2 Maternal and Child Health Plan Benefit Model: Evidence-Informed Coverage

Plan Implementation Guidance Document

This document provides a description of the Maternal and Child Health Plan Benefit Model and guidance for its implementation. It also includes an actuarial analysis illustrating the financial impact of the Maternal and Child Health Plan Benefit Model on both HMO and PPO plan designs. Employers can use this information to estimate the cost implications of adopting the recommended benefits in their own covered population.

Introduction

The Maternal and Child Health Plan Benefit Model (Plan Benefit Model) proposes a set of evidence-informed, comprehensive, standardized, integrated, and sustainable employer-sponsored health benefits for children and adolescents (ages 0 to 21 years), as well as preconception, pregnant, and postpartum women.

The model includes recommendations on *minimum* health, pharmacy, vision, and dental benefits; cost-sharing arrangements; and other information pertinent to plan design and administration. The Plan Benefit Model is not meant to be a gold-standard; rather, it is the National Business Group on Health's (Business Group's) baseline recommendation on which benefits *all* large employers should cover in *all* of their health plans.

The Plan Benefit Model was designed to:

1. Encourage evidence-informed benefit design.
2. Emphasize prevention and early detection.
3. Improve standardization.
4. Reduce employee cost barriers to essential care services.
5. Balance employee affordability and employer sustainability.

Plan Benefit Model Design

The Business Group used a multi-step process to identify, structure, and estimate the financial impact of the health benefits recommended in the Plan Benefit Model.

Development

The Business Group established the Maternal and Family Health Benefits Advisory Board (Benefits Advisory Board) to develop and vet the Plan Benefit Model, and to provide guidance on the overall project. The Benefits Advisory Board consisted of 14 Business Group member medical directors, benefit managers, and health promotion program staff; healthcare consultants; and delegates from the American Academy of Family Physicians (AAFP), the American Academy of Pediatrics (AAP), and the National Association of Pediatric Nurse Practitioners (NAPNAP). The Benefits Advisory Board met between February 2006 and May 2007 to design and revise the Plan Benefit Model.

Content and Data Sources

The benefits recommended in the Plan Benefit Model were adapted from clinical guidelines and recommendations developed by 28 professional organizations, healthcare groups, and Federal health agencies (refer to Figure 2A). In order to promote consistency and standardization, well-child care benefits were modeled on the American Academy of Pediatrics' *Bright Futures Guidelines* (2007, 3rd edition), which functions as the standard of preventive care in pediatric practices across the country.

When clinical guidelines and recommendations were not available, industry standard definitions and benefit coverage limits were applied. The Federal Employees Health Benefit Plan (FEHBP) was used

as the industry standard default. FEHBP is the largest group medical plan in the United States and is reviewed annually for adequacy.

In situations where clinical guidelines or recommendations conflicted, the Benefits Advisory Board reviewed the original documents and developed their own "expert opinion" statement.

Figure 2A: Organizations Cited in the Plan Benefit Model
Advisory Committee on Immunization Practices (ACIP)
Agency for Healthcare Research and Quality (AHRQ)
American Academy of Family Physicians (AAFP)
American Academy of Ophthalmology (AAO)
American Academy of Pediatric Dentistry (AAPD)
American Academy of Pediatrics (AAP)
American Association for Pediatric Ophthalmology and Strabismus (AAPOS)
American Association of Certified Orthoptists (AACO)
American College of Obstetricians and Gynecologists (ACOG)
American Dental Association (ADA)
American Dietetic Association (ADA)
American Medical Association (AMA)
American Psychological Association (APA)
American Speech-Language-Hearing Association (ASHA)
Bright Futures Guidelines
California Healthcare Foundation (CHCF)
Center for Medicare and Medicaid Services (CMHS)
Centers for Disease Control and Prevention (CDC)
Eye Med
Federal Employee Health Benefit Plan (FEHBP)
Hospice Foundation of America (HFA)
Kaiser Family Foundation (KFF)
National Academy of Neuropsychology (NAN)
National Hospice and Palliative Care Organization
U.S. Armed Services Health Care Services (TriCare)
U.S. Breastfeeding Committee (USBC)
U.S. Department of Health and Human Services, Bureau of Health Professionals (HRSA-BHP)
U.S. Preventive Services Task Force (USPSTF)

Review

The Plan Benefit Model was reviewed by the Benefits Advisory Board. In addition, an ad-hoc committee of 20 individuals and organizations reviewed the model and submitted comments and corrections. These external reviewers provided additional expertise and guidance. Reviewers included primary care providers; academic researchers; maternal and child health policy experts; patient and family advocates; and ancillary service providers, including dentists, dieticians, vision providers, and others. A full list of external reviewers is provided in the acknowledgements section on page A-iii.

