Cost Impact Study of Mandated Benefits in Texas

Report # 1

July 21, 2000

with August 30, 2000 revisions

Susan K. Albee, F.S.A.
Esther Blount, F.S.A.
Tim D. Lee, F.S.A.
Mark Litow, F.S.A.
Mike Sturm, F.S.A.

Cost Impact Study of Mandated Benefits in Texas

Table of Contents

Appendices

EXECUTIVE SUMMARY

Milliman & Robertson, Inc. (M&R) was engaged by the Texas Department of Insurance (TDI) to perform a study to evaluate the cost impact of 13 specific mandated benefits**.** Mandated benefits are coverages required by law and include regulations requiring 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 1 of the study. Part 1 involves the estimation of the impact on premium rates of each of the 13 mandates.

We have estimated the premium costs for each mandate, separately for 6 different market segments. Estimates vary between small and large groups, and among indemnity, PPO/POS plans, and HMO plans. We have not addressed the impact on individual coverages, as that was beyond the scope of the requested study.

Following is a high level summary of the average per member per month (PMPM) and percentage of premium cost estimates for each of the mandates for all markets and plan types combined. Detailed descriptions of each of the mandates are included in Attachment A.

Estimated Average PMPM Premium
Calendar Year 2000

Mandate	Average PMPM Premium Cost		Estimated % of Premium Cost	
	Large Group	Small Group	Large Group	Small Group
Chemical Dependency	$0.79	0.85	0.5%	0.5%
Complications of Pregnancy	0.80	0.83	0.5%	0.5%
Oral Contraceptives	0.66	0.62	0.4%	0.3%
Congenital Defects	2.27	2.61	1.3%	1.4%
HIV/AIDS	1.91	2.07	1.1%	1.1%
Mammography	0.64	0.67	0.4%	0.4%
Prostate Testing	0.14	E	0.1%	E
Serious Mental Illness	3.34	3.53	2.0%	1.9%
Minimum Maternity Stay	0.55	0.47	0.3%	0.3%
Minimum Mastectomy Stay	0.02	E	0.0%	E
Reconstructive Surgery	0.21	0.25	0.1%	0.1%
Handicapped Dependents	0.55	0.62	0.3%	0.3%
Childhood Immunizations	0.93	0.80	0.6%	0.4%
Total	**$12.81**	**13.32**	**7.6%**	**7.2%**

E = Exempt from legislation.

Detailed assumptions are contained in this report and should be reviewed carefully before applying these cost estimates. The report's authors are available to explain the results, the assumptions upon which they are based, and the limitations in the use of the results.

Following are some high level assumptions applied in estimating the costs of the mandates:

- The costs shown above equal the total expected cost of the insurance coverage required by the mandate. In other words, it represents the costs a health insurance carrier would incur to add the benefit (or population), 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 this stage of our study, we have 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 above 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. Potential offsetting savings will be addressed in Part 2 of our study.

- 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. The additional cost of a mandate may result in groups reducing or dropping their coverage. In that instance, groups making such a change in coverage are likely to be lower cost on average, so that the remaining groups covered through insurance have a higher than average cost. Since the benefits are mandated in Texas, our expectation is that any adverse selection is included in the underlying data. The exception is for the maternity and mastectomy length of stay mandates that were more recent and were not reflected in the underlying data. In these cases we used our judgment to incorporate adverse selection. The Serious Mental Illness benefit in the small group market is required to be offered, rather than mandated in all health benefit plans. Costs do not reflect the adverse selection inherent in a market where each employer can individually select whether to offer the benefit.

This report has been prepared for the Texas Department of Insurance. It may be distributed to other parties at the Department’s discretion; however, we ask that any distribution include the report in its entirety.

This report should be considered only a part of the more detailed study that M&R has been engaged to complete. While the initial cost implications of the mandates are important, they only tell a small part of the story of the impact of the mandated benefits. M&R is continuing its research and analysis to provide additional information with respect to the following:

- 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 benefit on employers' ability to purchase health insurance;

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

A report detailing the results of this more extensive study will be completed no later than September 30, 2000. It will include recommendations for a process and methodology to evaluate the cost and benefits of newly proposed mandated benefit legislation.

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.

While we anticipate that the cost estimates presented above will not change, it is possible that we will encounter additional information in the next stage of the project that will cause us to re-evaluate our assumptions. If so, we will clearly state that in presenting the final study.

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 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 first of two reports and addresses the annual premium cost per covered individual for each of 13 mandated benefits specified by TDI.

The cost development incorporates a number of data sources, both published and non-published. In presenting the costs, we have attempted to specifically detail these data sources and our methodologies and assumptions.

Section II of this report summarizes the results of our study. It includes the estimated per member per month (PMPM) premium by market segment for each of the mandates and the cost estimates as a percent of premium. The market segments are defined by size (large group vs. small group) and delivery system (HMO vs. PPO/POS vs. indemnity). Large groups are those with 51 or more employees eligible for health insurance coverage, while small groups are those with 2 – 50 eligible employees.

Cost may vary between small and large groups due to differences in the risk characteristics of the enrollees, required coverages, typical benefit designs, and expense structures. They will differ among delivery systems due to differences in benefit designs, provider reimbursement, medical management, and enrollee risk characteristics.

In Section III, we describe the general methodology we applied in developing our cost estimates. The section also includes a listing of a number of our data sources.

Section IV describes M&R's healthcare reform model for Texas. This model was used to develop expected premium costs by market segment and apply consistent assumptions for mandated benefit costs by market.

Section V includes detailed information on the cost development for each of the mandates. For each mandated benefit, we describe our approach and assumptions, and list each of our data sources.

Section VI contains the conclusion to this report.

II. SUMMARY OF RESULTS

In aggregate for large groups the 13 benefits we studied represent approximately $12.81 per member (insured individual) per month (PMPM) and 7.6% of premium for an average health insurance plan. In aggregate for small groups the 13 benefits we studied represent approximately $13.32 per member (insured individual) per month (PMPM) and 7.2% of premium for average health insurance plan.

