Cost Impact Study of Mandated Benefits in Texas

Report # 2

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Table of Contents

Appendices

Note: The appendix numbers correspond with the section numbers.

EXECUTIVE SUMMARY

Milliman & Robertson, Inc. (M&R) was engaged by the Texas Department of Insurance (TDI) to perform a study to evaluate the costs and benefits of thirteen specific mandated benefits, as well as other issues associated with mandated benefits in Texas. This report is intended to assist TDI and the Joint Interim Committee on Health Benefit Mandates in its study of mandated benefits.

Mandated benefits are coverages required by law to be included in health insurance policies sold by commercial insurance companies and health maintenance organizations. The regulations may require the coverage of certain persons, coverage of specific illnesses, procedures, or types of treatment, or coverage of care provided by certain types of providers. This report represents the results of Part 2 of the study. Report 1, dated July 21, 2000 and revised August 30, 2000, involved the estimation of the impact on premium rates of each of the thirteen mandates. The mandates are described in Appendix I of this report.

While the initial cost implications associated with the mandates are important, they only tell a small part of the story of the impact of the mandated benefits. This second report provides additional critical information to aid in assessing the comprehensive impact of the mandates. In this second report, we provide additional information with respect to the following:

- Utilization statistics, including the number and percentage of insureds expected to file a claim for each mandated benefit within a single policy year;
- Incidence rate information indicating the total number of Texans likely to be affected by a particular illness, medical condition, or service associated with each mandated benefit;
- Physical and economic consequences of not providing care and/or treatment associated with each mandated benefit;
- Current and future medical cost savings that can be attributed to treatment provided as a result of the mandated benefit;
- The extent to which the mandated benefit contributes to the quality of an insured's health status, including whether the treatment is generally recognized by the medical community as being efficacious;
- Current and future impact on the utilization of sick days or disability benefits attributable to the medical treatment provided as a result of the mandated benefit;
- The extent to which the mandated benefit is covered by self-funded employers in Texas (who, under current law, are not subject to state-mandated benefits);
- The impact of the mandated benefits on employers' ability to purchase health insurance;

- The extent to which premium costs for benefit riders under the small employer standardized Basic and Catastrophic plans are factored into the base premium rates for the plans.

We include recommendations for a process and methodology to evaluate the cost and benefits of newly proposed mandated benefit legislation.

This report has been provided to the Texas Department of Insurance and is intended to be distributed to members of the Joint Interim Committee on Health Care Mandates. It may be distributed to other parties at the Department's discretion; however, we ask that any distribution include the report in its entirety.

The enclosed estimates are based on available data and assumptions described herein. While we have taken reasonable care in the validation of these assumptions and development of the cost assumptions, actual costs are likely to vary from these estimates.

Major Findings

Following are the major findings of our study:

- None of the thirteen mandated benefits on its own constitutes a significant percentage of the premium for group insurance in Texas. The direct premium costs associated with the mandates are estimated to account, in total, for 7.6% of large group premiums and 7.2% of small group premiums.

- When we consider indirect health care costs and offsetting benefits, the mandates are estimated to account for approximately 6.5% of large group premiums and 6.3% of small group premiums. These estimates include additional costs associated with, for example, follow-up testing related to additional screenings and cost reductions such as savings associated with earlier detection and treatment of a disease.

- The impact on an insured's health status of not providing the treatment or care associated with the mandated benefits is high or very high for six of the mandates.

- There are likely to be associated economic and social consequences – such as lost productivity, assistance costs for families, and housing support – of not providing the treatment or care associated with the mandated benefits for six of the mandates.

- If health plans do not include the mandated benefits, the likelihood of a patient receiving treatment is lower for almost all of the mandates.

- If treatment is still received in the absence of group insurance coverage, it may be paid for by the affected individual or funded through a public program. We estimate that if the insured chooses to pay for the treatment, it will represent a moderate to high financial burden (more than $1,000) for nine of the thirteen mandated benefits. The quality and cost efficiency of the care received may be lower for six of the thirteen mandates if the benefit is not covered under group insurance.

- If the mandates did not exist, we predict that a large majority of small and large group insurance plans would still cover the benefits at some level. For ten of the thirteen mandates, we believe that the coverage would be at least at the mandated level in most offerings. Consequently, the impact on premiums of removing the mandates is less than the premium costs associated with the mandated coverages shown above.

- The treatments associated with the majority of the mandated benefits are expected to have a positive health status effect and are generally considered by the medical community to be efficacious.

- The treatments associated with many of the mandated benefits are expected to result in fewer sick days and lower disability benefits for the employer.

- Plans offered by self-funded employers generally include some coverage for each of the mandated benefits, although sometimes at a lower level.

- While the cost of mandated benefits is a consideration for most employers who choose to self-fund, it is rarely the primary reason.

- The elimination of the mandates we studied would probably have an insignificant impact on the number of uninsured in Texas. This is because the number of uninsured appears to be as dependent, if not more dependent, on the income and/or available resources of individuals and/or employers (as well as some other factors) than it is on the cost of health care. On the other hand, each incremental cost increase due to additional mandates may drive some employers to choose not to offer coverage.

- While small employer carriers are generally pricing the Basic and Catastrophic plans at a considerable discount from their most common marketed plans, they may not be pricing them as low as the benefit differentials warrant.

- Most of the rate differences expected between the Basic and Catastrophic and market plans are due to cost sharing differences (deductible and coinsurance percentages) rather than the removal of mandated benefits.

- Although the Basic and Catastrophic plans required to be offered by small employer carriers may be more attractive at a lower premium rate, other factors are contributing to the low participation rates.

Conclusions

Each of the mandated benefits we reviewed provides some value to the insured population in Texas. The treatment and care associated with the majority of the mandates we reviewed are expected to improve and maintain the health of Texas residents. Coverage for many of the mandates will prevent affected individuals from personally bearing a large financial burden for their care. Providing the proper treatment for a number of the conditions can increase productivity for workers and lower sick days and disability benefits. On the other hand, some of the mandates do not contribute significantly to the health and welfare of the population, but allow an insured individual to have more choice in his or her healthcare options.

However, with these benefits come costs that may make it more difficult for employers and employees to purchase health insurance coverage. The relative weight of the costs compared to the benefits is subject to public policy debate.

Future mandated benefit proposals should be carefully evaluated with respect to their cost impact as well as their expected impact on the health and welfare of the State's residents. While consistent, objective evaluations are very difficult to achieve, there are a number of steps the State can take to improve the process.

I. INTRODUCTION

The 76th Texas Legislature enacted House Bill 1919, effective August 30, 1999, which established a joint interim committee to study health care benefits mandated by law. It directed the Texas Department of Insurance (TDI) to assist the committee in conducting the study.

This report is intended to assist TDI and the committee in developing its study and recommendations. It is the second of two reports and contains a comprehensive analysis for each of thirteen mandated benefits specified by TDI, as well as additional information to assist the committee in developing its recommendations. A summary of the mandated benefits is in Appendix I.

The analysis incorporates a number of data sources, both published and non-published. In presenting our study, we have specifically detailed these data sources and our methodologies and assumptions.

Section II of the report contains a summary of the results, including a comprehensive table of our evaluation results for each mandate. It draws from the analysis and research presented in later sections of the report.

In Section III, we describe our approach to assessing each of the specific mandates. We introduce seven questions that will be addressed with respect to each mandate, and clarify our approach on answering each question. Section IV, "Assessments of Specific Mandates", goes on to answer these questions in detail. We have cited all relevant sources for data and information in that section. The section includes the following information with respect to each mandate:

- Utilization statistics, including the number and percentage of insureds expected to file a claim for each mandated benefit within a single policy year;
- Incidence rate information indicating the total number of Texans likely to be affected by a particular illness, medical condition, or services associated with each mandated benefit;
- Physical and economic consequences of not providing care and/or treatment associated with each mandated benefit;
- Current and future medical cost savings that can be attributed to treatment provided as a result of the mandated benefit;
- The extent to which the mandated benefit contributes to the quality of an insured's health status, including whether the treatment is generally recognized by the medical community as being efficacious;
- Current and future impact on the utilization of sick days or disability benefits attributable to the medical treatment provided as a result of the mandated benefit;

In Section V, we present the results of a survey we did of employers in Texas that offer self-insured plans. This addresses the extent to which the mandated benefit is covered by self-funded employers in Texas (who, under current law, are not subject to state-mandated benefits).

Section VI addresses the impact of premium level on the uninsured and relates to the impact of the mandated benefits on employers' ability to purchase health insurance. In Section VII we describe our assessment of carrier pricing of Small Employer Standardized Basic and Catastrophic plans. We discuss the extent to which premium costs for benefit riders under the Small Employer Standardized Basic and Catastrophic plans are factored into the base premium rates for the plans.

In Section VIII, we describe a recommended process for the review of future proposed mandates. We end with conclusions in Section IX.

II. SUMMARY OF RESULTS

Following is a description of the results and conclusions of our analysis. A table summarizing the results is found at the end of this section. Background material and supporting information with respect to the evaluation of each specific mandate is included in Section IV. The numbers next to each topic below and on the tables relate to questions described in Section III and addressed in Section IV.

Fully Insured Population Using Coverage Annually (1)

For most of the mandates, the portion of the fully insured population expected to file a claim for the mandated benefit in a single policy year is relatively small (all are less than 10%). The mandates related to preventive measures (Childhood Immunizations (8.8%), Mammography (7.3%), and Prostate Screening (2.2%)), as well as Oral Contraceptives (2.7%) have the highest percentages expected to file a claim annually. For all of the remaining mandates, less than 2% of the population covered under fully insured group policies is expected to file a claim annually. The percentages and number of individuals are shown in the summary table. The numbers are based on an assumed 2.9 million individuals with large group coverage and 2.1 million individuals with small group coverage (fully insured only for both large and small groups) in Texas. This may be considered a measure of the demand for a particular service. We have categorized the rates into High Demand (greater than 5% of insured population), Moderate Demand (1% to 5%), and Low Demand (less than 1%).

State Incidence and Prevalence Rate Information (2)

We gathered statistics regarding the number of Texans who are likely to be affected by a particular illness, medical condition, or service associated with each mandated benefit. This differs from the prior statistic, which is based on the portion and number of insureds using the specific mandated service. In the case of preventive services, these questions are answered with respect to the condition the service is expected to prevent (e.g., breast cancer for the Mammography mandate). The summary table notes what we considered to be the associated illness, medical condition, or service. These statistics relate to the total number of individuals in Texas, regardless of their insurance status.

As the table shows, it is often difficult to compare these statistics from one condition to the next. For many conditions (e.g., cancer), the incidence rates of new cases each year are well documented, while the disease prevalence (portion of population currently alive with the condition) is not sufficiently tracked. Therefore, we have not categorized these results as we do with other topics.

Impact of Not Providing Care or Treatment Associated With The Mandated Benefits (3A)

We evaluated the physical and economic/social consequences of not providing care or treatment associated with each mandated benefit.

Physical (Impact on Health Status)

The physical consequences of not providing treatment associated with the thirteen mandated benefits we studied range from life-threatening consequences to minor or no impact. We categorized the impact on health status of not providing treatment into some general categories, discussed below. We considered the impact to be Very High or High for six of the mandates.

Very High Health Status Impact

We consider the impact on health status to be very high if there are potential immediate life-threatening consequences of not providing treatment. Two of the mandates fall into this category: Complications of Pregnancy and Congenital Defects (as it applies to newborns).

High Health Status Impact

We consider conditions to have a high impact on health status if a lack of treatment is expected to lead to the worsening of symptoms, reduced ability to function, and lower quality of life. Ultimately, these conditions, if left untreated, may result in reduced life expectancy. The following mandates fall in this category: Chemical Dependency, Congenital Defects (applied to non-newborns), HIV/AIDS, Serious Mental Illness, and Handicapped Dependents.

Moderate Health Status Impact

We have classified the preventive mandates (Mammography, Prostate Screening, and Childhood Immunizations) as having a "Moderate" impact on health status. Mammography and Prostate Screening do have the potential to detect cancer earlier and result in increased life expectancy and improved health status. Immunizations may similarly prevent life-threatening diseases. However, the impact of not having the screening or immunizations available will have minimal health status effect on the majority of those who would have been screened/immunized otherwise but would have never contracted the targeted illness, anyway. Therefore, we consider the impact to be lower for these mandates than those mandates that cover the direct treatment for existing medical conditions.

Low to No Impact on Health Status

We consider the impact of not providing treatment associated with the remaining four mandates to be minimal. However, in all cases, the affected individuals personally benefit from the service provided and have the benefit of having more choice in medical treatment without bearing all of the costs. These mandates are: Oral Contraceptives, Reconstructive Surgery, Minimum Maternity Length of Stay, and Minimum Mastectomy Length of Stay.

Economic/Social Consequences

The treatment associated with some of the mandates have other potential economic consequences to society if the treatment is not provided. Such economic consequences include:

- Assistance costs for affected families (financial, time);
- Maintenance costs (housing support and facilities);
- Law enforcement costs (e.g., arrests, etc., associated with untreated mental health and substance abuse);
- Lost productivity

Most of the impact of the last of these, lost productivity, is addressed separately under the topic dealing with sickness and disability costs. With respect to the other consequences, we categorize the mandates with respect to economic/social consequences as follows:

High Economic Impact

We considered the treatment associated with a mandate to have a high economic impact if, left untreated, it could lead to all four of the consequences described above, and has a high likelihood of having at least one of the consequences. Chemical Dependency and Serious Mental Illness are two mandates that seem to meet this criteria.

Moderate Economic Impact

We considered the treatment associated with a mandated benefit to have a moderate economic impact if, left untreated, it could likely lead to at least one of the consequences described above. This category includes four mandates: Congenital Defects, HIV/AIDS, Handicapped Dependents and Childhood Immunizations. We include childhood immunizations here because if all immunizations were to cease, incidence rates of the applicable diseases could eventually go up dramatically and have a significant economic impact.

Low to No Economic Impact

The remainder of the mandates fall into this category. There is at most a minor chance for the lack of treatment to have the consequences described.

Impact of Not Providing Insurance Coverage (3B)

The above section addresses the impact of not providing treatment. In many cases, even if expenses are not covered by insurance, the treatment will still be provided. This is especially true for medically necessary, emergency treatments, such as treatment for those conditions covered under Complications of Pregnancy. In many cases, insurance coverage shifts the financial burden from public programs such as Medicaid and Medicare to the private sector. In other cases, the cost would be borne by the insured in the absence of insurance coverage. In either case, a lack of coverage may lead to a lower level of care or treatment. This treatment may also be of a lower quality and cost efficiency.

In general, we have made the implicit assumption that having coverage will result in access to treatment. Today, in the United States, that is by and large true. However, if healthcare costs keep growing at rates much higher than wages and other resources, a time may come when this is no longer true.

On the summary table, we note who would most likely be financially responsible for the cost of the treatment (the alternate payer) if it is not covered by health insurance. In all cases, the insured has the option of paying for the service. The level of the associated financial burden on the individual may be a consideration when determining the value of a mandate. Clearly the level of financial burden depends on an individual's particular financial situation and often the level of treatment required, however, we have categorized the mandates based on some general guidelines.

Financial Burden on Insured

The categories below assume that the insured chooses to obtain the uncovered treatment or service associated with the mandate and pays for it out of his or her own pocket. We consider nine of the thirteen mandated benefits to represent a moderate or high financial burden.

High Financial Burden

A mandate is considered to have a high personal financial burden if expenses are likely to be ongoing and total in excess of $1,000 per year. Chronic conditions will generally fall in this category. This applies to the following mandates: Complications of Pregnancy, Congenital Defects, and AIDS.

Moderate Financial Burden

We considered a mandate to have a moderate financial burden if it is expected to be of high cost (greater than $1,000), but is a one-time expense. This category is applicable to: Minimum Hospital Stay for Maternity, and Minimum Hospital Stay for Mastectomy or Lymph Node Dissection and Reconstructive Surgery.

Moderate to High

We classified the Chemical Dependency, Serious Mental Illness, and Handicapped Dependents mandates in this intermediate category because they may fall in either the high or moderate category. Although these conditions may result in an ongoing high financial burden, treatment may be successful at preventing future ongoing costs.

Low Financial Burden

We considered mandates with expected costs at less than $1,000 on a one-time or annual basis to represent a low financial burden on the insured. This category applies to: Oral Contraceptives, Mammography, Prostate Screening, and Childhood Immunizations.

Likelihood of Receiving Treatment

We also note in the summary table the relative likelihood of receiving treatment if it is financed by the alternate payer rather than the insurance company. We considered the likelihood to be the same for emergency, potentially life-threatening conditions (Complications of Pregnancy, Congenital Defects in newborns), regardless of the payer. We considered the likelihood to be lower for all other mandates.

Quality and Cost Efficiency of Care

We evaluated whether the quality and cost efficiency of the care would differ if the alternate payer financed the care. We determined that the service/care would likely be the same for Oral Contraceptives, Mammography, Prostate Screening, Childhood Immunizations, and Reconstructive Surgery. This is because they are the most likely to be paid for by the insured, who will often seek treatment by the same health care provider whether or not the service is paid for by insurance. The extra days that might result if Minimum Maternity and Mastectomy Lengths of Stays are not covered are also likely to be provided in the same setting whether the insured or the insurer pays, and therefore, are assumed to be provided with the same quality of care.

For the remaining six mandates (Chemical Dependency, Complications of Pregnancy, Congenital Defects, HIV/AIDS, Serious Mental Illness, and Handicapped Dependents), the treatment is more likely to be paid for through a public program or public hospital and provided in a different setting than if it is an insured benefit. For these mandates, we assumed the quality and cost efficiency of care would be the same or lower.

Mandate Impact (3C)

The prior section discussed the likelihood of getting treatment, even if there was no insurance coverage. Further, even if a mandate did not exist, many insurance plans may choose to include the coverage anyway.

For each mandate on the summary, we include a measure of the estimated portion of fully insured plans that we assume would include some level of coverage and the estimated portion that we would expect to include the full mandated level of coverage.

For all thirteen mandates, we believe the portion of fully insured small and large groups that would include some level of coverage for the mandated benefit is very high (greater than 90%). For all but three of the mandates, we believe the portion that would cover the benefit at the mandated level is also very high. Only for Chemical Dependency, Serious Mental Illness, and Childhood Immunizations do we believe that the level of coverage would be lower for a high proportion of plans offered by group insurers. These conclusions are based on our review of the results of a survey of self-insured employers in the state, as well as knowledge of typical coverage provisions.

Because we expect that many of the benefits would continue to be included in insured plans even if they were not mandated, the premium impact estimates below are higher than the premium **reductions** that would result from removing these mandates.

Direct Premium Impact (4)

In our first report, we estimated the total premium cost of the mandated benefits to represent about 7.6% of large group premiums and 7.2% of small group premiums. We now classify the direct premium impact of each mandate into three categories, as follow:

Low:	less than or equal to .25% of premium
Moderate:	greater than .25% of premium, but less than or equal to .75% of premium
High:	greater than .75% of premium

Based on the direct premium impact quantified in Report 1, three of the thirteen mandates fall into the Low category, seven fall into the Moderate category, and three fall into the High category. The category and percent of premium are included on the summary table for each of the mandates.

Indirect Premium Impact (5)

In many cases, the health care costs of the mandated benefit are not limited to the costs of providing the specific services mandated. There may be additional related costs. For example, adding a preventive service to a benefit plan may increase the utilization of the preventive service. The cost of providing the preventive service is the direct cost quantified above. The increased utilization of the preventive service may lead to additional costs caused by, for example, the need for follow-up testing in the case of false positive results. The costs for the follow-up testing are considered here.

On the other hand, provision of a service or treatment may result in offsetting savings in another area. For example, a preventive service may result in earlier detection and treatment for a disease, at a lower cost. These savings are also considered in this section.

As a result of our review of indirect costs and benefits, we developed estimated factors to apply to the direct costs. Application of these factors results in the net premium cost impact of each mandate.

We now classify the combined direct and indirect premium impact (net premium impact) of each mandate into three categories, as follow:

Low:	less than or equal to .25% of premium
Moderate:	greater than .25% of premium, but less than or equal to .75% of premium
High:	greater than .75% of premium

Based on the net premium cost estimates, five of the mandates have a Low impact, five have a Moderate impact, and three remain in the High category.

Following is a summary of the direct and indirect premium by mandate. The direct premium impact is from Report 1. The indirect adjustments are developed in Section IV for each mandate.

Table II.1

Mandate	Direct Percent of Premium Cost Large Group	Direct Percent of Premium Cost Small Group	Indirect Factor	Direct and Indirect Percent Premium Cost Large Group	Direct and Indirect Percent Premium Cost Small Group
Chemical Dependency	0.5%	0.5%	0.76	0.4%	0.4%
Complications of Pregnancy	0.5%	0.5%	1.00	0.5%	0.5%
Oral Contraceptives	0.4%	0.3%	0.50	0.2%	0.2%
Congenital Defects	1.3%	1.4%	1.00	1.3%	1.4%
HIV / AIDS/HIV-Related Illnesses	1.1%	1.1%	1.00	1.1%	1.1%
Mammography	0.4%	0.4%	1.18	0.5%	0.5%
Prostate Screening	0.1%	E	1.90	0.2%	E
Serious Mental Illness	2.0%	1.9%	0.80	1.6%	1.5%
Min. Hospital Stay-Maternity	0.3%	0.3%	1.00	0.3%	0.3%
Min. Hospital Stay-Mastectomy	0.0%	E	1.00	0.0%	E
Reconstructive Surgery for Mastectomy	0.1%	0.1%	1.00	0.1%	0.1%
Handicapped Dependents	0.3%	0.3%	1.00	0.3%	0.3%
Childhood Immunizations	0.6%	0.4%	0.00	0.0%	E
Total	**7.6%**	**7.2%**		**6.5%**	**6.3%**

E = Exempt from legislation

Health Status Impact and Medical Efficacy of Treatment (6)

For each of the mandates, we evaluated the extent to which the mandated benefit contributes to the quality of an insured's health status, including whether the treatment is generally considered to be efficacious. We categorize the mandates below. The treatments associated with the majority of the mandates are expected to have a positive health status effect and are generally considered by the medical community to be efficacious.

Positive Health Status Impact

We considered the mandate to have a positive health status impact if the associated treatment or testing is generally considered by the medical community to be efficacious. Seven of the mandates fell in this category: Chemical Dependency, Complications of Pregnancy, Congenital Defects, HIV/AIDS, Serious Mental Illness, Handicapped Dependents, and Childhood Immunizations.

Mixed Health Status Impact

We considered the health status impact to be mixed if there are considerable differences of opinion across the medical community regarding the efficacy of the treatment or testing. The medical risks associated with having the treatment are low or nonexistent. This describes Mammography, Prostate Screening, Minimum Hospital Stay for Maternity and Minimum Hospital Stay for Mastectomy.

Neutral Health Status Impact

We considered the health status impact to be neutral for non-medically necessary treatment without significant medical risks. This applies to Oral Contraceptives and Breast Reconstruction.

Negative Health Status Impact

We considered the health status impact to be negative if a large portion of medical community believe it to be harmful. None of the mandates fell into this category.

Impact of Treatment on Sick Days/Disability Costs (7)

We evaluated the impact that treatment associated with the mandated benefits has on sick days and disability costs. Again, we developed some general categories and assigned the mandates to each category as is noted on the summary table. Many of the treatments are expected to result in fewer sick days and lower disability costs for the employer.

High Sick Day/Disability Impact

We consider the impact to be high if the treatment is expected to result in considerably fewer sick days and lower disability benefits on an ongoing basis for the affected individual. The following mandates fall in this category: Chemical Dependency, Congenital Defects in non-newborns, HIV/AIDS, and Serious Mental Illness.

Moderate Sick Day/Disability Impact

We consider the impact to be moderate if the covered service is intended to prevent a condition that could cause an extensive period of disability. Oral Contraceptives and Childhood Immunizations fall into this category.

Low to No Sick Day/Disability Impact

We considered the sick day/disability impact to be low to no if the treatment is associated with a one-time ailment or treatment period that may or may not result in reduced sick days. The applicable mandates for this category are: Complications of Pregnancy, Minimum Maternity Stay, Minimum Mastectomy Stay, Congenital Defects (newborns), and Handicapped Dependents. Some of these mandates fall in this category because the associated sick days are expected to fall during standard maternity leave.

No to Negative Sick Day/Disability Impact

Some of the mandates have the potential to increase sick days and disability costs. These are: Mammography, Prostate Screening, and Reconstructive Surgery.

Coverage by Self-Funded Employers

The summary table includes the results of our survey of self-funded employers for each of the mandates. For all but three of the mandates, 89% or more of the companies responded that they fully cover the mandated benefits. The three mandates that have a lower probability of coverage are Chemical Dependency (53%), Serious Mental Illness (50%), and Childhood Immunizations (73%). These results are described in detail in Section V. In addition, we found that while mandated benefits may have been considered when an employer decided to self-fund, it was rarely the primary factor for most employers.

Impact on Level of Uninsured

We studied, in aggregate, the expected impact of mandated benefits on the level of the uninsured population in the State. The impact of the level of premiums on the uninsured was not evaluated separately for each of the specific mandates. While it seems logical that if health insurance premium levels decrease (e.g., through the removal of mandates) more employers will purchase coverage for their employees and the number of uninsured individuals will decrease, the evidence to support this conclusion is difficult to evaluate.

The primary reason is that the number of uninsured appears to be as dependent, if not more dependent, on the income and/or available resources of individuals and/or employers (as well as some other factors), than it is on the cost of health care. The cost of health care is significant, but it is likely only one of many reasons people go uninsured. Given the average income levels in the State of Texas for many uninsured individuals, the make-up of the work force, the availability of treatment for uninsured persons and the status of public coverage, the cost of health care is likely not a primary influence in most situations. This suggests that changes or elimination of various state mandates and, therefore, relatively minor reductions in premium rates will not have a significant impact on the number of uninsured Texans.

On the other hand, each incremental cost increase may drive some employers to choose not to offer coverage. This is especially true with respect to small employers, as a majority of small employers who do not offer health insurance cite affordability as a major issue.

Additional information is provided in Section VI.

Assessment of Small Employer Plans

We were asked to evaluate the extent to which premium costs for benefit riders under required small employer standardized plans in Texas (Basic and Catastrophic) are factored into base plan premium rates. We evaluated the expected pricing differentials between typical industry plans and the Basic and Catastrophic plans and compared them to market differentials. The conclusions we reached based on our analysis follow:

- The majority of the premium reductions expected between industry plans and the required standardized plans are due to increased member deductible and coinsurance payments rather than exclusion of riders (mandated benefits);
- While carriers are generally pricing the standardized Basic and Catastrophic plans at a considerable discount from their most common market plans, they may not be pricing them as low as the benefit differentials warrant;
- We do not have sufficient data to determine if carriers are loading the base plan premium rates for the expected rider costs in excess of the rider premiums;
- There may be some options available to make the standardized plans more attractive to small employers.

Our analysis is described in detail in Section VII.

Recommended Process for Review of Future Proposed Mandates

A final step in M&R's engagement was to prepare and provide written recommendations for a process and methodology to evaluate the cost and benefits of newly proposed mandated benefit legislation. Through the process of evaluating the thirteen mandated benefits, we have done considerable thinking regarding an effective, efficient, and feasible process. We reviewed descriptions of prior attempts to evaluate mandated benefit legislation in Texas and processes used in other States. The mandate evaluations in this report ultimately served as a template for the recommended process described in Section VIII.

In general, our recommendation is that each newly proposed mandated benefit be evaluated under a consistent set of considerations, similar to those in the summary table for current mandates. We have developed the framework for a Cost/Benefit Scoring System for Mandated Benefits. This system may be further developed with input from the Joint Interim Committee on Health Care Mandates. The system would allow the relative merits of each mandated benefit proposal to be evaluated based on specific criteria and goals set by the committee and for each proposal to be compared to other mandates on a consistent basis.

Summary of Results

	A. Chemical Dependency (CD)	B. Complications of Pregnancy	C. Oral Contraceptives	D. Congenital Defects	E. HIV/AIDS
Fully Insured Population Using Coverage Annually (1)					
Demand Level Percent	Moderate (1%)	Low (.15%)	Moderate (2.7%)	Moderate (1.9%)	Low (.1%)
Applied to	Large and Small Groups	Large and Small Groups	Large and Small Groups	Large and Small Groups	Large and Small Groups
Number	49,000	7,506	135,108	95,076	5,004

State Incidence and Prevalence Information (2)	Chemical Dependency	Complications of Pregnancy	Desire to avoid pregnancy	Congenital Defects	HIV/AIDS
Associated Condition	6.8% chemically dependent	30% of Pregnancies	15.6% population	1 in 28 babies born	.23% of population
Estimated Number in Texas	922,000	166,178	3.1 million	12,463 born per year	45,460

Impact of Not Providing Treatment (3A)					
Physical (Health Status)	High	Very High	Low to No Impact	Very High (Newborns), High (Other)	High
Economic/Social	High	Low to No	Low to No	Moderate	Moderate

Impact of Not Providing Insurance Coverage (3B)					
Payer	Insured, public programs	Insured, bad debt	Insured	Insured, public programs	Insured, public programs
Financial Burden if Paid by Insured	Moderate to High	High	Low	High	High
Likelihood of Receiving Treatment	Lower	Same	Lower (use of oral contraceptives)	Same (Newborns); Lower (Other)	Lower
Quality and Cost Efficiency of Care	Same or Lower	Same or Lower	Same	Same or Lower	Same or Lower

Mandate Impact (3C)					
Estimated portion of plans incl. some level of coverage	Very High	Very High	Very High	Very High	Very High
Est. portion of plans incl. full mandated level of coverage	Medium	Very High	Very High	Very High	Very High

Direct Premium Impact (4)					
Services Included	Inpatient and Outpatient CD Treatment	Treatment of Complications	Prescriptions for Oral Contraceptives	Treatment of Congenital Defects at All Ages	Treatment for Individuals with HIV/AIDS/HIV-Related Illnesses
Premium Cost Impact	Moderate (0.5%)	Moderate (0.5%)	Moderate (0.4%)	High (1.3%)	High (1.1%)

Indirect Premium Impact (5)					
Costs	None	None	None	None	None
Benefits	Reduced Medical Costs for Other Conditions	Some minor potential savings in future medical costs	Reduced maternity costs	None	None
Estimated Factor to Apply to Direct	.76	1.0	.50	1.0	1.0
Net Premium Cost Impact	Moderate (0.4%)	Moderate (0.5%)	Low (0.2%)	High (1.3%)	High (1.1%)

Health Status Impact / Efficacy (6)	Positive	Positive	Neutral	Positive	Positive

Impact of Treatment on Sick Day/Disability Cost (7)	High	Low to No	Moderate	Low to No-Newborns, High-Other	High

Coverage by Self-Funded Employers					
Cover Fully	53%	97%	89%	92%	97%
Cover Partially	40%	2%	4%	6%	2%
Do Not Cover	6%	1%	7%	2%	1%

Summary of Results

	F. Mammography	G. Prostate Screening	H. Serious Mental Illness	I. Min. Hospital Stay-Maternity	J. Min. Hospital Stay-Mastectomy
Fully Insured Population Using Coverage Annually (1)					
%	High (7.3%)	Moderate (2.2%)	Moderate (1.75%)	Moderate (1.1%)	Low (.03%)
Applied to	Large and Small Groups	Large Groups	Large and Small Groups	Large and Small Groups	Large Groups
Number	365,292	63,756	87,319	55,044	1,500
State Incidence and Prevalence Information (2)	Breast Cancer	Prostate Cancer	8 Serious Mental Disorders	Uncomplicated Maternity Stays	Breast Cancer
Prevalence or Incidence Statistic	.05% of pop. develops in yr	.05% of pop. develops in yr	2.9% of population	1.4% of population	.05% of pop. develops in yr
Estimated Number in Texas	10,675 new cases/year	9,918 new cases/year	583,290	284,601	10,675 new cases/year
Impact of Not Providing Treatment (3A)					
Physical (Health Status)	Moderate	Moderate	High	Low to No	Low to No
Economic/Social	Low to No	Low to No	High	Low to No	Low to No
Impact of Not Providing Insurance Coverage (3B)					
Payer	Insured	Insured	Insured, public programs	Insured	Insured
Financial Burden if Paid by Insured	Low	Low	Moderate to High	Moderate	Moderate
Likelihood of Treatment	Lower (screening rate)	Lower (screening rate)	Lower	Lower (if earlier release)	Lower (if earlier release)
Quality and Cost Efficiency of Care	Same	Same	Same or Lower	Same	Same
Mandate Impact (3C)					
Estimated portion of plans incl. some level of coverage	Very High	Very High	Very High	Very High	Very High
Est. portion of plans incl. full mandated level of coverage	Very High	Very High	Medium	Very High	Very High
Direct Premium Impact (4)					
Services Included	Mammography Screening	Prostate Screening	Inpatient and Outpatient Treatment	Cost for Additional Inpatient Days	Cost for Additional Inpatient Days
Premium Cost Impact	Moderate (0.4%)	Low (0.1%)	High (2.0%)	Moderate (0.3%)	Low (0.0%)
Indirect Premium Impact (5)					
Costs	Testing on False Positives; Treatment of Non-Life Threatening Cancers	Testing on False Positives; Treatment of Non-Life Threatening Cancers; Shift cost from Medicare	Higher prescription drug costs?	Readmissions (minor)	Readmissions (minor)
Benefits	Lower Average Cost per Case Treated Due to Early Detection	Lower Average Cost per Case Treated Due to Early Detection	Reduced Medical Costs for Other Conditions	None	None
Estimated Factor to Apply to Direct	1.18	1.9	.80	1.0	1.0
Net Premium Cost Impact	Moderate (0.5%)	Low (0.19%)	High (1.61%)	Moderate (0.3%)	Low (0.0%)
Health Status Impact/Efficacy (6)	Mixed	Mixed	Positive	Mixed	Mixed
Impact of Treatment on Sick Day/Disability Cost (7)	No to Negative	No to Negative	High	Low to No	Low to No
Coverage by Self-Funded Employers					
Cover Fully	89%	89%	50%	96%	92%
Cover Partially	10%	8%	45%	3%	6%
Do Not Cover	1%	3%	5%	1%	2%

Summary of Results

	K. Reconstructive Surgery	L. Handicapped Dependents	M. Childhood Immunizations
Fully Insured Population Using Coverage Annually (1)			
%	Low (.035%)	Low (.081%)	High (8.8%)
Applied to	Large and Small Groups	Large and Small Groups	Large and Small Groups
Number	1,751	4,053	440,352

State Incidence and Prevalence Information (2)	Breast Cancer	Unable to Work due to Disability	10 Diseases
Prevalence or Incidence Statistic	.05% of pop. develops in yr	2.45% of population	.07% of population
Estimated Number in Texas	10,675 new cases/year	490,703	13,905

Impact of Not Providing Treatment (3A)			
Physical (Health Status)	Low to No	High	Moderate
Economic/Social	Low to No	Moderate	Moderate

Impact of Not Providing Insurance Coverage (3B)			
Payer	Insured	Insured, public programs	Insured
Financial Burden if Paid by Insured	Moderate	Moderate to High	Low
Likelihood of Treatment	Lower	Lower	Lower (Immunization Rate)
Quality and Cost Efficiency of Care	Same	Same or Lower	Same

Mandate Impact (3C)			
Estimated portion of plans incl. some level of coverage	Very High	Very High	Very High
Est. portion of plans incl. full mandated level of coverage	Very High	Very High	Medium

Direct Premium Impact (4)			
Services Included	Reconstructive Surgery	All coverage for handicapped dependents	Administration and Cost of Immunizations
Premium Cost Impact	Low (0.1%)	Moderate(0.3%)	Moderate (0.6%)

Indirect Premium Impact (5)			
Costs	Higher Cost Treatment Options	None	None
Benefits	Earlier Treatment	None	Reduced Incidence of Associated Diseases
Estimated Factor to Apply to Direct	1.0	1.0	0.0
Net Premium Cost Impact	Low (0.1%)	Moderate (0.3%)	None (0.0%)

Health Status Impact/Efficacy (6)	Neutral	Positive	Positive

Impact of Treatment on Sick Day/Disability Cost (7)	No to Negative	Low to No	Moderate

Coverage by Self-Funded Employers			
Cover Fully	96%	93%	73%
Cover Partially	3%	4%	18%
Do Not Cover	1%	2%	8%

III. DESCRIPTION OF APPROACH TO ASSESSING SPECIFIC MANDATES

In order to provide consistent information about each of the mandates and to address all questions requested under the engagement, we developed seven questions to address with respect to each of the mandates. The questions and additional information are listed below. We have tied each of the questions to information requested in the original Request for Proposal for this project, covering Section 3.2 (1) – 3.2 (7). In some cases, we have added additional questions that we believe to be relevant to the understanding of the impact of the mandates.

1. How many and what portion of the insured population are expected to use the mandate annually?

This question corresponds to the request in the RFP to provide "utilization statistics, including the number and percentage of insureds expected to file a claim for each mandated benefit within a single policy year." We are defining "insureds" as those covered under fully insured group insurance plans (large and/or small groups as applicable).

For some of the mandates, the results will be expressed as the number and percentage of insureds expected to use the service or treatment, (e.g., number expected to receive a mammography screening in a year). For other mandates, this will be the number of people who currently have coverage due to the mandated benefit being provided and the percentage of the insured population they represent (e.g., handicapped dependents). In answering these questions, we assume that the benefit would not be covered under insured plans in the absence of the mandate.

We used consistent estimates of the total number of small and large group fully insured enrollees in the State for all mandates. The numbers expected to use the mandate are based on an assumed 2.9 million individuals with large group coverage and 2.1 million individuals with small group coverage (full insured) in Texas.