Evidence-Informed Coverage

The Plan Benefit Model was informed by medical evidence. Some recommended interventions (e.g., STI screening) are evidence-based. Other recommended interventions do not meet the stringent criteria for being evidence-based, but nonetheless represent the best available information for health improvement. These interventions are based on what is called "recommended guidance."

Generally, the term "evidence-based" refers to medical interventions (e.g., tests, procedures, medications) that have been evaluated and determined to be effective. This means the intervention has a measurable impact on health outcomes: it prevents disease, reduces mortality, or improves a person's functionality.

Evidence-based interventions have a strong base of research to support their efficacy, safety, and cost-effectiveness.

An intervention is considered "**evidence-based**" when[1, 2]:

- Peer-reviewed, documented evidence shows that the intervention is medically effective in reducing morbidity or mortality;
- Reported medical benefits of the intervention outweigh its risks;
- The estimated cost of the intervention is reasonable when compared to its expected benefit; and
- The recommended action is practical and feasible.

Recommended guidance is based on the best available information about a condition, disease, or health service, but lacks the scientific research support in order to be considered evidence-based. Expert opinion, expert panel judgments, and consensus opinion are all forms of recommended guidance.

Evidence-based benefit design is an approach for developing health benefits. Evidence-based plans promote health care with demonstrated effectiveness by providing more generous coverage for services supported by strong evidence, and less generous coverage for services that are unproven or evidence indicates may be ineffective or unsafe.[3] The Business Group and many individual employers believe that this approach promotes quality and standardization, and helps reduce costs by eliminating waste.[3]

Evidence-based benefit design is a useful approach for many areas of clinical care. However, it is not feasible in *all* areas. For many interventions commonly performed in the course of child and adolescent care, there are few, if any, properly constructed studies that link the intervention with intended health outcomes. The absence of evidence does not demonstrate a lack of usefulness, however; it mostly reflects a lack of documented study.[4] Many organizations and institutions are working to fill these existing gaps in information.[4]

Until scientific research can be conducted, employers must find other ways to evaluate the usefulness and appropriateness of child health interventions. Recommended guidance (e.g., an expert opinion from a leading professional organization) is one important source of information in the benefit design process.

Evidence-based recommendations in pediatrics are limited due to[5]:

- *Unique ethical issues regarding the withholding of treatment from vulnerable populations.* It would be unthinkable for a clinician to withhold a long-standing treatment from a child in order to test its utility; yet, that is what a true randomized controlled trial (RCT) would require.
- *Lower levels of research investment.* Children's health problems (compared to adult issues) are less likely to be studied, and, when studied, the research is not as well funded.
- *Challenges of research in children.* Children are more difficult to study than adults. For example, because children's bodies change rapidly through the natural process of growth and development, the effect of a given intervention (e.g., counseling to promote weight loss in obese children) can be difficult to measure.
- *Demographic challenges.* Children aged 1 to 5 years in the United States are the most diverse in terms of race and ethnicity of any age cohort.
- *Social determinants of health* (e.g., poverty, education, social support) impact children to a far greater extent than adults.

The Plan Benefit Model is based primarily on recommended guidance. For the purpose of transparency, each proposed benefit carries an "evidence rating."

Evidence Rating	Level
Evidence-Based Research	1
Recommended Guidance • Expert Opinion • Expert Panel • Expert Consensus	2
Federally Vetted	3
Industry Standard	4

Plan Benefit Model Guidance

Covered Population

The Plan Benefit Model is designed to address the minimum health care needs of a target population:

1. Preconception, pregnant, and postpartum women.
2. Children (0 to 12 years of age) and adolescents (13 to 21 years of age), including those with special health care needs.