Following is the breakdown of PMPM costs by market segment for large groups:

Estimated Average Large Group PMPM Premium
Calendar Year 2000

Mandated Benefit	Large Group HMO	Large Group PPO / POS	Large Group Indemnity	Large Group Combined
Chemical Dependency	$0.73	$0.90	$0.81	$0.79
Complications of Pregnancy	0.83	0.75	0.89	0.80
Oral Contraceptives	0.67	0.66	0.59	0.66
Congenital Defects	2.00	2.58	3.04	2.27
HIV/AIDS/HIV-related Illnesses	1.80	2.02	2.21	1.91
Mammography	0.63	0.66	0.58	0.64
Prostate Testing (PSA)	0.13	0.14	0.13	0.14
Serious Mental Illness	3.17	3.65	3.19	3.34
Minimum Hospital Stay for Maternity	0.67	0.39	0.38	0.55
Minimum Hospital Stay for Mastectomy or Lymph Node Dissection	0.02	0.02	0.02	0.02
Reconstructive Surgery for Mastectomy	0.18	0.24	0.30	0.21
Handicapped Dependents Regardless of Age	0.49	0.62	0.68	0.55
Childhood Immunizations	0.93	0.99	0.61	0.93
Total	$12.25	$13.62	$13.43	$12.81

Following is the breakdown of PMPM costs by market segment for small groups:

Estimated Average Small Group PMPM Premium
Calendar Year 2000

Mandated Benefit	Small Group HMO	Small Group PPO / POS	Small Group Indemnity	Small Group Combined
Chemical Dependency	$0.74	$0.87	$1.02	$0.85
Complications of Pregnancy	0.84	0.80	1.05	0.83
Oral Contraceptives	0.61	0.62	0.60	0.62
Congenital Defects	2.02	2.72	3.62	2.61
HIV/AIDS/HIV-related Illnesses	1.81	2.12	2.62	2.07
Mammography	0.64	0.67	0.69	0.67
Prostate Testing (PSA)	E	E	E	E
Serious Mental Illness	3.22	3.64	3.78	3.53
Minimum Hospital Stay for Maternity*	0.68	0.37	0.44	0.47
Minimum Hospital Stay for Mastectomy or Lymph Node Dissection	E	E	E	E
Reconstructive Surgery for Mastectomy**	0.19	0.26	0.38	0.25
Handicapped Dependents Regardless of Age	0.50	0.65	0.81	0.62
Childhood Immunizations***	0.85	0.81	0.58	0.80
Total	$12.10	$13.53	$15.59	$13.32

E = Exempt from legislation

*Required under federal law: The Newborns' and Mothers' Health Protection Act of 1996.

**Required under federal law: The Women's Health and Cancer Rights Act of 1998. State statute subsequently revised to include small employers.

***Required under federal HMO legislation. Estimate supplied for all types of coverage to address those HMOs that offer other types of coverage.

The large group cost estimates as a percentage of premium are below:

Estimated Average Large Group Percent of Premium
Calendar Year 2000

Mandated Benefit	Large Group HMO	Large Group PPO / POS	Large Group Indemnity	Large Group Combined
Chemical Dependency	0.5%	0.5%	0.4%	0.5%
Complications of Pregnancy	0.5%	0.4%	0.5%	0.5%
Oral Contraceptives	0.4%	0.4%	0.3%	0.4%
Congenital Defects	1.3%	1.4%	1.6%	1.3%
HIV/AIDS/HIV-related Illnesses	1.1%	1.1%	1.1%	1.1%
Mammography	0.4%	0.4%	0.3%	0.4%
Prostate Testing (PSA)	0.1%	0.1%	0.1%	0.1%
Serious Mental Illness	2.0%	2.0%	1.6%	2.0%
Minimum Hospital Stay for Maternity	0.4%	0.2%	0.2%	0.3%
Minimum Hospital Stay for Mastectomy or Lymph Node Dissection	0.0%	0.0%	0.0%	0.0%
Reconstructive Surgery for Mastectomy	0.1%	0.1%	0.2%	0.1%
Handicapped Dependents Regardless of Age	0.3%	0.3%	0.4%	0.3%
Childhood Immunizations	0.6%	0.6%	0.3%	0.6%
Total	**7.7%**	**7.5%**	**7.0%**	**7.6%**

The small group cost estimates as a percentage of premium are below:

Estimated Average Small Group Percent of Premium
Calendar Year 2000

Mandated Benefit	Small Group HMO	Small Group PPO / POS	Small Group Indemnity	Small Group Combined
Chemical Dependency	0.5%	0.5%	0.4%	0.5%
Complications of Pregnancy	0.5%	0.4%	0.5%	0.5%
Oral Contraceptives	0.4%	0.3%	0.3%	0.3%
Congenital Defects	1.3%	1.5%	1.6%	1.4%
HIV/AIDS/HIV-related Illnesses	1.1%	1.1%	1.1%	1.1%
Mammography	0.4%	0.4%	0.3%	0.4%
Prostate Testing (PSA)	E	E	E	E
Serious Mental Illness	2.0%	1.9%	1.6%	1.9%
Minimum Hospital Stay for Maternity*	0.4%	0.2%	0.2%	0.3%
Minimum Hospital Stay for Mastectomy or Lymph Node Dissection	E	E	E	E
Reconstructive Surgery for Mastectomy**	0.1%	0.1%	0.2%	0.1%
Handicapped Dependents Regardless of Age	0.3%	0.4%	0.4%	0.3%
Childhood Immunizations***	0.5%	0.4%	0.2%	0.4%
Total	7.5%	7.2%	6.8%	7.2%

E = Exempt from legislation

*Required under federal law: The Newborns' and Mothers' Health Protection Act of 1996.