The total covered life estimates are from specific data sets developed by the Employee Benefit Research Institute (EBRI) for M&R. These estimates correspond to values consistent with the current population survey (CPS) as conducted periodically by the U.S. Census Bureau. We projected the provided data forward as data is typically two years old or more, depending on when an evaluation is done. In addition, we had to make assumptions as to the breakdown of insureds from employers of size 25 – 99 between small and large groups (we assumed a 50/50 split) and the breakdown of insureds from public sector employers (we assumed 75% large group). We also adjusted the counts to exclude the portion assumed to be covered through self-funded plans.

2. **How many individuals are likely to be affected by the particular illness, medical condition or service associated with the mandated benefit (of the insured population in the State and of the total State population, regardless of healthcare coverage)? Are there other important characteristics of this group to note (e.g., average age, etc.)?**

   This question addresses the request to provide "incidence rate information indicating the total number of Texans likely to be affected by a particular illness, medical condition or service associated with each mandated benefit." In the case of preventive services, these questions are answered with respect to the condition the service is expected to prevent (e.g., breast cancer for the Mammography mandate).

3. **A) If the care and/or treatment associated with the mandated benefit were not provided, what would be the physical and economic consequences? B) If the coverage were not provided under private group insurance, to what extent would the service be provided/condition be treated? C) If the State mandate did not exist, would group health plans still cover the service/condition/population?**

   It is important to distinguish between these three questions. The first answers directly the request in the RFP to describe "physical and economic consequences of not providing care and/or treatment associated with each mandated benefit". For example, if Chemical Dependency is not treated, what are the consequences for the patient? The second relates to the impact of not providing coverage for a specific medical treatment or service under a group insurance plan. For example, if Chemical Dependency were not covered by insurance, would the affected population still receive health care treatment for Chemical Dependency? Who would pay for it and what would the impact be?

   The last question relates directly to the impact of the mandate legislation. Continuing the prior example, in the absence of the mandate, would group health plans cover the treatment for Chemical Dependency? In many cases, the response to the last question is speculative; many of the mandates have been in place a number of years and it is difficult to guess how coverage might have evolved in the absence of the mandate.

   We have provided our professional opinions in these instances, based on similar types of coverages and standard plan provisions and the prevalence of coverage in self-insured plans. In other cases, federal laws or other State laws may supercede the mandate. If the answer to this second question is "yes", much of the rest of the analysis may be moot (i.e., legislative action will not impact coverage); however, we have still addressed the remainder of the questions with respect to the impact of treatment or coverage not being provided.

4. What are the expected additional costs (premiums) to the insurance company for covering the mandated benefit (direct expenses only)?

This was the question answered in Report 1 and requested in the RFP section 3.2(1). Separate premium estimates were developed by group size (small or large) and by delivery system (HMO, PPO/POS, and Indemnity). The results are reproduced in Section IV. Please refer to Report 1 for detailed assumptions underlying each of the mandated benefits. Our high level assumptions include the following:

- The costs shown equal the total expected cost of the insurance coverage required by the mandate. In other words, it represents the costs a health carrier would incur to add the benefit, assuming that it was not covered previously. Actual costs to a specific carrier will vary based on its own cost components, as well as its standard benefit offering in advance of the mandate.

- In the first stage of our study, we only estimated the initial additional costs for the coverages or treatments mandated. The premium estimates do not include the impact on other healthcare costs. For example, the costs in Report 1 for mammography screening include the screening costs only and do not include cost savings or additional costs resulting from the earlier detection and treatment of breast cancer.

- Costs reflect typical cost sharing amounts paid by policyholders or plan enrollees, which results in a reduction in the cost of insurance coverage.

- Costs include adverse selection inherent in a mandated benefit included as part of a comprehensive health benefit plan.

5. What additional indirect costs or offsetting benefits may result? Can they be quantified in relation to the direct expenses (from the insurance company perspective)? What is the resulting net premium impact?

This responds to the request to provide "current and medical cost savings that can be attributed to treatment provided as a result of the mandated benefit". As our estimates in Report 1 only included direct expenses, we include an analysis of indirect **costs** in addition to **benefits** here.

In many cases, the costs of the mandated benefit are not limited to the costs of providing the specific services mandated. There may be additional related costs. For example, adding a preventive service to a benefit plan may increase the utilization of the preventive service. The cost of providing the preventive service is the direct cost quantified in question 4. The increased utilization of the preventive service may lead to additional costs caused by, for example, the need for follow-up testing in the case of false positive results. The costs for the follow-up testing are considered here.

On the other hand, provision of a service or treatment may result in offsetting savings in another area. For example, a preventive service may result in earlier detection and treatment for a disease, at a lower cost. These savings are also considered in this section.

We have attempted to quantify these additional costs and benefits based on our research and modeling. We did not develop any new studies, but relied on available data and published studies. We have noted our sources and assumptions. In some cases, the assumptions are based on our best judgement rather than specific data. Such estimates are noted.

We have performed our modeling by comparing expected insured costs with the **coverage** compared to expected insured costs without the coverage. We stress **coverage** here, because we are focussing on the change due to adding the service to a health benefit plan. As an example, in addressing the mandate regarding oral contraceptives, we assume that even without the coverage, a significant portion of women will still use oral contraceptives. The offsetting cost savings in lower maternity rates is only due to those women who would make different decisions if oral contraceptives were covered by their health plan.

Because the results will vary based on the specific assumptions, we have performed sensitivity testing. Ultimately, we have stated the additional costs or benefits as a factor to adjust the premium cost estimates from question 4 above. For example, we might state that the indirect costs are equal to one half of the expected direct expenses, making the total cost of the mandate 1.50 times the premium impact estimates in Report 1. We have not varied these loading or discount factor estimates by delivery system or group size, as we do not want to imply an accuracy beyond that represented. The actual costs will vary based on a specific carrier's own cost components, as well as its benefit plan design.

The costs presented in this section are used to develop the adjustment factors and represent gross healthcare costs. In other words, they are not reduced for member cost sharing and do not include administrative expenses. This should not impact the result significantly.

6. Regardless of cost, to what extent does the coverage contribute to the quality of the insured's health status? Is the treatment generally recognized by the medical community as being efficacious?

These questions answer 3.2(6), which requires "an analysis of the extent to which the mandated benefit contributes to the quality of an insured's health status, including whether the treatment is generally recognized by the medical community as being efficacious."

While there may not be sufficient cost savings to offset the costs, there are other issues to consider. In many cases, the additional costs will result in improvement in the quality of the insured's health status and general well being. We address this question for each of the mandates based on a review of literature and published studies. We discuss the medical community's perception of the treatment or service, based on professional organization's recommendations and a review of literature. All assumptions and conclusions have been developed or reviewed by physician consultants within M&R.

7. What is the expected impact on sick days/disability benefits of providing the treatment?

We were asked to consider "the current and future impact on the utilization of sick days or disability benefits attributable to the medical treatment provided as a result of the mandated benefit". An additional societal and economic cost issue is the impact of the treatment on sick days and disability benefits. We have considered this for each of the mandates.

IV. ASSESSMENTS OF SPECIFIC MANDATES

Following are the assessments of each of the specific mandates. For each, we describe the mandate, then answer the seven questions outlined in Section III.

A. Chemical Dependency

Requires the inclusion of benefits for the treatment of Chemical Dependency based on specific criteria established by TDI rule. In general it must be covered the same as any physical illness up to 3 separate series of treatment for each individual. Some limits are allowed, but they are defined such that any utilization review should limit them the same way due to medical necessity criteria. Applies to all HMOs, group health insurers for all sizes and self-funded plans with >250 employees.

1. How many and what portion of the insured population are expected to use the mandate annually?

In 1997, an estimated 195,678 individuals received alcohol and drug treatment in Texas.[1] This represents about 1% of the population. Applying this to the Texas fully insured population implies that almost 49,000 individuals will use the service annually.

2. How many individuals are likely to be affected by the particular illness, medical condition or service associated with the mandated benefit (of the insured population in the State and of the total State population, regardless of healthcare coverage)? Are there other important characteristics of this group to note (e.g., average age, etc.)?

As noted above, 1% of the population is estimated to receive treatment in a year for chemical dependency. However, over 900,000 Texans, or 6.8% of the adult population, could be considered dependent on alcohol or drugs.[2] Following is an illustration of Texas adults with alcohol and/or drug problems.

Table IV.A.1
Percentage of Texas Adults
with Alcohol and/or Drug Problems
Texas Adults, 1996[3]

No Problems	81.7%
Alcohol-only problems	14.2%
Drug-only problems	1.6%
Alcohol and drug problems	2.6%

[1] Liang Y. Liu, Ph.D., *Economic Costs of Alcohol and Drug Abuse in Texas: 1997 Update*, Texas Commission on Alcohol and Drug Abuse, September 1998, p. 3.
[2] "Substance Use Among Texas Adults", *Fact Sheet*, Texas Commission on Alcohol and Drug Abuse, <http://www.tcada.state.tx.us/research/facts/adult96.html> [6/12/00].
[3] Lynn Wallish, Ph.D., *1996 Texas Survey of Substance Use Among Adults*, Texas Commission on Alcohol and Drug Abuse, December 1997, p. 14.

Chemical dependency, as defined in the Texas legislation, includes the abuse of or psychological or physical dependence on or addiction to alcohol or a controlled substance. The following is a list of the most common controlled substances:

Table IV.A.2
Adult Clients at Admission to
TCADA-Funded Treatment Programs:
Jan.1 through Dec.31, 1999[4]

Primary Drug	Total Admissions
All Drugs	40,222
Alcohol	14,261
Amphetamines	1,510
Cocaine	3,513
Crack	10,555
Downers	435
Hallucinogens	63
Heroin	5,114
Inhalants	85
Marijuana/Hashish	3,705
Other Drugs	173
Other Opiate	808

3. A) If the care and/or treatment associated with the mandated benefit were not provided, what would be the physical and economic consequences? B) If the coverage were not provided under private group insurance, to what extent would the service be provided/condition be treated? C) If the State mandate did not exist, would group health plans still cover the service/condition/population?

If chemical addictions are not treated, the consequences can range from health care expenditures to productivity loss to legal troubles. The following table shows the economic costs of alcohol and drug abuse in the United States.

[4] "TCADA Statistical Information – Statewide Totals 1997", Texas Commission on Alcohol and Drug Abuse, <http://www.tcada.st.tx.us/research/statistics/statetotals.html> [6/2/00].

Table IV.A.3
Economic Costs of Alcohol and Drug Abuse in Texas, 1997[5]
(in $ millions)

Type of Cost	Total	Alcohol Abuse	Drug Abuse	Combined Alcohol & Drug Abuse
Total	$19,323	$11,697	$6,111	$1,514
Core Costs	13,470	9,275	2,781	1,414
Treatment	1,510	468	1,042	—
Morbidity (lost productivity)	8,067	6,119	534	1,414
Mortality (premature death)	3,893	2,688	1,205	—
Other Related Costs	4,940	1,826	3,113	1
Direct Costs	2,870	1,145	1,725	1
Crime	2,393	687	1,706	—
Motor Vehicle Crashes	427	409	17	1
Social Welfare Administration	16	15	1	—
Fire Destruction	34	34	—	—
Indirect Costs	2,070	681	1,388	—
Victims of Crime	257	103	154	—
Incarceration	1,468	579	889	—
Criminal Careers	345	—	345	—
Special Disease Groups	913	596	217	100
AIDS (IVDU)	160	—	160	—
Hepatitis B (IVDU)	14	—	14	—
Perinatal Substance Exposure	739	596	43	100

As you can see, the indirect costs of chemical dependency far exceed the costs of treatment. If treatment were not provided, the treatment costs in the above table would go down, but all of the other costs would go up.

If coverage is not provided under group insurance, the burden may fall on the family, and ultimately to public programs for treatment. This will result in higher public costs to finance federal and state programs. The affected population is not likely to receive the amount and level of treatment it would if the coverage includes chemical dependency treatment.

If the mandate did not exist, it is unlikely that the benefits would be covered in full. The survey of self-funded employers indicates that only 54% of the respondents cover chemical dependency at the level required under the mandate.

[5] Liu, pg. 2, table 1.

4. What are the expected additional costs (premiums) to the insurance company for covering the mandated benefit (direct expenses only)?

From Report 1, following is the premium impact. The costs below represent the costs to treat chemical dependency on an inpatient or outpatient basis.

Table IV.A.4

	PMPM Premium	Percent of Premium
Large Group		
HMO	$0.73	.5%
PPO / POS	0.90	.5%
Indemnity	0.81	.4%
Small Group		
HMO	0.74	.5%
PPO / POS	0.87	.5%
Indemnity	1.02	.4%

5. What additional indirect costs or offsetting benefits may result? Can they be quantified in relation to the direct expenses (from the insurance company perspective)? What is the resulting net premium impact?

Researchers generally agree that there are offsetting savings resulting from chemical dependency treatments. In fact, numerous studies support that substance abuse is the most cost effective of all medical treatments. These savings result from a reduction in hospitalization, decrease in alcohol-related fatal accidents and a decrease in other related physical problems. The following are results from studies showing reduced medical utilization for other conditions:

1. California Department of Alcohol and Drug programs, examining from before to after treatment, found:[6]
    - hospitalizations for physical problems down 36%
    - drug overdose hospitalizations down 58%
    - mental health hospitalization down 44%
    - emergency room visits down 36%
    - total hospital days down 25%

[6] *The Costs and Consequences of Addiction and the Benefits of Prevention and Treatment*, New York State Office of Alcoholism and Substance Abuse Services, January 1998, pg. 13.

2. The Tully Hill Study in New York, comparing a year before treatment to two years after treatment, found:[7]

    - hospitalization reduced from 44% to 14%
    - emergency treatment episodes reduced from 38% to 22%
    - outpatient treatment episodes reduced from 75% to 68%

A 1992 study by Holder and Blose illustrated the impact of alcoholism treatment on other medical expenses.[8] The study compared the costs of two groups of alcoholics – one group that received treatment and one that did not. After controlling for demographic differences between the groups, the study found that the average monthly medical costs for the untreated group were about 24% higher than the treated group over a four-year period.

There are numerous estimates of the potential medical cost savings and the relative medical costs of those with chemical dependency compared to the rest of the population. We performed sensitivity testing to determine a reasonable indirect premium factor to apply to the direct premium cost estimates. We arrived at a factor of .76 based on the following assumptions; which are based on judgement and the results of our research:

- Ratio of medical costs for those treated for a chemical dependency to those without (excluding treatment costs): 1.2
- Expected percentage of population treated: 1%
- Medical costs related to chemical dependency treatment, as a percent of total costs: .5%
- Savings in other medical costs for those with chemical dependency treatment: 10%

[7] *The Costs and Consequences…*, p. 13.

[8] Stephen P. Melek, F.S.A., *Behavioral Healthcare Risk-Sharing and Medical Cost Offsets*, Milliman & Robertson, Inc., Research Report, 1996, pg. 6-8. Study by Harold D. Holder and James O. Blose, "The Reduction of Health Care Costs Associated with Alcoholism Treatment – A 14-Year Longitudinal Study", *Journal of Studies on Alcohol*, Vol. 53, November 4, 1992.

6. Regardless of cost, to what extent does the coverage contribute to the quality of the insured's health status? Is the treatment generally recognized by the medical community as being efficacious?

Successful treatment will improve an insured's health status substantially, although some effects will remain. Studies indicate that better treatment is associated with longer treatment periods but retaining patients is problematic. The treatment is considered to be efficacious; although, there is a high risk of relapse. Following is an illustration of abstinence rates based on a study of patients treated in Texas.

Table IV.A.5

6-Month Follow-up	Total % Abstinent[9]	12-Month Follow-up	Total % Abstinent[10]
Didn't Complete Treatment	60.3	Didn't Complete Treatment	64.4
Completed Treatment	71.8	Completed Treatment	73.6
Total	69.3	Total	70.7

7. What is the expected impact on sick days/disability benefits of providing the treatment?

Chemical dependency results in considerable loss of work time. Significant productivity gains due to the treatment of chemical dependency are expected to be achieved.

[9] *SATOS – Substance Abuse Treatment Outcome Study: First Report*, Texas Commission on Alcohol and Drug Abuse, Summer 1992, pg. 25, table 9.
[10] *SATOS*.

B. Complications of Pregnancy

Benefits for Complications of Pregnancy must be provided on the same basis as for other illnesses. This includes cases with a hospital stay due to a diagnosis not related to pregnancy but complicated by pregnancy. This also includes ectopic pregnancies, spontaneous terminations, and cesarean sections during the period when a viable birth is not possible. The mandate does not include abortions or cesarean sections resulting in delivery or hospitalizations due to difficult pregnancies. This mandate applies to all accident and health insurance products.

1. How many and what portion of the insured population are expected to use the mandate annually?

From Report 1, the expected utilization per 1,000 insured is 1.51; we assume each of these represents an individual utilizer. So, the percentage of insureds expected to file a claim for the mandated benefit within a policy year is 0.15%. This equates to 7,506 fully insured individuals in Texas.

2. How many individuals are likely to be affected by the particular illness, medical condition or service associated with the mandated benefit (of the insured population in the State and of the total State population, regardless of healthcare coverage)? Are there other important characteristics of this group to note (e.g., average age, etc.)?

Based on a live birth rate of 17.4 per 1,000 Texas residents[1] and 7.4 fetal deaths per 1,000 live births[2] we estimate there are 348,974 live births and 351,557 total deliveries per year in Texas. We expect 63% of pregnancies to result in delivery, based on our analysis of oral contraceptives. Therefore, we estimate there are 553,928 pregnancies per year in Texas. Based on these values, the table below estimates the number of women in Texas that are likely to suffer from some of the most common complications of pregnancy. While we expect about 30% of pregnant women to have a diagnosis meeting the definition of a complication of pregnancy and about 14% of deliveries will include a diagnosis meeting the definition of a complication of pregnancy, only about 5.5% of pregnancies reach the severity to obtain coverage under the mandate.

[1] *Bureau of Vital Statistics1998 Annual Report, Natality*, Texas Department of Health, <http://www.tdh.state.tx.us/brs/stats98/text/98natal.htm> [8/4/00].
[2] *Vital & Health Statistics*, Series 20, No. 36 (8/96), Centers for Disease Control and Prevention, <http://www.cdc.gov/nchs/data/sr20_31.pdf> [8/4/00].

Table IV.B.1

Type of Complication (top complications)	Prevalence among Pregnant Women (Nationwide)	Estimated Number in Texas Per Year
Hyperemesis gravidarum	1 in every 300[3] pregnancies	1,846
Ectopic pregnancy	7 in every 1,000[4] pregnancies	3,877
Spontaneous abortion	10% - 20 %[5, 6] pregnancies	110,786
Diabetes	211 per 10,000 live births[7]	7,363
Hypertension	5-10 in every 500[8] pregnancies	8,309
Pyelonephritis	2%[9] of pregnancies	11,079
Appendicitis	0.05%[10] of pregnancies	277
Acute Cholecystitis	0.04%[11] of deliveries	141
Congenital Heart Disease	0.5 – 1%[12] of pregnancies	4,154

[3] *Pregnancy & Baby's First Year*, "The First Trimester Complications", Children's HealthCenter, MayoClinic HealthOasis, <http://www.mayohealth.org/mayo/baby/htm/baby5.htm> [8/4/00].
[4] *Pregnancy & Baby's First Year*.
[5] *Pregnancy & Baby's First Year*.
[6] "Abortion, Spontaneous", *General Health Encyclopedia*, HealthCentral, <http://www.healthcentral.com/mhc/top/001488.cfm> [7/11/00].
[7] "Prenatal Care and Pregnancies Complicated by Diabetes – U.S. Reporting Areas, 1989", *MMWR Weekly*, February 19,1993, <http://www.cdc.gov/epo/mmwr/preview/mmwrhtml/00019601.htm> [8/4/00].
[8] "High Blood Pressure in Pregnancy", Department of Obstetrics and Gynecology, <http://obgyn.uihc.uiowa.edu/Patinfo/pregprob/hyper10n.htm> [8/4/00].
[9] John E. Delzell, Jr., MD and Michael L. Lefevre, MD, "Urinary Tract Infections During Pregnancy", *American Family Physician*, American Academy of Family Physicians, <http://aafp.org/afp/20000201/713.html> [8/25/00].
[10] Michelle Tracey, MD and H. Stephen Fletcher, MD, "Appendicitis in Pregnancy", The American Surgeon, <http://www.onlinejournal.net/sesc-TAS/2000/66/6/html/66_6_555.html> [8/25/00].
[11] R.E. Glasgow, et al, "Changing Management of Gallstone Disease During Pregnancy", Springer-Verlag New York, Inc., 1998, <http://link.springer-ny.com/link/service/journals/00464/bibs/12n3p241.html> [8/28/00].
[12] Dr. Danny Tucker, "Significant Cardiac Disease and Pregnancy" <http://www.womens-health.co.uk/cardiac.htm> [8/31/00]

3. A) If the care and/or treatment associated with the mandated benefit were not provided, what would be the physical and economic consequences? B) If the coverage were not provided under private group insurance, to what extent would the service be provided/condition be treated? C) If the State mandate did not exist, would group health plans still cover the service/condition/population?

Below are some of the potential consequences of the most common complications:

Hyperemesis Gravidarum – This can be life threatening to the woman and her baby. The woman loses weight and becomes dehydrated. Dehydration can cause dangerous shifts in the electrolyte levels in the blood, and the blood becomes too acidic. Complications include liver damage (sometimes rupturing and bleeding) and bleeding in the retina of the eye. Since this is life threatening the woman is hospitalized and intravenously given fluids, glucose, electrolytes and occasionally vitamins.

Ectopic Pregnancy – This is life threatening to the mother and must be removed as soon as possible. In the United States, 1 out of 826 women with an ectopic pregnancy dies of complications.[13]

Spontaneous or Missed Abortion – When only part of the contents of the uterus are expelled a suction curettage must be performed to empty the uterus. Any retained tissue may cause infection or an abnormal activation of blood clotting systems. These are serious conditions that must be treated immediately. It is hard to estimate the number of spontaneous abortions since many happen early in the pregnancy and go unreported.

Diabetes – This condition (established or gestational) increases the risk for adverse fetal and maternal outcomes and needs to be closely monitored during the entire pregnancy.

Hypertension – Complications from high blood pressure during pregnancy include a decrease in the blood and oxygen supply to the mother and baby. In the mother it can cause kidney problems, breathing problems, seizures, strokes and even death. Babies may have problems with growing, getting enough oxygen and other complications. Should this go untreated and blood pressure rises and/or urine tests show kidney problems, hospital admission is recommended. A common complication of high blood pressure is pre-eclampsia, which is not covered by this mandate.

Pyelonephritis – This is a systemic illness that can progress to maternal sepsis (blood poisoning), pre-term labor and premature delivery. Hospitalization is indicated for patients who are unable to stay hydrated and who are having contractions. The condition is treated by antibiotic therapy (plus intravenous fluids, if hospitalized). Most patients respond to treatment within 24 to 48 hours. Twenty-three percent of patients have recurrence of the disease.[14]

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[13] "Complications of Pregnancy", *The Merck Manual of Medical Information – Home Edition*, Section 22. Women's Health Issues, Chapter 245, <http://www.merck.com/pubs/mmanual_home/sec22/245.htm> [8/9/00].
[14] Delzell and Lefevre.

Appendicitis – This is a condition that causes inflammation of the appendix. Immediate surgery is needed for treatment, which requires a few days in the hospital. Without treatment, the infected appendix can rupture. There is a fetal mortality rate as high as 35% and maternal mortality rate of 2%. Since symptoms are similar to pregnancy itself, the diagnosis is often delayed contributing to the increased risk.[15]

Acute Cholecystitis – This is a condition that causes inflammation of the gallbladder. It can be initially treated with conservative measures such as bed rest, withdrawal of oral feeding, intravenous hydration, antimicrobials, and analgesics (parenteral Demerol). Recurrent disease and multiple hospitalizations may warrant a cholecystectomy.

Congenital Heart Disease – The most common forms of congenital heart disease make up 95% of all congenital heart diseases. From those 95%, 72% are low risk with a mortality rate less than 1%, 14% have a medium risk with a mortality rate of 5-15%, and 14% have a high risk with a mortality rate of 25-50%.[16] For the most part, mothers without cyanosis (deficiency of oxygen) have normal pregnancies. In cyanotic mothers, severe growth retardation and higher abortion rates arise. The situation is reversed after surgical correction.[17]

In summary, if left untreated, many of these conditions are life threatening to the mother and the baby. If the mother and/or baby survive these conditions, there may be permanent damage that will cause long term medical expenses going forward.

Since all the conditions left untreated can reach emergency situations, the conditions would more likely be treated in the emergency room in the absence of private insurance coverage. The costs due to complications of pregnancy will be absorbed by the healthcare system with or without the coverage. By the time the condition reaches the stage covered by the mandate, it would be considered medically necessary to admit the mother to the hospital or the pregnancy will already be terminated. Without coverage either the mother, healthcare provider, or society would cover the cost.

In the absence of this mandate, diabetes, appendicitis, cholecystitis, and hypertension would almost certainly be covered by most major medical plans. Since pregnancy is now covered as any other illness by most commercial group plans, it is likely that most of the other complications of pregnancy would also be covered as well. Based on the results of the survey of self-funded employers (Section V), we would expect 97% of employers to provide this coverage in the absence of the mandate.

[15] Tracey.
[16] Tucker.
[17] "Heart Disease in Pregnancy", <http://www.dencats.org/heart/preg/pregchd.htm> [8/25/00].

4. What are the expected additional costs (premiums) to the insurance company for covering the mandated benefit (direct expenses only)?

From Report 1, following is the premium impact. The costs below represent the costs for treating the complications of pregnancy as described above.

Table IV.B.2

	PMPM Premium	Percent of Premium
Large Group		
HMO	$0.83	.5%
PPO / POS	0.75	.4%
Indemnity	0.89	.5%
Small Group		
HMO	0.84	.5%
PPO / POS	0.80	.4%
Indemnity	1.05	.5%

5. What additional indirect costs or offsetting benefits may result? Can they be quantified in relation to the direct expenses (from the insurance company perspective)? What is the resulting net premium impact?

Coverage in group insurance plans may save current and future costs, as the woman may be more inclined to seek treatment faster knowing she can go to the hospital of her choice (rather than a community hospital) and the cost is insured. Faster treatment may lead to less continuing complications in the future and save lives. There is not sufficient data available to estimate the cost savings due to earlier treatment; however, we would not expect that the premium cost estimates would be reduced significantly due to future cost savings.

6. Regardless of cost, to what extent does the coverage contribute to the quality of the insured's health status? Is the treatment generally recognized by the medical community as being efficacious?

The earliest treatment possible will contribute to the mother's and baby's current and long term health status. If the mandate causes the mother to seek treatment faster, it will enhance her and/or her baby's health status.

The medical community supports hospitalization when these conditions have reached emergency status. However, the medical community strongly recommends quality prenatal care to decrease the chances of the mother's and/or baby's medical condition reaching the stages where the services covered by the mandate are needed. Women who have inadequate

prenatal care are at a greater risk for pregnancy complications and negative birth outcomes. Lack of quality prenatal care will lead to a greater risk of gestational diabetes, spontaneous abortions and hypertension, as well as other related complications. Babies born to mothers with untreated complications of pregnancies are more likely to have complications that will require high utilization of healthcare resources. Various studies indicate that the estimated savings due to prenatal care range from $1.70 to $3.38 saved for every $1.00 spent on prenatal care.[18] Receiving early and consistent prenatal care increases the likelihood of a healthy outcome.

7. What is the expected impact on sick days/disability benefits of providing the treatment?

If caught early enough, the condition may not deteriorate into long term chronic conditions. This will reduce the utilization of sick days and disability benefits after the pregnancy. During the pregnancy, the length of disability may be shortened if the condition is treated earlier due to the mandate. The impact on total employee sick days and disability benefits, however, is likely to be minimal.

[18] "For Every Dollar Spent – The Cost Savings Argument for Prenatal Care", *The New England Journal of Medicine*, November 10, 1994, Vol. 331, No. 19, <http://www.nejm.org/conten/1994/0331/0019/1303.asp> [8/10/00].

C. Oral Contraceptives

Benefits for Oral Contraceptives must be provided when all other prescription drugs are covered. Applies to all accident & health insured products.

1. How many and what portion of the insured population are expected to use the mandate annually?

We expect there to be about 339 scripts billed for oral contraceptives per 1,000 members annually from Report 1. Each script represents a monthly supply of oral contraception. If each individual utilizer receives 12 prescriptions a year, and 95% of small and large group fully insured plans include prescription drugs, this implies that about 2.7% of the insured population will use the mandate annually. This equates to about 135,108 women in Texas.

2. How many individuals are likely to be affected by the particular illness, medical condition or service associated with the mandated benefit (of the insured population in the State and of the total State population, regardless of healthcare coverage)? Are there other important characteristics of this group to note (e.g., average age, etc.)?

Women of childbearing age (15-44) account for 60.1 million or 21.9% of the U.S. population[1] and about 4.54 million of the population of Texas[2]. According to the Guttmacher Institute[3], 31% of these women do not need contraception, because they "are sterile for non-contraceptive reasons; are pregnant, postpartum, or trying to become pregnant; have never had intercourse; or are not sexually active", implying that about 3.1 million individuals in Texas could have a need for oral contraceptives.

3. A) If the care and/or treatment associated with the mandated benefit were not provided, what would be the physical and economic consequences? B) If the coverage were not provided under private group insurance, to what extent would the service be provided/condition be treated? C) If the State mandate did not exist, would group health plans still cover the service/condition/population?

If oral contraceptives were not available, women would need to make different choices with respect to birth control. Many of the other choices (no method, diaphragm, and condom), are also less effective. This may lead to an increase in the rate of unwanted pregnancies, abortions, and births.

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[1] "Resident Population Estimates of the United States by Age and Sex: April 1, 1990 to July 1, 1999, with Short-Term Projection to July 1, 2000", U.S. Census Bureau, Population Division, Population Estimates Program, <http://www.census.gov/population/estimates/nation/intfile2-1.txt> [7/14/00].

[2] "State Population Estimates and Demographic Components of Population Change: July 1, 1998 to July 1, 1999", U.S. Census Bureau, Population Division, Population Estimates Program, <http://www.census.gov/population/estimates/state/st-99-1.txt> [8/11/00].

[3] "Contraceptive Use: Who Needs Contraception?", *Facts in Brief*, The Alan Guttmacher Institute, <http://www.agi-usa.org/pubs/fb_contr_use.html> [7/11/00].

If oral contraceptives were not covered by insurance, we would expect a slightly lower use rate of oral contraceptives and, therefore, a slightly higher rate of unwanted pregnancies, abortions, and births. However, in most cases, we would expect that the insureds would still use oral contraceptives, but bear the costs themselves.

For those women who want to avoid pregnancy—and in particular, avoid giving birth—there will be a personal economic gain by avoiding the costs associated with raising a child. In the state of Texas, the rate of births by women age 15 to 19 is 35% greater than the U.S. average.[4] Therefore, the economic benefits of avoiding childbirth in Texas may be more pronounced than in the rest of the nation.

If the mandate did not exist, we predict that the majority of health plans would still cover oral contraceptives due to market demand. This is supported by the survey of self-funded employers (Section V) which showed that 89% covered oral contraceptives at the level of the mandate. Only 7% excluded oral contraceptive coverage.

4. What are the expected additional costs (premiums) to the insurance company for covering the mandated benefit (direct expenses only)?

From Report 1, following is the premium impact. The costs below represent the costs of prescriptions for oral contraceptives.

Table IV.C.1

	PMPM Premium	% of Premium
Large Group		
HMO	$0.67	.4%
PPO / POS	0.66	.4%
Indemnity	0.59	.3%
Small Group		
HMO	0.61	.4%
PPO / POS	0.62	.3%
Indemnity	0.60	.3%

[4] Texas: 73 births per 1000. U.S.: 54 births per 1000. "Contraception Counts: State-by-State Information", *Issues in Brief*, The Alan Guttmacher Institute, < http://www.agi-usa.org/pubs/ib22.html > [7/14/00].

5. What additional indirect costs or offsetting benefits may result? Can they be quantified in relation to the direct expenses (from the insurance company perspective)? What is the resulting net premium impact?

The costs of covering oral contraceptives may be offset by cost savings in pregnancy and childbirth. We used the following information based on our research to develop a model to assess the potential impact.

- 17.3% of women (15-44) use oral contraception. [5]
- In the state of Texas, there are 112 pregnancies per 1000 women (15-44).[6]
- 50% of miscarriages come from unwanted pregnancies.[7]
- 7% of those who need contraception don't use it.[5]
- 47% of unwanted pregnancies come from women who use no method of contraception.[4]
- The failure rate of oral contraception is 6%[8]

Based on the above information and the statistics shown in question 2 above, we develop the following table to represent the base scenario, in which Oral Contraceptives are assumed to be covered:

Table IV.C.2

	Per 1000 Women Age 15-44	Annual Pregnancies	Annual Pregnancy Rate
Don't Need Contraception	310.0	57.1	0.18
Need Contraception	690.0	54.9	0.08
No Method	48.3	25.8	0.53
Oral	173.0	10.4	0.06
Non-Oral (High)	116.5	18.3	0.16
Non-Oral (Low)	352.2	0.4	0.001
All	1000.0	112.0	0.11

We split the non-oral contraceptive methods into high risk (of pregnancy) and low risk. High risk include diaphragm, condom, and sponge, while low risk include implant, injectible, and sterilization.

[5] *Number of women 15-44 years of age and percent distribution by current contraceptive status and method, according to age at interview: United States 1995*.
<http://www.cdc.gov/nchs/datawh/statab/pubd/2319_41.htm> [6/27/00]
[6] "Contraception Counts..."
[7] S.K. Henshaw, "Unintended Pregnancy in the United States," *Family Planning Perspectives*, 30:24-29 & 46, 1998.
[8] "Contraceptive Use..."

We can further refine this table by indicating the results of these pregnancies (birth or non-birth). This refinement is included in Appendix IV-C.

Based on our modeling and research, we estimate that the savings from the coverage of oral contraception ($0.44) is outweighed by the costs of coverage ($0.77). These are gross healthcare costs. This cost impact assumes that 5% of current oral contraceptive users would use no method in the absence of coverage, and 10% would switch to other contraceptives, in the high-risk category. The reason that the savings do not fully offset the costs can be characterized as follows.

- The savings from the coverage of oral contraception is made when women choose contraception in lieu of using no method or high-risk non-oral—thereby reducing the number of unwanted births and the costs associated with them.

- The women who would switch to using no method in the absence of coverage of oral contraception account for a savings of $0.31, but they account for only $0.04 of the costs of coverage.

- The women who make the switch to high risk non-oral from oral contraception in the absence of coverage account for a savings of $0.13, but they account for only $0.08 of the costs of coverage.

- The women who would use oral contraceptives whether or not they have coverage provide no savings, but they account for $0.65 of the cost of coverage.

Based on various scenarios regarding the number of women who would make different contraceptive choices with coverage vs. without coverage, we estimate that 25% to 75% of gross healthcare costs for oral contraceptives will be recovered through reduced pregnancy and delivery costs. Detailed exhibits showing the cost development and assumptions are in Appendix IV-C.

6. Regardless of cost, to what extent does the coverage contribute to the quality of the insured's health status? Is the treatment generally recognized by the medical community as being efficacious?

Aside from the prevention of pregnancy, oral contraception has mixed effects on a woman's health. The FDA reports the following health benefits and risks from oral contraception.[9]

Benefits

- Can make periods lighter and more regular.
- Can provide protection against pelvic inflammatory disease.
- Can provide protection against ovarian and endometrial cancers.

Risks

- Might contribute to cardiovascular disease, including high blood pressure, blood clots, and blockage of the arteries.
- May worsen the health of those women who have or have had breast cancer.
- May have side effects including nausea, headache, breast tenderness, weight gain, irregular bleeding, and depression.
- It has been debated whether or not oral contraception increases the risk of breast cancer. The latest research indicates that if there is such an increase in risk, it is small.

[9] Tamar Nordenberg, "Protecting Against Unintended Pregnancy: A Guide to Contraceptive Choices", FDA Consumer, April 1997 with revisions made in June 1997, October 1999, and June 2000, <http://www.fda.gov/fdac/features/1997/397_baby.html> [8/9/00].

7. What is the expected impact on sick days/disability benefits of providing the treatment?

Of the 4.54 million women of childbearing age in Texas, about 4.39 million are age 16 or older.[10] At least 60% of these are in the workforce,[11] and therefore, it is likely that unwanted pregnancies will lead to work absences due to maternity leave and other medical concerns.

In the model, we estimated that as many as 3.2[12] unwanted births annually per 1,000 women might be prevented due to the mandate. If we look at women in the workforce of childbearing age (about 2.6 million), we can estimate the prevention of as many as 8,300 births. Each of these instances would result in the prevention of missed work.

[10] Based on aged distribution of females in U.S. "Resident Population Estimates...".
[11] Includes women over 44. Actual rates for women 15-44 should be higher. "Employment status of the civilian noninstitutional population in states by sex, age, race and Hispanic origin, 1999 annual averages", Bureau of Labor Statistics, <http://stats.bls.gov/laus/laustdem.pdf> p. 12, [9/19/00].
[12] In the model, we estimated a reduction of non-aborted pregnancies of 4.4 per 1000. In Texas, for every 92 non-aborted pregnancies, there are 75 births.[5] That is, 18% of these pregnancies are miscarried. Thus, we estimate a decrease in births of 3.2 per 1000.

D. Congenital Defects

Policies that provide maternity coverage or dependent coverage must automatically cover newborns for the first 31 days and must continue coverage if the insured pays the required premium and provides notification within the first 31 days. If a policy includes maternity or additional newborn children benefits, it cannot limit or exclude initial coverage of a newborn infant for a period of time, or include limitations for Congenital Defects of a newborn child. The mandate applies to all individual and group accident and health insurance. We were asked by TDI to research congenital defect costs for the entire population, not just newborns. We were also asked to not include newborn costs unrelated to congenital issues in the first 31 days.