The Plan Benefit Model does not include recommendations on benefits for adult men (with the exception of vasectomy) or for adult women outside of the scope of maternity care.

The adolescent age limit (21 years) is consistent with commonly accepted definitions for differentiating between adolescence and adulthood.[4, 6] Plan provisions for preconception, pregnant, and postpartum women apply to adolescents who require reproductive health services.

Benefit coverage for labor and delivery, which includes services for newborns, can be applied to the mother and/or retrospectively to the newborn child once an application for the child's health coverage has been completed. It is recommended that the application for enrolling the newborn child be completed and submitted to the employer's health plan within 30 days of birth.

Referenced Health Plans

The Plan Benefit Model was designed to support two common managed care plan designs: **preferred provider organizations (PPOs)** and **health maintenance organizations (HMOs)**. These two plan designs were chosen because they are extremely common. As such, utilization and claims data could be used for actuarial modeling purposes. The Plan Benefit model can be applied to other plan designs, such as consumer-directed health plans (CDHPs); however, restructuring would be required.

Covered Services

Covered services described in the Plan Benefit Model are designed to support a range of healthcare services along a prevention—illness—chronic disease continuum. The covered services are organized into five descriptive categories:

- **Preventive Services** are designed to detect the existence of, or risk for, diseases, conditions, and problems. These services include comprehensive health assessments; age-appropriate screening, counseling, preventive medication, and preventive treatment; parent and child education; and anticipatory guidance. The recommended preventive services address the physical, mental, vision, and oral health care needs of the target population.
- **Physician/Practitioner Services** support the delivery of care by individual health professionals who may or may not be affiliated with a group practice or hospital.
- **Emergency Care, Hospitalization, and Other Facility-Based Care** address acute health care needs. These services may be necessary to treat illness, address injury, or support pregnancy.
- **Therapeutic Services / Ancillary Services** include an array of specialty services that may be performed in a practitioner's office, the beneficiary's home, or in a healthcare facility.
- **Laboratory, Diagnostic, Assessment, and Testing Services** are used to determine the presence, severity, or cause of an illness, or for diagnosing a specific illness, injury, or disability.

Plan Benefit Model Key Concepts

Cost-Sharing

Employee/employer cost-sharing is an employer strategy designed to lessen the financial liability of a health plan. While employee cost-sharing is an effective cost-containment strategy, many experts believe that employers have maximized the financial benefit of cost-sharing.[7] High cost-sharing, specifically high premiums, can price some families out of the market. Similarly, high deductibles and copayment/coinsurance requirements may force families to delay or forgo care.

Research has shown that as the cost of healthcare increases for beneficiaries, utilization of unnecessary *and* essential care decreases. When beneficiaries forgo preventive care or delay seeking care for an acute problem, there is a real risk that the problem will become exacerbated over time. In the end, the beneficiary is likely to require more intensive and expensive care than would have been required had he or she sought care when symptoms first emerged.

The Plan Benefit Model supports access to essential care services by removing beneficiary cost barriers wherever possible. The Plan Benefit Model aims to balance employee affordability and employer sustainability.

Growth in healthcare premiums has consistently outpaced both inflation and growth in workers' earnings for the past 20 years.[8] Between 2004 and 2008, the cost of buying coverage for an employee (i.e., the employee's share of the premium) increased 31% ($211) for single coverage and 39% ($956) for family coverage.[9, 10] Family out-of-pocket costs for medical care are also on the rise. In 2004, 18% of families with employer-sponsored health coverage spent 10% or more of their annual income on medical expenses (premiums and copayment/coinsurance), compared to 16% in 2001. This represents a 12.5% increase over 8 years.[11]

Typical cost-sharing methods include: premiums, deductibles, copayment or coinsurance, annual out-of-pocket maximums, and/or lifetime maximums. The Plan Benefit Model includes the following cost-sharing recommendations. These cost-sharing provisions were included in the actuarial analysis, with the exception of recommended premium and out-of-pocket amounts.