**Required under federal law: The Women's Health and Cancer Rights Act of 1998. State statute subsequently revised to include small employers.

***Required under federal HMO legislation. Estimate supplied for all types of coverage to address those HMOs that offer other types of coverage.

Each of the mandates is described in detail in Appendix A.

III. METHODOLOGY

Following are the steps we applied in the development of the premium costs.

1. First, we updated M&R's healthcare reform model for Texas by HMO, PPO, and Indemnity coverage for small and large group business. This model reflects the number of people, costs and premiums for the State for calendar year 2000. The model and assumptions are further described in Section IV of this report.

2. Second, we developed initial claim cost estimates for each of the mandates. The initial cost estimates came from a number of sources. Some of the sources used include:

   - M&R's Health Cost Guidelines (HCGs);
   - M&R's Care Guidelines;
   - M&R's professional services model (MCPSD);
   - Internal M&R databases of health claims information;
   - MDR UCR fee schedule (owned by Ingenix) released in February 2000;
   - Public data sources

   The M&R data sources are described in detail in Appendix B.

3. Next, we adjusted the claim costs for each mandated benefit by market and added estimated retention (administrative expenses and risk charge) to arrive at premium costs. This step involved taking the initial claim cost estimates and adjusting them based on our healthcare reform model from (1) above.

In Section V of this report, we address the specific assumptions and data sources used in the cost development for each of the mandates.

IV. DESCRIPTION OF HEALTHCARE REFORM MODEL AND ASSUMPTIONS

The first step in our analysis was to update M&R's healthcare reform model for Texas by HMO, PPO, and Indemnity coverage for small and large group business. This model reflects the expected number of fully insured people, costs and premiums for the State for calendar year 2000 categorized into market cells that vary by market size (i.e., large group vs. small group) and type of delivery system (i.e., HMO, PPO/POS, and Indemnity).

The goal of the model is to develop cost and premium assumptions for comprehensive healthcare products representative of these markets. The model results allow us to apply consistent assumptions to vary the mandated benefit costs by these individual markets, translate claim costs into premium rates, and develop mandated benefit costs as a percent of total premium.

Market Segments

Large groups are defined as those with 51 or more employees eligible for health insurance coverage, while small groups are those with 2 – 50 eligible employees. Cost may vary between small and large groups due to differences in the risk characteristics of the enrollees, required coverages, typical benefit designs, and expense structures.

HMO, PPO/POS, and indemnity plans will have different cost structures for a number of reasons. An Health Maintenance Organization, or HMO, will typically have a restrictive provider network and therefore will generally have lower negotiated reimbursement rates to providers and incorporate managed care features to result in lower utilization. On the other hand, they generally offer richer plan benefits than PPO or indemnity plans, including many preventive care features.

Preferred Provider Organizations or Point of Service Plans (PPO/POS) are plans that offer the insured the option of a designated panel of providers or their provider of choice, with different associated cost sharing requirements. In an indemnity plan, the insured will have the freedom of choice of providers. Utilization and reimbursement levels are generally higher than in the managed care (HMO, PPO/POS) plans; however, the benefit plan is usually not as rich as under managed care plans.

Methodology

We followed a number of steps to complete our analysis. Specifically, we:

- Calculated Texas-specific PMPM average medical cost estimates by market size and delivery system using our research database. In developing our estimates, we accounted for market cell differences in:
  - Benefit plan,
  - Provider reimbursement, and
  - Level of health care management

- Adjusted our preliminary results by market cell to our best estimate PMPM premium for the Texas market. We applied one scalar adjustment to all cells to preserve the relativities among cells. We set the scalar based on a variety of sources, including *M&R's 1999 HMO Rate Survey*, other premium surveys for PPOs and Indemnity plans, local market knowledge, and our judgment.

- Adjusted our results by market cell to reflect age/gender and health status differences among the cells.

- Divided the medical cost estimates for each market cell by a target loss ratio that varies by market cell to arrive at the premium by market cell.

We estimated Texas' population by market cell using a variety of sources, including data from the Employee Benefit Research Institute (EBRI), Interstudy, the U.S. Statistical Abstract, the Health Insurance Association of America (HIAA), other research data, and our judgment.

Results

Following are the results of the model showing annual premiums and population estimates by market.

Market	Delivery System	Estimated Average Premium Per Covered Member *	Texas Population Estimates (000)
Large Group	HMO	$1,912	1,687
(i.e., 51+ employees)	PPO / POS	2,145	1,050
	Indemnity	2,339	161
	Subtotal	**$2,020**	**2,898**
Small Group	HMO	$1,917	607
(i.e., 2-50 employees)	PPO / POS	2,243	1,301
	Indemnity	2,778	198
	Subtotal	**$2,199**	**2,106**
Large and Small Group	HMO	$1,913	2,294
	PPO / POS	2,199	2,351
	Indemnity	2,581	359
	Subtotal	**$2,095**	**5,004**

* Premiums reflect what carriers need to charge to meet profit goals

V. ASSUMPTIONS UNDERLYING MANDATED BENEFIT COST ESTIMATES

This section describes the cost assumptions and methodologies for each of the mandates in detail. First we describe some of the overall assumptions, then we address each mandate separately.

As described in the Executive Summary, we used the following guidelines in developing our cost estimates:

- 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 this stage of our study, we have 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 above 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. The additional cost of a mandate may result in groups reducing or dropping their coverage. In that instance, groups making such a change in coverage are likely to be lower cost on average, so that the remaining groups covered through insurance have a higher than average cost. Since the benefits are mandated in Texas, our expectation is that any adverse selection is included in the underlying data. The exception is for the maternity and mastectomy length of stay mandates that were more recent and were not reflected in the underlying data. In these cases we used our judgment to incorporate adverse selection. However, the Serious Mental Illness benefit in the small group market is required to be offered, rather than mandated in all health benefit plans. Costs do not reflect the adverse selection inherent in a market where each employer can individually select whether to offer the benefit.