1. How many and what portion of the insured population are expected to use the mandate annually?

From Report 1, 1.4% of all medical costs are attributable to congenital defects. These are the costs that have been coded as congenital defects and not the total medical costs of individuals that have a congenital defect. Of the population studied, approximately 1.9% of the members filed at least one claim relating to a congenital defect during the study period. The population studied was from two Texas HMOs with approximately 4 million combined member months during 1997 and 1998. Based on this data, 95,076 Texans with small and large group coverage are expected to file a claim annually.

It should be noted that children with congenital defects account for 10% to 15% of all pediatric hospital admissions.[1] In addition, newborns with congenital defects account for roughly one-third of NICU admissions.[2]

2. How many individuals are likely to be affected by the particular illness, medical condition or service associated with the mandated benefit (of the insured population in the State and of the total State population, regardless of healthcare coverage)? Are there other important characteristics of this group to note (e.g., average age, etc.)?

According to the March of Dimes, 1 in 28 babies born in the United States has a congenital defect. With a crude live birth rate of 17.4 per 1,000 Texas residents,[3] we would expect 12,463 babies born per year in Texas with a congenital defect. The table below shows estimated incidence rates for some of the most common congenital defects per 100,000 live births.

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[1] Yoon, P.W., et al, "Contribution of Birth Defects and Genetic Disease to Pediatric Hospitalizations", *Archives of Pediatric Adolescent Medicine*, Centers for Disease Control and Prevention, Division of Birth Defects and Developmental Disabilities, Nov 1997, 151 (11):1096-103

[2] Lindower, J.B., et al, "Outcomes and Resource Utilization for Newborns with Major Congenital Malformations", *J Perinatol,* Children's Hospital Medical Center, Division of Neonatology, Cincinnati, OH, Apr-May 1999, 19(3):212-5

[3] Texas Department of Health, Bureau of Vital Statistics, *1998 Annual Report, Natality*, <http://www.tdh.state.tx.gov/bvs/stats98/text/98natal.htm> [9/25/00].

Table IV.D.1[4]
Incidence of Congenital Defects In Texas

Most Common Congenital Defects	Rate per 100,000 Live Births	Estimated Annual Births in Texas with Congenital Defects
Heart and Circulation	870	2,915
Muscles & Skeleton	662	2,218
Cleft Lip/Palate	108	362
Genital & Urinary Tract	741	2,482
Nervous System & Eye	376	1,260
Spina Bifida	50	168
Down Syndrome	111	372
Respiratory Tract	111	372
Metabolic Disorders	29	97
Congenital Infections	88	295
Rh Disease	71	238
Fetal Alcohol Syndrome	100	335

3. A) If the care and/or treatment associated with the mandated benefit were not provided, what would be the physical and economic consequences? B) If the coverage were not provided under private group insurance, to what extent would the service be provided/condition be treated? C) If the State mandate did not exist, would group health plans still cover the service/condition/population?

If left untreated at birth, many of the above conditions are fatal. If not fatal, they leave severely disabling conditions. During the individual's lifetime there is often further surgery required. If this is left untreated, the individual is left with more physical limitations than is necessary under optimal treatment conditions.

Should care not be provided, the medical costs would decrease but other costs, such as welfare support and institutional costs, would increase. The better management and treatment of the condition might cause the net medical cost, developmental costs, and possibly the special education costs to go up, but the mortality and disability costs to go down.

If these conditions are excluded from commercial insurance coverage, the affected population is still likely to receive care, financed through a publicly funded program such as Medicaid, nonprofit organizations such as the March of Dimes, the individual, or the healthcare provider through charitable care.

[4] "Birth Defects and Infant Mortality: A National and Regional Profile 1996", March of Dimes Birth Defects Foundation. pg. 43.

Costs may be higher under private insurance because the individual may be more likely to seek prolonged treatment, such as physical therapy and speech therapy if they are covered. Such costs and treatment are likely to contribute to better physical conditions and quality of life.

However, some aggressive disease management programs have shown annual savings of 11%-30% by helping the individual to treat and self-manage particular diseases.[5] These are not instant savings, but over time they can reach this level due to claim avoidance by identifying risks before they become major health problems. Currently the focus has been on such diseases as cardiovascular, diabetes, asthma, multiple sclerosis and cystic fibrosis. Some of the genetic conditions fall into the categories that employer disease management programs address, and would therefore, create future medical cost savings to the system. There is still a net cost to the insurance carrier that might have denied this coverage in the absence of this mandate.

However, the majority of potential savings arises through the prevention of congenital defects. The prevention of congenital defects in not included in the mandated benefit.

A 1994 study, "Estimates of the Economic Costs of Birth Defects", obtained from the Summer 1994 issue of Inquiry,[6] illustrates additional societal costs from a number of congenital defects. Should insurance or public services not fund these costs, they will fall to the individual. The study shows an estimate of the 1988 economic costs to society due to select congenital conditions. This does not include the indirect cost to society due to family members who take time from work to care for individuals with congenital defects. Developmental costs only include public expenditures and exclude private out-of-pocket costs (e.g., wheelchair ramps). Although costs and treatments have changed significantly since 1988, this does give an indication of the allocation of society's extra cost due to congenital defects. Following is a table developed based on the study.

[5] Lee Fletcher, "Disease Management Generating Savings", *Business Insurance*, July 31, 2000, pg. 1.
[6] Norman J. Waitzman, et.al., "Estimates of the Economic Costs of Birth Defects", *Inquiry* 33:188-205 (Summer 1994), 1994 Blue Cross and Blue Shield Association and Blue Cross and Blue Shield of the Rochester Area.

Table IV.D.2
1988 Additional Lifetime Morbidity Cost Due to Congenital Defects
Per Person Diagnosed with the Specific Congenital Defect
($,000)

Most Common Congenital Defects	Rate per 100,000 Live Births	Net Additional Medical Costs	Developmental & Special Education Costs	Mortality Costs	Disability Costs	Total Additional Lifetime Cost
Heart and Circulation	108	$ 99	$ 2	$ 134	$ 26	$ 261
Muscles & Skeleton	147	24	6	98	20	148
Cleft Lip/Palate	177	11	3	48	30	92
Cerebral Palsy	123	142	85	40	177	444
Genital/Urinary Tract	147	9	0	112	0	121
Spina Bifida	42	99	24	82	52	257
Down Syndrome	105	55	88	96	171	410
Respiratory Tract	29	44	0	84	0	128
Metabolic Disorders	83	30	0	60	0	90

Net Additional Medical Costs = Medical costs for those with a congenital defect in excess of "average"
Developmental & Special Education Costs = public costs such as day care programs, counseling, special education classrooms, case management, evaluation, etc.
Mortality Costs = lost productivity due to early mortality (measured by lost wages)
Disability Costs = lost productivity due to inability to work or work limitations

The incidence rates do not match the table presented earlier because this research tended to focus on the more costly subsets of the groupings. The additional lifetime cost is the yearly cost discounted by 5% per year to the date of birth and includes net medical costs, direct costs of developmental services, special education, and estimated future earnings lost due to early mortality or inability to work. The true medical costs of this population due to the congenital defect is difficult to study because these congenital defects often coexist with and give rise to other illnesses. The recording of medical costs may only include the primary illness and may not make mention of the underlying congenital defect. This problem is expected to increase with age, since the attention given to any congenital defect is likely to diminish with age. This lifetime cost approach attempts to accumulate all costs of the individual and then remove the costs of an "average" individual for a net cost related to the defect.

This approach is in contrast to the estimates in Report 1 that attempt to track those claims that were coded as primarily due to the congenital defect, such that the claim might be denied payment by an insurer in the absence of this mandate.

Based on the self-funded survey, it appears that this benefit would be covered in the absence of the mandate. It is difficult to say whether or not the mandate caused the market to demand this coverage even in the self-funded environment due to competitive pressure. Another more current influence to cover these benefits could be avoidance of lawsuits under the Americans With Disabilities Act, since most of these are very disabling conditions. As individuals demanded accommodations in the workplace due to their disability, they would also demand full medical coverage.

4. What are the expected additional costs (premiums) to the insurance company for covering the mandated benefit (direct expenses only)?

From Report 1, following is the premium impact. The costs below represent only those costs emerging from a primary diagnosis of congenital defect.

Table IV.D.3

	PMPM Premium	Percent of Premium
Large Group		
HMO	$2.00	1.3%
PPO / POS	2.58	1.4%
Indemnity	3.04	1.6%
Small Group		
HMO	2.02	1.3%
PPO / POS	2.72	1.5%
Indemnity	3.62	1.6%

5. What additional indirect costs or offsetting benefits may result? Can they be quantified in relation to the direct expenses (from the insurance company perspective)? What is the resulting net premium impact?

This mandate is likely to shift a small amount of cost from the public to the private sector. We believe the premium costs in number 4 above represent the entire costs from the insurance company perspective.

6. Regardless of cost, to what extent does the coverage contribute to the quality of the insured's health status? Is the treatment generally recognized by the medical community as being efficacious?

Most literature covering congenital defects emphasizes prevention of congenital defects and aggressive management of individuals with congenital defects. Since providing treatment to individuals with congenital defects significantly lowers their mortality rate, the treatments included in the mandate have a great impact on the quality of the insured's health status.

The medical community recommends aggressive management of many of these congenital conditions. We would expect there to be more compliance with maintenance visits and therapies in the insured environment.

7. What is the expected impact on sick days/disability benefits of providing the treatment?

One major impact of aggressive management and education of many of these conditions is getting individuals into the workforce that would not normally have been in the workforce. This is a saving to society of the mortality and disability costs shown in Table IV.D.2 above. Examples include adults with down syndrome involved in special group home work programs or holding regular jobs. Also, many of the individuals born with cardiovascular problems, if treated early enough, go on to lead lives unaffected by the condition.

For the employer that hires an individual with a congenital condition, this does mean increased utilization of sick days and disability benefits since individuals with these conditions have a higher prevalence of other illnesses. To society this means a larger percentage of the population that is fully or partially self-supporting.

E. HIV / AIDS/HIV-Related Illnesses

Policies may not exclude or deny coverage, or cancel a policy based on a diagnosis of AIDS, HIV, or HIV-Related illness. This applies to group accident and health insurance, Chapter 20 companies, and HMOs.

1. How many and what portion of the insured population are expected to use the mandate annually?

We have estimated that about 0.1% of the Texas commercial population has HIV/AIDS; the vast majority of them are expected to file a claim within a policy year. This implies that about 5,000 individuals with HIV/AIDS are covered under small and large group fully insured plans in Texas.

2. How many individuals are likely to be affected by the particular illness, medical condition or service associated with the mandated benefit (of the insured population in the State and of the total State population, regardless of healthcare coverage)? Are there other important characteristics of this group to note (e.g., average age, etc.)?

According to CDC data, there were 22,505 individuals living with AIDS in Texas at the end of 1999.[1] Data on individuals with HIV-only in Texas is incomplete; we estimate that there are approximately 22,955 additional individuals in Texas known to have HIV, based on the ratio of reported HIV-only to AIDS cases in other States with more complete data.

3. A) If the care and/or treatment associated with the mandated benefit were not provided, what would be the physical and economic consequences? B) If the coverage were not provided under private group insurance, to what extent would the service be provided/condition be treated? C) If the State mandate did not exist, would group health plans still cover the service/condition/population?

If HIV is not treated it will likely progress more quickly through the stages of the condition – from primary infection to the clinically asymptomatic stage to the symptomatic stage to AIDS. Over time, the immune system will weaken and opportunistic infections and cancers may develop. The patient's quality of life is likely to diminish and his life expectancy will decrease.

If individuals infected with HIV are excluded from commercial group coverages, they are likely to still receive care, but through a publicly-funded program. Currently, the majority of those with HIV are covered through public sources and a large percentage are uninsured. Only about 32% have private insurance; 48% have Medicare or Medicaid, and about 20% are uninsured.[2] Studies indicate that the care received by HIV-infected individuals who have private insurance is significantly better than the care received by the uninsured and Medicaid enrollees.

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[1] "HIV/AIDS Surveillance Report", Centers for Disease Control, Year-end edition Vol. 11, No. 2

[2] "HIV Cost and Services Utilization Study", *Policy Brief*, <http://www.rand.org/publications> [7/18/00].

We considered whether the costs of treatment are higher in private insurance than in public programs or for the uninsured. We hypothesized that private insurance costs may be higher, because the patient is more likely to seek and receive treatment, including drug therapies, if they are covered. However, they may not be receiving more costly treatment if insurance companies and especially managed care organizations are doing effective disease management and minimizing unnecessary hospitalizations.

We used a study comparing the treatment received by individuals with different health insurance coverages to estimate the cost differential.[3] Based on our analysis, we estimate that the annual cost to treat an individual with HIV/AIDS is 5% to 10% lower for those with private insurance compared to those with no insurance, Medicare, or Medicaid, even after adjusting for severity of cases. This is mainly due to the lower hospitalization rate for those with private insurance.

Detailed assumptions and the development of this cost comparison are shown in Appendix IV-E. The appendix shows a set of assumptions resulting in private healthcare costs being 6% less than the costs provided to those with Medicare, Medicaid, or no insurance. Sensitivity testing resulted in the range estimated above (5% to 10%), although the actual differential could be outside of that range.

We believe that even in the absence of the mandate, most group plans would include individuals with HIV/AIDS and coverage of these conditions. This is supported by the 97% coverage shown in the survey of self-funded employers (Section V). Even if coverage for HIV and AIDS treatment is excluded, it may be difficult for insurers to attribute all health problems of an individual with these conditions as being directly related to HIV or AIDS. Therefore, they may end up covering a large portion of the costs whether the conditions are included in the policy or not.

[3] Martin F. Shapiro, MD, PhD, et al, "Variations in the Care of HIV-Infected Adults in the United States, Results from the HIV Cost and Services Utilization Study", *JAMA*, June 23/30, 1999 – Vol 281, No. 24;

4. What are the expected additional costs (premiums) to the insurance company for covering the mandated benefit (direct expenses only)?

From Report 1, following is the premium impact. The costs below represent the costs of covering HIV, AIDS, and related costs.

Table IV.E.1

	PMPM Premium	Percent of Premium
Large Group		
HMO	$1.80	1.1%
PPO / POS	2.02	1.1%
Indemnity	2.21	1.1%
Small Group		
HMO	1.81	1.1%
PPO / POS	2.12	1.1%
Indemnity	2.62	1.1%

5. What additional indirect costs or offsetting benefits may result? Can they be quantified in relation to the direct expenses (from the insurance company perspective)? What is the resulting net premium impact?

From the perspective of group insurance carriers in Texas, the requirement to cover individuals with AIDS/HIV does increase costs to the extent that they would have excluded these individuals or the condition in the absence of the mandate. The direct costs quantified in number 4 above represent the potential cost to the carrier; there are no additional costs or offsetting benefits to consider from the insurance companies' perspective.

6. Regardless of cost, to what extent does the coverage contribute to the quality of the insured's health status? Is the treatment generally recognized by the medical community as being efficacious?

The measures of treatment of HIV and AIDS are recognized by the medical community as contributing to the quality of life and health status of the patient.

7. What is the expected impact on sick days/disability benefits of providing the treatment?

Treatments allow patients to retain the ability to work for an extended period of time.

F. Mammography

Annual mammography screening for females 35 and older must be provided on the same basis as other radiological examinations. This mandate applies to individual or group policies of accident & health insurance and Chapter 20 companies.

1. How many and what portion of the insured population are expected to use the mandate annually?

From Report 1, the annual utilization per 1,000 insured is 73 screenings. Assuming each of these represents an individual utilizer, the percentage of insureds expected to file a claim for the mandated benefit within a policy year is 7.3%. This implies that 365,292 people are expected to file a claim in a year under small or large group insurance coverages.

2. How many individuals are likely to be affected by the particular illness, medical condition or service associated with the mandated benefit (of the insured population in the State and of the total State population, regardless of healthcare coverage)? Are there other important characteristics of this group to note (e.g., average age, etc.)?

The following percentages are from the Centers for Disease Control and Prevention Internet website. These percentages give an indication of the current usage of mammography screening.

Table IV.F.1
Percentage of Texas Women Who Have Had a Mammogram, 1998[1]

Age Bracket	Percent That Have Ever Had A Mammogram (a)	Percent of (a) That Have Had a Mammogram in the Last Year (b)	Expected Percent That Will Have A Mammogram Per Year (a) x (b)	2000 Estimated Number in Texas (in 000's)
18-39	23.7%	43.6%	10.3%	336
40–49	73.0%	58.8%	42.9%	641
50-59	86.8%	68.9%	59.8%	608
60-64	86.5%	72.6%	62.8%	236
65+	86.2%	65.6%	56.6%	669
Total	56.2%	61.2%	34.4%	2,490

The following incidence rates are from the American Cancer Society, Texas Cancer Facts & Figures 2000. Since the majority of the treatment for breast cancer is done at the time of diagnosis, these incidence rates can be used to estimate the follow-up costs of a positive mammogram.

[1] *Texas Cancer Facts and Figures 2000*, American Cancer Society, Texas Division, Inc., pg. 20-22. "Behavioral Risk Factor Surveillance System, Texas 1998, Risk Factors and Calculated Variables", Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Adult and Community Health, <http://www2/cdc/nccdphp/brfss/index.asp> [9/6/00].

Table IV.F.2
Female Breast Cancer Incidence Counts
and Percentage of Total New Cancers by Age of Diagnosis
Texas 1996[2]

Age Bracket	Count Female	% of Total New Cases	Incidence per 100,000 Women	Expected New Texas Cases in Year 2000
15-34	288	2.8%	10.44	303
35-44	1,293	12.7%	82.90	1,361
45-54	2,147	21.1%	179.01	2,260
55-64	2,088	20.5%	266.91	2,198
65-84	3,842	37.7%	395.41	4,044
85+	524	5.2%	337.30	552

Percentages may not add to 100 due to rounding
Incidence includes invasive cancers only; In situ cases are excluded

3. A) If the care and/or treatment associated with the mandated benefit were not provided, what would be the physical and economic consequences? B) If the coverage were not provided under private group insurance, to what extent would the service be provided/condition be treated? C) If the State mandate did not exist, would group health plans still cover the service/condition/population?

The potential consequences of not using mammographies to screen for breast cancer or reduced mammography rates due to lack of coverage include:

- Later detection on the average, leading to reduced life expectancy and higher treatment costs.

  According to the New England Journal of Medicine, women who are uninsured or are insured by Medicaid are more likely to be diagnosed with a more advanced stage of breast cancer than those who are privately insured. The survival rate for the uninsured and those covered by Medicaid is worse than those covered by privately insured patients.[3]

- Lower overall costs for screening, follow-up testing and treatment associated with lower screening rates.

According to the CDC in 1993, among women aged 50-64, the percent of women reporting a recent mammogram was lowest for uninsured women (20%) and highest for women enrolled

[2] *Texas Cancer Facts…*
[3] J.Z. Ayanian, "The relation between health insurance coverage and clinical outcomes among women with breast cancer" *New England Journal of Medicine*, Jul 1993, 329(5):326-31.

in an HMO (59%).[4] Therefore, coverage is a strong predictor of utilization of this service. Below is an historical comparison of utilization. We believe this growth is attributable to a combination of increasing coverage among commercial insurance carriers, expanded coverage under Medicare and Medicaid, as well as heightened awareness due to physician recommendation and American Cancer Society advertising.

Table IV.F.3
Percent of Women Having a Mammogram Within the Past 2 Years

Age	1987 US[5]	1996 US[6]	1996 TX[7]
40-49	31.9%	64.4%	58.7%
50 & older	27.4%	55.7%	52.9%

We suspect that while many health plans, especially HMOs, would cover mammographies in the absence of the mandate, that coverage would not be universal. Any plan that does not currently cover annual physical exams would tend to not cover other preventive type benefits as well. Coverages in the fee-for-service and the out-of-network PPO/POS environments are less likely to cover mammographies in the absence of a mandate. This is supported by the 89% coverage by self-funded employers (Section V).

4. What are the expected additional costs (premiums) to the insurance company for covering the mandated benefit (direct expenses only)?

From Report 1, following is the premium impact. The costs below represent the costs for mammography screenings.

Table IV.F.4

	PMPM Premium	Percent of Premium
Large Group		
HMO	$0.63	.4%
PPO / POS	0.66	.4%
Indemnity	0.58	.3%
Small Group		
HMO	0.64	.4%
PPO / POS	0.67	.4%
Indemnity	0.69	.3%

[4] "Mammography", CDC Figure 35, *Health, United States, 1995*, Report submitted by the Secretary of Health and Human Services to the President and Congress of the United States and compiled by the Centers for Disease Control and Prevention, National Center for Health Statistics, <http://www.cdc.gov/nchs/data/hus_95.pdf> [9/22/00].
[5] *Health, United States, 1999,* pg. 237, Table 82.
[6] "1996 – BRFSS 1992-1996", *Cancer Risk Report,* NHO Epidemiology and Surveillance
[7] "1996 – BRFSS 1992-1996".

5. What additional indirect costs or offsetting benefits may result? Can they be quantified in relation to the direct expenses (from the insurance company perspective)? What is the resulting net premium impact?

Based on our modeling and research, we believe there is a net cost in mammography screening. The literature shows major confounding factors in achieving cost-effectiveness in mammography screening:

- There is a high rate of false positives;
- From 1988-1996 the incidence rates for cancer have remained approximately level, yet the diagnosis of ductal carcinoma in situ (DCIS) has increased by approximately 6% per year. DCIS is a noninvasive cancer that can remain biologically benign and the autopsy frequency is much greater than the lifetime risk of cancer. According to one source, only 30% to 50% of DCIS progress to significant cancer, yet all are generally treated as cancer. The incidence of DCIS with screening is 16% to 24%. This source concludes that the rate of detection of latent breast cancer is 8% to 12%.[8]
- For the commercially insured population, there is also the impact that 43% of breast cancer cases are diagnosed after age 65. Earlier diagnosis can shift some of the cost from the Medicare market to the commercial market.

If we assume that 36% of women age 40+ will be screened each year with the mandate, while only 20% will be screened in the absence of the mandate, the estimated additional insured health care cost will be $0.78 PMPM. Following is the breakdown of additional costs:

Screening (Females age 40+)	$0.62 PMPM
False Positives (Females age 40+)	0.05
Treatment of DCIS that would not progress to life-threatening (40+)	0.05
Earlier Treatment (40+)	0.01
Screening and Associated Costs for Females age 35-39	0.05
Total Additional Costs	$0.78 PMPM

The cost estimates take into account that we expect the average cost per patient of cancer treatment to go down due to diagnosis at an earlier stage. The figures represent gross insured healthcare costs (i.e., they are not reduced by cost sharing). The total cost of coverage is about 1.18 times the direct costs of screening. While the direct costs were estimated at about 0.4% of premium, we estimate that the total premium cost is about 0.5% of premium, including direct and indirect costs related to the coverage.

[8] Wayne Kuznar, "Screening Less Costly for Prostate Than for Breast Cancer", *Urology Times*, Jan95, Vol. 23 Issue 1 p4,

The detail supporting these results is included in Appendix IV-F. The exhibits include the sources of the underlying assumptions.

Another way to address the cost of the mandate is to develop a computer simulation model to analyze the cost per year of life saved by complying with different recommended screening scenarios. The development of such a model is beyond the scope of this report, however this is one mandate that has been analyzed extensively and our research uncovered many such estimates. The range of estimates varied significantly based on the reduced mortality assumed. One particular study developed a comparison of the marginal cost per year of life saved (MCYLS) under different possible mandates.[9] The measure was determined by dividing the marginal cost of screening (the difference between the total costs for screening and the total costs for observation over the period encompassed by the model) by the marginal effectiveness (the difference between years of life accumulated in the screened group and the years of life accumulated in the observed group). Below are the results of this 1995 study:

Table IV.F.5
Cost Effectiveness of Different Mammographic Screening Schedules[10]

Age	Screening Frequency	1995 MCYLS
50-79	Biennial	$16,000
40-49 50-59	Annual Biennial	$20,200
40-64 65-79	Annual Biennial	$25,000
50-79	Annual	$25,600
40-79	Annual	$27,100
40-49 50-79	Biennial Annual	$31,200
40-49 (high risk) 40-49 (normal risk) 50-79	Annual Biennial Annual	$31,900

Until recently the American Cancer Society (ACS) guidelines recommended the most expensive (in terms of MCYLS) screening schedule of annual screening in high-risk women and biennial screening in normal-risk women aged 40-49 years and annual screening from ages 50-79. The more current guidelines of annual screening starting at age 40 reduced the cost per year of life saved by 15%. However, the most cost-effective choice is biennial screening for ages 50-79 at 51% of the cost of the current ACS guidelines. Adding annual screening at ages 40-49 increases the cost to 65% of the current ACS guidelines. This study found annual screening more effective

[9] K. Lindfors and J. Rosenquist, "The Cost-Effectiveness of Mammographic Screening Strategies" *JAMA*, Sep. 95, Vol.274, No 11, pg. 882.
[10] Lindfors and Rosenquist, pg. 882, Table 6.

in the 40-49 age group and biennial screening more effective in the 50-79 age group. This is primarily due to the assumption that the lead-time gained with mammography screening in women aged 40-49 is 12 to 24 months, while in women older than 50 it is 3.5 to 4 years. This lead-time difference is due to the assumption that younger women tend to have tumors that are more aggressive and less responsive to hormonal therapies.

The most controversial assumption in any of the MCYLS-type studies is the assumed mortality reduction due to screening. In our literature search we have seen estimates of anywhere from 0% to 40% reduction due to the screening with mammograms. As the mortality assumptions decrease, the MCYLS will increase. The assumptions used in the above study are stated below:

Table IV.F.6
Percentage Assumed Mortality Reduction[11]

Age	Annual Mammography	Biennial Mammography
40-49	23%	4%
50-59	32%	30%
60-69	32%	27%
70-79	32%	23%

To test the sensitivity of the model results to the mortality assumption, the study varied the age 40-49 mortality for three of the screening options:

Table IV.F.7
Marginal Cost Per Year of Life Saved[12]

Assumed Mortality Reduction in Age 40-49	Annual for Ages 40-49	Annual for Ages 40-49; Biennial for Ages 50-79	Biennial for Ages 40-49; Annual for Ages 50-79
4%	$33,600	$26,700	$31,200
12%	$30,400	$23,500	$27,700
20%	$27,900	$21,000	$25,000
23%	$27,100	$20,200	NA

Based on the study above, a 500% increase in mortality reduction for ages 40 – 49, only results in a 20% decrease in the MCYLS. Therefore, the results are fairly insensitive to the mortality reduction assumptions.

[11] Lindfors and Rosenquist, pg. 882, Table 4.
[12] Lindfors and Rosenquist, pg. 882, Table 7.

6. Regardless of cost, to what extent does the coverage contribute to the quality of the insured's health status? Is the treatment generally recognized by the medical community as being efficacious?

Health Benefits

There is some debate over the health benefits of mammography screening as being effective in reducing deaths from breast cancer. Many researchers believe that mammography screening is effective in reducing deaths from breast cancer and detecting the disease at an earlier stage when more treatment options are available. These studies show deaths from breast cancer are actually reduced 25% with mammography screening. However, two studies from Canada and Sweden show mammography screening have no significant effect on mortality (the study published in The Lancet, 1/8/00 and quoted in many articles).[13] Two Canadian researchers came to a similar conclusion five years ago (study also published in The Lancet, 7/1/95).[14]

There are risks associated with mammography screening that go beyond exposure to radiation. Mammography screening is responsible for the increase in the diagnosis of ductal carcinoma in situ (DCIS) as well as false positives and overtreatment of diagnoses.

The ACS disagrees with the Canadian and Swedish studies and believes that the death rate from breast cancer in the United States has been falling steadily for the past 10 years due in great part to mammography. Also, the stage of disease at diagnosis has shifted dramatically. "In the early 1980s when only 13% of American women were getting mammograms, the average size of breast cancer tumors was about 3 cm. By the late 1990s, 60% of the women in the US were having regular mammography and the average size of tumors had decreased to 2cm."[15] There is no one standard methodology for studying MCYLS. Three different studies on just the 40-49 age group show the MCYLS to be in the range of $7,000-$105,000.[16] However this is hard to prove because it could be due to other factors like chemotherapy.[17]

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[13] Donalee Moulton, "Is Mammography Screening Effective?", *Canadian Medical Association Journal,* Mar 2000, Vol.162 Issue 5, pg. 688.
[14] "Mammography Screening Does Not Save Lives", *HealthFacts*, Feb 2000, Vol.25, Issue 3, pg. 1.
[15] C.W. Henderson, "American Cancer Society Affirms Value of Mammography Screening", *Women's Health Weekly*, 1/22/2000 pg. 8.
[16] Elizabeth Brown, "Cost-Effectiveness and Coverage Policy", *Physician Executive,* May/June 99, Vol. 25 Issue 3, pg. 75.
[17] "Mammography Screening Does Not…".

Professional Recommendations[18]

Professional recommendations differ with respect to the age to begin mammography screening. Annual breast cancer screening for women aged >50 is widely recommended. Although effectiveness of screening among women aged 40-49 years is in debate, none of the professional recommendations below address screening under age 40.

- The American Cancer Society (ACS) recommends that women >40 years should have an annual mammogram, annual clinical breast examination (CBE) and perform breast examinations monthly.

- The National Cancer Institute (NCI) guidelines recommend that all women aged >40 years receive mammography every 1-2 years.

- U.S. Preventive Services Task Force (USPSTF) recommended that women aged 50-69 years receive routine breast cancer screening every 1-2 years

7. What is the expected impact on sick days/disability benefits of providing the treatment?

Because higher mammography screening rates may lead to earlier detection of breast cancer, more females will be treated earlier, during their working years. However, we do not expect this impact to be significant. Currently 57.1% of breast cancer cases are diagnosed prior to age 65. Therefore, we expect more work time off due to mammography screening and follow-up tests, than from the cancer itself.

[18] Hershel W. Lawson, MD, et al, "Implementing Recommendations for the Early Detection of Breast and Cervical Cancer Among Low Income Women", 3/31/00, Centers for Disease Control and Prevention, prepared by the National Center for Chronic Disease Prevention and Health Promotion and the Division of Cancer Prevention and Control, <http://www.cdc.gov/epo/mmwr/preview/mmwrtml/rr4902a4.htm> [6/2/00].

G. Prostate Screening

Policies must include annual benefits for diagnostic tests used in the detection of prostate cancer, including physical exams and prostate specific antigen (PSA) test. PSA tests are to be covered for males at least age 50, or at least age 40 with a family history of prostate cancer or other cancer risk factors. The mandate applies to individual, group or franchise insurance policies, HMO and MEWA. Small employers are exempt.

1. How many/what portion of the insured population are expected to use the mandate annually?

From Report 1, the annual utilization per 1,000 insured is 21.56 screenings. Assuming each of these represents an individual utilizer, the percentage of insureds expected to file a claim for the mandated benefit within a policy year is 2.2%. This implies that 63,756 men are expected to file a claim in a year under large group insurance coverages.

2. How many individuals are likely to be affected by the particular illness, medical condition, or service associated with the mandated benefit (of the insured population in the State and of the total State population, regardless of healthcare coverage)? Are there other important characteristics of this group to note (e.g., average age, etc.)?

The following incidence rates are from the American Cancer Society, Texas Cancer Facts & Figures, 2000:

Table IV.G.1
Prostate Cancer Incidence Counts
and Percentage of Total New Cancers By Age of Diagnosis,
Texas 1996[1]

Age	Count (Male)	% New Cases of Prostate Cancer	Incidence per 100,000	Estimated New Texas Cases in Year 2000
15-34	0			0
35-44	32	0.3%	2.04	33
45-54	556	5.9%	47.68	581
55-64	2,159	22.8%	298.83	2,255
65-84	6,190	65.4%	833.40	6,464
85+	522	5.5%	818.89	545

Percentages may not add to 100 due to rounding
Source: Texas Cancer Registry

[1] *Texas Cancer Facts and Figures 2000*, American Cancer Society, Texas Division, Inc., pg. 35.

In order to estimate the total number of Texans with prostate cancer, we need statistics on disease prevalence (percent of population with the disease at a certain time) rather than incidence rates (new cases diagnosed). Very few statistics are available regarding the prevalence of cancer. We have used data from the Connecticut Tumor registry to estimate the number of Texans who currently have prostate cancer. Based on that data, the prevalence rates per 100,000, by age, and number of Texans inflicted are as follow:

Table IV.G.2[2]

Males Age	Prevalence per 100,000	Estimated # in Texas
40-44	9.0	73
45-49	27.5	185
50-54	166.4	913
55-59	622.9	2,063
60-64	1657.4	5,629
65+	6111.5	51,679

Rates/100,000, Malignant Cases Only; By Site, Sex and Age Group

3. A) If the care and/or treatment associated with the mandated benefit were not provided, what would be the physical and economic consequences? B) If the coverage were not provided under private group insurance, to what extent would the service be provided/condition be treated? C) If the State mandate did not exist, would group health plans still cover the service/condition/population?

If PSA screening is not covered under health insurance plans, the screening rate is likely to be lower than if it is covered. Potential consequences of not screening or lower screening rates for prostate cancer include:

- Later detection on average
  - ✓ May reduce life expectancy
  - ✓ Higher treatment costs for those found to have cancer
- Lower overall costs for screening, follow-up testing, and treatment associated with lower screening rates.

We suspect that while many health plans, especially HMOs, would cover Prostate Screening in the absence of the mandate, that coverage would not be universal. Any plan that does not currently cover annual physical exams would tend to not cover other preventive type benefits as well. Coverages in the fee-for-service and the out-of-network PPO/POS environments are less likely to cover prostate screenings in the absence of a mandate. This is supported by the 89% coverage by self-funded employers (Section V).

[2] January 1, 1994 Connecticut Cancer Prevalence

4. What are the expected additional costs (premiums) to the insurance company for covering the mandated benefit (direct expenses only)?

From Report 1, following is the premium impact. The costs below represent the premium costs for prostate screenings.

Table IV.G.3

	PMPM Premium	Percent of Premium
Large Group		
HMO	$0.13	.1%
PPO / POS	0.14	.1%
Indemnity	0.13	.1%
Small Group		
HMO	**Exempt from Legislation**	
PPO / POS		
Indemnity		

5. What additional indirect costs or offsetting benefits may result? Can they be quantified in relation to the direct expenses (from the insurance company perspective)? What is the resulting net premium impact?

Based on our modeling and research, we believe there is a net cost in early testing for prostate cancer. The literature shows two major confounding factors in achieving cost-effectiveness in prostate cancer screening:

- Because the PSA will also detect prostate hyperplasia, there is a high rate of false positives;
- Prostate cancer may be present without presenting medical problems. An autopsy study has shown that more men die with prostate cancer than die of it.

For the commercially insured population, the problem is further compounded by the average age of the affected population; most cases of prostate cancer occur after age 65. Based on data from the SEER Program of the National Cancer Institute, only about 21.6% of prostate cancers are typically diagnosed between ages 50 and 64. The National Cancer Institute states that "the natural history of prostate cancer is prolonged relative to other cancers."

If we assume that 30% of men age 50+ will be screened each year with the mandate, while only 10% will be screened in the absence of the mandate, the estimated additional insured healthcare cost will be $0.29 PMPM. Following is the breakdown of additional costs:

Screening:	$0.15 PMPM
Follow-Up for False Positives:	0.03
Earlier Treatment Costs:	0.10
Additional Costs for Males 40 – 49	0.01
Total	$0.29 PMPM

The cost estimates take into account that we expect the average cost per patient of cancer treatment to go down due to detection at an earlier stage. The figures represent gross insured healthcare costs (i.e., they are not reduced by member cost-sharing and do not include administrative costs). Based on the above figures, the total cost of the coverage is about 1.9 times the direct costs of the screenings. Therefore, while the direct costs were estimated at about .1% of premium, we estimate the total premium cost to be about .19% of premium, including direct and indirect costs related to the coverage.

The detail supporting these results is included in Appendix IV.G. The exhibits include the sources of the underlying assumptions.

6. Regardless of cost, to what extent does the coverage contribute to the quality of the insured's health status? Is the treatment generally recognized by the medical community as being efficacious?

There is considerable debate regarding the health benefits of prostate cancer screening. Although many researchers believe that screening for prostate cancer will extend life expectancy, there is currently no conclusive study that supports this.[3] A comprehensive study called The PLCO[4] Screening Trials is still several years away from answering this question.

The most common procedure for treating prostate cancer is a Radical Prostatectomy (RP). This surgical procedure is not without risks. The following are the risks associated with RP and the probability of each event.[5]

Death	0.64%
Incontinence Only	9.14%
Impotence Only	45.90%
Incontinence and Impotence	13.71%

[3] Michael L. Lefevre, "Prostate Cancer Screening: More Harm than Good?" *American Family Physician*, Aug 98, Vol. 58, Issue 2, pg. 432.
[4] National Cancer Institute, Prostate, Lung, Colorectal, & Colon (PLCO) Screening Trials, <http://dcp.nci.nih.gov/plco> [9/26/00].
[5] Michael J. Barry, M.D., et al, "Should Medicare Provide Reimbursement for Prostate-Specific Antigen Testing for Early Detection of Prostate Cancer?", Part IV: Estimating the Risks and Benefits of an Early Detection Program, *Urology*, 46 (4), 1995.

Radiation Therapy is another option for many patients with prostate cancer. It is not as effective as RP, but it does not expose the patient to the above risks.[6]

7. What is the expected impact on sick days/disability benefits of providing the treatment?

Because higher screening rates may lead to earlier detection, more males will be treated earlier, during their working years. Currently, only about 22% of prostate cancers are diagnosed prior to age 65. This will likely lead to higher utilization of sick days or disability benefits. In other words, sickness and disability claims are more likely to result from treatment rather than the cancer itself.

[6] Marc B. Garnick, MD, FACP, "Prostate Cancer." *Medicine*. Vol. 3, Ch. 12, Sec. IX. Scientific American.

