

Health Management Corporation (HMC) is pleased to present the results of the Baby Benefits Financial Impact Study for Sara Lee Corporation. Inpatient hospital claims were reviewed for all obstetric charges incurred by Sara Lee employees/ spouses during the period July 1, 1991 through June 30, 1992 (Period 1) and July 1, 1992 through June 30, 1993.

Results of the study indicate a strong correlation between program utilization and cost savings. In fact, the study identified that, during the first year of program implementation, the overall incidence and severity of infants who incurred prematurity claims decreased from the prior year and that Sara Lee saved at least \$2.50 in healthcare claims for every dollar invested in the program. This savings estimate translates to a 10% reduction in inpatient obstetric charges and a 33% reduction in inpatient charges related to prematurity. It is important to note that the savings estimates represent inpatient hospital claims savings only and do not include additional savings related to decreased physician and outpatient charges, benefits management, decreased absenteeism, increased productivity or other long term benefits associated with program utilization. Therefore, the savings realized by Sara Lee as a result of utilizing the Baby Benefits program are even greater than \$2.50 for every dollar invested.

Current participation levels at Sara Lee are estimated to be at approximately 51%. In order for Sara Lee to receive the maximum benefits associated with the utilization of the Baby Benefits program, participation in the program should continually be promoted. As program participation increases, the return on investment of \$2.50 will increase.

(Please note that, due to a change in benefit plans, claims incurred prior to January 1, 1992 by individuals at the Hosiery, Knit Products, Direct, Intimates and Spring City locations are not available and, therefore, are not included in the study).

Estimated Savings Reduction in Prematurity Charges as Percent of Total Charges

- X - Estimated savings resulting from the utilization of the Baby Benefits Program.
- \$1,332,761+X - Estimated prematurity costs for Period 2 without program utilization.
- \$6,004,184+X - Estimated total obstetric claims for Period 2 without program utilization.
- 30% Percentage of claims related to prematurity prior to program utilization
- \$267,446 - Estimated annual program cost assuming \$0.52 monthly cost per contract.

$$(\$1,332,761 + X) / (\$6,004,184 + X) = 30\%$$

$$0.7X = \$468,494$$

$$X = \$669,277 \text{ (Total savings related to program utilization)}$$

Total Savings / Total Cost = Return on investment or total savings per dollar invested in the program

$\$669,277 / \$267,446 = \$2.50$ Savings per dollar invested

Savings as a Percentage of Charges

$\$669,277 / (\$6,004,184 + \$669,277) = 10.0\%$ of total obstetric charges

$\$669,277 / (\$1,332,761 + \$669,277) = 33.4\%$ of total prematurity charges

BABY BENEFITS Program Effectiveness Study Summary Blue Cross and Blue Shield of Virginia (Fully Insured Groups)

Blue Cross and Blue Shield of Virginia included the Baby Benefits prenatal risk management program for the small account business unit representing nearly 130,000 contracts effective May 1990. The following is a summary of the results of a study conducted by Blue Cross and Blue Shield of Virginia's Actuarial department. The purpose of the study was to determine the measurable cost savings attributable to the Baby Benefits program during the period from September 1990 through May 1991.

Results

During the nine month time period, over \$331,000 was saved, or 20.1% of claims associated with prematurity/low birth weight.

Savings associated with Baby Benefits were partially attributable to shorter length of stay.

Average length of stay for all deliveries and preterm deliveries was measurably lower for the Baby Benefits study group:

- All Maternity - Baby Benefits Participants 4.11 days; Control 4.69 days
- All Preterm Delivery - Baby Benefits Participants 18.55 days; Control 23.07 days

Savings were 3.7% of claims for all maternity, delivery, and post-natal costs (excluding congenital anomalies).

This represents a 30% savings over the cost of the program.

Other Findings

There were lower than expected participation in the Baby Benefits program during this first time period. The study results indicated that participation was directly correlated to savings (higher participation results in higher return).

This analysis included solely health care costs through the first four months. This does not account for the long term savings associated with a full term vs. preterm delivery.

Additional savings, not quantified within this study include: employee productivity, time lost, disability expense, and costs associated with turnover.

Methodology/Study Parameters

The study included 2,428 pregnancies during the period from September 1990 through May 1991. The study group, consisting of those eligible for Baby Benefits, included 1,390 deliveries; the control group (groups who did not have Baby Benefits or any other risk assessment program), 1,038 deliveries.

Study and control group samples were remarkably similar. Distributions were reviewed for delivery month, age category, maternal risk for preterm birth, and geographic area. Adjustments were made for case mix (e.g., multiple births), low/high cost service areas, and benefit design differences.

Cases were only included for persons covered under a family or subscriber/minor contract for a period from 10 months prior to delivery through 4 months subsequent to delivery. (This post-delivery cut-off was adequate for the cases included in the study).

Savings were based on:

- lower average costs for preterm births
- fewer preterm births

These were calculated comparing the rate and cost of pregnancies in the study versus the control group.

This study was based on a conservative approach to measurement. A third savings, area, lifetime savings on babies brought to or closer to term, was not included.