We calculated the PMPM cost of the mandates using different methods, depending on the benefit. In general, the development of the mandate cost involved one of two methodologies:

- Develop estimated utilization per 1,000 members per year and the average charge per service for the mandated benefit for one of the markets. Then, average PMPM costs for that market equal the utilization times the charge per service divided by 12,000 (the

12,000 factor adjusts from a per 1,000 members per year basis to a per member per month basis). Adjustments to calculate the utilization and charges for the other markets are then based on relativities included in the healthcare reform model.

- Estimate the portion of the population covered by the mandate and that population's monthly healthcare costs compared to the total insured population. We then solve algebraically for the portion of costs associated with the mandated population.

Following is the detail by mandate.

Chemical Dependency

Our cost estimates for chemical dependency are largely based on HCGs data adjusted for Texas. The basic tables of the HCGs and the healthcare reform model split out the costs associated with chemical dependency, separately for inpatient and outpatient services. We adjusted the utilization and charge levels for the required level of benefits and by market segment as reflected in the healthcare reform model.

Following are the results:

	Inpatient Days Per 1,000	Outpatient Visits per 1,000	Net Average Claim Cost PMPM Inpatient	Net Average Claim Cost PMPM Outpatient	PMPM Premium	Percent of Premium
Large Group						
HMO	11.2	42.7	$0.35	$0.27	$0.73	.5%
PPO / POS	12.4	41.2	0.43	0.33	0.90	.5%
Indemnity	13.2	35.2	0.53	0.21	0.81	.4%
Small Group						
HMO	11.2	42.9	0.35	0.27	0.74	.5%
PPO / POS	12.3	40.5	0.40	0.29	0.87	.5%
Indemnity	13.0	34.6	0.55	0.22	1.02	.4%

Sources of Data:

A. Milliman & Robertson, Inc. 2000. *Health Cost Guidelines*.

Complications of Pregnancy

In order to develop the costs for this mandate, we went through the following steps:

1. Based on the data sources identified below, we isolated the cases that included a diagnosis related to complication of pregnancy. This includes cases with a hospital stay during pregnancy for a diagnosis unrelated to pregnancy but complicated by the 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.

2. We then estimated the utilization and average cost per service of the hospital stays and the medical services related to the hospital stays.

3. We used the HCGs utilization and average charge relationships to vary the results by type of coverage.

Following are the results:

	Annual Utilization Per 1,000 Members (a)	Gross Average Charge (b)	Average Net Claim Costs PMPM	PMPM Premium	Percent of Premium
Large Group					
HMO	2.056	$4,103	$0.70	$0.83	.5%
PPO / POS	1.275	6,016	0.64	0.75	.4%
Indemnity	1.382	6,998	0.81	0.89	.5%
Small Group					
HMO	2.065	4,103	0.71	0.84	.5%
PPO / POS	1.251	6,128	0.64	0.80	.4%
Indemnity	1.279	7,387	0.79	1.05	.5%

(a) Annual Utilization Per 1,000 Members = Expected number of members with a complication of pregnancy per 1,000 members of a standard population.
(b) Average Cost = Average cost per complications of pregnancy case.

Sources of Data:

A. Milliman & Robertson, Inc. 2000. *Health Cost Guidelines.*

B. Milliman & Robertson, Inc. 2000. Internal health claims information databases.

Oral Contraceptives

Our cost estimates for oral contraceptives are largely based on the HCGs data, which contains relative utilization and charge information by type of drug. We also reviewed studies regarding the utilization of oral contraceptives by women in the U.S. in order to validate the utilization assumptions. Based on that data, when oral contraceptives are included in the pharmacy benefits, they will represent approximately 3.7% of prescription drug utilization. The cost per script will be about 66% of the gross average cost per script of all prescription drugs.

We applied these percentages to the health care reform model costs for Texas in order to calculate utilization and average charges by market. We assumed the same cost sharing as in the overall health reform model. Following is the resulting utilization, costs and premiums for the mandate.

Following are the results:

	Utilization per 1,000	Average Charge per Script	Average Copay per Script	Average Net Claim Cost PMPM	PMPM Premium	% of Premium
Large Group						
HMO	344.8	$27.26	$7.51	$0.57	$0.67	.4%
PPO / POS	341.4	27.26	7.51	0.56	0.66	.4%
Indemnity	355.6	27.26	9.07	0.54	0.59	.3%
Small Group						
HMO	339.4	27.26	9.07	0.51	0.61	.4%
PPO / POS	327.8	27.26	9.07	0.50	0.62	.3%
Indemnity	325.1	27.26	10.52	0.45	0.60	.3%

Sources of Data:

A. Milliman & Robertson, Inc. 2000. *Health Cost Guidelines.*

B. National Center for Health Statistics. *National Survey of Family Growth*.

Congenital Defects

In order to develop the costs for this mandate, we went through the following steps:

1. We were asked by TDI to estimate the cost of any congenital condition at any age. Based on the data sources identified below, we first estimated the relative utilization of hospital days and physician visits that included a diagnosis related to a congenital condition. Based on this relative utilization, we applied the HCGs to develop the expected cost of these conditions.

2. We based this analysis on the detail member records that could be identified with an ICD9 code relating to congenital anomalies or perinatal conditions. We separated the ICD9 codes into two groups. The first group included the codes that are strictly related to one of these categories. The second group included the codes which include one of these categories as a possible cause of the condition, but for which there are other causes as well. When the second group of ICD9 codes were added to the first group the resulting utilization was 40% higher than when using the first group alone. We used a factor of 1.10 applied to the first group, based on the assumption that one quarter of the increase resulting from the second group would be due to congenital conditions.