H. Serious Mental Illness

Policies must include 45 days inpatient and 60 outpatient visits without a lifetime limit on the number of days/visits on the same basis as any other physical illness for 8 diagnoses. For group insurance, including HMO's, it is mandated. For small group it must be offered.

1. How many and what portion of the insured population are expected to use the mandate annually?

An estimated 2.8% of the adult population in the United States and 3.2% of the population under age 17 has a serious mental illness (SMI). We would expect about 60% of this population to use mental health services in a year.[1] Applying these percentages to the Texas fully insured population results in an estimated 1.75%, or 87,319 individuals expected to use the mandate annually.

2. How many individuals are likely to be affected by the particular illness, medical condition or service associated with the mandated benefit (of the insured population in the State and of the total State population, regardless of healthcare coverage)? Are there other important characteristics of this group to note (e.g., average age, etc.)?

In aggregate, 2.9% of the total population is estimated to have a serious mental illness. This implies that a total of 583,290 Texans suffer from one of the applicable conditions. Serious mental illness, as defined in the Texas legislation, includes the following conditions:

- Schizophrenia
- Paranoid and other Psychotic Disorders
- Bipolar Disorders
- Major Depressive Disorders
- Schizo-affective Disorders
- Pervasive Development Disorders
- Obsessive – Compulsive Disorders
- Depression in Childhood and Adolescence

[1] Bruce Lubotsky Levin, Dr.P.H., et al, *Mental Health Parity: 1998 National and State Perspectives*, Revised Report March 25, 1998, The Louis de la Parte Florida Mental Health Institute, University of South Florida, Tampa, pg. 33.

3. A) If the care and/or treatment associated with the mandated benefit were not provided, what would be the physical and economic consequences? B) If the coverage were not provided under private group insurance, to what extent would the service be provided/condition be treated? C) If the State mandate did not exist, would group health plans still cover the service/condition/population?

If serious mental illnesses are not treated, the consequences can range from loss of productivity to homelessness, suicide, and incarceration. The inflicted can become a danger to themselves and others and have difficulty functioning in society. The number of persons in the U.S. with mental illness among the homeless is estimated to be between 200,000 and 350,000.[2]

Additional consequences include:

- Higher absentee rate for employers
- Deterioration in physical health of SMI individual
- Lower quality of life for SMI individual and family

If coverage is not provided under group insurance, the burden may fall on the family of the mentally ill, and ultimately to public programs for treatment. This will result in higher public costs to finance federal and state programs for SMI individuals. The level and quality of treatment may be lower in public programs.

If the mandate did not exist, it is likely that the benefits would be covered but only to a limited degree. The survey of self-funded employers indicates that only 50% of the respondents cover Serious Mental Illness at the level required under the mandate. In absence of the mandate, we expect that a typical benefit plan would offer the following coverage:

Inpatient Coverage – same as any illness up to a maximum of 30 days per year.

Outpatient Coverage – 50% coinsurance up to a maximum of 20 visits per year.

Partial Hospitalization or Residential Programs – in place of inpatient coverage, 2 days count as 1 inpatient day toward the maximum coverage.

It is generally thought that as much as 50% of the mentally ill population also has a substance abuse problem.[3] In the absence of this mandate, many might eventually be treated under the chemical dependency mandate. However, coverage of serious mental illness may allow earlier intervention/treatment.

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[2] "Mental Illnesses Are Treatable Neurobiological Disorders", National Alliance for the Mentally Ill, <http://www.nami.org/disorder/disord5.htm> [8/24/00].

[3] Agnes B. Hatfield, Ph.D., "Dual Diagnosis: Substance Abuse and Mental Illness", National Alliance for the Mentally Ill, HelpLine Fact Sheet, <http://www.nami.org/helpline/disord2.htm> [8/23/00].

4. What are the expected additional costs (premiums) to the insurance company for covering the mandated benefit (direct expenses only)?

From Report 1, following is the premium impact. The costs below represent the premium costs for treating all Serious Mental Illness on an inpatient and outpatient basis

Table IV.H.1

	PMPM Premium	Percent of Premium
Large Group		
HMO	$3.17	2.0%
PPO / POS	3.65	2.0%
Indemnity	3.19	1.6%
Small Group		
HMO	3.22	2.0%
PPO / POS	3.64	1.9%
Indemnity	3.78	1.6%

The small group estimates in the table above assume no adverse selection. However, the smaller the group, the more adverse selection occurs in an environment where coverage is offered rather than mandated. In the most extreme case, the purchaser of coverage for a two-member group generally knows the majority of the medical conditions of current members (and all the known medical conditions of ½ the group). In the absence of known conditions, this size group will generally not pay any extra premium for this type of coverage. At an average annual cost of $2,000 per person with a known SMI condition, the PMPM healthcare cost increases 22 times compared to the average cost across the total insured population.

As you increase the size of the group to 10 members there is still a strong likelihood the purchaser of coverage will not select the rider unless they know of someone within the group that needs the coverage. Since there are more members to spread this additional cost over in a 10-member group, the PMPM healthcare cost impact only increases 4 times.

When you reach a 100-member group (50 employees) the PMPM premium impact of knowing one claimant needing coverage is only 1.5 times. The insurance carrier must assess their target market to determine the amount of adverse selection that can be expected and how to spread this risk most effectively. For example, if the carrier predominately markets to the under 5 life market and decides to load the rider the full 22 times described above, they will create additional adverse selection. This occurs because the groups that have individuals with yearly maintenance costs below the average might choose to cover this cost outside of insurance and not select the rider, such that the average cost per SMI claimant increases.

5. What additional indirect costs or offsetting benefits may result? Can they be quantified in relation to the direct expenses (from the insurance company perspective)? What is the resulting net premium impact?

Although difficult to quantify, researchers generally agree that there are offsetting savings resulting from mental health treatment. These include a reduction in future mental health costs due to the completion of treatment and reductions in other healthcare costs that might be amplified by a serious mental illness. Following are descriptions of studies supporting the additional savings that might be gained by treatment of serious mental illness.

In a 1995 study, Milliman & Robertson, Inc., StayWell Health Management Systems, Inc., Chrysler Corporation, and the international union UAW jointly studied how an individual's health habits affect medical claims.[4] This study showed that medical costs experienced by persons classified as elevated risk for mental health were 13% higher than those for persons classified as low risks. These costs exclude mental health and substance abuse claims.

The social costs associated with mental illness have been estimated to be greater than the actual costs of the direct care (inpatient and outpatient services). Based on an NIMH-sponsored study, following are the estimated allocation of direct and indirect costs of mental illness in 1990 (not limited to serious mental illness).[5]

45% - Direct Treatment and Support Costs;
43% - Morbidity Cost – Value of Reduced or Lost Productivity;
8% - Mortality Costs – Lost Productivity Due to Premature Death;
4% - Other Related Costs

Another study shows the 1990 total U.S. costs of mental health and substance abuse costs to be $314 billion. These can be allocated as follows:[6]

34% - Lost Productivity;
26% - Somatic Health Consequences;
22% - Crime, Criminal Justice Cost, and Property Damage

The National Advisory Committee in 1993 estimated the following national costs and savings for mental illness parity:[7]

Costs:	$6.5 billion;
Indirect Cost Savings:	$7.5 billion;
General Healthcare Cost Savings:	$1.2 billion;
Net Cost Savings:	$2.2 billion

[4] Stephen P. Melek, *Behavioral Healthcare Risk-Sharing and Medical Cost Offsets*, Milliman & Robertson, Inc. Research Report, pg. 10.
[5] Stephen P. Melek, *Mental Health Care Reform – Can Everyone Win?*, Milliman & Robertson, Inc. Research Report, pg. 5.
[6] Levin, pg. 34.
[7] Levin, pg. 36.

Clearly not all of these savings would accrue to the insurance carrier or even the employer. However, based on these estimates, the healthcare cost savings equal 18.5% of the total costs of treatment.

Another study showed that the treatment of mental health disorders (not limited to SMI) could reduce other healthcare costs by about 10%.[8] Using this assumption, and assuming that medical costs prior to treatment for those with a mental illness were 13% higher based on the M&R study cited earlier, we get healthcare cost savings equal to 20.5% of treatment costs. Ultimately, we used an indirect premium adjustment factor of .80. If we apply this to our direct premium estimates above, the resulting indirect premium cost equals 1.6% of premium.

6. Regardless of cost, to what extent does the coverage contribute to the quality of the insured's health status? Is the treatment generally recognized by the medical community as being efficacious?

Many mental health conditions are considered treatable, and ultimately curable. Following are estimates of the success of the treatment of certain conditions:[9]

Table IV.H.2

Condition	Success Rates
Schizophrenia	60%
Major Depression	65%
Bipolar Disorder	80%
Panic Disorder	70 to 90%

A study of Major Depression patients at Leiden University showed that within nine months 49% had reached full remission and 45% were in partial remission. During the following 3-5 years, 82% of the patients had reached a period of full remission. However, there was a relapse or recurrence rate of 41% within five years. Although the treatment is recognized to contribute to the insured's health status, there may need to be continuing treatments over the individual's lifetime.[10]

[8] Levin, pg. 18.
[9] Levin, pg. 33-34.
[10] L. Van Londen, et al, *Three to Five Year Prospective Follow-up of Outcome in Major Depression*, Leiden University, Department of Psychiatry, The Netherlands, <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi> [8/15/00].

7. What is the expected impact on sick days/disability benefits of providing the treatment?

Serious mental illness results in considerable loss of work time and disability claims. Significant cost savings in productivity gains are expected to be achieved due to the treatment of mental illness. For example, depressed employees have 1.5 to 3.2 more sick days per month than other employees, according to a study by the U.S. Centers for Disease Control and Prevention (CDC).[11]

[11] Study from the U.S. Centers for Disease Control and Prevention cited at the conference *Mental Illness and the Workplace: Can Health Services Research Influence Public Policy and Private Actions?*, jointly sponsored by the Association for Health Services Research and the National Alliance for the mentally Ill, <http://www/ahsr.org> [9/15/00] pg. 3.

I. Minimum Hospital Stay for Maternity

Policies providing maternity benefits must include inpatient care for mother and child for at least 48 hours following uncomplicated vaginal delivery and 96 hours after an uncomplicated C-section. Policies with in-home post delivery care are not subject to this requirement unless medically necessary or requested by the mother. This mandate applies to individual, group, blanket, or franchise insurance policies, Chapter 20, HMO, and MEWA.

1. How many and what portion of the insured population are expected to use the mandate annually?

The percentage of insureds expected to file a claim for a maternity stay without complications within a policy year is 1.1%, based on the cost development in Report 1. This equates to 55,044 women in Texas with small and large group coverage are expected to file a claim annually.

2. How many individuals are likely to be affected by the particular illness, medical condition or service associated with the mandated benefit (of the insured population in the State and of the total State population, regardless of healthcare coverage)? Are there other important characteristics of this group to note (e.g., average age, etc.)?

Based on a live birth rate of 17.4 per 1,000 Texas residents[1] and 7.4 fetal deaths per 1,000 live births[2] we estimate 351,557 annual deliveries in Texas. From the Milliman & Robertson Health Cost Guidelines national averages, we expect 23% of these deliveries to be cesarean and 74% of cesarean deliveries to be uncomplicated. We expect the remaining deliveries to be vaginal and 83% of vaginal deliveries to be uncomplicated. Therefore, we expect 284,601 women to have an uncomplicated delivery in Texas each year. We consider this to be the affected population because they are most likely to have hospital stays shorter than the mandated length-of-stay in absence of the mandate.

[1] Texas Department of Health, Bureau of Vital Statistics, *1998 Annual Report, Natality*, <http://www.tdh.state.tx.gov/bvs/stats98/text/98natal.htm> [9/25/00].
[2] *Vital & Health Statistics*, Series 20, No. 36 (8/96), <http://www.cdc.gov/nchs/data/sr20_31.pdf> {9/26/00].

3. A) If the care and/or treatment associated with the mandated benefit were not provided, what would be the physical and economic consequences? B) If the coverage were not provided under private group insurance, to what extent would the service be provided/condition be treated? C) If the State mandate did not exist, would group health plans still cover the service/condition/population?

The majority of the research review did not support the view that physical or economic consequences would result from not providing the additional care in the mandate. However, the majority of the research has been completed on model programs that included a pre-screening process to identify low-risk mothers and infants, prenatal instruction or education and follow-up care. Under these conditions, documented studies indicate the following findings related to early discharge (less than 48 hours):[3]

- A reduced risk of nonsocomial infection (infection acquired during a hospital stay) for both the mother and the baby;
- Discharge prior to 48 hours was not associated with increased morbidity, mortality or increased readmission; and
- Women who assume total responsibility for their baby sooner after delivery may feel more confident initially than those that do not.

Very few of the researchers have studied the effects of early discharge on disadvantaged populations (e.g., adolescent or single mothers subsisting on welfare without the same resources and social support). A study at the Colorado School of Medicine showed that moderately early neonatal discharge can be safely accomplished in an indigent population with the aid of a successful outpatient follow-up program.[4] This study did show a higher readmission rate but no serious complications occurred. However, a study in Ohio on Medicaid claims from 1992-1995 suggested that readmission rates are not influenced by shorter stays.[5]

The Ohio study showed that as the number of short stays increased from 21% in 1991 to 60% in 1999, there was a 23% decrease in rehospitalization rates for healthy full-term newborns. A short stay was defined as discharge within 1 day of vaginal birth and within 2 days of cesarean birth. The study further showed that maternal age, maternal education, adequacy of prenatal care, birth weight, and short stay rates were not statistically significant factors for rehospitalization within 7 days after discharge.

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[3] "Impact of 24-Hour Postpartum Stay on Infant and Maternal Health", Report 5 of the Council on Scientific Affairs (A-95), American Medical Association CSA Reports, <http://www.ama-assn.org/med-sci/csa/1995/rpt4aa95.htm> [7/20/00].

[4] PD Conrad, et al, "Safety of Newborn Discharge in Less Than 36 Hours in an Indigent Population", Department of Pediatrics, University of Colorado School of Medicine, Denver, from National Library of Medicine, PubMed, <http://www.ncbi.nlm.nih.gov:80> [8/16/00].

[5] Uma R. Kotagal, et al, "Safety of Early Discharge for Medicaid Newborns", *JAMA*, September 22/29, 1999, Vol. 282, No. 12, pg. 1150-1156

A Utah study showed that 93% of full-term infants who die in the neonatal period are symptomatic within 12 hours of age and 99% were symptomatic by 18 hours. The study could not demonstrate an association between early hospital discharge and neonatal mortality of those infants who died after discharge home.[6]

A Yale University study of an unselected group, showed the mothers who stayed 1 night after a routine vaginal delivery reported more distress and pediatric problems and greater use of outpatient health services than mothers who stayed 2 nights. However, readmission rates were similar.[7]

The current trend of shorter hospital stays also occurred during World War II. The Emergency Maternal Infant Care program subsidized obstetric care for servicemen's wives, resulting in hospital births becoming more popular and accessible. However, a baby boom overwhelmed the maternity facilities and the hospitals were forced to discharge mothers after 24 hours. To compensate, community-based services such as visiting nursing care, postnatal homes, and prenatal classes evolved. Therefore, postnatal care remained comprehensive despite short hospital stays.[8]

We did find one study at the University of Washington that found that 8 out of every 100 readmissions of babies within the first week following birth is attributable to their being sent home early.[9] This study showed that newborns discharged early were about 1.2 times more likely to be rehospitalized within 7 days; mainly for jaundice, dehydration, and infections. This study did not look at the type of follow-up care the infants were receiving.

The over-riding theme of the majority of the research literature was that with the proper pre-natal education and outpatient follow-up care there were not increased mortality or readmissions due to early discharge.

If the coverage were not provided under group health insurance plans, the service would probably not be utilized (i.e., there would be more short stays). The service (additional hospital days) would probably only be utilized by higher-income individuals with adequate financial resources.

Due to a federal mandate that requires the same coverage, this coverage would be provided by group health insurance plans in the absence of a state mandate.

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[6] SA Beebe, et al, "Neonatal Mortality and Length of Newborn Hospital Stay", Department of Pediatrics, University of Utah, Salt Lake City, <http://www.ncbi.nlm.nih.gov:80> [8/16/00].

[7] DA Lane, et al, "Early Postpartum Discharges. Impact on Distress and Outpatient Problems, Department of Medicine, Yale University School of Medicine, New Haven, CT, <http://www.ncbi.nlm.nih.gov:80> [8/16/00].

[8] E. Temkin, "Driving Through; Postpartum Care During World War II", *American Journal of Public Health*, April 1999, <http://www.ncbi.nlm.gov:80> [8/16/00].

[9] Lee Bowman, "Short Hospital Stays Increase Risks for Newborns", <http://www.peekaboo.net/archives/cat13/22.html> [8/17/00].

4. What are the expected additional costs (premiums) to the insurance company for covering the mandated benefit (direct expenses only)?

From Report 1, following is the premium impact. The costs below represent the cost of the expected additional days of hospitalization due to the mandate.

Table IV.I.1

	PMPM Premium	Percent of Premium
Large Group		
HMO	$0.67	.4%
PPO / POS	0.39	.2%
Indemnity	0.38	.2%
Small Group		
HMO	0.68	.4%
PPO / POS	0.37	.2%
Indemnity	0.44	.2%

5. What additional indirect costs or offsetting benefits may result? Can they be quantified in relation to the direct expenses (from the insurance company perspective)? What is the resulting net premium impact?

The consequences of not providing longer maternity stays appear to be dependent on the follow-up care and education provided to the mother.

The future medical costs that would be saved would be the extra primary care physician and emergency room visits required due to early discharge. The Yale study showed an increase of pediatric visits from 54% to 96% between those newborns that stayed one night and those that stayed two nights.[10] Assuming that 75% of the mothers currently staying one day would increase their stay from one day to two days with the mandate in place (the same assumption used to price the mandate in report 1), this mandate would save approximately $0.012 PMPM in pediatric visits due to shorter stays (assuming 50% primary care and 50% emergency room). However, since these visits have not resulted in a greater rate of readmission, the mandate still results in a net cost after paying for an extra hospital day.

The other future cost is for increased prenatal education and follow-up care. However, this is currently recommended to the pregnant mother regardless of the length of the hospital stay. Studies have also shown prenatal care to be cost effective.

[10] Lane.

6. Regardless of cost, to what extent does the coverage contribute to the quality of the insured's health status? Is the treatment generally recognized by the medical community as being efficacious?

The majority of the research supports the position that the insured's health will not suffer from discharge earlier than that specified in the mandate.

The concern of the medical community is that in the absence of the mandate, they may be required to discharge a mother that is not emotionally or medically ready to be discharged. All the research points to the necessity of a structured discharge program and prenatal education. The mandate assures that the decision will be made between the physician and the mother, without being influenced by the existence or non-existence of insurance coverage.

7. What is the expected impact on sick days/disability benefits of providing the treatment?

The current standard for disability purposes is 6 weeks after delivery. This should not be impacted by this mandate.

J. Minimum Hospital Stay for Mastectomy or Lymph Node Dissection

Policies that provide treatment of breast cancer must cover inpatient care for at least 48 hours after a mastectomy and 24 hours after lymph node dissection unless both the patient and doctor determine a shorter stay is appropriate. The mandate applies to individual, group, blanket, or franchise insurance policy, Chapter 20, HMO, MEWA. Small employers are exempt.

1. How many and what portion of the insured population are expected to use the mandate annually?

The percentage of total insureds expected to file a claim for the mandated benefit within a policy year is 0.03%, based on the data sources cited in Report 1. This implies that about 1,500 women in Texas will file a claim associated with the mandate in a year.

2. How many individuals are likely to be affected by the particular illness, medical condition or service associated with the mandated benefit (of the insured population in the State and of the total State population, regardless of healthcare coverage)? Are there other important characteristics of this group to note (e.g., average age, etc.)?

Following are 1996 Texas incidence rates for breast cancer. A total of 10,182 women were diagnosed with breast cancer in Texas in that year.

Table IV.J.1
Female Breast Cancer Incidence Counts
and Percentage of Total New Cancers
by Age of Diagnosis
Texas 1996[1]

Age Bracket	Count (Female)	% of Total New Cases	Incidence per 100,000	Expected New Texas Cases in 2000
15-34	288	2.8%	10.44	303
35-44	1,293	12.7%	82.90	1,361
45-54	2,147	21.1%	179.01	2,260
55-64	2,088	20.5%	266.91	2,198
65-84	3,842	37.7%	395.41	4,044
85+	524	5.2%	337.30	552

Percentages may not add to 100 due to rounding
Incidence includes invasive cancers only; In situ cases are excluded

Since the majority of treatment for breast cancer is done at the time of diagnosis, these incidence rates reflect the individuals in Texas that could have a need for a mastectomy or lymph node dissection.

[1] *Texas Cancer Facts and Figures 2000*, American Cancer Society, Texas Division, Inc., pg. 20-22.

3. A) If the care and/or treatment associated with the mandated benefit were not provided, what would be the physical and economic consequences? B) If the coverage were not provided under private group insurance, to what extent would the service be provided/condition be treated? C) If the State mandate did not exist, would group health plans still cover the service/condition/population?

In the 1980's the "standard management" for a mastectomy consisted of hospital admission 24 hours before surgery and discharge only after the surgical drains were removed. The average hospital stay was in excess of 10 days[2]. To reduce hospital costs the trend has been to do "same day" admissions with early postoperative discharge or outpatient surgery. These changes required adjustments in personnel responsibilities as the patient care moved from predominantly inpatient to an outpatient setting. Patient education and written instructions for home care of surgical wounds and drainage catheters were essential. There was significant public/media reaction that these changes were made to control costs at the expense of the patient. With few exceptions, research has shown otherwise. There do not appear to be any physical or economic consequences due to the shorter hospital stays or to replacing inpatient with outpatient surgery. Below is a small sample of the studies found on this subject:

- MD Anderson studied mastectomy surgeries between 1986 and 1987 after implementation of the "same-day" admission and early postoperative discharge with suction catheter drains in place. This was a first step in reducing the hospital stay from over 10 days to less than 72 hours. The concern was over releasing patients with the catheter drains still in place. The same surgeon performed the surgery as performed the surgery for patients between 1983-1984 (considered the control group). Hospital charges were reduced 39% and complication rates remained unchanged. The conclusion was that "hospital admission on the day of operation and early postoperative discharge with drainage catheters in place should be the goal for most mastectomy patients"[3].

- Kaiser Permanente did a study to show that mastectomies can be performed safely in an outpatient setting. They reviewed the records of 100 consecutive women undergoing breast cancer surgery between August 1994 and July 1996. Fifty patients were discharged the day of surgery and 44 were hospitalized. Outpatients were more likely to have axillary lymph node dissection with or without partial mastectomy or simple mastectomies (84%) rather than modified radical mastectomies. Of those hospitalized only 6 remained 2 or more days postoperatively. Only one patient was readmitted with a wound infection. 94% were discharged within 23 hours of surgery. There were no major complications or deaths. No complications occurred in outpatients, and there were no readmissions[4].

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[2] MJ Edwards, et.al, "Economic Impact of Reducing Hospitalization for Mastectomy Patients", Department of General Surgery, University of Texas System Cancer Center, M.D. Anderson Hospital and Tumor Institute, Houston, *Ann Surg 1998* Sep, 208 (3):330-6, <http://www.ncbi.nlm.nih.gov/> [8/22/00].

[3] Edwards.

[4] LR Tan and JM Guenther, "Outpatient Definitive Breast Cancer Surgery", Department of Surgery, Kaiser Permanente Medical Center, Los Angeles, California; *AM Surg 1997* Oct; 63(10):865-7; <http://www.ncbi.nlm.nih.gov> [8/22/00].

- The Comprehensive Breast Care Center did a study on 221 patients between September 1990 and June 1992 that underwent surgery for breast cancer on an outpatient basis. Operations included 31 modified radical mastectomies, 101 partial mastectomies with radical axillary node dissections, 11 total mastectomies, 69 partial mastectomies and 11 radical axillary dissections. "No patient required hospitalization for any reason. There were no wound infections. Patient satisfaction was high and compliance was excellent."[5]

- McGill University did a study to compare inpatient to same-day discharge surgery for breast cancer, on unselected patients. All patients interviewed had routine level I and II axillary lymph node dissection under general anesthesia, combined with breast surgery for most of them. The patients selected were limited to these levels of treatment to attempt to keep the inpatient and outpatient severity similar. There were 55 outpatient and 35 inpatient interviews. The intent was to assess psychological distress, pain, anxiety and emotional adjustment rather than the surgical complication rate. Both groups reported similar levels of pain, fear, and anxiety. Ambulatory patients manifest a significantly better emotional adjustment and fewer psychological distress symptoms. Inpatients reported that it took an average of 27 days to feel they had recovered, about 10 days longer than outpatients. Inpatient return to usual activities was also about 11 days later. The conclusion they reached was that same-day discharge patients are not at a disadvantage and that outpatient surgery may foster patient emotional well-being better than routine hospitalization[6].

- One study found a small readmission risk. The University of South Florida studied the outcomes of outpatient surgery by comparing their risk of readmission within 30 days. In this study 20% of the mastectomies were performed on an outpatient basis. They found women undergoing outpatient mastectomy were more likely to be readmitted within 30 days of discharge; however, the excess risk was very small (0.7%)[7].

- The New Jersey Association of Health Plans has a summary of several studies on their website with a supporting Wall Street Journal editorial. We did not review the source of these studies. The over-riding theme of the website summary was that managed care is not necessarily the driving force behind the outpatient mastectomy trend and to express concern about the political trend to ban/discourage outpatient procedures[8]. Following are some of the studies cited:

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[5] AA Goodman and AL Mendez, "Definitive Surgery for Breast Cancer Performed on an Outpatient Basis, Comprehensive Breast Care Center, Plantation, Fla., *Arch Surg 1993* Oct, 128(10): 1149-52, <http://www.ncbi.nlm.nih.gov> [8/22/00].

[6] RG Margolese and JC Lasry, "Ambulatory Surgery for Breast Cancer Patients", Department of Surgery, McGill University, Jewish General Hospital, Montreal, Quebec, Canada, *Ann Surg Oncol, 2000* April, 7(3):181-7, <http://www.ncbi.nlm.nih.gov> [8/22/00].

[7] "The Use and Outcomes of Outpatient Mastectomy in Florida", Department of Family Medicine, University of South Florida; Tampa, *Am J Surg 2000* Apr, 179(4):253-9, <http://www.ncbi.nlm.nih.gov> [8/22/00].

[8] "Mastectomy Length of Stay", Information and Analysis; New Jersey Association of Health Plans Home Page; <http://www.njhmo.org/women.html> [8/21/00].

(a) American Association of Health Plans commissioned a study to analyze the outpatient mastectomy rates for privately insured women. This study concluded that fee-for-service had the highest rate of outpatient procedures (26%), followed by HMOs at 17%, and PPO/POS plans last at 11%.

(b) John Hopkins Breast Cancer Center in Baltimore found outpatient mastectomies are associated with lower infection rates and higher satisfaction among women.

(c) A 1996 study at Henry Ford Hospital reported accelerated physical recovery, earlier return to occupational activities, and numerous psychological advantages, such as control, independence, and strong family interactions.

(d) A 1995 study at New Jersey College of Medicine showed that partial mastectomies with lymph node removal done on an outpatient basis had a lower rate of postoperative infection.

The decision is between the physician and the insurer to define medical necessity in the absence of this mandate. With the mandate, the individual has more input into this decision. Surgeries that become routine outpatient surgeries would probably not be covered on an inpatient basis without this mandate unless there was some additional complication for the individual. In the absence of coverage, the patient would have to pay for services denied by the insurer.

The University of South Florida study noted above, found outpatient mastectomies were more likely to be performed on women who were older, who lived in higher income communities or who were uninsured. Health insurance type (HMO, PPO, FFS, or uninsured) was not associated with having a higher rate of outpatient surgery. Therefore, it does not appear that the mandate will impact the trend toward outpatient surgeries and shorter stays. Given this trend, the additional hospital days would probably not be covered in the absence of this mandate.

4. What are the expected additional costs (premiums) to the insurance company for covering the mandated benefit (direct expenses only)?

From Report 1, following is the premium impact. The costs below represent the costs of the expected additional days of hospitalization due to the mandate.

Table IV.J.2

	PMPM Premium	% of Premium
Large Group		
HMO	$0.02	.01%
PPO / POS	0.02	.01%
Indemnity	0.02	.01%
Small Group		
HMO	**Exempt from Legislation**	
PPO / POS		
Indemnity		

5. What additional indirect costs or offsetting benefits may result? Can they be quantified in relation to the direct expenses (from the insurance company perspective)? What is the resulting net premium impact?

We could not find material offsetting cost savings associated with this mandate. None of the research found a material increase in readmissions for the shorter stays. This would be the only area that could have potentially generated cost savings.

We studied a small number of cases in our databases to compare the cost of the outpatient procedures to similar inpatient procedures. We found the outpatient procedure cost to be approximately the same as a one day inpatient cost. Therefore, we assumed that moving from an outpatient procedure to a one day inpatient procedure would not increase the insurer's cost. The only increase in cost will come from those procedures meeting the mandate definition of mastectomy that could allow the patient to stay in the hospital two days when they would have previously stayed one day. The cost difference between outpatient procedures and inpatient procedures varies by hospital pricing structure and is often dependent on the volume of the particular type of service performed. In some cases moving from an outpatient to an inpatient setting may reduce costs or may increase costs. The samples we used were selected from two HMOs in Texas, but this may not represent all hospitals or insurers in Texas.

6. Regardless of cost, to what extent does the coverage contribute to the quality of the insured's health status? Is the treatment generally recognized by the medical community as being efficacious?

The medical community research shows the safety and the faster recovery rate of the outpatient procedures. Therefore, the medical community would not find it efficacious to reverse the trend to increased inpatient stays. Longer inpatient stays do not appear to contribute to the quality of the insured's health status.

7. What is the expected impact on sick days/disability benefits of providing the treatment?

Should future studies confirm the McGill University study, there could be an increase of up to 11 days of recovery, or about a week and a half of disability benefits, for those women that have the surgery performed on an inpatient basis when an outpatient procedure is an option. We expect an additional inpatient hospital day would have a minimal effect on sick days or disability benefits.

K. Reconstructive Surgery for Mastectomy

Policies that provide coverage for mastectomy must provide coverage for breast reconstruction. The mandate applies to individual, group, blanket, or franchise insurance policy, Chapter 20, HMO, MEWA.

1. How many and what portion of the insured population are expected to use the mandate annually?

The percentage of insureds expected to file a claim for the mandated benefit within a policy year is .035%, resulting in 1,751 women in Texas filing a claim annually. Based on the data, approximately half of this utilization is due to first time surgery and half is follow-up from a prior year.

Less than half of those who undergo radical mastectomy choose to get reconstruction surgery. Factors that play a role in a woman's decision not to have reconstruction surgery include advanced age at the time of the mastectomy, concerns about complication of further surgery, uncertainty about the outcome and fear about the effect of reconstruction on future problems with breast cancer.

However, as better techniques are available with fewer potential complications, the number of women opting for reconstruction is expected to increase. In 1997, more than 50,000 mastectomy-related breast reconstruction surgeries were done nationally; in 1998 the number increased to nearly 70,000. About 40% of all breast reconstruction surgeries are done at the same time as the mastectomy.[1]

[1] Kathleen Doheny, "New Law Offers Post Mastectomy Breast Reconstruction to More Women", Health With WebMD, <http://health.excite.com/topics_content/dmk/dmk_article_5962883> [8/13/00].

2. How many individuals are likely to be affected by the particular illness, medical condition or service associated with the mandated benefit (of the insured population in the State and of the total State population, regardless of healthcare coverage)? Are there other important characteristics of this group to note (e.g., average age, etc.)?

Following are incidence rates of breast cancer by age from the American Cancer Society, Texas Cancer Facts & Figures 2000:[2]

Table IV.K.1
Female Breast Cancer Incidence Counts
and Percentage of Total New Cancers By Age of Diagnosis
Texas 1996

Age	Count (Female)	% of New Cases	Incidence per 100,000	Expected New Texas Cases in 2000
15-34	288	2.8%	10.44	303
35-44	1,293	12.7%	82.90	1,361
45-54	2,147	21.1%	179.01	2,260
55-64	2,088	20.5%	266.91	2,198
65-84	3,842	37.7%	395.41	4,044
85+	524	5.2%	337.30	552

Percentages may not add to 100 due to rounding

Since the majority of treatment for breast cancer is done at the time of diagnosis, these incidence rates reflect the individuals in Texas that could have a need for a mastectomy. However, as stated above, only about half of those who undergo mastectomy choose to get reconstruction surgery.

3. A) If the care and/or treatment associated with the mandated benefit were not provided, what would be the physical and economic consequences? B) If the coverage were not provided under private group insurance, to what extent would the service be provided/condition be treated? C) If the State mandate did not exist, would group health plans still cover the service/condition/population?

Breast reconstruction is not a medically necessary procedure. Not providing the surgery does not have any direct physical or economic consequences.

However, there are two schools of thought on the value of providing reconstruction after mastectomies. The fear of a mastectomy without reconstruction may discourage some women from getting tests that would detect breast cancer at an earlier stage when less radical treatment could save lives as well as money. Women who need mastectomies may also opt for less invasive surgery and be at risk of developing cancer again later.

[2] *Texas Cancer Facts & Figures 2000*, American Cancer Society, Texas Division, Inc. pg. 20-22.

On the other hand, according to a study by the Brigham and Women's Hospital, Boston, MA, the availability of reconstruction has encouraged the inappropriate use of mastectomies for low risk diseases. Randomized clinical studies have demonstrated that breast-conserving surgery followed by irradiation has equivalent survival benefits to mastectomy in the treatment of early-stage breast cancer.[3]

If coverage were not provided under private group health insurance the utilization would be expected to decrease. Because this is not a medically necessary procedure, those that could not afford the procedure would delay it or decline to have it.

Since the passage of this mandate, the 1998 Federal Breast Reconstruction Law was passed, which "requires group and individual health insurance plans to cover reconstructive surgery after mastectomy, as well as implants and other work needed to make the other breast symmetrical".[4] Therefore, in the absence of the Texas mandate, this coverage would still be required for group and individual insurance plans.

4. What are the expected additional costs (premiums) to the insurance company for covering the mandated benefit (direct expenses only)?

From Report 1, following is the premium impact. The costs below represent the costs of reconstructive surgery following mastectomy due to a diagnosis of cancer.

Table IV.K.2

	PMPM Premium	Estimated Percent of Premium Cost (c)
Large Group		
HMO	$0.18	.1%
PPO / POS	0.24	.1%
Indemnity	0.30	.2%
Small Group		
HMO	0.19	.1%
PPO / POS	0.26	.1%
Indemnity	0.38	.2%

[3] RT Osteen, "Reconstruction After Mastectomy", *Cancer* 1995 Nov 15,Brigham and Women's Hospital, Boston, Massachusetts

[4] Doheny.

5. What additional indirect costs or offsetting benefits may result? Can they be quantified in relation to the direct expenses (from the insurance company perspective)? What is the resulting net premium impact?

There are several choices for women in the early stages of breast cancer, including breast conserving surgery, mastectomy alone, or mastectomy plus reconstruction surgery. Studies show that the cost of mastectomy plus reconstruction is higher than the cost of breast conserving surgery. However, if a mastectomy is medically necessary, the cost of reconstruction at the time of the mastectomy can be as much as 40% lower than if the reconstruction is done at a later time. Since women who are covered under insurance for reconstruction may be more inclined to have it done at the time of the mastectomy, the mandate may potentially conserve resources.

The following table shows estimated utilization and cost relativities for the four choices of treatment.

Table IV.K.3

Type of Treatment	Estimated % After Mandate	Estimated % Prior to Mandate	"Virginia" Study Cost Relativity	"Texas" Study Cost Relativity
Breast Conserving Surgery	30%	30%	1.34	1.34
Mastectomy Alone	28%	39%	1.00	1.00
Mastectomy + Immediate Reconstruction	32%	12%	1.72	1.35
Mastectomy + Delayed Reconstruction	10%	19%	2.23	2.19
Average Cost Relativity/ Virginia	1.46	1.42		
Average Cost Relativity/Texas	1.33	1.37		

The above table indicates that costs change for the combined treatments by a range of –3% to +3% (e.g., (1.46 – 1.42) ÷ 1.42 = .03), due to the mandate. The ultimate impact depends on the internal pricing structure of the hospital performing the service. This pricing structure varies by region and the volume of these types of services performed. The future costs appear to be growing more as a result of the increased use of breast conserving surgery with radiation (the radiation costs have not been estimated in the table above) rather than with the addition of more reconstructions (as long as the increased reconstructions are immediate).

The percentages in the table above, prior to the mandate, were taken from a study at the Virginia Commonwealth University based on local and regional staged breast cancer from 1989 to 1991 in Virginia[5]. We have increased the Breast Conserving Surgery percentage from 26% to 30% and adjusted the other percentages accordingly. This adjustment was due to a study that shows the use of breast conserving surgery with radiation treatment as an alternative to mastectomy is rapidly increasing.[6] This study was done on older women and the percentage went as high as 41% in the HMO environment.

Most surgeons use the size of the tumor to determine whether a breast conserving surgery is the best option. As early diagnosis improves, more women would be candidates for breast conserving surgery. However, older patients are less likely to choose reconstruction and more likely to choose breast conserving surgery. Therefore, we would not expect the commercial insurance population to have as large a percent of breast conserving surgery as predicted in the Virginia study.

The "Virginia" cost relativities were developed from cost estimates supplied for each type of treatment in the study at the Virginia Commonwealth University based on local and regional staged breast cancer from 1989 to 1991 in Virginia.[7]

The "Texas" cost relativities were taken from another study at The University of Texas M.D. Anderson Cancer Center[8] that indicated the cost differential to be 62% between mastectomy with immediate reconstruction and mastectomy with delayed reconstruction. The relativities for the other types of treatment were based on the "Virginia" relativities and judgement.

