to reduce their overall plan benefits by an average of 0.6%. For the benefit cap alternatives, there would be similar reductions in coverage or higher cancellation rates ranging from 0.5% for the alternative with a \$2,500 per devise allowed maximum (no limits on frequency) to 0.2% for the alternative with a \$1,500 maximum allowed cost over 4 years (two times for binaural).

III. References and Principal Sources of Data

The numbers below refer to the footnotes in the text.

1. Website www.hearingloss.org, "Facts on Hearing Loss" (no date)
2. "The Impact of Untreated Hearing Loss on Household Income," by Sergei Kochkin, PhD, The Better Hearing Institute, August 2005
3. "Hearing Aids," by Timothy Hain, MD, last modified September 16, 2005
4. "MarkeTrak VII: Hearing Loss Population Tops 31 Million People," by Sergei Kochkin, PhD, article originally appearing in the Hearing Review, 2005, volume 12, number 7.
5. "MarkeTrak V," appearing in The Hearing Journal, January 1999 and February 2000.
6. "2005 Dispenser Survey," appearing in The Hearing Review, 2005
7. "Review and Evaluation of LD1087, an Act to Require All Health Insurers to Cover the Cost of Hearing Aids," by Karen Bender and Beth Fritchen of Mercer Risk, Finance, and Insurance Consulting, Inc., and by Marti Hooper and Richard Diamond of the Maine Bureau of Insurance, October 2003
8. "New Hampshire: Health Coverage and Uninsured," www.statehealthfacts.org, The Henry J. Kaiser Family Foundation
9. "Cost and Coverage Analysis of Ten Proposals to Expand Health Insurance Coverage," by John Shiels and Randall Haught, The Lewin Group, October 2003
10. "The Price Sensitivity of Demand for Nongroup Health Insurance," Congressional Budget Office, August 2005
11. "The Elasticity of Demand for Health Care," by Jeanne Ringel, Susan Hosek, Ben Vollaard, and Sergej Mahnovski, National Defense Research Institute and Rand, undated

APPENDIX

**Exhibit
Assumptions for Projecting Cost of Hearing Device Mandates**

Change in...	\$ Allowed Limit Per Devise				\$ Allowed Limit All Devices Over Years (2 times for binaural)												
	No Frequency Limit				\$1,500		\$2,000		\$2,500		2 Years		3 Years		4 Years		
	\$1,500	\$2,000	\$2,500	No Frequency Limit	2 Years	3 Years	3 Years	4 Years	4 Years	4 Years	2 Years	3 Years	3 Years	4 Years	2 Years	3 Years	4 Years
HB 159 As Introduced																	
Average cost per hearing aid	-1%	17%	34%		-1%	-2%	-3%			16%	12%	12%	9%	34%	31%	27%	
Increase in users	92%	97%	103%		92%	86%	68%			92%	86%	81%		97%	92%	86%	
Reduction in number of years to replacement																	
Under 19	-30%	-40%	-45%		-30%	-25%	-20%			-40%	-35%	-25%		-40%	-35%	-30%	
19 to 64	-30%	-40%	-45%		-30%	-25%	-15%			-40%	-30%	-20%		-40%	-35%	-30%	