Following are the results:

	Percent of Services Related to Congenital Conditions	Average Net Claim Costs PMPM	PMPM Premium	Percent of Premium
Large Group				
HMO	1.26%	$1.70	$2.00	1.3%
PPO / POS	1.49%	2.20	2.58	1.4%
Indemnity	1.56%	2.77	3.04	1.6%
Small Group				
HMO	1.26%	1.70	2.02	1.3%
PPO / POS	1.51%	2.18	2.72	1.5%
Indemnity	1.57%	2.72	3.62	1.6%

Sources of Data:

A. Milliman & Robertson, Inc. 2000. *Health Cost Guidelines.*

B. Milliman & Robertson, Inc. 2000. Internal health claims information databases.

C. Milliman & Robertson, Inc. 2000. *Managed Care Professional Services Model*. "Managed Care Professional Services Database" uses data from 1997 and 1998.

HIV / AIDS/HIV-Related Illnesses

In order to develop the costs for this mandate, we went through the following steps:

1. Based on the data sources identified below, we first estimated the percent of the insured population in Texas that has HIV/AIDS. This percentage is based on CDC data regarding the total number of Texans living with AIDS as of December 1999, adjusted to include individuals with HIV only and to exclude those covered under Medicaid and other public insurance programs.

2. We then determined the expected annual healthcare costs per person with HIV only or AIDS based on various sources. The average annual cost was assumed to equal $22,000.

3. Given the assumed percentage of the population that met the definition of the legislation, the cost of covering this population and the cost of covering the entire population, we algebraically solve for the cost of covering the entire population excluding this legislated population.

Following are the results:

	Percent with AIDS/HIV	Average PMPM Cost for Population w/AIDS/HIV	Average Additional PMPM Cost Added to the System	PMPM Premium	Percent of Premium
Large Group					
HMO	0.1%	$1,667	$1.53	$1.80	1.1%
PPO / POS	0.1%	1,870	1.72	2.02	1.1%
Indemnity	0.1%	2,183	2.01	2.21	1.1%
Small Group					
HMO	0.1%	1,652	1.52	1.81	1.1%
PPO / POS	0.1%	1,841	1.69	2.12	1.1%
Indemnity	0.1%	2,137	1.97	2.62	1.1%

Sources of Data:

A. Dulworth, Sherrie, and Bruce Pyenson. 1998. "HIV/AIDS Managed Care". Milliman & Robertson, Inc. Research Report.

B. HIV Cost and Services Utilization Study Policy Brief. 1999. "A Portrait of the HIV + Population in America". RAND.

C. Shapiro, MD, PhD, Martin F., et al. 1999. "Variations in the Care of HIV-Infected Adults in the United States". The Journal of the American Medical Association, June 23-30, 1999. Volume 281, No. 24.

D. U.S. Department of Health and Human Services. 2000. *HIV/AIDS Fact Sheet*. Prepared by Office of Communications and Public Liaison, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland.

E. U.S. Department of Health and Human Services. 1999. *HIV/AIDS Surveillance Report*. Centers for Disease Control. Year-end edition, Volume 11, No. 2.

Mammography

Our cost estimates for mammography are based on M&R data as well as research regarding recommended screening frequencies and adherence to those recommendations. Our cost estimates assume that if screenings are covered, 1 in 10 women age 35 – 39 will be screened each year, 1 in 4 women age 40 – 49, and 1 in 2 age 50+ in the Indemnity large group population. We estimated the average charge per screening to be $108 based on a number of internal data sources and our judgement. We adjusted the utilization and charge levels as reflected in the healthcare reform model for physical exams to arrive at the costs by market segment.

Following are the results:

	Utilization per 1,000 Members per Year	Gross Average Charge	Average Net Claim Cost PMPM	PMPM Premium	Percent of Premium
Large Group					
HMO	75.8	$ 95	$0.54	$0.63	.4%
PPO / POS	72.2	114	0.56	0.66	.4%
Indemnity	73.8	108	0.53	0.58	.3%
Small Group					
HMO	76.1	95	0.54	0.64	.4%
PPO / POS	70.5	114	0.54	0.67	.4%
Indemnity	68.3	114	0.52	0.69	.3%

Sources of Data:

A. American Medical Association. 1999. "Quality of Care in Investor-Owned vs. Not-for-Profit HMOs". The Journal of the American Medical Association. July 14, 1999. Volume 282, No. 2.

B. "MDR Payment System". 2000. MDR/PC Software Version 1.2. Various MDR UCR fee databases. Salt Lake City: Ingenix Publishing.

C. Milliman & Robertson, Inc. 2000. *Health Cost Guidelines.*

D. Milliman & Robertson, Inc. 2000. Internal health claims information databases.

E. Milliman & Robertson, Inc. 2000. *Managed Care Professional Services Model*. "Managed Care Professional Services Database" uses data from 1997 and 1998.

F. National Cancer Institute. 1999. "Cancer Facts". Internet Web Site: http://cis.nci.nih.gov/fact/5_28.htm.

G. Various Internet articles regarding mammography utilization.

Prostate Testing (PSA)

Our cost estimates for prostate screening are based on M&R data as well as research regarding actual screening frequencies. We translated the utilization suggested by the data for a full commercial population to that for men age 40 and older. Ultimately, our utilization is based on the assumption that 30% of men age 40+ are screened annually in the indemnity large group population. We estimate the average charge per screening to be $81 based on a number of internal data sources and our judgement.

We adjusted the utilization and charge levels as reflected in the healthcare reform model to arrive at the costs by market based on the relative utilization and costs among the markets for physical exams.

Following are the results:

	Utilization per 1,000 Members per Year	Gross Average Charge	Average Net Claim Cost PMPM	PMPM Premium	Percent of Premium
Large Group					
HMO	22.1	$71.42	$0.11	$0.13	.1%
PPO / POS	21.0	85.48	0.12	0.14	.1%
Indemnity	21.6	81.00	0.12	0.13	.1%
Small Group					
HMO	**Exempt from Legislation**				
PPO / POS					
Indemnity					

Sources of Data:

A. "MDR Payment System". 2000. MDR/PC Software Version 1.2. Various MDR UCR fee databases. Salt Lake City: Ingenix Publishing.