A current study of the utilization of each type of service after the mandate was not available. The percentages above are estimated based on the following assumptions:

- The number of mastectomies that are followed by reconstruction increase from less than 50% of the total mastectomies to 60% due to insurance covering the cost rather than the individual.

- That 75%, rather than 40% of patients, have immediate reconstruction rather than delay reconstruction, because cost is not as much of an issue.

- The percentage of breast conserving surgeries did not change, since this type of treatment is not covered by the mandate.

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[5] CE Desch, et al, "A Sociodemographic and Economic Comparison of Breast Reconstruction, Mastectomy, and Conservative Surgery", Department of Internal Medicine and Surgery, Virginia Commonwealth University / Medical College of Virginia, Richmond, *Surgery* April 1999.

[6] Gerald F. Riley, "Stage at Diagnosis and Treatment Patterns Among Older Women With Breast Cancer, An HMO and Fee-for –Service Comparison", <http://www.jama.ama_assn.org/issues/v281n8/full/joc81168.html> [6/9/00].

[7] Desch, et al.

[8] A. Khoo, et al, "A Comparison of Resource Costs of Immediate and Delayed Breast Reconstruction, Department of Plastic Surgery at The University of Texas M.D. Anderson Cancer Center, *Plastic Reconstructive Surgery,* April 1998.

6. Regardless of cost, to what extent does the coverage contribute to the quality of the insured's health status? Is the treatment generally recognized by the medical community as being efficacious?

The decision to have breast reconstruction is a very personal one. As with any surgery, there are risks involved. While it does not directly contribute to the quality of the insured's physical health, it is likely to help address the fears of many women that they will be disfigured. This fear may prevent some women from getting tested so that breast cancer can be detected earlier.

There is general agreement in the medical field that, with the latest techniques, breast reconstruction does not interfere with radiation or other treatments and that the risks involving future breast cancer problems associated with reconstruction are minimal.

Randomized clinical trials have demonstrated that breast conserving surgery followed by breast irradiation has equivalent survival benefits to mastectomy in the treatment of early-stage breast cancer.[9] This alternative to mastectomy is being recommended more frequently as screening finds the cancers at earlier stages.

7. What is the expected impact on sick days/disability benefits of providing the treatment?

Sometimes the results of breast reconstruction may be less than satisfactory, and additional surgeries may be necessary to correct the reconstruction. If implants are used, they will age over time and may need to be replaced. It is, therefore, likely that in some cases, additional sick days will be used.

[9] Khoo, et al.

L. Handicapped Dependents Regardless of Age

Policies that normally discontinue coverage of children at a certain age must allow continuation of the coverage if the child is incapable of self-employment due to mental retardation or physical handicap and chiefly dependent on the insured for support and maintenance. The mandate applies to any policy of accident and sickness insurance, including Chapter 20, individual & HMO policies.

1. How many and what portion of the insured population are expected to use the mandate annually?

From Report 1, the percent of Handicapped Dependents Regardless of Age is 0.095%. We estimate that about 85% of those insureds will file a claim in a given year, which implies that the percentage of insureds expected to file a claim for the mandated benefit within a policy year is 0.081%. This equates to approximately 4,053 individuals in Texas covered under fully insured large and small group coverages.

2. How many individuals are likely to be affected by the particular illness, medical condition or service associated with the mandated benefit (of the insured population in the State and of the total State population, regardless of healthcare coverage)? Are there other important characteristics of this group to note (e.g., average age, etc.)?

While approximately 3.8% of the Texas population aged 16 – 64 (490,703 estimated individuals) are unable to work due to disability, the portion of the insured population we estimate to be covered as dependents under this mandate is substantially smaller, at .095% of the covered population. This is because the mandate states that coverage may not be **terminated** upon a child reaching a limiting age for dependent coverage while the child "is both (1) incapable of self-sustaining employment by reason of mental retardation or physical handicap and (2) chiefly dependent upon the insured for support and maintenance". Typical limiting ages for dependents are between ages 19 and 23. This implies that to meet the coverage definition:

1. The dependent will have to be disabled prior to attaining the limiting age and have been included in the coverage as a dependent at that time;
2. The employee will need to have continuous coverage under the plan to retain coverage for the dependent beyond the limiting age;
3. The dependent cannot be self-sustaining or supported by another individual (e.g., a spouse) at any point in time and then return to be covered as a dependent.

About 1.5% of the Texas population aged 16 to 24 are unable to work due to disability. The lower prevalence rate at the younger ages and the attrition resulting from the limited application of the mandate results in the small representation in the insured population.

Table IV.L.1
Persons with a Severe Work Disability[1]

Age	Disabled In Texas Unable to Work	Texas Population	% Disabled in Texas
16 to 24	33,561	2,248,285	1.5%
All 16 - 64	407,819	10,695,826	3.8%

Following are the most common health conditions among those unable to work:

Table IV.L.2
Incidence of Health Conditions
Among Those Described as Unable to Work[2]

Health Conditions	Percent
Musculoskeletal Systems	35.2
Circulatory Conditions	12.4
Mental Disorders	9.0
Nervous System	8.7
Mental Retardation	5.4
Neoplasms	4.5
Respiratory Disease	4.4
Metabolic or Immunity	3.3
Digestive System	2.4
Other Conditions	11.5
Unknown	3.2

However, the four leading causes of major activity limitation in children are 1) mental retardation, 2) cerebral palsy, 3) speech impairments, 4) epilepsy, and 5) other selected impairments (e.g., spina bifida). These would have the most presence for those eligible under the mandate.

[1] U.S. Bureau of the Census 1990, <http://www.census.gov/hhes/www/disable/census/tables/tablst.html> [6/22/00].
[2] "Exploratory Study of Health Care Coverage and Employment of People with Disabilities: Literature Review" – The Lewin Group, Inc. 1997

3. A) If the care and/or treatment associated with the mandated benefit were not provided, what would be the physical and economic consequences? B) If the coverage were not provided under private group insurance, to what extent would the service be provided/condition be treated? C) If the State mandate did not exist, would group health plans still cover the service/condition/population?

Many of the above conditions, if not treated, may result in a deterioration of physical health, reduced productivity, and lower quality of life. They may also reduce life expectancy.

If disabled handicapped dependents of insured individuals are excluded from commercial group coverage, they are still likely to receive care, but through a publicly funded program such as Medicaid. The table below shows the healthcare programs under which disabled individuals are currently covered.

Table IV.L.3
Health Insurance of Unemployed Ages 16-64[3]

Type of Health Insurance	Not Disabled	All Disabled	Levels I & II*	Disabled Children
Private Coverage	80.9%	66.3%	55.5%	65%
Private Only	80.2	60.7	41.7	60.4%
Private and Public	0.7	5.6	13.8	4.6%
Public Coverage	4.0	20.7	44.1	23.1%
Public Only	3.3	15.1	30.4	18.5%
Medicare	0.0	9.4	24.7	0.0%
Medicaid	3.7	13.3	26.1	23.1%
No Insurance	15.8	18.6	14.1	16.6%

**Levels I and II indicate the most severely disabled and those least likely to be able to maintain self-sustaining employment*

Without the coverage, disabled handicapped persons will likely get coverage through Medicaid or Medicare or be uninsured. We considered whether the costs of treatment may be higher in private insurance than in these public programs. We speculate that costs may be higher under private insurance because the patient may be more likely to seek prolonged treatment, such as physical therapy and speech therapy, if they are covered. Such costs and treatment are likely to contribute to better physical conditions and quality of life for the disabled. There was not sufficient data to determine the relative costs for treatment in a privately insured plan vs. publicly funded program.

The mandate could have an additional impact, which is to discourage the disabled population from working, as doing so could result in a loss of health insurance. This is also an issue with the publicly funded programs. The mandate may cause the employee to feel locked into a particular job in order to not lose dependent coverage.

[3] Michelle Adler, "The Disabled: Their Health Care and Health Insurance", August 1990, <http://aspe.os.dhhs.gov/daltcp/reports/disabled.htm> [6/12/00]

We believe that in the absence of the mandate, the majority of group coverages would still provide this benefit. This is supported by the results of the survey of self-funded employers where 93% of the respondents indicated that they cover this benefit at the level of the mandate.

4. What are the expected additional costs (premiums) to the insurance company for covering the mandated benefit (direct expenses only)?

From Report 1, following is the premium impact. The costs below represent the costs borne by the entire insured population due to covering this higher cost segment of the population.

Table IV.L.4

	PMPM Premium	Estimated Percent of Premium Cost
Large Group		
HMO	$0.49	.3%
PPO / POS	0.62	.3%
Indemnity	0.68	.4%
Small Group		
HMO	0.50	.3%
PPO / POS	0.65	.4%
Indemnity	0.81	.4%

5. What additional indirect costs or offsetting benefits may result? Can they be quantified in relation to the direct expenses (from the insurance company perspective)? What is the resulting net premium impact?

From the perspective of group insurance carriers in Texas, the requirement to cover handicapped dependents regardless of age does increase costs to the extent that they would have excluded these individuals or the condition in the absence of the mandate. The direct costs quantified in Table IV.L.4 above, represent the potential cost to the carrier; there are no additional costs or offsetting benefits to consider from the insurance companies' perspective.

6. Regardless of cost, to what extent does the coverage contribute to the quality of the insured's health status? Is the treatment generally recognized by the medical community as being efficacious?

Although most disability conditions are not "curable", an individual often responds positively to training and therapies. The quality of life for a handicapped person may be improved through the additional access and therapy that commercial insurance provides.

7. What is the expected impact on sick days/disability benefits of providing the treatment?

Since this mandate only affects a disabled handicapped person who is "incapable of self-sustaining employment" and is "chiefly dependent upon insured for support and maintenance" the impact on increased utilization of sick days is not applicable to this group. The mandate also does not impact disability benefits provided by employer sponsored plans. There may be some reduction in the employee missed time from work if insured coverage leads to overall better health of the disabled dependent.

M. Childhood Immunizations

Policies that provide benefits for a family member of the insured must cover specified immunizations from birth until the date the child is six years of age. Immunizations may not be subject to a deductible, co-payment or co-insurance requirement. The mandate applies to individual, group, blanket, or franchise insurance policy, Chapter 20, HMO, and MEWA. Small employers are exempt. However, to comply with HMO laws (federal and state) the same benefits must be offered except copays are allowed.

1. How many and what portion of the insured population are expected to use the mandate annually?

About 10% of the population covered under group insurance policies are age 6 and younger. We expect about 88% of them to receive immunizations in a year, resulting in 440,352 children using the mandate each year.

2. How many individuals are likely to be affected by the particular illness, medical condition or service associated with the mandated benefit (of the insured population in the State and of the total State population, regardless of healthcare coverage)? Are there other important characteristics of this group to note (e.g., average age, etc.)?

The mandate requires immunizations that cover ten diseases: Polio, Measles, Mumps, Rubella, Hib, Hepatitis B, Varicella (Chicken Pox), Diphtheria, Tetanus, and Pertussis.

The following six immunizations cover all ten diseases:

Table IV.M.1

Immunization	Diseases
3+Polio (IPV)	Polio
1+MMR	Measles, Mumps, Rubella
3+Hib	Hib
3+HepB	Hepatitis B
1+Var	Varicella
4:3:1 (DTaP)	Diphtheria, Tetanus, Pertussis

The incidence rates from the years prior to a vaccine and the years after a vaccine are below. See Table IV.M.2-App and Table IV.M.5-App in Appendix IV-M for additional detail.

Table IV.M.2

Disease	Disease Incidence Rate per 100,000 People (All Ages)			Estimated # In Texas
	Before Vaccine	After Vaccine 1998 US	Estimated in Texas	
Diphtheria	162.3	0.0	0.0	0.0
Tetanus	1.2	0.0	0.0	0.0
Pertussis	130.3	2.3	10.7	2,137
Polio				
Paralysis	10.3	0.0	0.0	0
Death	1.2	0.0	0.0	0
Measles	278.5	0.0	0.0	7
Mumps	75.8	0.2	0.2	45
Rubella				
Rubella	24.0	0.1	0.1	26
Congenital Rubella Syndrome	0.4	0.0	0.0	0
Hib	8.2	0.0	0.0	4
Hepatitis B (*Infant, Child)	11.9	3.7	4.3	861
Varicella (Chicken Pox)	1,518.7	88.8	54.0	10,825
Total				13,905

The incidence rates and number in Texas are calculated based on immunization rates in Texas compared to the U.S. immunization rates. Generally, Texas tends to be below the national average,[1] as shown below.

Table IV.M.3
Immunization Rates

	3+Polio	1+MMR	3+Hib	3+HepB	1+Var	4:3:1
U.S.	89.6%	91.5%	93.5%	88.1%	57.5%	79.9%
Texas	85.2%	87.9%	88.1%	81.7%	58.9%	74.7%

[1] http://www.cdc.gov/nip/coverage/tables/TAB1-antigen_iap.xls [9/19/00]

3. A) If the care and/or treatment associated with the mandated benefit were not provided, what would be the physical and economic consequences? B) If the coverage were not provided under private group insurance, to what extent would the service be provided/condition be treated? C) If the State mandate did not exist, would group health plans still cover the service/condition/population?

Currently, there is a mandated benefit for immunization, which is the base scenario. We consider three additional scenarios: 1) all immunization ceases (pre-vaccine), 2) all insurance coverage ceases, 3) the mandate is removed.

The majority of childhood immunizations are for viral infections and as long as the community reservoir of the virus is low, due to the immunization of the community at large, the risk to a non-immunized child or small group of children is quite low. With bacterial infections, like pertussis and Hib, the bacteria remain present in the community, so non-immunization of a small population could expose the child more immediately to the risk of these infections. For Hib, the risk is serious croup, epiglottitis, and infant meningitis. These illnesses have virtually disappeared from our community because of immunization. The impact of meningitis is not only the hospitalization but a significant incidence of permanent disability and dependence.

As you can see from the Table IV.M.2 above, immunizations have been quite successful in reducing the incidence rates of these diseases over the years. If all immunizations were to cease, the incidence rates could potentially return to historic pre-vaccine levels. This is what we have assumed in our model. Clearly, this impact would not be immediate, and is only likely to happen if all immunizations in the U.S. were to cease; however, it is impossible to know how the effects would emerge. Many of the related diseases are costly and life-threatening; therefore, the physical and economic consequences of returning to these disease levels would be great.

If coverage were not provided, we assume that many parents would still choose to immunize their children, at their own expense. However, we would expect the total immunization rate to go down. This value is estimated to be 2/3 of current immunization levels.

In order to determine the impact of having a State mandate in place, we considered the immunization rates in the states with a mandate compared to the states without a mandate.

There are 29 states and the District of Columbia that have mandated benefits for immunizations, and the remaining 21 states do not.[2] We considered the immunization levels for states according to this categorization.[3]

[2] Appendices: Blue Cross & Blue Shield Association Summary of State Mandated Savings Account Laws. (3129)
[3] http://www.cdc.gov/nip/coverage/tables/TAB1-antigen_iap.xls

Table IV.M.4

	3+Polio	1+MMR	3+Hib	3+HepB	1+Var	4:3:1
No Mandate	88.08%	90.85%	93.97%	88.08%	51.64%	79.09%
Mandate	90.27%	91.83%	93.53%	88.42%	59.62%	80.54%
Ratio	0.98	0.99	1.00	1.00	0.87	0.98

The associated detail by state is in Table IV.M.1-App of Appendix IV-M. For all but one disease, immunization levels are higher for mandated states than for non-mandated states. The levels for 3+Hib may be regarded as equal. From this analysis, we can conclude that immunization levels for Texas would change slightly if the mandate were removed. The following are the levels of immunization for Texas—with mandate (current) and without mandate (estimate).[4]

Table IV.M.5

	3+Polio	1+MMR	3+Hib	3+HepB	1+Var	4:3:1
TX Mandate	85.20%	87.90%	88.10%	81.70%	58.90%	74.70%
TX No Mandate	83.13%	86.96%	88.10%	81.38%	51.02%	73.35%

The mandate seems to have a modest affect on immunization levels for most of these shots and a moderate affect on Varicella immunization levels. These levels translate to 221 incidences of childhood disease prevented per 100,000 Texans—or about 44,000 cases per year. Almost all (196 of 221) of these prevented cases are Varicella. Appendix IV-M, Table IV.M.6-App, indicates the prevention figures for each disease. The modeling in the appendix uses the following simplifying assumptions:

- If there were no immunizations, the disease incidence would return to historic levels.
- If we reduce immunizations by X% from the current US rate, we reduce the cases prevented (historical levels minus current levels) by X% as well.

The morbidity rates are illustrated from two different perspectives. In Appendix IV-M, Table IV.M.4-App., we indicate how many cases are prevented (compared to pre-vaccine) per 100,000 people in each scenario. In Appendix IV-M, Table IV.M.5-App, we indicate the expected number of cases per 100,000 for each scenario.

To summarize the results, we estimate the number of cases per 100,000, for all ten diseases, would be 2,223 if vaccination were not available; without insurance coverage, the total number of cases would be 934 per 100,000. Without the mandate, the total number of cases would be 290 per 100,000. With the current mandate, the total number of cases is only 69 per 100,000.

[4] TX Mandate percentages are current values (see 1). TX No-Mandate percentages are determined by taking the ratio in the previous table (US) and multiplying it by the TX Mandate percentages.

There is a relatively small difference between immunization levels for the mandate and no-mandate scenarios. This is indicated in the "marginal" columns in Appendix IV-M, Table IV.M.4-App. As a result, there is a relatively small difference between the mandate incidence rates and the no-mandate incidence rates. This can likely be explained by the assumption that many insurers will cover immunization regardless of whether or not there is a mandate. This is supported by the survey of self-funded employers (Section V) where 73% reported coverage at the level of the mandate and another 18% reported coverage but not at the level of the mandate.

4. What are the expected additional costs (premiums) to the insurance company for covering the mandated benefit (direct expenses only)?

From Report 1, following is the premium impact. The costs below represent the costs of the immunizations at their assumed current utilization level.

Table IV.M.6

	PMPM Premium	Percent of Premium
Large Group		
HMO	$0.93	.6%
PPO / POS	0.99	.6%
Indemnity	0.61	.3%
Small Group		
HMO	$0.85	.5%
PPO / POS	0.81	.4%
Indemnity	0.58	.2%

5. What additional indirect costs or offsetting benefits may result? Can they be quantified in relation to the direct expenses (from the insurance company perspective)? What is the resulting net premium impact?

Based on our modeling and research, we estimate that there is a net savings for covering immunizations. An additional savings of $1.59 may be achieved due to decreased disease incidence, the cost of the immunizations is about $0.79 PMPM.

Clearly this is a somewhat simplified model – a single carrier who removes immunization coverage will reduce costs in the short-run and is not likely to see an increase in the incidence of these diseases. However, in aggregate, we expect savings from immunization to outweigh the costs.

6. Regardless of cost, to what extent does the coverage contribute to the quality of the insured's health status? Is the treatment generally recognized by the medical community as being efficacious?

Following are the immunization recommendations from the Centers for Disease Control (CDC).[5] Note that the number of doses in the CDC recommendations may differ from the number of doses in Appendix IV-M, Table IV.M.1-App of the analysis.

Table IV.M.7

		Recommended Doses	
Immunization	Diseases	#	Schedule
IPV	Polio	4	2 mos, 4 mos, 6-18 mos, 4-6 yrs
1+MMR	Measles, Mumps, Rubella	2	12-15 mos, 4-6 yrs
3+Hib	Hib	4	2 mos, 4 mos, 6mos, 12-15 mos
3+HepB	Hepatitis B	3	0-2 mos, 1-4 mos, 6-18 mos
1+Var	Varicella	1	12-18 mos
DTAP	Diphtheria, Tetanus, Pertussis	5	2 mos, 4 mos, 6 mos, 15-18 mos, 4-6 yrs

The benefits of following these recommendations are obvious, namely that childhood morbidity and mortality can be greatly reduced (see Appendix IV-M, Table IV.M.4-App of analysis). It should be noted that there are some risks associated with the administration of vaccines, but according to the CDC, these risks are rare compared to the risks of disease for those who are not immunized.

Risks[6]

MMR Vaccine:
Encephalitis or severe allergic reaction: 1 in 1,000,000 vaccinations.

DTP Vaccine:
Continuous crying, then full recovery: 1 in 100
Convulsions or shock, then full recovery: 1 in 1,750
Acute encephalopathy: 0-10.5 in 1,000,000

[5] http://www.cdc.gov/nip/recs/child-schedule.PDF [9/19/00]
[6] http://www.cdc.gov/nip/publications/6mishome.htm#Themajorityofpeople [9/19/00]

7. What is the expected impact on sick days/disability benefits of providing the treatment?

All costs listed above only account for medical related costs. There are costs incurred by parents who miss workdays due to their child's illness, and there are costs incurred by adults whose childhood diseases are not manifested until adulthood. A workday loss is defined as a day in which an adult guardian is required to attend to the child's medical needs or a day that an adult misses work due to one of these illnesses. It does not account for the fact that some adults will take off part days or that some adults do not work. We have estimated the number of workdays loss prevented due to each scenario in Appendix IV-M, Table IV.M.6-App.

Based on this definition of a workday loss, there are approximately 587 fewer annual workdays lost per 100,000 Texans in the mandate scenario than in the no-mandate scenario. As with financial costs, most workday loss prevention is from Varicella. Of these 587 days, 529 are from cases of Varicella.

Based on the U.S. Census Bureau information, 39% of families in 1998 with own children under age 6 have at least one parent not employed.[7] If we assume there are no workdays loss in those households, the 587 estimate drops to 358 fewer annual workdays lost per 100,000 Texans due to the mandate.

[7] U.S. Census Bureau, *Families With Own Children – Employment Status of Parents: 1995 and 1998*, Statistical Abstract of the United States: 1999, pg. 418, Table No. 611.

V. RESULTS OF SURVEY OF SELF-FUNDED EMPLOYERS

We were asked to determine the extent to which each mandated benefit is covered by self-funded (self-insured) employers in Texas (who, under current law, are not subject to state-mandated benefits). In order to do so, we conducted a survey of self-insured employers in Texas.

Our mailing list was based on a database supplied by the Texas Department of Insurance (TDI). We sent surveys to a total of 2,300 employers and received back 385 responses, for a return rate of 17%. Of the surveys that were returned, 109 of the employers indicated that they did not offer self-insured plans. Our results are based on the remaining 276 survey responses.

Requested Information

The survey is included in Appendix V-A. We first asked for limited employer information, including the number of employees in the firm eligible for the health plan and the delivery options (traditional indemnity, HMO, HMO with point-of-service option, and PPO).

We then asked, for each of the thirteen mandated benefits, whether the self-funded plan covers the benefit covered under the mandate, partially covers the benefit, or excludes the benefit. For benefits covered partially, we asked that the respondent provide additional explanation for the response.

Our last question asked the respondent to check a statement regarding the impact of mandated benefits on the company's decision to self-insure. They were to indicate one of the five statements below that best describes the company's consideration of mandated benefits in deciding to self-insure.

- ❑ 0 We do not believe that state-mandated benefits would have any material cost impact on our health plan and our decision to be self-insured was made entirely for reasons unrelated to avoiding mandated benefits.

- ❑ 1 While mandated benefits may add some cost to plans such as ours, the desire to avoid mandated benefits was immaterial to our decision to self-insure.

- ❑ 2 While avoiding the costs of mandated benefits was not a major reason we chose to self-insure, it was one of several factors that we considered.

❑ 3 Avoiding the costs of mandated benefits was one of the top few equally important reasons we decided to self-insure.

❑ 4 While other factors played a part in our decision to self-insure, avoiding the costs of mandated benefits was the most important factor.

❑ 5 Avoiding the costs of mandated benefits was the sole sufficient reason by itself for us to self-insure.

Results

Based on the survey results, we conclude that by-and-large, self-funded plans are covering the majority of the mandated benefits even if they are not required to do so. In addition, very few would consider mandated benefits to be a significant factor in their decisions to self-fund.

Following are the responses related to the coverage of the mandates.

Table V-1

Mandated Benefit	Number of Responses	% of Plans Covering the Benefit	% of Plans Partially Covering the Benefit	% of Plans that Exclude the Benefit
Chemical Dependency	272	53%	40%	6%
Complications of Pregnancy	273	97%	2%	1%
Oral Contraceptives	273	89%	4%	7%
Congenital Defects	272	92%	6%	2%
HIV/AIDS/HIV-related Illnesses	271	97%	2%	1%
Mammography	272	89%	10%	1%
Prostate Testing (PSA)	272	89%	8%	3%
Serious Mental Illness	270	50%	45%	5%
Minimum Hospital Stay for Maternity	272	96%	3%	1%
Minimum Hospital Stay for Mastectomy or Lymph Node Dissection	271	92%	6%	2%
Reconstructive Surgery for Mastectomy	272	96%	3%	1%
Handicapped Dependents Regardless of Age	269	93%	4%	2%
Childhood Immunizations	271	73%	18%	8%

As can be seen above, for all but Chemical Dependency, Serious Mental Illness, and Childhood Immunizations, 89% or more of the companies fully cover the mandated benefit. In most cases where the respondent indicated that the benefit was partially funded, there were internal limits or member cost sharing levels which were more restrictive than allowed under the State mandate legislation. For the preventive benefits, some companies allow a certain dollar amount for preventive services annually, rather than covering the specific service. In Appendix V-B we show additional information regarding the results of the study.

On the question regarding the impact of mandated benefits on the decision to self-insure, we received the following responses:

Table V-2

Category	Number Responding	Percent of Responses
0 – No material impact	84	33.3%
1 – Not material to decision	99	39.3%
2 – One of several factors	45	17.9%
3 – One of top factors	15	6.0%
4 – Most important factor	6	2.4%
5 – Sole sufficient reason	3	1.2%
Total	252	100%

The average score indicated was 1.1. It appears that mandated benefits have had little influence on employers' decisions to self-insure, although they are a factor.

Additional Comments from Respondents

Some respondents indicated that they are self-insured partly because they have employees in a number of states and do not want to coordinate benefits with the states' various mandates. In some cases, the benefits are covered by self-insured employers due to Federal mandates. In addition, employers commented that they choose to cover the state mandated benefits so employees do not perceive them as having a non-competitive or non-complying plan.

VI. IMPACT OF PREMIUM LEVEL ON THE UNINSURED

While it seems logical that if health insurance premium levels decrease (e.g., through the removal of mandates), more employers will purchase coverage for their employees and the number of uninsured individuals will decrease, the evidence to support this is difficult to evaluate.

The primary reason is that the number of uninsured appears to be as dependent, if not more dependent, on the income and/or available resources of individuals and/or employers (as well as some other factors) than it is on the cost of health care. The cost of health care is significant, but it is only one of many reasons people go uninsured. Given the average income levels in the State of Texas for many uninsured individuals, the make-up of the work force, the availability of treatment for uninsured persons and the status of public coverage, the cost of health care is likely not a primary influence in most situations. This suggests that changes or elimination of various state mandates and, therefore, relatively minor reductions in premium rates will not have a significant impact on the number of uninsured Texans.

On the other hand, each incremental cost increase may drive some employers to choose not to offer coverage. This is especially true with respect to small employers, as a majority of small employers who do not offer health insurance cite affordability as a major issue.

In this section we will provide a brief description of the characteristics of the uninsured population, both nationally and in Texas. We will also discuss our findings regarding the potential impact of State mandates on the uninsured population.

Characteristics of the Uninsured Population

Approximately 18.2% of the U.S. non-elderly population (or 43 million individuals) are uninsured. This estimate is based on information in the publication "Uninsured in America" Second Edition-May 2000 published by the Kaiser Commission on Medicaid and the Uninsured, which presents Current Population Survey information from March 1997, 1998, and 1999.[1]

Based on the following statistics, a typical uninsured individual could be described as under age 35, without a college degree, working full time for a small firm, for less than $7.00 per hour. According to the August 2000 Employee Benefit Research Institute (EBRI) Issue Brief No. 224,[2] 83% of uninsured Americans were in a family with a working family head. In 1998, 53% of uninsured workers were under age 35, nearly 90% had not earned a college degree, 78% worked full time, 20% worked in the service industry, 60% were employed in small firms or were self-employed, 42% earned $7.00 or less per hour, and 99% earned less than $50,000 per year.

[1] "Uninsured in America", Current Population Survey: March 1997, 1998, and 1999, Kaiser Commission on Medicaid and the Uninsured, Second Edition, May 2000.
[2] *EBRI Issue Brief*, No. 224, Employee Benefit Research Institute, August 2000.

The October 1999 Current Population Survey (CPS) conducted by the U.S. Census Bureau provides additional information on the uninsured.[3] The CPS report covering calendar year 1998 reports that ethnicity and U.S. citizenship can be indicators of the uninsured. About 35% of Hispanics are uninsured, compared to 15% of whites, 22% of African-Americans, and 21% of Asians. In addition, 43% of non-U.S. citizens and 34% of foreign-born citizens are uninsured, compared to 19% of naturalized citizens and 14% of native citizens.

Information is also provided by type of industry. The percentage of uninsured workers is about 18% overall, but is significantly higher for many industries: agriculture (39%), personal services (33%), construction (31%), retail (26%), and business and repair services (25%).

Texas Uninsured Population

EBRI has analyzed the CPS results on an individual state basis and published the results in a July 2000 *Facts from EBRI*.[4] This publication provided the following information:

- The percentage of Texas' non-elderly population without health insurance in 1998 was 27%, the second highest rate in the U.S. Texas also had a lower rate of employment-based coverage (58%) than the national rate (65%).

- Among Texas workers in firms with 1,000 or more workers, 62% had coverage "in their own name" (i.e., they were the primary beneficiaries), compared with 23% of those in firms with fewer than 10 employees.

- Among individuals ages 18-64, full-time workers had a lower uninsured rate (22%) than part-time workers (29%).

Some of the characteristics of the uninsured population nationwide have a higher prevalence in Texas. For example, Texas has a much higher than average percentage of Hispanics in their population than the national average (30% vs. 11%), as well as higher than average rates of non-U.S. citizens and workers in certain industries. These characteristics of the Texas population may be driving the high uninsured rate more than the level of health insurance premiums or the number and cost of state mandates.

A recent report from the National Center for Policy Analysis (NCPA) states that the major reason that Texas has a high uninsured rate is the extensive system of free health care. Texas spends an average of $1,000 per year on free health care for each uninsured individual. The system of free care discourages people from enrolling in publicly funded health insurance. In fact, 1.6 million Texans may be eligible for Medicaid but not enrolled, because the benefits of

[3] Current Population Survey, U.S. Census Bureau.
[4] Facts From EBRI, July 2000.

enrolling in Medicaid are not worth the bureaucratic hassles of enrolling. In most areas, the uninsured receive the same medical care as Medicaid patients. However, in either situation (Medicaid or uninsured) the local, State, and Federal governments would pay for almost all the care these people receive.

Will Reduced Premiums Impact the Number of Covered Employees?

As described above, many of the uninsured workers in this country (and in Texas) have full-time jobs with small employers. The 2000 Small Employer Health Benefits Survey (SEHBS), co-sponsored by the Blue Cross Blue Shield Association, EBRI, and the Consumer Health Education Council, cited many reasons why small employers did not offer coverage to their employees:[5]

- 53% of small employers not offering coverage said that affordability is a barrier.

- Affordability was also a barrier for dependent coverage as 51% of small firms offering coverage reported that less than half of their eligible employees accept coverage for their dependents.

- Many (67%) small employers without health insurance are unaware that insurers could not deny them coverage, even if their employees were sick. This implies that some small employers may not seek out health insurance if they know an employee or dependent has a severe health problem.

- 80% of small employers did not realize that states require insurers to spread the cost of small employers across all small groups through the use of rating restrictions. More than 65% did not realize there are regulatory limits on how much insurers can charge small employers.

- 57% of small employers without coverage were not aware that their contributions were 100% tax deductible.

- Small business owners that do not offer health benefits do not understand the positive impact the offer could have on their employees. Small employers offering health benefits say that it has a positive impact on employee recruitment and retention, as well as on employee attitudes and performance.

Since 53% of small employers cited affordability as a major issue, it appears that a change in price could have a measurable impact on the number of uninsureds. In fact, the Congressional Budget Office (CBO) estimates that a 1% increase in the cost of health insurance forces an

[5] The 2000 Small Employer Health Benefits Survey, co-sponsored by the Blue Cross Blue Shield Association, EBRI, and the Consumer Health Education Council.

additional 200,000 Americans to become uninsured. Conversely, it could be inferred that a 1% decrease in the cost of insurance would increase the number of uninsured Americans by 200,000. Since there are 43 million uninsured Americans, a change of 200,000 uninsureds represents about a 0.5% change.

However, the study "Reducing the Number of Uninsured by Subsidizing Employment-Based Health Insurance"[6] has shown that subsidies of as much as 50% in the cost of insurance increased the number of small firms (under 20 employees) offering insurance to their employees by only a small amount (about 3.5%).

According to the 2000 SEHBS study, if insurance costs fell 10% (which is more than the estimated cost of the state mandates we studied), only 13% of companies without insurance would be "much more likely" to offer health benefits, and 30% would be "somewhat more likely", while 54% would be "no more likely". In addition, if the government provided premium assistance, the subsidy would need to be substantial to move companies not offering health benefits to offer coverage. About 62% of the respondents indicated that subsidies of 25% to 100% of premium would be required to convince them to offer coverage. Another 12% would offer coverage with subsidies of 0-24% of premium, 7% would not provide coverage even if it was 100% paid for while 17% did not know.

As noted earlier with regard to the SEHBS, factors other than price may have a significant impact on the decision of small employers to provide health insurance to their employees. Several of these factors were listed above, but additional factors include:

- The financial outlook for both the entire economy and the firm itself. It would be difficult for a struggling firm, or any firm in an economic downturn, to make the commitment to provide health insurance to its employees.

- The mix of full-time, part-time, and temporary workers in the firm. Uninsured rates for part-time and temporary workers are much higher than rates for full-time workers due to the increased administrative burden to cover these workers.

- The wage levels and contribution levels required of the individual workers. Uninsured workers are heavily skewed to the lower end of the wage scale, at least partially due to lower participation rates when offered insurance through their employers, but required to contribute to the cost of the coverage.

The article entitled "Explaining the Decline in Health Insurance Coverage, 1979-1995" examines the relationship of the "expenditure-to-income ratio" to the uninsured rate.[7] The findings suggest

[6] Kenneth E. Thorpe, Ph.D., et al, "Reducing the Number of Uninsured by Subsidizing Employment-Based Health Insurance".
[7] Richard Kronick and Todd Gilmer, "Explaining the Decline in Health Insurance Coverage, 1979-1995".

that a 10% increase in the expenditure-to-income ratio results in a 1.2% increase in the percentage of uninsureds. This statement implies that **as long as the increases in per capita health care expenditures outpace the increases in personal income, the uninsured percentage will continue to increase**.

In addition, the make-up of the work force will also have an impact on the uninsured based on the education level and the race/ethnic mix. Some cultures may not place as high a priority on health insurance as other cultures.

In recent years, welfare reform initiatives may have added to the uninsured problem. While the intent of the reforms was to allow families to maintain public coverage as they moved into the work force, miscommunication and implementation problems may have resulted in many people losing coverage. People no longer eligible for cash benefits may not realize they are eligible for Medicaid benefits.

In conclusion, the evidence seems to indicate that the uninsured population would not change appreciably even if significant (e.g., 50%) reductions in health insurance premium rates could be achieved. The marginal reductions expected through elimination of state mandates would likely not result in significant changes in the uninsured population, either in Texas or nationally.

VII. ASSESSMENT OF SMALL EMPLOYER PLANS

The original Request for Proposal for this project, Section 3.2 (10), asked that we address the extent to which premium costs for benefit riders under the Small Employer Standardized Basic and Catastrophic plans (including prescription drug riders, alcohol & drug abuse benefit riders, mental health benefit riders, and preventive care benefit riders) are factored into base premium rates for the plans. Based on further discussions with TDI and our understanding of the issues involved, we determined that the following questions needed to be addressed:

1. What is the expected premium differential between the standardized plans and common full coverage industry plans (with and without adverse selection)?

2. Does the exclusion of some of the mandated benefits make a significant contribution to the expected reduction in premium?

3. Does the industry pricing structure conform to the expected?

4. Are carriers increasing the base plan premiums to subsidize the cost of the riders in order to make the riders more affordable?

5. What alternatives could be considered to make the plans more attractive to small employers?

Background

Due to small employer health insurance reform legislation passed in 1993 and amended in 1995, insurers are required to offer two standard group policy forms that exclude some of the mandated benefits required under large group policies (e.g., Chemical Dependency, Serious Mental Illness, Mammography, Prostate Screening, and Childhood Immunizations). The insurers are allowed to offer full-coverage policies in addition to these standardized options. Benefits in the standardized plans include physician services for the treatment of illness or injury, hospital benefits, anesthesia, outpatient services, x-ray and laboratory services, maternity benefits, and limited coverage of durable medical equipment, physical therapy, skilled nursing care, and home health care. The Basic plan offers a preventive care rider for well-child care, immunizations and annual check ups. Both plans offer riders for alcohol/drug abuse, mental health and prescription drugs. The most significant differences between the two plans are the deductibles, co-insurance, and limits on out-of-pocket expense options available. The intent of the standardized plans was to supply the market with low premium cost alternatives.

Based on a TDI report, Health Insurance Regulation in Texas - The Impact of Mandated Health Benefits,[1] plan enrollment statistics show that less than 8% of employers chose the Standardized Basic or Catastrophic plans in 1993-1994. This number dropped to 7% in 1995-1996. There is no statistical explanation for the low enrollment, but researchers have found that employers and consumers are generally uninterested in limited benefit plans except as a last resort. Limited

[1] Health Insurance Regulation in Texas - The Impact of Mandated Health Benefits; Texas Department of Insurance, Report to the Texas Legislature, December 1998, pg. 98-100

information collected from insurers by TDI indicates that the rates charged for the Standardized Basic and Catastrophic plans are considerably lower than for carriers' other plans, which would suggest that the level of benefits also play a significant role in an employer's health insurance decisions.