B. Milliman & Robertson, Inc. 2000. Internal health claims information databases.

C. Milliman & Robertson, Inc. 2000. *Managed Care Professional Services Model*. "Managed Care Professional Services Database" uses data from 1997 and 1998.

Serious Mental Illness

Our cost estimates for serious mental illness (SMI) are based largely on M&R's internal data. The basic tables of the HCGs and the healthcare reform model split out the costs associated with all mental illness. Based on detailed proprietary databases showing utilization and charges by diagnosis, we estimated the portions of inpatient and outpatient mental health services that are due to the conditions covered in this mandate.

Following are the results:

	Total Average Inpatient Mental Health Claim Cost PMPM	Total Average Outpatient Mental Health Claim Cost PMPM	Average SMI Inpatient Claim Costs PMPM	Average SMI Outpatient Claim Costs PMPM	PMPM Premium	Percent of Premium
Large Group						
HMO	$ .81	$2.66	$0.75	$1.94	$3.17	2.0%
PPO / POS	1.04	2.93	0.97	2.14	3.65	2.0%
Indemnity	1.36	2.24	1.26	1.63	3.19	1.6%
Small Group						
HMO	.81	2.67	0.76	1.95	3.22	2.0%
PPO / POS	.96	2.76	0.89	2.02	3.64	1.9%
Indemnity	1.33	2.19	1.23	1.60	3.78	1.6%

Sources of Data:

A. Milliman & Robertson, Inc. 2000. *Health Cost Guidelines.*

B. Milliman & Robertson, Inc. 2000. Internal health claims information databases.

Minimum Hospital Stay for Maternity

In order to develop the costs for this mandate, we went through the following steps:

1. First we built separate length of stay continuance tables for DRGs 371 and 373. DRG 371 contains vaginal deliveries without complications and DRG 373 contains cesarean deliveries without complications. We assumed that 75% of the one day stays for DRG 371 will take advantage of the legislation to stay 2 days and that 75% of the cases with stays under 4 days for DRG 373 will take advantage of the legislation to stay 4 days. We used these estimates to adjust the average lengths of stay for maternity in the HCGs.

2. Since the majority of the cost of a hospital stay occurs in the earlier days, the average cost per day will decrease as the number of days increase. We used the relationship of the average cost per day of a well managed plan to a loosely managed plan in the HCGs to develop a formula based on linear regression to estimate this decrease in average cost per day. We then applied this formula to the average costs for a maternity stay in the HCGs.

Following are the results:

	Prior Annual Utilization Per 1,000 (a)	Revised Annual Utilization Per 1,000 (b)	Prior Gross Average Charge (c)	Revised Gross Average Charge (d)	Increased Net Average Claim Cost PMPM	PMPM Premium	Percent of Premium
Large Group							
HMO	44.72	54.54	$1,215.35	$1,122.16	$0.57	$0.67	.4%
PPO / POS	28.00	33.19	1,723.13	1,600.85	0.33	0.39	.2%
Indemnity	30.52	35.53	1,970.08	1,836.63	0.34	0.38	.2%
Small Group							
HMO	44.91	54.78	1,215.35	1,122.16	0.57	0.68	.4%
PPO / POS	27.49	32.54	1,753.00	1,628.57	0.30	0.37	.2%
Indemnity	28.26	32.89	2,079.53	1,938.66	0.33	0.44	.2%

(a) Prior Annual Utilization Per 1,000 = assumed hospital days per 1,000 members prior to legislation
(b) Revised Annual Utilization Per 1,000 = assumed hospital days per 1,000 after the legislation assuming 75% of the patients stay the maximum allowed by the legislation
(c) Prior Cost = average cost per day prior the legislation
(d) Revised Cost = revised average cost per day after the adjustment described above.

Sources of Data:

A. Milliman & Robertson, Inc. 2000. *Health Cost Guidelines.*

B. 1998 Hospital Admissions Database. 1998. "Hospital Length of Stay Distribution Tables".

Minimum Hospital Stay for Mastectomy or Lymph Node Dissection

In order to develop the costs for this mandate, we went through the following steps:

1. First we built a length of stay continuance table for DRGs 257-260. This contains the primary hospital stays related to complete and partial mastectomies. We assumed that 75% of the one-day stays will take advantage of the legislation and stay two days. We used these estimates to adjust the average lengths of stay for a mastectomy in the HCGs.

2. Since the majority of the cost of a hospital stay occurs in the earlier days, the average cost per day will decrease as the number of days increases. We used the relationship of the average cost per day of a well managed plan to a loosely managed plan in the HCGs to develop a formula based on linear regression to estimate this decrease in average cost per day. We then applied this formula to the average costs for a mastectomy stay in the HCGs.

3. We assessed the impact of lymph node dissections and mastectomy cases with the potential of moving from an outpatient to an inpatient basis. We determined that the additional cost would be negligible for lymph node dissections based on input from a physician consultant. We increased the assumed inpatient admissions to adjust for expected costs increased due to mastectomy cases moving from an outpatient to an inpatient basis.

Following are the results:

	Prior Annual Utilization Per 1,000 (a)	Revised Annual Utilization Per 1,0000 (b)	Prior Gross Average Charge (c)	Revised Gross Average Charge (d)	Increased Net Average Claim Cost PMPM	PMPM Premium	% of Premium
Large Group							
HMO	.556	.689	$2,464.37	$2,287.11	$0.02	$.02	0%
PPO / POS	.605	.702	3,427.85	3,243.49	0.01	0.02	0%
Indemnity	.677	.753	3,888.36	3,713.88	0.01	0.02	0%
Small Group							
HMO	**Exempt from Legislation**						
PPO / POS							
Indemnity							

(a) Prior Annual Utilization Per 1,000 = assumed hospital days per 1,000 members prior to legislation increased by 20% as described above.
(b) Revised Annual Utilization Per 1,000 = assumed hospital days per 1,000 after the legislation assuming 75% of the patients stay the maximum allowed by the legislation and 20% more admits per 1,000.
(c) Prior Cost = average cost per day prior the legislation
(d) Revised Cost = revised average cost per day after the adjustment described above.