Process

We started with the healthcare reform model developed for Report 1 as the industry PPO plan. We then made the necessary benefit adjustments to reflect the PPO version of the Standardized Basic and Catastrophic plans and we priced the riders without adverse selection. In the pricing of the riders a company must make an adverse selection assumption. Adverse selection will be a critical issue to consider because each carrier must individually weigh how much risk they can take in their market before setting a final price on these types of riders. The types of issues that the carrier might consider include:

- The average size of the group to which they will be marketing. The smaller the group, the more adverse selection they can expect for riders such as mental health and alcohol and drug abuse. Even increasing the rate to 10 times the standard pricing may not be adequate for a very small group that knows they have someone that will utilize the benefit. The more the rider is loaded for adverse selection, the more it will cause additional adverse selection. (See Section IV assessment of Serious Mental Illness for an example.)

- The average age and family size of the groups to which they will be marketing. This will impact the utilization of the preventive rider.

- The types of provider contracts the carrier has negotiated. If any of these benefits are under a capitated arrangement, the adverse selection risk is transferred to the provider.

- For the pharmacy rider, the high utilizing groups will tend to choose the copay version and the low utilizing groups will tend to choose the less expensive 50% coinsurance version.

We compared the result of our pricing to the pricing information that was supplied by the TDI from four companies. To complete this part of the analysis we also needed to adjust the Report 1 industry PPO plan to the carrier plan provided. We looked at premium relativities with and without adverse selection. We also looked at premium relativities with adverse selection loaded in the base plan versus loaded in the rider. We assumed that adverse selection was equal to the cost of the rider for the mental health and alcohol and drug abuse riders. We did not assume any adverse selection for the other riders.

1. What is the expected premium differential between the standardized plans and common full-coverage industry plans (with and without adverse-selection)?

We would expect the Standardized Basic plans offered without any riders to be priced at 14% to 27% less than the Industry plan without prescription drug benefits. If carriers do not load the base plan for the adverse selection associated with riders, we would expect the Standardized Basic plans with all riders to be priced at 11% to 22% below the Industry plan with prescription drug benefits. If carriers do load the base plan for the rider adverse selection, we would expect premiums to be 10% to 23% below the Industry plan premiums without riders and 7% to 19% below the Industry plan premiums with riders.

We would expect Standardized Catastrophic plans offered without any riders to be 37% to 67% less than the Industry plan without prescription drug benefits. If carriers do not load the base plan for the adverse selection associated with riders, we would expect the Standardized Catastrophic plans with all riders to be priced at 36% to 62% below the Industry plan with prescription drug benefits. If carriers do load the base plan for the rider adverse selection, we would expect premiums to be 34% to 65% below the Industry plan premiums without riders and 33% to 60% below the Industry plan premiums with riders.

The above reductions assume administration expenses are incorporated into pricing as a flat percent of premium across all plans.

Appendix VII-A includes tables that summarize the benefit options assumed to develop these percentages. In summary, we would expect sizeable cost differences between typical industry plans and the mandated plans.

2. Does the exclusion of some of the mandated benefits make a significant contribution to the reduction in premium?

We have confirmed the conclusion reached in TDI's report, Health Insurance Regulation in Texas - The Impact of Mandated Health Benefits, that "the premium reductions are mainly due to increased deductible and coinsurance contributions and limits on hospital and doctor benefits, not elimination of mandated benefits".[2]

[2] Health Insurance Regulation in Texas, pg. 5.

As an example, we compare the following three plans without a pharmacy benefit:

Table VII.1

Benefit	Industry Plan	Basic Plan	Catastrophic Plan
Office Visit Copay	$15	NA	NA
Deductible (In/Out)	$250/$300	$500/$500	$1250/$2500
Coinsurance (In/Out)	80%/60%	90%/70%	80%/60%
Out of Pocket Max (In/Out)	$1250/$2000	$3000/$3000	$5000/$5000
Annual Maximum	$2,000,000	$2,000,000	$2,000,000
Transplant Coverage	All covered	Not covered	Excluded pancreas only
Physical/Occupational/Speech Therapy	20 visit limit	30 visit limit	No limit
Durable Medical Equipment	No limit	$200 annual limit	No limit
Mental Health	30 days & 20 visits*	30 days & 20 visits (rider)	30 days & 20 visits (rider)
Alcohol and Drug	same as any illness	10days &10 visits (rider)	10days &10 visits (rider)
Preventive Care	Covered	rider	Not covered
Family Deductible	2x Individual	NA	NA

**Expanded coverage for Serious Mental Illness is offered as a rider for additional premium.*

The Basic plan above is expected to have medical costs 20.6% less than the Industry plan above; and the Catastrophic plan above is expected to have medical costs 43.3% less than the Industry plan above. The table below shows the allocation of this differential:

Table VII.2

Source of Reduction	Basic Plan	Catastrophic Plan
Deductible/Coinsurance/OOP Max;	10.3%	38.7%
Internal Limits	1.5	1.3
Mental Health Rider	3.7	2.8
Alcohol/Drug Rider	0.6	0.5
Preventive Rider	4.5	NA

As can be seen above, more premium reduction can be obtained by increasing the cost sharing (deductible, coinsurance and out of pocket maximum) than through the exclusion of the riders. It is important to note that the rider benefits are not identical to the mandated benefits. For example the preventive rider covers well child-care, immunizations, and annual physicals, which is more than the mandated preventive services (Mammography Screening, Prostrate Screening and Childhood Immunizations).

3. Does the industry pricing structure conform to the expected?

Based on the company pricing provided and our analysis, carriers are generally pricing the Basic and Catastrophic plans at a material discount from their most common market plan. However, they are not pricing them as low as our models would predict. Average company relative rate factors (relative differences in premium rates by plan when compared to the company's most common market plan) for the Basic and Catastrophic plans are about 0 to 80% higher than our estimates. See Appendix VII-B for details by company. Potential reasons and caveats follow:

- Critical information was often missing from the carrier data supplied, such as out-of-pocket maximum, the pharmacy option chosen, out-of-network cost sharing, etc. Where such information was missing, we used our best judgement to set the missing criteria.

- We could not determine if the Standardized Basic and Catastrophic plans used the same provider network as the carrier's market plan. There might be significant differences in the network contracting discounts or the utilization management that are not reflected in this analysis.

- The carrier might use different estimates of utilization savings due to higher cost-sharing (this may be supported by the fact that the ratio of company relative rate factors to ours are generally higher on the Catastrophic plan).

- Actual experience of Standardized plans used in pricing by carriers may be worse than the M&R model would suggest. This experience may reflect the low participation referred to previously.

- Different administrative expenses could be assumed since benefits do not conform to company standards, systems or provider contracts. This lack of conformity requires more manual intervention to administer the claim process and to address consumer questions with respect to benefits. It also requires more training/education of employees than if all policies use common language and benefits. In addition, as noted earlier, lower premium plans generally have fixed costs that reflect a higher percentage of premium.

- The products may be priced at a high level to discourage sales since the benefits do not conform to company standards or systems.

4. Are carriers increasing the base plan premiums to subsidize the cost of the riders in order to make the riders more affordable?

If this were the case, the ratio of the company relative rate factors to our calculated relative rate factors would be higher for plans without riders than those with riders. As noted above, average company relative rate factors for the Standardized Basic and Catastrophic plans are about 0 to 80% higher than our estimates. For three of the four carriers, the differential is higher for those plans without riders, which may indicate that the adverse selection cost for the riders may be included in the pricing for the base plan.

For example, compare the cheapest Basic and richest Basic relative rate factors developed from the data supplied by Company A. The cheapest Basic plan does not include any riders. The richest Basic plan includes the mental health, alcohol/drug abuse, and preventive riders. Otherwise, the plans are identical. None of the plans for this carrier included pharmacy benefits. From Appendix VII-B we can compare the company relativity to the expected relativity without adverse selection.

Table VII.3 below shows this comparison. The 1.05 in column (a) reflects the rate relativity of Company A's Cheapest Basic plan without any riders to the Company's market plan. In other words, the Cheapest Basic plan is priced at 1.05 times the company's market plan. based on the M&R model, we would expect the rate relativity to be .73. Therefore, the Cheapest Basic plan is priced 1.44 times what is expected based on the M&R model. Similarly, the company's Richest Basic plan (including all riders except pharmacy) is priced at 1.12 times the company's market plan (without a pharmacy benefit) and we would expect this relationship to be .81.

If adverse selection were loaded in the rider, the relationship (column c) should stay consistent across the two comparable plans. If adverse selection were loaded in the base plan, you would expect the relationship (column c) to be greater for the plan without the rider than the plan with the rider.

Table VII.3

	Company Relativities (a)	Expected Relativities (b)	Ratio of Company to Expected Relativities (c)
Cheapest Basic (excluding riders)	1.05	.73	1.44
Richest Basic (including riders)	1.12	.81	1.38

Since all other aspects of the two plans are the same, a conclusion might be that the additional pricing load from 1.38 to 1.44 is an extra adverse selection load applied to the base plan.

However, as described in number 3 above, we do not have sufficient pricing detail from the carriers to arrive at a definite conclusion. In addition, this result is less critical than the overall pricing comparison in number 2 above.

5. What alternatives could be considered to make the plans more attractive to small employers?

Based on the TDI report referred to previously, since 1993 the number of small employers with health insurance has more than doubled. However, less than 7% of employers chose the Standardized plans. The conclusion reached was that employers who purchase insurance in order to remain competitive with other businesses must provide benefits that are relatively

comparable in order to attract and retain employees.[3] This conclusion was reinforced by a comment received in our survey of self-insured employers (see section V): "We cover items so they don't perceive we have a bad or illegal plan. We have to remain competitive."

Basic and Catastrophic plans do not appear to be attractive to small employers for a variety of reasons (they are not interested in stripped-back plans, the plans are not priced low enough, the plans are not encouraged by carriers). Also, carriers do not like having to conform to standard plan designs that often require manual intervention or system enhancements to administer. As shown in number 2 above, most premium savings are due to cost sharing options such as higher deductibles, copays/coinsurance and out-of-pocket maximums.

Based on this, following are some optional approaches:

- Do away with Basic and Catastrophic plans, but require carriers to offer higher deductible/coinsurance/out-of-pocket options on their market plans. This may prevent the mandated plans from being offered through a different (and higher cost) network.

- Better monitor premiums charged for Basic and Catastrophic plans. This would require more rate filings than are currently required and would be very difficult and costly to do.

- Send a memorandum to company actuaries as a Texas supplement to the "NAIC Guidance Manual in the Evaluation of Rating Manuals and Filings Concerning Small Employer Health Insurance". This supplement would address "safe-harbor" relationships between a full coverage plan and the standardized plans. By doing this the company actuary would be aware that any relativity outside this range would need to be justified should the company be audited by the TDI.

- Keep as is, in order to have the limited plans available, even if they do not appear to be ideal.

The TDI report proposed expanding the availability of the small employer Standardized Basic and Catastrophic plans to large employers in Texas. There does not appear to be enough of a "success story" in the small group market to warrant this expansion without further study or modification of approach.

[3] Health Insurance Regulation in Texas, pg. 100

VIII. RECOMMENDED PROCESS FOR REVIEW OF FUTURE PROPOSED MANDATES

A final step in M&R's engagement was to prepare and provide written recommendations for a process and methodology to evaluate the cost and benefits of newly proposed mandated benefit legislation. Through the process of evaluating the thirteen mandated benefits, we have done considerable thinking regarding an effective, efficient, and feasible process. We reviewed descriptions of prior attempts to evaluate mandated benefit legislation in Texas and processes used in other States. The mandate evaluations in this report ultimately served as a template for the recommended process that follows.

In general, our recommendation is that each newly proposed mandated benefit be evaluated under a consistent set of considerations, listed below. In order to evaluate the relative merits of each proposal, we recommend that a point system be developed, allowing comparison based on specific criteria and goals developed by the Joint Interim Committee on Health Care Mandates. We believe the evaluation described could be conducted within the time constraints of the Texas legislative session.

Background and Alternate Options

Past efforts to develop a process for consistently evaluating mandated benefit proposals in Texas have not generally been considered successful. In 1993, a Mandate Benefits Review Panel was appointed. It encountered a number of difficulties with respect to funding and scheduling constraints. In addition, it appears that some of the problems stemmed from a lack of direction to the panel and unreasonable expectations.

The Panel was given one year to review all current mandated benefits and 30 days for all new proposals. The panel members were volunteers and were required to include three senior researchers, two of whom were experts in health research or biostatistics and serve on the faculty of a Texas university. Based on the criteria for assigning members to the panel, the panel initially believed the underlying expectation was that they conduct original, scientific research in order to evaluate the mandates. Once the panel members recognized the time constraints they were under, they realized that this level of review was not possible and recommended that their results be considered "professional recommendations". Still, the panel members were limited by lack of available data and lack of funding to develop data resources. Finally, the panel was disbanded in 1997. Please refer to TDI's December 1998 report, "The Impact of Mandated Health Benefits" and reports of February 1995 and February 1997 from the Mandated Health Insurance Benefits Review Panel for additional information regarding the Panel and its reviews.

Since then, mandated benefit proposals have been reviewed on an ad hoc basis by the Texas Department of Insurance (TDI). Various methodologies and processes to evaluate mandated benefits have been considered over the years, finally leading to the assignment for the interim committee and M&R's engagement in this endeavor.

There has been considerable talk about applying cost effectiveness analysis (CEA) as a review criteria for evaluating the value of health care spending initiatives and the relative value of health policy proposals. TDI's December 1998 report to the Texas Legislature effectively addresses the strengths and weaknesses associated with CEAs (pp. 113 – 124). While we certainly recognize the value of a rigorous, scientific review of all mandate proposals, it is not the centerpiece of our proposed review methodology for the following reasons:

- Problems with data availability;
- Extensive time and cost required to develop CEAs for all mandated benefit proposals;
- Medical treatment/cost changes over time;
- Wide variability in results;
- Ability to understand assumptions and results; and
- Cost effectiveness is not the sole relevant criteria in determining the value of a mandated benefit.

While we believe that a cost effectiveness analysis should not be the primary review criteria due to these limitations, we do agree that there should be a consistent process and application of a methodology in evaluating each mandate. The goal should be to provide legislators with consistent, adequate information to make informed decisions regarding proposed mandated benefits. In essence, the process described below collects and organizes the information we believe can reasonably be evaluated with limited time and funding in order to make a decision regarding the value of mandated benefit legislation.

Review Considerations

Following are the specific review considerations we recommend. These correspond roughly to the evaluation categories shown in the summary of results, Section II.

- Level of Demand

- Impact of Mandating the Benefit
  - Portion of Plans with Some Level of Coverage
  - Portion of Plans with Proposed Mandated Level of Coverage

- Impact of Not Covering Under Private Insurance
  - Likelihood of Receiving Treatment
  - Personal Financial Burden
  - Relative Quality and Cost Efficiency of Care

- Impact of Not Providing Treatment
  - On Health Status
  - On Economy/Society

- Health Status Impact/Efficacy
- Impact of Treatment on Sick Day/Disability Cost
- Direct Premium Cost Impact on Small Employers and Large Employers (stated as a cost per insured or cost per employee basis and as a percent of premium)
- Net Premium Cost Impact on Small Employers and Large Employers

In Section II of this report, we developed categories for each of the review considerations listed above. We recommend that the review process include assigning categories based on the evaluation of each of the items above.

Cost / Benefit Scoring System for Mandated Benefits

Based on the categories assigned to a proposed mandate for the considerations above, a value score can be developed in order to compare the mandates to each other. The scoring system would need to be developed based on impressions of the relative value of each item. We have assigned sample value scores in each category to illustrate an example of the results based on the mandates we reviewed. Following are the considerations, category definitions, and points for each result. Higher scores indicate a higher relative value for the mandate.

Cost / Benefit Scoring System for Mandated Benefits

Sample Point Assignment

Demand Level	Score
High	3
Moderate	2
Low	1

Portion of Plans with Some Level of Coverage	Score
Very High	1
High	2
Medium	3
Low to No	4

Portion of Plans with Full Level of Coverage	Score
Very High	1
High	2
Medium	3
Low to No	4

Likelihood of Receiving Treatment in Absence of Insurance Coverage	Score
Same	0
Lower	2

Personal Financial Burden in Absence of Insurance Coverage	Score
High	4
Moderate to High	3
Moderate	2
Low	0

Relative Quality & Cost Efficiency of Care in Absence of Insurance Coverage	Score
Same	0
Same or Lower	2

Impact of Not Providing Treatment on Health Status	Score
Very High	4
High	3
Moderate	2
Low to No	0

Impact of Not Providing Treatment on Economy/Society	Score
High	3
Moderate	2
Low to No	0

Health Status Impact of Treatment	Score
Positive	3
Mixed	1
Neutral	0

Impact of Treatment on Sick Day/Disability Costs	Score
High	3
Moderate	2
Low to No	1
No to Negative	0

Direct Premium Impact	Score
High	1
Moderate	2
Low	3

Net Premium Impact Level	Score
High	1
Moderate	2
Low	3

If we apply this point system to the thirteen mandated benefits, we get the following results (from highest to lowest score):

Mandate	Total Points
Chemical Dependency	29
Serious Mental Illness	27
Congenital Defects (non-Newborns)	25
HIV/AIDS	24
Handicapped Dependents	23
Childhood Immunizations	23
Congenital Defects (in Newborns)	22
Complications of Pregnancy	21
Minimum Hospital Stay for Mastectomy	15
Prostate Screening	15
Mammography	14
Minimum Hospital Stay for Maternity	14
Reconstructive Surgery	13
Oral Contraceptives	13

Details are shown in Appendix VIII. Again, this evaluation is based on a sample point system. In our sample point assignment, points in each category generally range from 0 to 4. The sample points in the premium impact categories range from 1 to 3. The Committee could consider having a "Very High" impact category with a score of zero. In extreme situations, such as extremely high cost, a negative score instead of zero could be assigned.

Milliman & Robertson would be happy to work with the Joint Interim Committee on Health Care Mandates in the development of a scoring system. The Committee would need to consider the relative value of each of the categories and assign points accordingly. The thirteen mandates we reviewed may be used as test cases in considering various point assignments.

Additional Issues

There were a number of issues we were asked to consider with respect to the proposed methodology. We address these below.

Could such an evaluation be reasonably performed within the time constraints of the Texas legislative session?

Because the evaluation is generally based on published data, rather than original research, we believe it could be performed within these time constraints. However, the feasibility will depend on the number of new mandates introduced. In addition, some preparation work prior to the session would be required. We recommend that there be a specific cut-off date to guarantee the review of a proposed mandate, as it may be more efficient to evaluate a number of them at one

time. Some mandates will be more or less difficult to evaluate than others; some considerations can be addressed with limited research while others will involve hiring of consultants and outside review.

The assigning of categories, as opposed to exact quantification, will help to streamline the process. The Internet can be a valuable resource in the research phase; accessing articles, data, and publications is significantly easier than it was in the past. If information is not available to categorize a mandate with respect to some of the considerations, it may still be possible to calculate a potential range of value scores that can still provide valuable information regarding the mandate. We believe the process can be coordinated to allow feedback on mandates within 30 days on average.

Who or what entity should conduct the evaluation?

We believe that in order to achieve consistent and unbiased results the evaluation should be performed by a single committee or entity rather than proponents of specific legislation. An option would be for the Texas Department of Insurance to coordinate the research and hiring of contractors. The process could be contracted out prior to each legislative session. The evaluation should include input from health actuaries, physicians, and health policy experts. The results of the reviews would be written documents that address each of the considerations above, show the development of a value score, and include supporting text and references. We recommend that the reports not include a specific recommendation regarding whether a benefit should be mandated, but be used as a tool for the legislative committee to provide its recommendations.

As noted earlier, we believe it would be appropriate for the Joint Committee to provide input into the development of the point values for the scoring system. As the Committee is to continue through June of 2001, we recommend that any issues that emerge in the use of the scoring system be addressed by the Committee and result in refinements as necessary prior to the end of the coming session.

Specific data elements that would typically be required to perform a cost/benefit analysis and the likelihood that such data would be obtainable within the time constraints of the Texas legislative session

- *An up-to-date healthcare reform model*: In order to develop premium cost estimates for the mandated benefits introduced in a single session, it would be useful to have an updated healthcare reform model, such as we used in Report 1. This model would allow the application of consistent assumptions to vary the mandated benefit costs by market, translate claim costs into premium rates, and develop mandated benefit costs as a percent of total premium. The goal of the model is to develop cost and premium assumptions for comprehensive healthcare products representative of these markets. This preliminary work could be completed in advance of a legislative session. Development of such a model would require contracting with an outside entity.

- *Insurance company contact information and data collection process*: One of the considerations in evaluating the mandated benefits is the level of current coverage. Obtaining this data may be difficult over the time required without advance preparation, as it likely requires surveying carriers across the state. However, it may possible to set up a system to allow more immediate feedback from a representative sample of carriers via an online form or email surveys as necessary throughout the legislative session. Again, much of the preparation could be done in advance of the legislative session.

- *Additional healthcare/premium cost data*: The development of estimated direct healthcare costs requires a variety of data sources, such as described in Report 1. While obtainable within the time constraints, it will likely require contracting with outside actuaries or other parties accustomed to developing healthcare cost estimates.

- Much of the remaining data with respect to incidence of diseases, medical efficacy, and the impact of not treating specific conditions is readily available through published sources. Many of these sources are available in full text on the Internet, while others can be easily ordered online. This published data needs to be coupled with the professional opinions of physicians.

What are the specific evaluation criteria that could reasonably be used to conduct a cost/benefit analysis?

To a large extent the specific evaluation criteria will emerge from the point values assigned in the Cost / Benefit Scoring System. There is a wide range of opinions regarding the value of mandates. These opinions range from a) the view that no mandated benefits are valid because insurance is a private industry and the marketplace will determine which benefits are appropriate, to b) the opinion that any mandate is valid if it contributes to an individual's well-being. M&R does not advocate any single position with respect to mandated benefits. However, we would consider a mandate to provide some benefit if:

- It is in demand by some not insignificant portion of the population;
- The coverage is generally not available in the applicable insured plans;
- Treatment is generally not available if the benefit is not covered by private insurance or, if it is available, it is less likely to be provided, represents a personal financial burden, or is expected to be of a lower quality or higher cost;
- Not providing treatment results in adverse physical consequences to the effected individual;
- Not providing treatment has additional societal and economic costs;
- The treatment is efficacious and contributes positively to the health status of the individual; and
- The treatment results in a lower number of sick days and lower disability benefits for employers.

Each of the above statements, if true with respect to a particular proposed mandated benefit, would favor the proposal.

These benefits need to be weighed against the cost of a mandate in determining its relative cost/benefit. The critical question is, at what point do the cost considerations outweigh the value? Again, a point system such as we have proposed may assist in this evaluation.

What is a definition of mandated benefits that could be used to determine which specific legislative proposals would be subject to the evaluation requirement?

We propose the following definition: "Legislation introduced that requires health insurance policies sold in Texas by commercial insurance companies and/or health maintenance organizations to include coverage of specific illnesses or medical conditions, coverage of services, procedures or types of treatment, or coverage of care provided by certain types of providers."

How does the proposed mandated benefit separately impact the ability of small and large employers to purchase health insurance in Texas?

The cost of mandates may be considered of greater concern in the small group market than in the large group market, since a large portion of the uninsured are employed by small companies. While the list of evaluation considerations should be the same, the committee might develop a different value score for large versus small groups, with the impact on premium cost having a greater weight for small groups.

If a mandated offering, rather than a mandated benefit is being considered, there are additional considerations which are especially critical with respect to small employers. These considerations relate to the insurability of the event and the ability for employer groups to select against the insurance plan for the coverage.

An event or condition is generally considered insurable if its occurrence is not foreseeable and the cost to the affected individual, should it occur, is relatively high. In Section IV, we discussed the adverse selection issue with respect to Serious Mental Illness benefits in small group coverage. Many benefits will result in adverse selection if structured as an offering rather than being included in all policies. Particularly for small employers, if a mandated offering is one that is subject to adverse selection, all of the other advantages of the mandates may be outweighed by the cost and selection issues.

IX. CONCLUSIONS

The specific mandated benefits that we studied are estimated to represent 6.3% to 7.6% of current group insurance costs in Texas. While that amount is not immaterial, we would not conclude that these mandates are greatly influencing the affordability and availability of health insurance to individuals in Texas. On the other hand, each mandate does add an incremental cost that may drive a marginal number of employers to choose not to offer health insurance coverage.

For that reason, additional factors should be considered in evaluating the value of a mandated benefit. The treatment and care associated with the majority of the mandates we reviewed are expected to improve and maintain the health of Texas residents. Coverage for many of the mandates will prevent affected individuals from personally bearing a large financial burden for their care or receiving lower quality care. Providing the proper treatment for a number of the conditions can increase productivity for workers and lower sick days and disability benefits. On the other hand, some of the mandates do not contribute significantly to the health and welfare of the population, but allow an insured individual to have more choice in his or her healthcare options. Whether these factors outweigh the cost issues is subject to public policy debate.

Most of the mandates do not directly impact a large portion of the population; we do not expect more than 10% of the insured population to file a claim in a year for any single mandate. However, the indirect consequences of not treating many of the associated conditions can impact society as a whole and the friends and family of those directly affected.

Future mandated benefit proposals should be carefully evaluated with respect to their cost impact as well as their expected impact on the health and welfare of the State's residents. While consistent, objective evaluations are very difficult to achieve, there are steps the State can take to improve the process.

APPENDIX I

MANDATED BENEFITS REQUIRING COVERAGE OF SPECIFIC ILLNESS, PROCEDURES OR TYPES OF TREATMENT

Mandate Benefit	Summary Of Statute Or Rule
1. Chemical Dependency ♦ Article 3.51-9, TIC ♦ Sections 3.8001-3.8030 Subchapter HH, Title 28 TAC: 01, 02, 04, 05, 07, 19, 22 06, 08-18, 20, 21 23-30	Requires the inclusion of benefits for the treatment of chemical dependency based on specific criteria established by TDI rule. In general they must be covered the same as any physical illness up to 3 separate series of treatment for each individual. Some limits are allowed but they are defined such that any UR should limit them the same way due to medical necessity criteria. All HMOs, group health insurers for all sizes and self-funded plans with >250 employees.
2. Complications of Pregnancy ♦ Section 21.405, Subchapter E, Title 28, TAC	Benefits for complications of pregnancy must be provided on the same basis as for other illnesses. All accident & health insured products. This includes cases with a hospital stay due to a diagnosis not related to pregnancy but complicated by pregnancy. This also includes ectopic pregnancies, spontaneous terminations, and cesarean sections during the period when a viable birth is not possible. This does not include abortions, cesarean sections resulting in delivery or hospitalizations due to difficult pregnancies.
3. Oral Contraceptives ♦ Section 21.404, Subchapter E, Title 28, TAC	Benefits for oral contraceptives must be provided when all other prescription drugs are covered. All accident & health insured products.
4. Congenital Defects ♦ Article 3.70-2(E), TIC ♦ Article 26.21(n), TIC ♦ Article 26.84(a), TIC ♦ Section 3.3401-3.3403, Subchapter U, Title 28, TAC ♦ Section 11.506(9)(D), Subchapter F, Title 28, TAC	Policies that provide maternity coverage or dependent coverage must automatically cover newborns for the first 31 days and must continue coverage if the insured pays the required premium and provides notification within the first 31 days. If a policy includes maternity or additional newborn children benefits, it cannot limit or exclude initial coverage of a newborn infant for a period of time, or limitations for congenital defects of a newborn child. All individual and group accident and health insurance. We were asked by TDI to research congenital defect costs for the entire population, not just newborns. We were also asked to not include newborn costs unrelated to congenital issues in the first 31 days.
5. HIV/AIDS/HIV-related illnesses ♦ Article 3.51-6, Section 3C, TIC ♦ Article 3.51-6D, TIC ♦ Article 3.50-2, Section 5(j)(1), TIC ♦ Article 3.50-3, Section 4C(1), TIC ♦ Article 3.51-5A(a)(1), TIC ♦ Section 3.3057(d), Exhibit A, Subchapter S, Title 28, TAC	Policies may not exclude or deny coverage, or cancel a policy based on a diagnosis of AIDS, HIV, or HIV-Related illness. Group accident and health insurance, Chapter 20, HMO.
6. Mammography ♦ Article 3.70-2(H), TIC	Annual mammography screening for females 35 and older must be provided on the same basis as other radiological examinations. Individual or group policy of accident & health insurance & Chapter 20.
7. Prostate Screening ♦ Article 21.53F, TIC ♦ Article 3.50-4, Section 18D, TIC ♦ Section 11.508(a)(9)(E), Subchapter F, Title 28, TAC	Policies must include annual benefits for diagnostic tests used in the detection of prostate cancer, including physical exams and prostate specific antigen (PSA) test. Individual, group or franchise insurance policy, including HMO, MEWA). Small employers are exempt.

Mandate Benefit	Summary Of Statute Or Rule
8. Serious Mental Illness ♦ Article 3.51-14, TIC	Policies must include 45 days inpatient and 60 outpatient visits without a lifetime limit on the number of days/visits on the same basis as any other physical illness for 8 diagnoses. For group insurance including HMO's it is mandated. For small group it must be offered.
9. Minimum Hospital Stay Maternity ♦ Article 21.53F, TIC ♦ Chapter 26, Subchapter A, Title 28, TAC 26.1, 26.4-26.9, 26.11-26.13, 26.15-26.20 26.3 26.10 26.14 26.27 ♦ Section 11.508(a)(7), Subchapter F, Title 28, TAC	Policies providing maternity benefits must include inpatient care for mother and child for at least 48 hours following uncomplicated vaginal delivery and 96 hours after an uncomplicated C-section. Policies with in-home post delivery care are not subject to this requirement unless medically necessary or requested by the mother. Individual, group, blanket, or franchise insurance policy, Chapter 20, HMO, MEWA.
10. Minimum Hospital Stay for Mastectomy or Lymph Node Dissection ♦ Article 21.52G, TIC ♦ Section 11.508(a)(5)(A)&(B), Subchapter F, Title 28, TAC	Policies that provide treatment of breast cancer must cover inpatient care for at least 48 hours after a mastectomy and 24 hours after lymph node dissection unless both the patient and doctor determine a shorter stay is appropriate. Individual, group, blanket, or franchise insurance policy, Chapter 20, HMO, MEWA. Small employers are exempt.
11. Reconstructive Surgery for Mastectomy ♦ Article 21.53I, TIC ♦ Section 11.508(a)(5)(A)&(B), Subchapter F, Title 28, TAC	Policies that provide coverage for mastectomy must provide coverage for breast reconstruction. Individual, group, blanket, or franchise insurance policy, Chapter 20, HMO, MEWA.
12. Handicapped Dependents Regardless of Age ♦ Article 3.70-2(C), TIC ♦ Section 3.3052(h), Subchapter S, Title 28, TAC ♦ Section 11.506(18), Subchapter F, Title 28, TAC	Policies that normally discontinue coverage of children at a certain age must allow continuation of the coverage if the child is incapable of self-employment due to mental retardation or physical handicap and chiefly dependent on the insured for support and maintenance. Any policy of accident and sickness insurance, including Chapter 20, individual & HMO.
13. Childhood Immunizations ♦ Articles 21.53F, TIC ♦ Article 20A.09F, TIC ♦ Section 11.506(2), Subchapter F, Title 28, TAC ♦ 11.508(a)(9)(G), Subchapter F, Title 28, TAC	Policies that provide benefits for a family member of the insured must cover specified immunizations from birth until the date the child is six years of age. Immunizations may not be subject to a deductible, co-payment or co-insurance requirement. Individual, group, blanket, or franchise insurance policy, Chapter 20, HMO, MEWA. Small employers are exempt. However, to comply with HMO laws (federal & state) the same benefits must be offered except copays are allowed.

APPENDIX II

There are no appendices associated with this section.

APPENDIX III

There are no appendices associated with this section.

APPENDIX IV

Oral Contraception
Marginal Cost/Savings of Coverage

MATERNITY COST SAVINGS DEVELOPMENT | **ORAL CONTRACEPTIVES COSTS**

Current Covered	per 1000 women age 15-44	number of pregs	preg rate	Breakdown of Pregnancies[a] abort*	Breakdown of Pregnancies[a] non-abort	Scripts per 1,000 Members/Year	Charge per Script	Gross Cost PMPM
Don't need contraception	310	57.1	0.18	0.0	57.1			
Need contraception								
doesn't use contr.	48.3	25.8	0.53	9.4	16.4			
use oral contr.	173	10.4	0.06	3.8	6.6	339.0	27.26	0.77
use other contr. (high risk)	116.5	18.3	0.16	6.7	11.6	or**		
use other contr. (low risk)	352.2	0.4	0.001	0.2	0.3	519.0	27.26	1.18
all	1000	112.0	0.11	20.0	92.0			

If Oral Contraception Is Not Covered	per 1000 women age 15-44	number of pregs	preg rate	Breakdown of Pregnancies[a] abort*	Breakdown of Pregnancies[a] non-abort
Don't need contraception	310	57.1	0.18	0.0	57.1
Need contraception					
wouldn't use contr.	57.0	30.4	0.53	11.1	19.3
would use oral contr.					
original users of oral contr.	173.0	10.4	0.06	3.8	6.6
switched to no method	-8.7	-0.5	0.06	-0.2	-0.3
switched to other contr.	-17.3	-1.0	0.06	-0.4	-0.7
would use other contr. (high risk)	133.8	21.0	0.16	7.7	13.4
would use other contr. (low risk)	352.2	0.4	0.001	0.2	0.3
all	1000	117.8	0.12	22.1	95.7

Assumes 5% of Oral Contraceptive Users Switch to No Method
Assumes 10% of Oral Contraceptive Users switch to Other Contraceptives, all of which are from high risk group

		abort* per 1000	nonabort per 1000	total cost	Per Woman per month	PMPM
Current	number	20.0	92.0			
	cost	375	6,657			
	total cost	7,494	612,718	620,213	51.68	10.85
Not Covered	number	22.1	95.7			
	cost	375	6,657			
	total cost	8,283	637,194	645,477	53.79	11.30

PMPM savings by covering	0.44	57%	savings as a percent of costs
PMPM Gross Drug Costs	0.77	37%	using alternate cost estimate
PMPM net savings (cost)	(0.33)		

* non-therapeutic abortions

a. We assume an abortion rate of 36.4% in Texas, based on the fact that there are 20 abortions per 1000 women (see 5, Cost Effectiveness Summary) and there are 54.9 unwanted pregnancies per 1000 as calculated above

**first is from Report 1 and is a blend of HCG and assumption that 17.3% of women age 15 - 44 take oral contraceptives; second is based on the 17.3% assumption. Repor 1 includes impact of underreporting of claims/different source data or less than 12 scripts per year

Oral Contraception
SENSITIVITY TEST 1
Marginal Cost/Savings of Coverage

MATERNITY COST SAVINGS DEVELOPMENT | **ORAL CONTRACEPTIVES COSTS**

Current Covered	per 1000 women age 15-44	number of pregs	preg rate	Breakdown of Pregnancies[a] abort*	non-abort	Scripts per 1,000 Members/Year	Charge per Script	Gross Cost PMPM
Don't need contraception	310	57.1	0.18	0.0	57.1			
Need contraception								
doesn't use contr.	48.3	25.8	0.53	9.4	16.4			
use oral contr.	173	10.4	0.06	3.8	6.6	339.0	27.26	0.77
use other contr. (high risk)	116.5	18.3	0.16	6.7	11.6			
use other contr. (low risk)	352.2	0.4	0.001	0.2	0.3			
all	1000	112.0	0.11	20.0	92.0			

If Oral Contraception Is Not Covered	per 1000 women age 15-44	number of pregs	preg rate	Breakdown of Pregnancies[a] abort*	non-abort
Don't need contraception	310	57.1	0.18	0.0	57.1
Need contraception					
wouldn't use contr.	51.8	27.6	0.53	10.1	17.6
would use oral contr.					
original users of oral contr.	173.0	10.4	0.06	3.8	6.6
switched to no method	-3.5	-0.2	0.06	-0.1	-0.1
switched to other contr.	-8.7	-0.5	0.06	-0.2	-0.3
would use other contr. (high risk)	125.2	19.7	0.16	7.2	12.5
would use other contr. (low risk)	352.2	0.4	0.001	0.2	0.3
all	1000	114.5	0.11	20.9	93.6

Assumes 2% of Oral Contraceptive Users Switch to No Method
Assumes 5% of Oral Contraceptive Users switch to Other Contraceptives, all of which are from high risk group

		abort* per 1000	nonabort per 1000	total cost	Per Woman per month	PMPM
Current	number	20.0	92.0			
	cost	375	6,657			
	total cost	7,494	612,718	620,213	51.68	10.85
Not Covered	number	20.9	93.6			
	cost	375	6,657			
	total cost	7,833	623,220	631,053	52.59	11.04

PMPM savings by covering	0.19	25% savings as a percent of costs
PMPM Gross Drug Costs	0.77	
PMPM net savings (cost)	(0.58)	

* non-therapeutic abortions

a. We assume an abortion rate of 36.4% in Texas, based on the fact that there are 20 abortions per 1000 women (see 5, Cost Effectiveness Summary) and there are 54.9 unwanted pregnancies per 1000 as calculated above

Oral Contraception
SENSITIVITY TEST 2
Marginal Cost/Savings of Coverage

MATERNITY COST SAVINGS DEVELOPMENT | **ORAL CONTRACEPTIVES COSTS**

Current Covered	per 1000 women age 15-44	number of pregs	preg rate	Breakdown of Pregnancies[a] abort*	non-abort	Scripts per Members/	Charge per Script	Gross Cost PMPM
Don't need contraception	310	57.1	0.18	0.0	57.1			
Need contraception								
doesn't use contr.	48.3	25.8	0.53	9.4	16.4			
use oral contr.	173	10.4	0.06	3.8	6.6	339.0	27.26	0.77
use other contr. (high risk)	116.5	18.3	0.16	6.7	11.6			
use other contr. (low risk)	352.2	0.4	0.001	0.2	0.3			
all	1000	112.0	0.11	20.0	92.0			

If Oral Contraception Is Not Covered	per 1000 women age 15-44	number of pregs	preg rate	Breakdown of Pregnancies[a] abort*	non-abort
Don't need contraception	310	57.1	0.18	0.0	57.1
Need contraception					
wouldn't use contr.	65.6	35.0	0.53	12.8	22.3
would use oral contr.					
original users of oral contr.	173.0	10.4	0.06	3.8	6.6
switched to no method	-17.3	-1.0	0.06	-0.4	-0.7
switched to other contr.	-26.0	-1.6	0.06	-0.6	-1.0
would use other contr. (high risk)	142.5	22.4	0.16	7.2	12.5
would use other contr. (low risk)	352.2	0.4	0.001	0.2	0.3
all	1000	122.7	0.12	22.9	97.1

Assumes 10% of Oral Users Switch to No Method
Assumes 15% of Oral Users switch to Other Contraceptives,
all of which are from high risk group

		abort* per 1000	nonabort per 1000	total cost	Per Woman per month	PMPM
Current	number	20.0	92.0			
	cost	375	6,657			
	total cost	7,494	612,718	620,213	51.68	10.85
Not Covered	number	22.9	97.1			
	cost	375	6,657			
	total cost	8,587	646,603	655,189	54.60	11.47

PMPM savings by covering	0.61	79% savings as a percent of costs
PMPM Gross Drug Costs	0.77	
PMPM net savings (cost)	(0.16)	

* non-therapeutic abortions
We assume an abortion rate of 36.4% in Texas, based on the fact that there are 20 abortions per 1000 wo
(see 5, Cost Effectiveness Summary) and there are 54.9 unwanted pregnancies per 1000 as calculated above

Oral Contraception
Average Costs

Average Cost of Birth
Health

	PMPM cost
Hospital Inpatient -- Maternity	
Mother	$4.20
Well Newborn	1.08
Non-Deliveries	0.54
Hospital Outpatient	
Maternity Non-Deliveries	$0.42
Physician	
Maternity	
Normal Deliveries	$2.28
Cesarean Deliveries	0.94
Non-Deliveries	0.25
	$9.71

Average Cost of Pregnancy
*** excluding non-therapeutic abortions**

births per 1000 women 15-44[b]	65	
women 15-44 U.S.	60.1	million
gross number of births per year	3.91	million
pregnancies minus abortions per 1000 women 15-44[b]	80	
women 15-44 U.S.	60.1	million
gross number of pregnancies per year*	4.81	million
PMPM cost for Birth Claims	$9.71	
number of births per member	0.0142	
Average Maternity cost per Birth	$8,194	
number of pregnancies per member*	0.0175	
Average Maternity cost per Pregnancy	$6,657	

Average Cost of Non-therapeutic Abortion

Average Cost of Abortion	$375

b. See 5, Cost Effectiveness Summary

Appendix IV - C

Oral Contraception
Profile of Pregnancies[c]

	number in millions	percentage
Wanted Births	2.7	0.44
Unwanted Births	1.2	0.19
Abortions	1.4	0.23
Miscarriages	0.9	
from Wanted pregnancies	0.45	0.07
from Unwanted pregnancies	0.45	0.07
total	6.2	1.00

c. See 3, Cost Effectiveness Summary

Women who switch from Oral Contraception to No Method

Women who switch from
Oral Contraception to No Method

Savings by Covering

	per 1000 women age 15-44	number of pregs	preg rate	Breakdown of Pregnancies[1] abort*	non-abort
Before Switching	8.7	4.6	0.53	1.67	2.92
After Switching	8.7	0.5	0.06	0.19	0.33
Difference in Occurences				1.48	2.59
Cost Per Occurrence				$375	$6,657
PMPM Savings from Coverage				0.01	0.30
Total PMPM Savings					0.31

Costs

Women who use Oral Contraception (mandate scenario)	per 1000 women age 15-44	percentage of oral contr. Users	portion of PMPM cost
users of oral contraception in either scenario	147.1	85%	0.65
would switch to no method	8.7	5%	0.04
would switch to other contraceptior	17.3	10%	0.08
PMPM Cost of Oral Contraception			0.77

* non-therapeutic abortions

Women who switch from Oral Contraception to High Risk Non-Oral Options

Women who switch from
Oral Contraception to High Risk Non-Oral Options

Savings

	per 1000 women age 15-44	number of pregs	preg rate	Breakdown of Pregnancies[1] abort*	non-abort
Before Switching	17.3	2.7	0.16	0.99	1.73
After Switching	17.3	1.0	0.06	0.38	0.66
Difference in Occurences				0.61	1.07
Cost Per Occurrence				$375	$6,657
PMPM Savings from Coverage				0.00	0.12
Total PMPM Savings					0.13

Costs (same as page 4)

Women who use Oral Contraception (mandate scenario)	per 1000 women age 15-44	percentage of oral contr. Users	portion of PMPM cost
users of oral contraception in either scenario	147.1	85%	0.65
would switch to no method	8.7	5%	0.04
would switch to other contraception	17.3	10%	0.08
PMPM Cost of Oral Contraception			0.77

* non-therapeutic abortions

Failure Rates of Non-Oral Contraception

High Risk (higher than oral contraception)	failure rate	% of population
Diaphragm	20.0%	1%
Male Condom	14.0%	13%
Female Condom	21.0%	0%
Sponge	33.0%	1%
composite	15.7%	15%

Low Risk (lower than oral contraception)	failure rate	% of population
Implant	0.30%	0.9%
Injectible	0.30%	1.9%
Sterilization	0.10%	24.8%
composite	0.12%	28%

Appendix IV - E

Final Version at Best Assumptions

See Description of Model for Sources and Assumptions

	%	< 2 Visits (OV or OP)	>=1 ER w/ out IP	>= 1 IP	No PI or NNRTI*
No Insurance	20%	25%	16%	13%	29%
Medicaid	29%	14%	21%	18%	27%
Medicare	18%	13%	18%	19%	22%
Private HMO	16%	15%	10%	8%	19%
Private Other	17%	15%	10%	10%	18%
Total	100%	16.4%	15.8%	14.2%	23.7%
Total Private	33%	15%	10%	9%	19%
Total Other	67%	17%	19%	17%	26%
Total	100%	16.4%	15.8%	14.2%	23.7%

CD4 Distribution*	
CD4 < .50	90%
CD4 < .20	50%

Associated Annual Costs					
If Yes (e.g., if < 2 visits)		60	600	32250	0
If No (e.g., if >=2 visits)		240	40	2150	10000

Associated Annual Costs						Total
Private	33%	213.00	96.00	4,868.12	8,146.36	13,323.48
Other	67%	209.37	144.73	7,199.61	7,381.34	14,935.06
Total	100%	210.57	128.65	6,430.22	7,633.80	14,403.24

Assumed Total Costs	Outpatient	ER	Hospital	Drugs	Total	Ratio of Private to Other	Ratio Adjusted for Severity
%	15%	2%	43%	40%			
	3,600	480	10,320	9,600	24,000		
Private (based on relative)	3,641.54	358.19	7,812.95	10,244.58	22,057.27		
Other	3,579.54	540.00	11,554.81	9,282.52	24,956.87	**0.88**	**0.94**
Total	3600	480	10320	9600	24,000		

Development of Severity Adjustment

		% Asymptomatic	% Symptomatic	% AIDS	
No Insurance	20%	14%	63%	23%	100%
Medicaid	29%	8%	51%	41%	100%
Medicare	18%	4%	39%	57%	100%
Private	33%	14%	51%	35%	100%
Total	100%	10.5%	51.2%	38.3%	
Private		14%	51%	35%	
Other		9%	51%	40%	

	Assumed Relative Costs (judgement)			Wted Avg Private	Wted Avg Other	Severity Adjustment
Severity Calculation	0.50	1.00	2.00	1.280	1.356	0.944

AIDS/HIV - Description of model used to determine relative costs between private insurance and other coverages, including the uninsured

The information regarding relative treatment frequencies are from "*Variations in the Care of HIV-Infected Adults in the United States"*. The final version is based on Table 2, data from the most recent follow-up. All percentages are straight from Table 2 except for the prescription drug utilization information, which was adjusted to be the percent of the entire population studied who did not receive Protease Inhibitors (PI) and Nonnucleoside reverse transcriptase inhibitors (NNRTI) as of 1/31/98, including those with CD4>.50 (assuming none of those received PI and NNRTI). This varies from the source data, which reported the portion of those with CD4<.50.

> Sample calculation; no insurance, no PI or NNRTI:
> 21% (from table) x 90% (those with CD4<.50) + 10% (CD4>.50) = 29%

Next, we assigned annual costs assuming positive vs. negative response, under the following best estimate assumptions:

> If had <2 Office or OP Visits in last 6 months, assumed they had 1 visit in the year at $60; if had >= 1 visit, assumed they had 4 in year at $60;
>
> If had >=1 ER visit without hospitalization in last 6 months, assumed 1.5 visits in the year on average, at $400 each. If no ER visits, assumed 10% had in the year, at $400.
>
> If had >=1 inpatient visit in 6 months, assumed to have 1.5 at $21,500 each (M&R Healthcost Guidelines, July 2000). For those with no inpatient visit in the last 6 months, we assumed 10% would have a stay in a year, at $21,500.

If did not receive PI or NNRTI by 1/31/98, assumed drug cost = $0; if did receive, assumed annual drug cost is $10,000.

> NOTE: Results only sensitive to relativities between yes/no treatment costs, with inpatient hospital and drugs being the most influential.

The costs above do not represent all treatment costs. We applied ratios to get to relative costs between private/other coverages. Then adjusted to a total cost number ($24,000). Again, total costs do not impact results.

Relative costs by type of service (Outpatient (OP), Emergency Room (ER), Inpatient (IP), Prescription Drugs (Rx)) are from RAND *Research Highlights.*

The above assumptions result in costs for private coverage at .88 times other coverages, before adjusting for severity. This is due to hospital costs at being 32% less in private coverages, offset by drug costs being 10% higher.

Severity adjustment: Clinical stages by coverage are from "HIV Costs and Services Utilization Study Policy Brief", http://www.rand.org/publications. Relative costs are based on judgement; sensitivity testing included varying the relative costs underlying the sensitivity adjustment. After adjusting for severity, we estimate that the costs for private coverage are .94 times the costs for other coverages.

Conclusion: We estimate that costs are 5 – 10% lower in private insurance after adjusting for severity.

Reasonableness of results: M&R research report ("*HIV/AIDS Managed Care",* Sherrie Dulworth, BSN, Bruce Pyenson, FSA, MAAA) suggests HMOs can reduce costs by 25% overall from fee-for-service coverages and lower inpatient costs by 70%. A 5 – 10% differential between private insurance and other coverages appears reasonable in comparison.

Appendix IV-F
Analysis of Mammography Screening Impact

Without Screening Coverage

		# Per 100,000 Women 40+
20%	Of Women 40+ Screen (judgement)	20,000
0	Cost per Screening to Insurance Company (not covered)	
-	PMPM Per Woman 40+	
88.05%	% of Women Screened W/ Negative Results	17,610
10.92%	False Positives	2,185
0.05%	Clinically Insignificant Cancer	10
0.98%	Clinically Evident Disease	195
100.0%		

Cost Per Additional Treatment Due to Screening

-	Women Screened W/ Negative Results
1,203	False Positives
$15,733	Clinically Insignificant Cancer (Assume stage 0)
23,639	Clinically Evident Disease
6.17	PMPM Per Woman 40+ of Additional Treatment
6.17	Total Insured Claim Cost PMPM (Female 40+)
19.04%	% of Population Female 40+
1.17	Claim Cost PMPM for Entire Insured Population
-	Additional PMPM from Base

Cost Per Patient of Cancer Treatment

Location	% of Cases	PV(cost)
Stage 0	7.40%	$15,733
Stage 1	35.10%	$22,191
Stage 2	39.20%	$24,189
Stage 3	11.60%	$25,440
Stage 4	6.70%	$27,793
All	100%	23,249

Split of PMPM Costs

-	Screening
0.42	False Positives
0.03	Clinically Insignificant Cancer
0.73	Clinically Evident Disease
-	Screening and treatment costs female age 35-39
1.17	Total

Assumptions Underlying Test Results:
12% mammographies are abnormal (judgement)
8.6% of abnormal mammographies are diagnosed with cancer, 1995 trended to 2000 (judgement, better equipment) (2)
1/3 of stage 0 cancers are life threatening (3)
Distribution of cancer at each stage, 1985 (4)
Cost estimates by treatment type from report 1
Combinations of the above assumptions are used to estimate false positives,
clinically insignificant cancers, and clinically evident cancers.

Cost of Treatment By Year

	Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
Stage 0	13,038.09	2,286.72	216	216	108	108	108
Stage 1	19,035.91	2,784.06	216	216	108	108	108
Stage 2	19,638.77	4,290.31	216	216	108	108	108
Stage 3	18,625.83	6,735.16	216	216	108	108	108
Stage 4	16,707.88	11,262.11	216	216	216	108	108

PV @	0.08
Stage 0	$15,733
Stage 1	$22,191
Stage 2	$24,189
Stage 3	$25,440
Stage 4	$27,793

Assumed portion of women age 35-39 who screen: 4.0%
0 Cost (not covered) Based on relative incidence of disease

With Screening Coverage

		# Per 100,000 Women 40+
36%	Of Women 40+ Screen (judgement)	36,061
108	Cost per Screening to Insurance Company	
3.25	PMPM Per Woman 40+	
92.50%	% of Women Screened W/ Negative Results	33,356
6.86%	False Positives	2,472
0.08%	Clinically Insignificant Cancer	28
0.57%	Clinically Evident Disease	204
100.0%		

Cost Per Additional Treatment

-	Women Screened W/ Negative Results
1,203	False Positives
$15,733	Clinically Insignificant Cancer (Assume stage 0)
22,960	Clinically Evident Disease
6.75	PMPM Per Woman 40+ of Additional Treatment
10.00	Total Insured Claim Cost PMPM (Female 40+)
19.04%	% of Population Female 40+
1.90	Claim Cost PMPM for Entire Insured Population
0.73	Additional PMPM from Base

Cost Per Patient of Cancer Treatment

Location	% of Cases	PV(Cost)
Stage 0	18.25%	$15,733
Stage 1	39.98%	$22,191
Stage 2	30.72%	$24,189
Stage 3	7.02%	$25,440
Stage 4	4.04%	$27,793
All	100%	22,081

Split of PMPM Costs

0.62	Screening (note: gross costs vs. step 1 net)
0.47	False Positives
0.07	Clinically Insignificant Cancer
0.74	Clinically Evident Disease
0.05	Screening and treatment costs female age 35-39
1.96	Total

Additional Costs Split

0.62	Screening
0.05	False Positives
0.05	Clinically Insignificant Cancer
0.01	Clinically Evident Disease
0.05	Screening and treatment costs female age 35-39
0.78	Total

Assumptions Underlying Test Results:

7.5% mammographies are abnormal (1)
8.6% of abnormal mammographies are diagnosed with cancer, 1995 trended to 2000 (judgement, better equipment) (2
1/3 of stage 0 cancers are life threatening (3)
Distribution of cancer at each stage, 1995 trended to 2000 (judgement) (4)
Cost estimates by treatment type from report 1
Combinations of the above assumptions are used to estimate false positives,
clinically insignificant cancers, and clinically evident cancers.

Sources:
(1)Tracking Program Outcomes - CDC; http://www.cdc.gov/cancer/nbccedp/spot.html
(2)Tracking Program Outcomes - CDC; http://www.cdc.gov/cancer/nbccedp/spot.html
(3)Breast Cancer Facts & Figures 1996; http://www.cancer.org/statistics/96bcff/bcffsurv.html
(4)The National Cancer Data Base 10-Year Survey of Breast Carcinoma Treatment at Hospitals in the United States

Assumed portion of women age 35-39 who screen: 10.0% (Report 1)
0.05 PMPM for full insured population
0.05 Ratioed up for Treatment Costs
Very minor additional cost

Appendix IV-G
Analysis of Prostate Screening Impact

In Absence of Screening Coverage

		# Per 100,000 Men 50+
10%	Of Men 50+ Screen (judgement)	10000
0	Cost per Screening to Insurance Company (not covered)	
-	PMPM Per Man 50+	
84.0%	% of Men Screened W/ Negative Results	8,398.3
12.0%	False Positives	1,201.3
1.3%	Clinically Insignificant Cancer	133.5
2.7%	Clinically Evident Disease	266.9

Cost Per Additional Treatment Due to Screening

-	Men Screened W/ Negative Results
200.00	False Positives
$16,952	Clinically Insignificant Cancer (Assume local)
24,135	Clinically Evident Disease
7.45	PMPM Per Male 50+ of Additional Treatment
7.45	Total Insured Claim Cost PMPM (Male 50+)
7.30%	% of Population Male 50+
0.54	Claim Cost PMPM for Entire Insured Population
-	Additional PMPM from Base

Cost Per Patient of Cancer Treatment

Location	% of Cases	PV(cost)
Local	69%	$16,952
Regional	21%	$29,665
Distant	10%	$38,142
All	100%	**21,741**

Split of PMPM Costs

-	Screening
0.01	False Positives
0.14	Clinically Insignificant Cancer
0.39	Clinically Evident Disease
-	Screening and treatment costs male age 40 - 49
0.54	Total

Sources of Assumptions:

Assumptions Underlying Testing Results:
In initial scenario:
1 clinically insignificant cancer for every 2 clinically evident cancers (judgement)
3 false positives for each cancer detected (including insignificant) (judgement)
Incidence rate from page 2 development
remainder are false positives

Initial location distribution from National Cancer Institute Data
Treatment costs by location based on relative points in M&R *Small Group Medical Underwriting Guidelines*
Costs of treatment by year based on M&R longitudinal study of health fund with 150,000 members

Cost of Treatment By Year

	Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
Local	10013	3070	1108	1108	1108	1108	1108
Regional	17523	5372	1939	1939	1939	1939	1939
Distant	22529	6908	2493	2493	2493	2493	2493

PV @ 8%

Local	$16,952
Regional	$29,665
Distant	$38,142

Assumed portion of men age 40 - 49 who screen: 0.2%
0 Cost (not covered) Based on relative incidence of disease

With Screening Coverage

		# Per 100,000 Men 50+
30%	Of Men 50+ Screen (judgement)	30000
81	Cost per Screening to Insurance Company	
2.03	PMPM Per Man 50+	
86.1%	% of Men Screened W/ Negative Results	25,824.8
12.3%	False Positives	3,693.9
0.5%	Clinically Insignificant Cancer	160.4
1.1%	Clinically Evident Disease	320.9

Cost Per Additional Treatment

-	Men Screened W/ Negative Results
200.00	False Positives
$16,952	Clinically Insignificant Cancer
23,676	Clinically Evident Disease
9.21	PMPM Per Male 50+ of Additional Treatment
11.24	Total Insured Claim Cost PMPM (Male 50+)
7.30%	% of Population Male 50+
0.82	Claim Cost PMPM for Entire Insured Population
0.28	Additional PMPM from Base

Cost Per Patient of Cancer Treatment

	Prior Cases	83.2%	New Cases	16.8%	Blend	100%
Location	% of Cases	PV(Cost)				
Local	69%	$16,952	80%	$16,952	$16,952	
Regional	21%	29,665	15%	29,665	29,665	
Distant	10%	38,142	5%	38,142	38,142	
All	100%	21,741	100%	19,918	**21,434**	

Split of PMPM Costs

0.15	Screening (note: gross costs vs. step 1 net)
0.04	False Positives
0.17	Clinically Insignificant Cancer
0.46	Clinically Evident Disease
0.01	Screening and treatment costs male age 40 - 49
0.83	Total

Additional Costs Split

0.15	Screening
0.03	False Positives
0.03	Clinically Insignificant Cancer
0.07	Clinically Evident Disease
0.01	Costs male age 40 - 49
0.29	**Total**

Assumptions:

Kept same relationship between negatives and false positives as initial

1 clinically insignificant cancer for every 2 clinically evident cancers
Incidence rate from page 2 development

Assumed portion of men age 40 - 49 who screen: 0.6%
0.00 PMPM for full insured population Based on relative incidence of disease
0.01 Ratioed up for Treatment Costs
Very minor additional cost

Appendix IV-G
Prostate Screening Impact
Supporting Assumptions

Based on Current Screening

Age at Diagnosis	Incidence Rate per 100,000	Texas 2000 Male Pop (000s)	# of Cases	Calc Percent of Cases
18-40	0	3,499	-	0.0%
40-44	3	1,616	48	0.1%
45-49	20	1,360	272	0.8%
50-54	93	1,121	1,042	3.2%
55-59	255	863	2,200	6.8%
60-64	554	715	3,962	12.2%
65-69	977	603	5,895	18.1%
70-74	1335	525	7,004	21.5%
75-79	1408	411	5,785	17.8%
80-84	1351	260	3,507	10.8%
85+	1225	230	2,819	8.7%
Ages 50 - 64 Totals	266.9	2,699	7,204	22.1%
All	290.4	11,202	32,534	100.0%

Source of Incidence Rates: SEER Data (1973 - 1995) for Current

With 30% Screening

Age at Diagnosis	Incidence Rate	# of Cases	Percent of Cases
18-40	0	15	0.0%
40-44	7	116	0.4%
45-49	37	503	1.5%
50-54	124	1,390	4.3%
55-59	316	2,729	8.4%
60-64	635	4,542	14.0%
65-69	1032	6,228	19.1%
70-74	1265	6,638	20.4%
75-79	1242	5,101	15.7%
80-84	1271	3,300	10.1%
85+	858	1,973	6.1%
Wted Avg	320.9	8660.3	26.6%
	290.4	32,534	100.0%

30% detected 5 years earlier (judgement)

Appendix IV-M
Table IV.M.1-App

Estimated Vaccination Coverage with Individual Vaccines and Selected Vaccination Series
Among Children 19-35 Months of Age by State
US, National Immunization Survey, 1999

	Population	mandate	3+DTP†	4+DTP‡	3+Polio§	1+MMR‖	3+Hib¶	3+HepB**	1+Var††	3:3:1‡‡	4:3:1§§	4:3:1:3‖‖	4:3:1:3:3¶¶
US National	272690813		95.90	83.30	89.60	91.50	93.50	88.10	57.50	86.10	79.90	78.40	73.20
Alabama	4369862	**N**	96.30	83.90	87.80	90.10	94.80	90.70	71.30	84.80	79.70	78.40	74.10
Alaska	619500	**N**	96.00	83.50	91.70	90.70	92.40	88.80	29.90	87.50	82.20	80.10	74.50
Arizona	4778332	**N**	91.6	76.50	84.30	87.40	90.40	84.40	59.30	81.70	73.90	72.40	67.30
Delaware	753538	**N**	98.30	83.60	93.00	94.20	96.20	87.70	61.40	89.40	80.00	78.20	69.00
Idaho	1251700	**N**	92.70	75.00	87.00	86.10	90.70	81.60	16.10	80.70	70.00	69.40	65.00
Illinois	12128370	**N**	95.80	82.00	87.90	91.40	94.20	87.60	43.60	84.90	78.80	77.40	72.00
Kentucky	3960825	**N**	98.70	92.50	91.30	93.70	97.10	93.80	61.70	89.70	88.60	87.60	84.40
Maine	1253040	**N**	97.00	86.90	92.10	92.00	95.90	87.20	43.10	89.30	84.10	82.90	76.80
Michigan	9863775	**N**	94.50	78.90	87.90	89.80	92.10	87.80	43.50	83.80	75.90	74.40	70.90
Nevada	1809253	**N**	91.20	76.90	85.50	88.70	89.00	84.90	48.30	82.70	73.40	73.10	68.50
New Hampshire	1201134	**N**	99.20	91.20	92.90	93.30	98.50	90.50	54.00	88.00	84.50	84.50	78.40
New Jersey	8143412	**N**	98.50	83.90	90.30	94.10	97.50	90.90	59.70	87.70	80.90	80.80	75.30
North Carolina	7650789	**N**	96.60	84.40	87.60	92.50	96.60	89.00	59.40	86.10	81.80	81.80	77.10
North Dakota	633666	**N**	95.70	88.40	89.60	90.80	92.90	90.20	45.90	85.50	83.00	80.40	76.30
Oregon	3316154	**N**	90.90	79.30	81.00	86.10	88.90	80.90	57.90	77.30	73.20	72.30	63.80
South Carolina	3885736	**N**	95.90	83.70	89.60	90.90	94.80	92.00	65.10	85.60	81.10	80.60	78.00
South Dakota	733133	**N**	97.50	86.50	93.00	93.00	94.90	90.50	17.50	88.80	83.40	81.70	76.90
Tennessee	5483535	**N**	96.00	82.40	86.20	89.60	92.20	86.20	56.90	83.90	79.50	77.70	70.00
Vermont	593740	**N**	99.50	94.80	93.30	99.40	99.50	90.90	46.80	92.90	90.70	90.50	85.20
Washington	5756361	**N**	94.40	80.90	88.60	89.30	92.60	85.50	32.10	83.30	76.50	74.90	67.10
Wyoming	479602	**N**	96.70	86.30	93.70	92.60	94.90	93.90	46.10	89.50	83.50	82.80	81.50
Arkansas	2551373	**Y**	93.50	79.90	89.40	86.90	91.30	83.20	58.00	84.70	78.50	77.10	70.40
California	33145121	**Y**	95.70	81.30	91.10	92.80	92.50	87.90	69.70	87.70	78.30	75.30	70.50
Colorado	4056133	**Y**	95.20	80.80	88.60	90.40	92.90	85.60	52.90	83.60	77.20	75.80	69.60
Connecticut	3282031	**Y**	98.20	93.00	91.00	95.40	96.80	93.60	62.70	89.10	87.10	85.90	82.30
District of Columbia	519000	**Y**	94.40	83.50	86.60	91.20	92.40	86.20	77.90	83.60	78.50	77.50	70.90
Florida	15111244	**Y**	96.70	86.00	92.70	91.70	93.10	92.90	50.70	87.90	82.00	80.30	77.90
Georgia	7788240	**Y**	97.30	85.40	92.60	91.50	95.30	91.00	61.70	88.70	83.10	81.90	77.90
Hawaii	1185497	**Y**	95.40	86.60	90.80	94.10	93.50	91.20	63.10	88.50	82.80	81.60	79.20
Indiana	5942901	**Y**	96.50	77.50	89.10	89.10	94.20	83.30	42.80	84.00	75.40	74.30	65.30
Iowa	2869413	**Y**	97.60	86.10	91.40	91.10	95.60	89.60	46.00	88.00	84.50	83.40	78.90
Kansas	2654052	**Y**	94.10	82.90	90.00	89.90	91.00	81.90	53.50	85.90	79.70	78.90	70.70
Louisiana	4372035	**Y**	96.90	80.20	89.60	89.80	94.30	90.50	61.00	84.20	76.90	76.80	72.30

Appendix IV-M
Table IV.M.1-App

Estimated Vaccination Coverage with Individual Vaccines and Selected Vaccination Series
Among Children 19-35 Months of Age by State
US, National Immunization Survey, 1999

	Population	mandate	3+DTP†	4+DTP‡	3+Polio§	1+MMR‖	3+Hib¶	3+HepB**	1+Var††	3:3:1‡‡	4:3:1§§	4:3:1:3‖‖	4:3:1:3:3¶¶
Maryland	5171634	**Y**	96.40	85.00	88.50	95.80	94.20	87.70	71.70	86.60	80.50	79.40	72.70
Massachusetts	6175169	**Y**	97.60	90.70	93.40	94.00	95.20	92.00	66.00	90.80	87.30	85.20	81.40
Minnesota	4775508	**Y**	99.30	90.60	93.50	95.70	97.20	90.60	61.60	91.10	87.00	85.20	78.50
Mississippi	2768619	**Y**	95.80	83.90	88.80	92.30	94.20	91.10	39.40	86.20	81.70	81.70	79.00
Missouri	5468338	**Y**	94.10	81.50	83.50	88.10	92.90	84.90	51.40	80.60	75.50	75.00	68.90
Montana	882779	**Y**	97.70	88.10	92.80	93.10	94.40	89.90	44.60	89.60	84.80	82.50	76.40
Nebraska	1666028	**Y**	96.30	86.80	91.70	91.80	93.40	92.90	58.40	89.00	83.70	81.80	79.80
New Mexico	1739844	**Y**	95.80	82.30	88.20	87.50	92.70	88.30	53.50	81.20	75.60	73.00	66.60
New York	18196601	**Y**	97.70	87.20	91.40	94.90	94.40	92.90	59.20	88.70	83.40	81.00	78.20
Ohio	11256654	**Y**	95.50	82.20	88.10	90.30	94.10	85.90	53.00	84.10	79.10	78.10	73.00
Oklahoma	3358044	**Y**	96.00	79.40	88.60	88.80	92.30	87.20	66.40	82.50	74.00	72.90	70.40
Pennsylvania	11994016	**Y**	98.20	90.00	93.10	94.30	97.40	91.20	67.00	90.70	86.60	86.00	80.80
Rhode Island	990819	**Y**	99.60	93.80	94.30	95.80	96.60	94.00	76.50	92.70	90.40	87.40	83.20
Texas	20044141	**Y**	91.80	77.50	85.20	87.90	88.10	81.70	58.90	81.60	74.70	72.40	64.80
Utah	2129836	**Y**	92.90	83.50	90.00	92.30	91.10	74.00	41.60	87.40	81.70	80.20	65.80
Virginia	6872912	**Y**	98.10	87.10	91.50	89.40	95.50	89.50	64.60	84.40	81.60	80.30	74.90
West Virginia	1806928	**Y**	99.10	85.80	92.50	93.30	97.60	92.20	51.30	89.20	82.10	81.00	77.80
Wisconsin	5250446	**Y**	98.4	87.6	92.00	94.20	96.40	90.10	49.10	89.40	85.40	84.50	78.60
standard deviation			2.17	4.58	2.89	2.78	2.48	4.02	12.81	3.35	4.59	4.59	5.57
Non-Mandate States	78665457		95.61	82.49	88.08	90.85	93.97	88.08	51.64	84.93	79.09	78.04	72.82
Mandate States	194025356		96.15	83.97	90.27	91.83	93.53	88.42	59.62	86.64	80.54	78.82	73.74
Ratio			0.99	0.98	0.98	0.99	1.00	1.00	0.87	0.98	0.98	0.99	0.99
US National			95.9	83.3	89.6	91.5	93.5	88.1	57.5	86.1	79.9	78.4	73.2
Texas			91.80	77.50	**85.20**	**87.90**	**88.10**	**81.70**	**58.90**	81.60	**74.70**	72.40	64.80
Texas Adjusted w/o mandate			91.29	76.14	**83.13**	**86.96**	**88.52**	**81.38**	**51.02**	79.99	**73.35**	71.69	63.99

3 Ways to Cover Mandate

a)	**3+Polio**	**1+MMR**	**3+Hib**	**3+HepB**	**1+Var**	**4:3:1**	
b)	3+Polio	1+MMR		3+HepB	1+Var		4:3:1:3
c)	3+Polio	1+MMR			1+Var		4:3:1:3:3

All Ages

	Without Vaccine				U.S. Current	With Vaccine 1998 (U.S. Population = 270,299, except where noted)		
	cases/year[1]	years averaged	yearly population2 (millions)	cases/ 100,000	Vaccination Level	cases	cases/ 100,000	Marginal cases/100,000
diphtheria	175,885	1920-1922	108,349	162.3	0.799	0	0.0	162.3
tetanus	1,314	1922-1926	113,866	1.2	0.799	1	0.0	1.2
pertussis	147,271	1922-1925	112,984	130.3	0.799	6279	2.3	128.0
polio								
- paralysis	16,316	1951-1954	158,910	10.3	0.896	0	0.0	10.3
- death[3]	1,879	1952-1954	158,910	1.2	0.896	0	0.0	1.2
measles	503,282	1958-1962	180,722	278.5	0.915	89	0.0	278.5
mumps	152,209	1968	200,706	75.8	0.915	606	0.2	75.6
rubella								
-rubella	47,745	1966-1968	198,659	24.0	0.915	345	0.1	23.9
-congenital rubella synd.	823	1966-1968	198,659	0.4	0.915	5	0.0	0.4
Hib	20,000	1988[4]	244,499	8.2	0.935	54	0.0	8.2
hepatitis b (infant, child)[5]	30,000	1991	252,127	11.9	0.881	10,000	3.7	8.2
varicella (chicken pox)[6]	3,953,000	1994	260,289	1,518.7	0.575	240000 [7]	88.8	1,429.9

1) http://www.cdc.gov/od/oc/media/fact/impvacc.htm
2) http://www.npg.org/facts/us_historical_pops.htm
3) http://www.cdc.gov/epo/mmwr/preview/mmwrhtml/00056803
4) http://www.niaid.nih.gov/publications/economic/vaccine.htm
5) Includes children only.
6) Cost-effectiveness of a Routine Varicella Vaccination Program for US Children. Lieu, Tracy, et al. JAMA, February 2, 1994--Vol 271, No. 5, pp. 375-381

Vaccine Coverage by Disease
With Mandate vs. Without Mandate

	Coverage With Mandate	Estimated Coverage W/O Mandate	Marginal Incr. in Coverage from Mandate	Marginal Number of TX Children Immunized*	Marginal Number of Cases Prevented
diphtheria	0.747	0.734	0.013	22,493	587
tetanus	0.747	0.734	0.013	22,493	4
pertussis	0.747	0.734	0.013	22,493	433
polio					
- paralysis	0.747	0.734	0.013	22,493	50
- death	0.747	0.734	0.013	22,493	6
measles	0.879	0.870	0.009	15,688	574
mumps	0.879	0.870	0.009	15,688	156
rubella					
-rubella	0.879	0.870	0.009	15,688	49
-congenital rubella synd.	0.879	0.870	0.009	15,688	1
Hib	0.881	0.881	0.000	0	0
hepatitus b (infant, child)	0.817	0.814	0.003	5,330	6
varicella (chicken pox)[6]	0.589	0.51	0.08	131,502	39,303
Total					41,169

* under age 6

Savings from Immunization and Marginal Savings of Mandate
With Mandate vs. Without Mandate

	Marginal Cases/ 100,000	No Immun.	No Coverage	No Mandate	Mandate	Marginal	Cases Prevented / 100000 No Immun.	No Coverage	No Mandate	Mandate	Marginal	average savings/ case	PMPM Savings No Immun.	No Coverage	No Mandate	Mandate	Marginal
diphtheria	162.3	0.00	0.49	0.734	0.747	0.013	0.0	106.3	159.4	162.3	2.9	29800.00	0.00	2.64	3.96	4.03	0.07
tetanus	1.2	0.00	0.49	0.734	0.747	0.013	0.0	0.7	1.1	1.2	0.0	0.00	0.00	0.00	0.00	0.00	0.00
pertussis	128.0	0.00	0.49	0.734	0.747	0.013	0.0	78.4	117.5	119.7	2.2	1448.00	0.00	0.09	0.14	0.14	0.00
polio																	
- paralysis	10.3	0.00	0.55	0.831	0.852	0.021	0.0	6.7	10.0	10.3	0.2	7653.50	0.00	0.04	0.06	0.07	0.00
- death	1.2	0.00	0.55	0.831	0.852	0.021	0.0	0.8	1.2	1.2	0.0	110.00	0.00	0.00	0.00	0.00	0.00
measles	278.5	0.00	0.58	0.870	0.879	0.009	0.0	176.4	264.6	278.5	2.9	996.25	0.00	0.15	0.22	0.23	0.00
mumps	75.6	0.00	0.58	0.870	0.879	0.009	0.0	47.9	71.9	75.6	0.8	475.00	0.00	0.02	0.03	0.03	0.00
rubella																	
-rubella	23.9	0.00	0.58	0.870	0.879	0.009	0.0	15.1	22.7	23.9	0.2	55.00	0.00	0.00	0.00	0.00	0.00
-congenital rubella synd.	0.4	0.00	0.58	0.870	0.879	0.009	0.0	0.3	0.4	0.4	0.0	200000.00	0.00	0.04	0.07	0.07	0.00
Hib	8.2	0.00	0.59	0.881	0.881	0.000	0.0	5.1	7.7	8.2	0.0	535.00	0.00	0.00	0.00	0.00	0.00
hepatitus b (infant, child)	8.2	0.00	0.54	0.814	0.817	0.003	0.0	5.0	7.6	7.6	0.0	201.03	0.00	0.00	0.00	0.00	0.00
varicella (chicken pox)[6]	1429.9	0.00	0.34	0.51	0.589	0.079	0.0	845.8	1268.8	1464.7	196.0	13.77	0.00	0.01	0.01	0.02	0.00
all diseases							0	1289	1933	2153	205						
Total PMPM Savings													0.00	3.00	4.50	4.59	0.08
Total PMPM Costs													0.00	0.00	0.71	0.73	0.02
Net Cost/(Savings) vs. No Immunizations													0.00	-3.00	-3.78	-3.86	-0.07
Net Cost/(Savings) vs.No Coverage															-0.78		

6) http://www.cdc.gov/od/oc/media/fact/chickenp.htm
7) Cost-effectiveness of a Routine Varicella Vaccination Program for US Children. Lieu, Tracy, et al.
JAMA, February 2, 1994--Vol 271, No. 5, pp. 375-381
Reports Total cost of $529 million for 3.95 million cases.
* No values entered for diseases with fewer than .25 current cases per 100,000.