Sources of Data:

A. 1998 Hospital Admissions Database. 1998. "Hospital Length of Stay Distribution Tables".

B. Milliman & Robertson, Inc. 2000. *Health Cost Guidelines.*

C. Milliman & Robertson, Inc. 2000. Internal health claims information databases.

Reconstructive Surgery for Mastectomy

In order to develop the costs for this mandate, we went through the following steps:

1. Based on the data sources identified below, we estimated the utilization and average cost per service of hospital and medical services that included a diagnosis related to breast reconstruction after a mastectomy.

2. We used HCG utilization and average charge relationships to vary the results by type of coverage.

Following are the results:

	Annual Utilization Per 1,000 Members (a)	Net Average Charge (b)	Net Average Claim Cost PMPM	PMPM Premium	Percent of Premium
Large Group					
HMO	.307	$6,081	$0.16	$0.18	.1%
PPO / POS	.361	6,780	0.20	0.24	.1%
Indemnity	.422	7,841	0.28	0.30	.2%
Small Group					
HMO	.308	6,081	0.16	0.19	.1%
PPO / POS	.356	6,912	0.20	0.26	.1%
Indemnity	.390	8,874	0.29	0.38	.2%

(a) Annual Utilization Per 1,000 Members = Expected number of breast reconstructive surgeries per 1,000 members of a standard population.
(b) Average Cost = Average cost per breast reconstruction case.

Sources of Data:

A. Milliman & Robertson, Inc. 2000. *Health Cost Guidelines.*

B. Milliman & Robertson, Inc. 2000. Internal health claims information databases.

Handicapped Dependents Regardless of Age

In order to develop the costs for this mandate, we went through the following steps:

1. Based on the data sources identified below, we first estimated the percent of the insured population that fits in the handicapped dependent category covered by the mandate. This percentage excludes those in the disabled population identified as being employed full time or married, as we have assumed that these individuals would not meet the dependent definition. We also adjusted the overall percentage based on the relationship of the Texas disabled population to the total disabled population

2. We then determined the relative utilization of hospital days and physician visits of the handicapped dependent population to the total population from relativities identified in our research. Based on this, we applied this relative utilization to HCGs utilization to develop the expected cost of insuring this population and compared it to the cost of insuring the total population.

3. Given the assumed percentage of the population that met the definition of the legislation, the cost of covering this population and the cost of covering the entire population, we algebraically solve for the cost of covering the entire population if it did not include this legislated population.

Following are the results:

	Percent Disabled (a)	Morbidity Factor (b)	Net Average Claim Cost PMPM	PMPM Premium	Estimated Percent of Premium Cost (c)
Large Group					
HMO	0.095%	4.2472	$0.42	$0.49	.3%
PPO / POS	0.095%	4.6905	0.52	0.62	.3%
Indemnity	0.095%	4.6511	0.62	0.68	.4%
Small Group					
HMO	0.095%	4.2544	0.42	0.50	.3%
PPO / POS	0.095%	4.7383	0.52	0.65	.4%
Indemnity	0.095%	4.6640	0.61	0.81	.4%

(a) % Disabled = Percent of the group population that are dependents meeting the definition of the legislation.
(b) Morbidity Factor = The claim costs of this group when compared to the total group population (e.g., 4.338 factor means 433.8% of standard costs)
(c) Estimated Percent of Premium Cost = $1 \div \{[1-(a)(b)]/[1-(a)]\}-1$ The percentage increase in premium rates over what would need to be charged if this population were not covered. The additional cost added to the system.

Sources of Data:

A. Milliman & Robertson, Inc. 2000. *Health Cost Guidelines*.

B. U.S. Census Bureau. 2000. *Disability, Selected Characteristics of Persons 16-74: 1999*. "Table 1. Selected Characteristics of Civilians 16 to 74 Years Old With a Work Disability, by Sex: 1999" and "Table 2. Labor Force Status – Work Disability Status of Civilians 16 to 74 Years Old, by Sex: 1999".

C. U.S. Census Bureau. 2000. *Disability – 1990 Census Table 1: State Totals*. State of Texas.

D. U.S. Department of Health and Human Services. 1990. *The Disabled: Their Health Care and Health Insurance*. Prepared by Michele Adler of the Office of Disability, Aging and Long-Term Care Policy. Pages 4, 8 and 10

Childhood Immunizations

In order to develop the costs for this mandate, we went through the following steps:

1. Based on the data sources identified below, we first estimated the utilization based on the recommended childhood immunization schedule for children under age 6. We adjusted this utilization by the estimated vaccination coverage for Texas as reported by the National Immunization Survey. This table estimates the percentage of the children that have complied with the recommended schedule by age two, by vaccine. This utilization was converted to utilization per 1,000 members by using HCG standard demographics. The utilization variances by type of coverage were also based on the HCG.

2. We then determined the cost per immunization based on a combination of the St. Anthony's RBRVS and the 50th percentile for Houston from the MDR UCR fee database. These were combined for the different types of coverage so as to reproduce the average cost assumptions consistent with the HCGs.

3. We did not include the rotavirus vaccination in this analysis. On October 22, 1999 the Advisory Committee on Immunization Practices recommended that Rotashield, the only US-licensed rotavirus vaccine, no longer be used in the United States. Therefore, we assumed no utilization due to this immunization that was legislated in Art. 20A.09F, effective September 1, 1999.