Appendix IV-M
Table IV.M.5-App

	Disease Incidence per 100,000 people - Texas			
	No Vaccine	No Coverage	No Mandate	Mandate
diphtheria	162.3	56.1	2.9	0.0
tetanus	1.2	0.4	0.1	0.0
pertussis	130.3	52.0	12.8	10.7
polio				
- paralysis	10.3	3.6	0.2	0.0
- death[3]	1.2	0.4	0.0	0.0
measles	278.5	102.1	13.8	0.0
mumps	75.8	27.9	4.0	0.2
rubella				
-rubella	24.0	8.9	1.3	0.1
-congenital rubella synd.	0.4	0.2	0.0	0.0
Hib	8.2	3.1	0.5	0.0
hepatitus b (infant, child)[5]	11.9	6.8	4.3	4.3
varicella (chicken pox)[6]	1518.7	672.9	249.9	54.0
all	2222.8	934.3	290.0	69.3

Savings from Immunization and Marginal Savings of Mandate
With Mandate vs. Without Mandate

	Cases Prevented / 100,000					workdays lost per case	Workday Loss Prevented / 100,000				
	No Immun.	No Coverage	No Mandate	Mandate	Marginal		No Immun.	No Coverage	No Mandate	Mandate	Marginal
diphtheria	0.0	106.3	159.4	162.3	2.9	14.0	0.0	1487.8	2231.6	2272.6	41.0
tetanus	0.0	0.7	1.1	1.2	0.0	4.4					
pertussis	0.0	78.4	117.5	119.7	2.2	3.1	0.0	239.0	358.5	365.1	6.6
polio											
- paralysis	0.0	6.7	10.0	10.3	0.2	8.0	0.0	53.4	80.1	82.1	2.0
- death	0.0	0.8	1.2	1.2	0.0	5.0	0.0	3.8	5.8	5.9	0.1
measles	0.0	176.4	264.6	278.5	2.9	2.5	0.0	441.1	661.6	696.1	7.2
mumps	0.0	47.9	71.9	75.6	0.8	1.4	0.0	64.7	97.0	102.1	1.0
rubella											
-rubella	0.0	15.1	22.7	23.9	0.2	1.0	0.0	15.1	22.7	23.9	0.2
-congenital rubella synd.	0.0	0.3	0.4	0.4	0.0	**					
Hib	0.0	5.1	7.7	8.2	0.0	1.4	0.0	7.2	10.8	11.4	0.0
hepatitus b (infant, child)[6]	0.0	5.0	7.6	7.6	0.0	0.22	0.0	1.1	1.7	1.7	0.0
varicella (chicken pox)	0.0	845.8	1268.8	1464.7	196.0	2.7	0.0	2283.8	3425.6	3954.7	529.1
Total Workdays Prevents / 100,000							0.0	4596.9	6895.4	7515.7	587.3

6) Morbidity does not occur until adulthood
** Workdays lost will be long-term, well in excess of the short-term workday loss from other diseases

Diphtheria					
Situation	distribution	Item		Unit Cost	Total Cost
All Complications	1	hospital (ICU)	10 days	**2500**	25000
	1	hospital IP (Med)	4 days	**1200**	4800
		workdays	14		
		weighted cost			29800.00

Hepatitis B					
Situation	distribution	Item		Unit Cost	Total Cost
Chronic (incl. fatal)	0.055	hospital (lifetime)	3 days	**1200**	3600
	0.055	follow up physician	1 days	**55**	55
	0.245	chronic, no costs		0	0
Non Chronic	0.7			0	0
		workdays	0.2		
		weighted cost			201.03

Hib					
Situation	distribution	Item		Unit Cost	Total Cost
Meningitis	0.08	hospital	5 days	**1200**	6000
	0.08	follow up physician	1 visit	**55**	55
Doctor Visit	0.92	physician	1 visit	**55**	55.00
		workdays	1.4		
		weighted cost			535.00

Measles					
Situation	distribution	Item		Unit Cost	Total Cost
Hospitalization	0.25	hospital	3 days	**1200**	3600
	0.25	follow up physician	1 visit	**55**	55
Doctor Visit	0.75	physician	2 visit	**55**	110
		workdays	2.5		
		weighted cost			996.25

Mumps					
Situation	distribution	Item		Unit Cost	Total Cost
Meningitis	0.07	hospital	5 days	**1200**	6000
	0.07	follow up physician	1 visit	**55**	55
Doctor Visit	0.93	physician	1 visit	**55**	55
		workdays	1.35		
		weighted cost			475.00

Pertussis					
Situation	distribution	Item		Unit Cost	Total Cost
Hospitalization	0.35	hospital	3 days	**1200**	3600
	0.35	follow up physician	2 visits	**55**	110
Non Hospitalization	0.65	physician	2 visits	**55**	110
	0.65	culture	1	100	100
	0.65	antibiotics	1	20	20
		workdays	3.1		
		weighted cost			1448.00

Polio (Paralysis)					
Situation	distribution	Item		Unit Cost	Total Cost
Major Illness	0.15	Physical Therapy	42 days	**1200**	50400
Minor Illness	0.85	Physician	2 visits	**55**	110
		workdays	8.0		
		weighted cost			7653.50
Polio (Death)					
Situation	distribution	Item		Unit Cost	Total Cost
Death	1	Hospitalization	3 days	**1200**	
Death	1	Physician	2 visits	**55**	110
		workdays	5.0		
		weighted cost			110.00

Rubella (non CRS)					
Situation	distribution	Item		Unit Cost	Total Cost
Non CRS	1.00	physician	1 visit	**55**	55
		workdays	1		
		weighted cost			55.00
Rubella (CRS)					
Situation	distribution	Item		Unit Cost	Total Cost
CRS	1.00	all	1 cases	**200,000**	200,000
		workdays	* *		
		weighted cost			200,000

Tetanus					
Situation	distribution	Item		Unit Cost	Total Cost
Non-fatal	0.70	Hospital	3 days	**1200**	3600
	0.70	Physician	2 visits	**55**	110
Fatal	0.30	Hospital	3 days	**1200**	3600
		workdays	4.4		
		weighted cost			3677.00

Varicella					
Situation	distribution	Item		Unit Cost	Total Cost
Hospitalization	0.00225	hospital	2 days	**1200**	2400
	0.00225	follow up physician	1 visit	**55**	55
Doctor Visit	0.15	physician	1 visit	**55**	55
No Medical Costs	0.85	parent stays home	3 days	0	0
		workdays	2.7		
		weighted cost			13.77

* All calculations are based on a combination of judgment by an M&R clinician, M&R Health Cost Guidelines, and the data provided in cited sources.

** Workdays lost will be long-term, well in excess of the short-term workday loss from other diseases

Sources: *

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APPENDIX V

Appendix V - A

Employer Information

Please indicate the total number of employees in your firm who are eligible for your health plan.

1 – 2	❑	101 – 150	❑	2,001 – 3,000	❑
3 – 10	❑	151 – 200	❑	3,001 – 4,000	❑
11 – 25	❑	210 – 500	❑	4,001 – 5,000	❑
26 – 50	❑	501 – 1,000	❑	5,000 +	❑
51 – 100	❑	1,001 – 2,000	❑		

Which of the following options does your self-funded health plan include?

a) Traditional indemnity ❑
b) HMO ❑
c) HMO with point-of-service option ❑
d) PPO ❑

If you have more than one self-insured plan please copy the questionnaire on the following pages and complete for each plan.

Company Name and Contact Information

Company: _____

Person filling out Survey (Name and Title): _____

Phone No.: _____ E-mail Address: _____

Appendix V - A

MANDATED BENEFITS REQUIRING COVERAGE OF SPECIFIC ILLNESS, PROCEDURES, OR TYPES OF TREATMENT

General Summary of Mandated Benefit	Does Company Plan Cover Benefit?	Does Company Plan Partially Cover Benefit?*	Does Company Plan Exclude Benefit?
1. Chemical Dependency The treatment of chemical dependency must be covered the same as any physical illness up to 3 separate series of treatment for each individual.			
2. Complications of Pregnancy Benefits for complications of pregnancy must be provided on the same basis as for other illnesses. This includes non-elective cesarean section, spontaneous abortions, ectopic pregnancy and hospital stays for conditions not related to pregnancy that are complicated by pregnancy such as diabetes, cardiovascular conditions, etc			
3. Oral Contraceptives Benefits for oral contraceptives must be provided when all other prescription drugs are covered.			
4. Newborns With Congenital Defects Policies that provide maternity coverage or dependent coverage must automatically cover newborns for the first 31 days and must continue coverage if the insured pays the required premium and provides notification within the first 31 days. If a policy includes maternity or additional newborn children benefits, it cannot limit or exclude initial coverage of a newborn infant for a period of time, or have limitations for congenital defects of a newborn child.			
5. HIV/AIDS/HIV-related illnesses Policies may not exclude or deny coverage, or cancel a policy based on a diagnosis of AIDS, HIV, or HIV-Related illness.			
6. Mammography Annual mammography screening for females 35 and older must be provided on the same basis as other radiological examinations.			
7. Prostate Testing Policies must include annual benefits for diagnostic tests used in the detection of prostate cancer, including physical exams and prostate specific antigen (PSA) test.			
8. Serious Mental Illness Policies must include 45 days inpatient and 60 outpatient visits without a lifetime limit on the number of days/visits on the same basis as any other physical illness for 8 specified serious diagnoses.			
9. Minimum Hospital Stay Maternity Policies providing maternity benefits must include inpatient care for mother and child for at least 48 hours following uncomplicated vaginal delivery and 96 hours after an uncomplicated C-section.			

Appendix V - A

General Summary of Mandated Benefit	Does Company Plan Cover Benefit?	Does Company Plan Partially Cover Benefit?*	Does Company Plan Exclude Benefit?
10. Minimum Hospital Stay for Mastectomy or Lymph Node Dissection Policies that provide treatment of breast cancer must cover inpatient care for at least 48 hours after a mastectomy and 24 hours after lymph node dissection unless both the patient and doctor determine a shorter stay is appropriate.			
11. Reconstructive Surgery for Mastectomy Policies that provide coverage for mastectomy must provide coverage for breast reconstruction.			
12. Handicapped dependents regardless of age Policies that normally discontinue coverage of children at a certain age must allow continuation of the coverage if the child is incapable of self-employment due to mental retardation or physical handicap and chiefly dependent on the insured for support and maintenance			
13. Childhood Immunizations Policies that provide dependent coverage must cover specified immunizations from birth until the date the child is six years of age. Immunizations may not be subject to a deductible, co-payment or co-insurance requirement.			

* For any benefit that your current company plan covers partially, please list the benefit number and the coverage that is provided. For example if coverage for chemical dependency is covered but has a maximum dollar or visit limit, please state that in this section.

Benefit Number	Coverage Provided

Please check the statement below that best describes the impact that the costs of State mandated benefits in commercial health insurance plans had in your firm's decision to move to a self-insured plan or to remain self-insured.

- ❑ **0** We do not believe that state-mandated benefits would have any material cost impact on our health plan and our decision to be self-insured was made entirely for reasons unrelated to avoiding mandated benefits.

- ❑ **1** While mandated benefits may add some cost to plans such as ours, the desire to avoid mandated benefits was immaterial to our decision to self insure.

- ❑ **2** While avoiding the costs of mandated benefits was not a major reason we chose to self-insure, it was one of several factors that we considered.

- ❑ **3** Avoiding the costs of mandated benefits was one of the top few equally important reasons we decided to self-insure.

- ❑ **4** While other factors played a part in our decision to self-insure, avoiding the costs of mandated benefits was the most important factor.

- ❑ **5** Avoiding the costs of mandated benefits was the sole sufficient reason by itself for us to self-insure.

Thank you for your help in this research effort.

Appendix V-B

MANDATED BENEFITS REQUIRING COVERAGE OF SPECIFIC ILLNESS, PROCEDURES, OR TYPES OF TREATMENT

All Respondents

Health Benefit Self-Insurance Survey for the Texas Legislature

Total Number of Surveys Returned	**385**
Not Self Funded	**109**
Self Funded	**276**

CHEMICAL DEPENDENCY	***Number***	***Percent***
Covered	145	53%
Partially Covered	110	40%
Excluded	17	6%
Total Responses	272	100%

COMPLICATIONS OF PREG		
Covered	265	97%
Partially Covered	5	2%
Excluded	3	1%
Total Responses	273	100%

ORAL CONTRACEPTIVES		
Covered	244	89%
Partially Covered	10	4%
Excluded	19	7%
Total Responses	273	100%

NEWBORNS W/CONGENITAL DEFECTS		
Covered	251	92%
Partially Covered	16	6%
Excluded	5	2%
Total Responses	272	100%

HIV/AIDS/HIV-RELATED		
Covered	262	97%
Partially Covered	5	2%
Excluded	4	1%
Total Responses	271	100%

MAMMOGRAPHY COVERED	***Number***	***Percent***
Covered	242	89%
Partially Covered	26	10%
Excluded	4	1%
Total Responses	272	100%

PROSTATE TESTING		
Covered	243	89%
Partially Covered	22	8%
Excluded	7	3%
Total Responses	272	100%

SERIOUS MENTAL ILLNESS		
Covered	134	50%
Partially Covered	122	45%
Excluded	14	5%
Total Responses	270	100%

MINIMUM HOSPITAL STAY MATERNITY		
Covered	261	96%
Partially Covered	9	3%
Excluded	2	1%
Total Responses	272	100%

MINIMUM HOSP STAY MAST/LYMPH		
Covered	249	92%
Partially Covered	16	6%
Excluded	6	2%
Total Responses	271	100%

RECONSTRUCTIVE SURG MASTECTOMY	***Number***	***Percent***
Covered	262	96%
Partially Covered	7	3%
Excluded	3	1%
Total Responses	272	100%

HANDICAPPED DEPENDENTS REGARDLESS OF AGE		
Covered	251	93%
Partially Covered	12	4%
Excluded	6	2%
Total Responses	269	100%

CHILDHOOD IMMUNIZATIONS		
Covered	199	73%
Partially Covered	49	18%
Excluded	23	8%
Total Responses	271	100%

MANDATED BENEFITS REQUIRING COVERAGE OF SPECIFIC ILLNESS, PROCEDURES, OR TYPES OF TREATMENT
Respondents with More than 500 Eligible Employees

Health Benefit Self-Insurance Survey for the Texas Legislature

Total Number of Surveys Returned	**385**
Not Self Funded	**109**
Self Funded	**276**
Eligibles Greater than 500	**128**

CHEMICAL DEPENDENCY	***Number***	***Percent***
Covered	63	49%
Partially Covered	62	48%
Excluded	3	2%
Total Responses	128	100%

COMPLICATIONS OF PREG		
Covered	123	96%
Partially Covered	5	4%
Excluded	0	0%
Total Responses	128	100%

ORAL CONTRACEPTIVES		
Covered	113	88%
Partially Covered	8	6%
Excluded	7	5%
Total Responses	128	100%

NEWBORNS W/CONGENITAL DEFECTS		
Covered	114	89%
Partially Covered	11	9%
Excluded	3	2%
Total Responses	128	100%

HIV/AIDS/HIV-RELATED		
Covered	124	97%
Partially Covered	3	2%
Excluded	1	1%
Total Responses	128	100%

MAMMOGRAHPY COVERED	***Number***	***Percent***
Covered	118	92%
Partially Covered	8	6%
Excluded	2	2%
Total Responses	128	100%

PROSTATE TESTING		
Covered	115	90%
Partially Covered	10	8%
Excluded	3	2%
Total Responses	128	100%

SERIOUS MENTAL ILLNESS		
Covered	60	47%
Partially Covered	62	49%
Excluded	5	4%
Total Responses	127	100%

MINIMUM HOSPITAL STAY MATERNITY		
Covered	120	94%
Partially Covered	7	5%
Excluded	1	1%
Total Responses	128	100%

MINIMUM HOSP STAY MAST/LYMPH		
Covered	111	87%
Partially Covered	14	11%
Excluded	2	2%
Total Responses	127	100%

RECONSTRUCTIVE SURG MASTECTOMY	***Number***	***Percent***
Covered	124	97%
Partially Covered	4	3%
Excluded	0	0%
Total Responses	128	100%

HANDICAPPED DEPENDENTS REGARDLESS OF AGE		
Covered	121	95%
Partially Covered	6	5%
Excluded	1	1%
Total Responses	128	100%

CHILDHOOD IMMUNIZATIONS		
Covered	95	74%
Partially Covered	26	20%
Excluded	7	5%
Total Responses	128	100%

MANDATED BENEFITS REQUIRING COVERAGE OF SPECIFIC ILLNESS, PROCEDURES, OR TYPES OF TREATMENT
Respondents with Less Than 500 Eligible Employees

Health Benefit Self-Insurance Survey for the Texas Legislature

Total Number of Surveys Returned	**385**
Not Self Funded	**109**
Self Funded	**276**
Less than 500 Eligibles	**134**
No Response to # of eligibles	***14***

CHEMICAL DEPENDENCY	***Number***	***Percent***
Covered	76	57%
Partially Covered	44	33%
Excluded	13	10%
Total Responses	133	100%

COMPLICATIONS OF PREG		
Covered	131	98%
Partially Covered	0	0%
Excluded	3	2%
Total Responses	134	100%

ORAL CONTRACEPTIVES		
Covered	120	90%
Partially Covered	2	1%
Excluded	12	9%
Total Responses	134	100%

NEWBORNS W/CONGENITAL DEFECTS		
Covered	126	95%
Partially Covered	5	4%
Excluded	2	2%
Total Responses	133	100%

HIV/AIDS/HIV-RELATED		
Covered	127	96%
Partially Covered	2	2%
Excluded	3	2%
Total Responses	132	100%

MAMMOGRAHPY COVERED	***Number***	***Percent***
Covered	114	86%
Partially Covered	17	13%
Excluded	2	2%
Total Responses	133	100%

PROSTATE TESTING		
Covered	118	89%
Partially Covered	11	8%
Excluded	4	3%
Total Responses	133	100%

SERIOUS MENTAL ILLNESS		
Covered	69	52%
Partially Covered	54	41%
Excluded	9	7%
Total Responses	132	100%

MINIMUM HOSPITAL STAY MATERNITY		
Covered	130	98%
Partially Covered	2	2%
Excluded	1	1%
Total Responses	133	100%

MINIMUM HOSP STAY MAST/LYMPH		
Covered	129	97%
Partially Covered	1	1%
Excluded	3	2%
Total Responses	133	100%

RECONSTRUCTIVE SURG MASTECTOMY	***Number***	***Percent***
Covered	127	95%
Partially Covered	3	2%
Excluded	3	2%
Total Responses	133	100%

HANDICAPPED DEPENDENTS REGARDLESS OF AGE		
Covered	119	92%
Partially Covered	6	5%
Excluded	5	4%
Total Responses	130	100%

CHILDHOOD IMMUNIZATIONS		
Covered	94	71%
Partially Covered	22	17%
Excluded	16	12%
Total Responses	132	100%

STATEMENT THAT BEST DESCRIBES THE IMPACT THAT THE COSTS OF STATE MANDATED BENEFITS IN COMMERCIAL HEALTH INSURANCE PLANS HAD IN FIRM'S DECISION TO MOVE TO SELF-INSURANCE OR REMAIN SRLF-INSURED

Health Benefit Self-Insurance Survey for Texas Legislature

0 WE DO NOT BELIEVE THAT STATE MANDATED BENEFITS HAVE ANY MATERIAL IMPACT DECISION WAS UNRELATED.
1 MANDATED BENEFITS MAY ADD SOME COST, TO AVOID MANDATED BENEFITS WAS IMMATERIAL.
2 AVOIDING COSTS OF MANDATED BENEFITS NOT MAJOR REASON, IT WAS ONE OF SEVERAL FACTORS.
3 AVOIDING COSTS OF MANDATED BENEFITS WAS ONE OF TOP FEW EQUALLY IMPORTANT REASONS.
4 WHILE OTHER FACTORS PLAYED A PART, AVOIDING COSTS OF MANDATED BENEFITS WAS MOST IMPORTANT.
5 AVOIDING COSTS OF MANDATED BENEFITS WAS SOLE SUFFICIENT REASON.

All Respondents		
Total	**Number**	**Percent**
0	84	33%
1	99	39%
2	45	18%
3	15	6%
4	6	2%
5	3	1%
TOTAL	**252**	**100%**

Greater Than		
500 Total	**Number**	**Percent**
0	33	27%
1	54	44%
2	23	19%
3	8	7%
4	4	3%
5	0	0%
TOTAL	**122**	**100%**

Less Than 500		
Total	**Number**	**Percent**
0	46	38%
1	44	36%
2	21	17%
3	6	5%
4	1	1%
5	3	2%
TOTAL	**121**	**100%**

APPENDIX VI

There are no appendices associated with this section.

APPENDIX VII

Appendix VII-A

Expected Pricing Structure of Standardized Plans

Below is a table that compares the actuarial relativities of the basic and catastrophic plans to the industry plan that includes pharmacy benefits. The following assumptions were made in the development of this comparison:

- The industry plan includes mental health, alcohol & drug abuse, and preventive services in the base plan. The only rider attached to the industry plan is a $10 copay pharmacy rider. Some companies plans may not include mental health benefits since this is a "make offer" benefit.

- The basis and catastrophic plans use coinsurance for office visits instead of a copay. The industry plan has a $15 office visit copay.

- The "with riders" column for the basic plan includes the mental health, alcohol & drug abuse (10 day limit), preventative and the 50% coinsurance pharmacy riders.

- The "with riders" column for the catastrophic plan includes the mental health, alcohol & drug abuse (10 day limit) and the 50% coinsurance pharmacy riders.

- The column that includes the riders with adverse selection assumes the mental health and alcohol & drug abuse riders will cost twice as much with adverse selection as they do without adverse selection.

- Utilization is expected to be 75% in-network and 25% out-of-network in all plans

Table VII.A.1-App
Standardized Plan Comparison- Basic

PPO Plan	Deductible In/Out	Coinsurance In/Out	Out of Pocket Max. In/Out	Relativity w/o Riders		Relativity w/ Riders	
				w/o Adverse Selection	w/ Adverse Selection	w/o Adverse Selection	w/ Adverse Selection
Basic	500/500	80%/60%	3,000	.63	.66	.78	.81
Basic	500/500	80%/80%	3,000	.65	.69	.80	.83
Basic	500/500	90%/70%	3,000	.69	.72	.84	.88
Basic	250/500	90%/70%	3,000	.74	.77	.89	.93
Industry	**250/300**	**80%/60%**	**1,250/2,000**	**.86**	**.86**	**1.00**	**1.00**

Table VII.A.2-App
Standardized Plan Comparison- Catastrophic

PPO Plan	Deductible In/Out	Coinsurance In/Out	Out of Pocket Max. In/Out	Relativity w/o Riders		Relativity w/ Riders	
				w/o Adverse Selection	w/ Adverse Selection	w/o Adverse Selection	w/ Adverse Selection
Catastrophic	5,000/5,000	80%/60%	10,000	.28	.30	.38	.40
Catastrophic	5,000/5,000	80%/80%	10,000	.30	.32	.39	.41
Catastrophic	2,500/5,000	80%/60%	10,000	.37	.39	.47	.49
Catastrophic	2,500/5,000	90%/70%	10,000	.42	.44	.52	.55
Catastrophic	2,500/2,500	90%/70%	5,000	.45	.48	.56	.58
Catastrophic	2,500/2,500	90%/90%	5,000	.47	.50	.58	.60
Catastrophic	1,250/2,500	80%/60%	5,000	.49	.52	.60	.62
Catastrophic	1,250/2,500	90%/70%	5,000	.54	.57	.64	.67
Industry	**250/300**	**80%/60%**	**1,250/2,000**	**.86**	**.86**	**1.00**	**1.00**

Appendix VII-B

Industry Pricing Structure of Standardized Plans

Below, we compared four companies from the information supplied from TDI. We compared the rates of each company's cheapest basic, richest basic, cheapest catastrophic, richest catastrophic and richest company PPO plan (based on the company definition). We then used the Texas healthcare reform model to estimate the relative value of the company's PPO plan. We adjusted the industry plan benefits for all of the company plan benefits that were supplied. Where critical information (such as out of pocket maximum or out of network cost sharing) was not supplied, we used our best judgement to set the missing criteria. For the final comparison, we took the information calculated from our model and adjusted the mental health and alcohol and drug riders for adverse selection as previously described. Following are the results by company of this comparison and some comments on the limitations of the comparison.

Table VII.B.1-App
Company A

Plan	Office Visit Copay	Deductible In/Out	Coinsurance In/Out	Riders*	Company Relativities	Expected Relativities w/o Adverse Selection	w/ Adverse Selection	
							Loaded in Rider	Loaded in Base
Cheapest Basic		$500	80%		1.05	0.73	0.73	0.77
Richest Basic		$500	80%	M,A,P	1.12	0.81	0.85	0.85
Cheapest Catastrophic		$5,000	80%		0.51	0.33	0.33	0.36
Richest Catastrophic		$2,500	90%	M,A	0.76	0.56	0.59	0.59
Company PPO	$15 PCP/ $25 Spec	$100/500	90%/70%		1.00	1.00	1.00	1.00
Richest Catastrophic / Cheapest Catastrophic					1.50	1.68	1.77	1.66
Richest Basic / Cheapest Basic					1.07	1.11	1.16	1.10

*M = Mental Health, A = Alcohol and Drug Abuse, P = Preventive

- Modeling assumes all plans are PPO. The data supplied indicated that the standardized plans may only be marketed on an indemnity basis, whereas the company plan is on a PPO basis. If the company is not getting the network contracting and utilization management the rates could easily increase 30-40%. This could explain why the standardized plans' relativities are so much greater than expected.
- Pharmacy benefit data was not submitted. We assumed none of the plans include a pharmacy benefit or rider option, including the Company PPO. Carriers are required to offer the pharmacy rider in the standardized plans and it should have been included in their "richest" options. We are not sure if they failed to supply the pharmacy benefit descriptions or if they totally excluded pharmacy rates from the summary.

- We assumed the company plan included mental health, alcohol & drug abuse and preventive benefits. If a rider supplies any of these benefits, then the factors above will be understated.
- This carrier appears to have enough load between the richest and cheapest standardized plans to be pricing the riders outside of the base plan pricing.

Table VII.B.2-App
Company B

	Office Visit Copay	Deductible	Coinsurance In/Out		Company Relativities	w/o Adverse Selection	Expected Relativities w/ Adverse Selection	
							Loaded in Rider	Loaded in Base
Cheapest Basic		$250/500	90%/70%		0.96	0.70	0.70	0.74
Richest Basic		$250/500	90%/70%	M,A,P,R1	1.47	0.85	0.89	0.89
Cheapest Catastrophic		$1,250/2,500	80%/60%		0.68	0.47	0.47	0.49
Richest Catastrophic		$2,500/5,000	90%/70%	M,A,R1	0.95	0.50	0.52	0.52
Company PPO	$10	$200/400	90%/70%	R2	1.00	1.00	1.00	1.00
Richest Catastrophic / Cheapest Catastrophic					1.40	1.06	1.12	1.05
Richest Basic / Cheapest Basic					1.54	1.21	1.26	1.20

*M= Mental Health, A= Alcohol and Drug Abuse, P= Preventive, R1= 50% Prescription Drug, R2 = $7/$15 drug card

- The richest basic and catastrophic plans include the pharmacy rider. The benefits were not supplied so it was assumed to be the 50% pharmacy rider. The copay pharmacy rider could increase the expected relativities an additional 0.07.
- The company PPO plan did not state the out-of-network benefit for the deductible and coinsurance. We assumed a 20% differential for the coinsurance and doubled the in network deductible. If the deductible is less and/or the coinsurance is greater than stated above, the expected relativities would increase.
- The richest catastrophic plan was stated to have a higher deductible and stop loss than the cheapest catastrophic plan. The only thing that causes the rate to be higher is the addition of the riders. This is an unusual interpretation of "richest". Therefore, it is questionable whether the benefits supplied are consistent with the rates supplied.
- Without more information we cannot address why the actual relativities are so much greater than expected. However, the carrier appears to have enough load between the richest and cheapest standardized plans to be pricing the riders outside of the base plan pricing.

Table VII.B.3-App
Company C

Plan	Office Visit Copay	Deductible In/Out	Coinsurance	Company Relativities	Expected Relativities	Expected Relativities w/ Adverse Selection	
						Loaded in Rider	Base
Cheapest Basic		$500 Comb	80%/60%	0.79	0.64	0.64	0.68
Richest Basic		$250/500	90%/70%	0.88	0.75	0.75	0.79
Cheapest Catastrophic		$5,000 Comb	80%/60%	0.52	0.29	0.29	0.31
Richest Catastrophic		$2,500 Comb	90%/70%	0.58	0.46	0.46	0.49
Company PPO		$100/200	90%/70%	1.00	1.00	1.00	1.00
Richest Catastrophic / Cheapest Catastrophic				1.11	1.59	1.59	1.58
Richest Basic / Cheapest Basic				1.12	1.17	1.17	1.17

- Pharmacy benefit data was not submitted. We assumed none of the plans include a pharmacy benefit or rider option, including the Company PPO. They are required to offer the pharmacy rider in the standardized plans and it should have been included in their "richest" options. We are not sure if they failed to supply the pharmacy benefit descriptions or if they totally excluded pharmacy rates from the summary.
- Other rider benefit data was also not submitted. We did not include any riders in the basic and catastrophic plans. Like the pharmacy benefit, it should be included in the "richest" options. We are not sure if they failed to supply the descriptions or if they were excluded from the summary. If the plans do contain riders, then our relativities to the company PPO would decrease.
- We assumed the company plan includes mental health, alcohol & drug abuse and preventive benefits. If a rider supplies any of these benefits, the factors above will be understated.
- The richest plans appear to be rated close to expected, especially if the company plan does not include mental health and/or preventive benefits. The cheapest plans do not appear to be rated as close to industry expectations. This could be due to not giving as much utilization adjustment for the higher deductibles as the M&R HCGs would suggest.
- We cannot address the rating relationship of the riders since this information was not supplied.

Table VII.B.4-App
Company D

Plan	Office Visit Copay	Deductible In/Out	Coinsurance In/Out	Riders*	Company Relativities	w/o Adverse Selection	Expected Relativities w/ Adverse Selection	
							Loaded in Rider	Loaded in Base
Cheapest Basic		$500Comb	90%/70%		0.71	0.65	0.65	0.68
Richest Basic		$250/500	90%/70%	M,A,P,R	0.95	0.91	0.95	0.95
Cheapest Catastrophic		$2,500/5,000	80%/60%		0.46	0.35	0.35	0.37
Richest Catastrophic		$1,250/2,500	90%/70%	M,A,R	0.73	0.68	0.71	0.71
Company PPO	$15	$0/200	90%/70%	R	1.00	1.00	1.00	1.00
Richest Catastrophic / Cheapest Catastrophic					1.57	1.97	2.05	1.93
Richest Basic / Cheapest Basic					1.33	1.41	1.47	1.40

*M= Mental Health, A= Alcohol and Drug Abuse, P= Preventive, R= $10/$15 Rx Card

- The richest/ cheapest plans for company D have higher relativities because they listed a $10/$15 pharmacy card as the rider for the richest plans where in the other 3 companies, we used 50% pharmacy plan. If we used a 50% pharmacy option on company D, the richest/ cheapest catastrophic would decrease by about 0.2 and the richest/ cheapest basic would decrease by about 0.1.
- Overall, this company appears to be rating the closest to industry expectations. They are extremely close for the richest plans.
- The relationship between the richest and the cheapest plans is not as great as one would expect. This could be due to the company not giving as much utilization savings for the higher deductibles and coinsurance options as the M&R HCGs would suggest. This could also be due to the concern expressed by the TDI, that some of the rider pricing has been incorporated in the base rating. However, the biggest deviation is in the catastrophic plan relationship which also has the biggest difference between deductibles and coinsurance which might imply the first reason has more credibility.

APPENDIX VIII

Appendix VIII
Cost/Benefit Scoring System for Mandated Benefits

Demand Level	Score
High	3
Moderate	2
Low	1

Portion of Plans With Some Level of Coverage	Score
Very High	1
High	2
Medium	3
Low to No	4

Portion of Plans with Full Level of Coverage	Score
Very High	1
High	2
Medium	3
Low to No	4

Likelihood of Receiving Treatment in Absence of Insurance Coverage	Score
Same	0
Lower	2

Personal Financial Burden in Absence of Insurance Coverage	Score
High	4
Moderate to High	3
Moderate	2
Low	0

Relative Quality and Cost Efficiency of Care in Absence of Insurance Coverage	Score
Same	0
Same or Lower	2

Impact of Not Providing Treatment On Health Status	Score
Very High	4
High	3
Moderate	2
Low to No	0

Impact of Not Providing Treatment on Economy/Society	Score
High	3
Moderate	2
Low to No	0

Health Status Impact of Treatment	Score
Positive	3
Mixed	1
Neutral	0

Impact of Treatment on Sick Days/ Disability Costs	Score
High	3
Moderate	2
Low to No	1
No to Negative	0

Direct Premium Impact	Score
High	1
Moderate	2
Low	3

Indirect Premium Impact Level	Score
High	1
Moderate	2
Low	3

Appendix VIII
Cost/Benefit Scoring System Example

	Chemical Dependency		Complications of Pregnancy		Oral Contraceptives		Congenital Defects			
							Newborns		Other	
	Level	Score	Level	Score	Level	Score	Level	Score	Level	Score
Level of Demand	Moderate	2	Low	1	Moderate	2	Moderate	2	Moderate	2
Impact of Mandating the Benefit										
Portion of Plans with Some Level of Coverage	Very High	1	Very High	1	Very High	1	Very High	1	Very High	1
Portion of Plans with Proposed Mandated Level of Coverage	Medium	3	Very High	1	Very High	1	Very High	1	Very High	1
Impact of Not Covering Under Private Insurance										
Likelihood of Receiving Treatment	Lower	2	Same	0	Lower	2	Same	0	Lower	2
Financial Burden if Paid by Insured	Moderate to High	3	High	4	Low	0	High	4	High	4
Quality and Cost Efficiency of Care	Same or Lower	2	Same or Lower	2	Same	0	Same or Lower	2	Same or Lower	2
Impact of Not Proving Treatment										
On Health Status	High	3	Very High	4	Low to No	0	Very High	4	High	3
On Economy/Society	High	3	Low to No	0	Low to No	0	Moderate	2	Moderate	2
Health Status Impact/Efficacy	Positive	3	Positive	3	Neutral	0	Positive	3	Positive	3
Impact of Treatment on Sick day/Disability Cost	High	3	Low to No	1	Moderate	2	Low to No	1	High	3
Direct Premium Cost Impact on Small Employers and Large Employers	Moderate	2	Moderate	2	Moderate	2	High	1	High	1
Net Premium Cost Impact on Small Employers and Large Employers	Moderate	2	Moderate	2	Low	3	High	1	High	1
Total Score		29		21		13		22		25

Appendix VIII
Cost/Benefit Scoring System Example

	HIV/AIDS		Mammography		Prostate Screening		Serious Mental Illness		Min. Hospital Stay for Maternity	
	Level	Score	Level	Score	Level	Score	Level	Score	Level	Score
Level of Demand	Low	1	High	3	Moderate	2	Moderate	2	Moderate	2
Impact of Mandating the Benefit										
Portion of Plans with Some Level of Coverage	Very High	1	Very High	1	Very High	1	Very High	1	Very High	1
Portion of Plans with Proposed Mandated Level of Coverage	Very High	1	Very High	1	Very High	1	Medium	3	Very High	1
Impact of Not Covering Under Private Insurance										
Likelihood of Receiving Treatment	Lower	2	Lower	2	Lower	2	Lower	2	Lower	2
Financial Burden if Paid by Insured	High	4	Low	0	Low	0	Moderate to High	3	Moderate	2
Quality and Cost Efficiency of Care	Same or Lower	2	Same	0	Same	0	Same or Lower	2	Same	0
Impact of Not Proving Treatment										
On Health Status	High	3	Moderate	2	Moderate	2	High	3	Low to No	0
On Economy/Society	Moderate	2	Low to No	0	Low to No	0	High	3	Low to No	0
Health Status Impact/Efficacy	Positive	3	Mixed	1	Mixed	1	Positive	3	Mixed	1
Impact of Treatment on Sick day/Disability Cost	High	3	No to Negative	0	No to Negative	0	High	3	Low to No	1
Direct Premium Cost Impact on Small Employers and Large Employers	High	1	Moderate	2	Low	3	High	1	Moderate	2
Net Premium Cost Impact on Small Employers and Large Employers	High	1	Moderate	2	Low	3	High	1	Moderate	2
Total Score		24		14		15		27		14

Appendix VIII
Cost/Benefit Scoring System Example

	Min. Hospital Stay for Mastectomy		Reconstructive Surgery		Handicapped Dependents		Childhood Immunizations	
	Level	Score	Level	Score	Level	Score	Level	Score
Level of Demand	Low	1	Low	1	Low	1	High	3
Impact of Mandating the Benefit								
Portion of Plans with Some Level of Coverage	Very High	1	Very High	1	Very High	1	Very High	1
Portion of Plans with Proposed Mandated Level of Coverage	Very High	1	Very High	1	Very High	1	Medium	3
Impact of Not Covering Under Private Insurance								
Likelihood of Receiving Treatment	Lower	2	Lower	2	Lower	2	Lower	2
Financial Burden if Paid by Insured	Moderate	2	Moderate	2	Moderate to High	3	Low	0
Quality and Cost Efficiency of Care	Same	0	Same	0	Same or Lower	2	Same	0
Impact of Not Proving Treatment								
On Health Status	Low to No	0	Low to No	0	High	3	Moderate	2
On Economy/Society	Low to No	0	Low to No	0	Moderate	2	Moderate	2
Health Status Impact/Efficacy	Mixed	1	Neutral	0	Positive	3	Positive	3
Impact of Treatment on Sick day/Disability Cost	Low to No	1	No to Negative	0	Low to No	1	Moderate	2
Direct Premium Cost Impact on Small Employers and Large Employers	Low	3	Low	3	Moderate	2	Moderate	2
Net Premium Cost Impact on Small Employers and Large Employers	Low	3	Low	3	Moderate	2	Low	3
Total Score		15		13		23		23