Following are the results:

	Annual Utilization Per 1,000 Members (a)	Gross Average Charge (b)	Net Average Claim Cost PMPM	PMPM Premium	Percent of Premium
Large Group					
HMO	525.30	$17.97	$0.79	$0.93	.6%
PPO / POS	449.20	22.47	0.84	0.99	.6%
Indemnity	203.97	32.49	0.55	0.61	.3%
Small Group					
HMO	527.63	17.97	0.71	0.85	.5%
PPO / POS	424.25	22.84	0.65	0.81	.4%
Indemnity	188.80	34.29	0.43	0.58	.2%

(a) Annual Utilization Per 1,000 Members = Expected number of immunizations given to children under age 6 per 1,000 members of a standard population
(b) Average Cost = Average cost per immunization

Sources of Data:

A. American Academy of Pediatrics. 2000. "Recommended Childhood Immunization Schedule, United States, January – December 2000". Approved by the Advisory Committee on immunization Practices, the American Academy of Pediatrics, and the American Academy of Family Physicians.

B. Centers for Disease Control and Prevention. 1998. *Vaccination Coverage Levels Among Children born from February 1995 – May 1997 – United States, January 1998 – December 1999*. "Table 6a. Estimated Vaccination Coverage with Individual Vaccines Among Children by 24 Months of Age, by Census Division and State" and "Table 11a. Estimated Vaccination Coverage with 4:3:1:3 Series Among Children 19-35 Months of Age by Provider Type, by Census Division and State". National Immunization Survey, 1998.

C. "MDR Payment System". 2000. MDR/PC Software Version 1.2. Various MDR UCR fee databases. Salt Lake City: Ingenix Publishing.

D. Milliman & Robertson, Inc. 2000. *Health Cost Guidelines*.

E. St. Anthony Publishing. 2000. *St. Anthony's RBRVS 2000*. Salt Lake City: Ingenix Publishing.

VI. CONCLUSIONS

This report should be considered only a part of the more detailed study that M&R is completing. While the initial cost implications are important, there are other essential issues necessary to evaluate the total impact of the mandates. M&R is continuing its research and analysis to provide additional information with respect to the following:

- 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;
- 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;
- 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;
- The impact of the mandated benefit on employer's ability to purchase health insurance;
- The extent to which premium costs for benefit riders under the small employer basic and catastrophic plans are factored into the base premium rates for the plans.

While we anticipate that the cost estimates in this initial report will not change, it is possible that we will discover additional information in the next stage of the project that will cause us to reevaluate our assumptions. If so, we will clearly state that in presenting the final study.

APPENDIX A

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. Newborns With 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 Testing (PSA) ◆ 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 B

Data Sources

M&R's Health Cost Guidelines (HCGs)

The HCGs provide a flexible but consistent basis for the determination of claim costs for a wide variety of health benefit plans. The HCGs can be used to anticipate future claim levels, evaluate past experience, and establish interrelationships among various health coverages.

The HCGs are developed as a result of M&R's continuing research on health care costs. An extensive amount of data, both published and unpublished, is used in developing the HCGs and updating them annually. For the 1997 HCGs, over 20 million member months were used in the construction of the base utilization and cost model. The 1999 update included an additional 12 million member months.

Several different sources are used annually representing a spread in experience by geographic location and type of delivery system. The base cost model can be adjusted using a series of over 30 different geographic utilization and cost factors to represent differences in the delivery of care in any area of the country. In all HCGs cost development, we applied Texas statewide area factors.

M&R's Care Guidelines

The M&R Care Guidelines (formerly HealthCare Management Guidelines) are a nine-publication series that spans the continuum of patient care and describe the best practices for treating common conditions in a variety of care settings.

The M&R Care Guidelines are written by M&R clinicians and represent a compilation of practices drawn from medical literature, practice observation, and the expert opinion of physicians, nurses, and other providers. The purpose of these clinical tools, which are updated on a regular basis, is to assist healthcare professionals in providing quality care while maximizing the medical community's efficiency in the use of healthcare resources.

M&R's Managed Care Professional Services Model

The Managed Care Professional Services Model is a resource M&R consultants use to provide clients with more detailed analysis of professional service costs. The model contains:

- Utilization by place of service by procedure code for surgery, anesthesia, and radiology.
- Information by age and gender.
- Data by physician specialty.
- Information by diagnostic category (groupings of ICD-9 codes).
- Inclusion of both "service" and "supply" utilization where appropriate.
- An analysis of variance using the underlying data.

- Anesthesia and assistant surgeon information by procedure code.
- Utilization for several CPT-4 code modifiers and HCPCS codes.

The primary tool of the model is the Managed Care Professional Services Database (MCPSD) -- An Access database with the full level of detail available. The MCPSD represents actual managed care relationships. The data source includes over 24 million member months from 10 HMOs covering various regions of the country.

1998 Hospital Admissions Database

M&R maintains an internal database of the hospital admission records from 15 states, based on publicly available information. M&R's consolidated and adjusted database is not available publicly. At this time the state of Texas has not made their information publicly available. Therefore, Texas admissions are not included. We have made appropriate adjustments to reflect this where necessary.

Internal M&R Databases of Health Claims Information

M&R maintains other detailed health claims databases (some of which are used in developing the HCGs) which are not available publicly. In this study we used extracts from a transaction level database of over 20 HMOs from various regions (including two Texas HMOs). Where possible we limited the data extracts to Texas specific information

MDR UCR Fee Databases

Ingenix produces the MDR UCR fee databases that provide national, representative, usual-customary-and-reasonable (UCR) guidelines. The medical UCR database provides UCR guidelines for more than 95 percent of all current CPT-4 codes for surgery, evaluation and management, medicine, radiology and laboratory procedures. The HCPCS UCR database features payment guidelines for durable medical equipment, medical/surgical supplies, injectable drugs, orthotics, prosthetics, vision services and hearing services.

Public Data Sources

Various other public data sources were used in our research. These data sources are sited in Section V under the applicable mandate.