- **Preventive Services.** The Plan Benefit Model recommends zero cost-sharing for preventive services to avoid real or perceived financial barriers, and to increase utilization.
- **Premium.** If employers require employees to contribute toward the cost of health benefits, the Plan Benefit Model recommends an amount between 15% and 25% of the total plan cost.[12] In 2008, the average cost of coverage was approximately $4,704 for individual coverage and $13,476 for family coverage (these figures include employer *and* employee premium costs).[13] Twenty percent (20%) cost-sharing was applied to these numbers in order to calculate the following recommended premiums:
  - Individual (1): $941
  - Individual plus one dependent (2): $1,891
  - Family (3+): $2,695

  If a higher premium amount is required, the Plan Benefit Model recommends lowering the maximum out-of-pocket limit by a similar percentage. The Plan Benefit Model also recommends using scaled premiums that are consistent with an employer's salary banding methodology.
- **Deductible.** The Plan Benefit Model recommends *against* using deductibles because they can be cost barriers to essential services. If a deductible must be used, one amount should be collectively applied to all covered services described in the Plan Benefit Model.
- **Out-of-Pocket (OOP) Maximum.** OOP maximums protect beneficiaries from mounting cost-sharing requirements (premium costs and copayment/coinsurance). If an employer includes a cost-sharing provision, the Plan Benefit Model recommends the following annual total OOP schedule*:
  - Individual (1): $2,370 total ($1,500 maximum copayment/coinsurance, plus $870 premium).
  - Individual plus one dependent (2): $5,420 total ($3,000 maximum copayment/coinsurance, plus $1,740 premium).
  - Family (3+): $5,420 total ($3,000 maximum copayment/coinsurance, plus $2,420 premium).

  *Note that these recommended OOP maximums *include* dental and vision out-of-pocket expenses; they *do not* include out-of-pocket pharmaceutical costs.
- **Copayment.** The Plan Benefit Model recommends a copayment schedule for the HMO model. Copayments are a disincentive to the overuse of certain healthcare services; they also scale out-of-pocket spending with service use (i.e., beneficiaries who use more healthcare services are required to pay more in out-of-pocket costs than those who use fewer services). This schedule excludes preventive care, and is scaled to correspond with the cost and utilization frequency of the service category. Plan participants are protected from excessive copayment costs through the OOP maximum noted above.

- **Coinsurance.** The Plan Benefit Model recommends a coinsurance schedule for the PPO model. Coinsurance is a disincentive to the overuse of certain healthcare services; it also scales out-of-pocket spending with service use. This schedule excludes preventive services, and is scaled to correspond with the cost and utilization frequency of the service category. Plan participants are protected from excessive coinsurance costs through the OOP maximum noted above.
- **Annual / lifetime caps** are excluded from the Plan Benefit Model for reasons of equity.

The Plan Benefit Model's OOP maximum includes premium costs, which is atypical in the marketplace today. Premium costs were included in the OOP maximum so that employees will be able to assess their maximum financial liability for health coverage under an employer-sponsored group medical plan.

Communication

For additional information on effectively communicating benefit changes to beneficiaries, please refer to Part 5.

Employer-sponsored health plans subject to the Employee Retirement Income Security Act (ERISA) of 1974 are required to provide plan participants with specific information about the benefits to which they are entitled, including covered benefits, plan rules, financial information, and documents about plan operation and management. The Plan Benefit Model attempts to support the regulatory provisions contained in 29 CFR - CHAPTER XXV - PART 2520 regarding the publication of health plan provisions in a summary plan description (SPD). Employers are encouraged to develop their own plan administration rules regarding the following items, which are not referenced in the Plan Benefit Model:

- COBRA eligibility and administration procedures.
- Claims administration procedures.
- Eligibility requirements.
- Provider network administration rules.
- Details regarding plan sponsorship, governance, and termination provisions.

Plan Structure

- The Plan Benefit Model recommends that **group care** be reimbursed as a covered service. Group care allows for multiple plan participants to be seen at the same time by an individual provider or healthcare team. Group care is a cost-effective means of care that can improve quality and timeliness in specific situations. Group care is most relevant for education-based services such as nutrition counseling or anticipatory guidance. Employers are encouraged to develop administrative procedures and set reimbursement levels with their plan administrator(s).
- The Plan Benefit Model also recommends that care delivered by a "healthcare team" be reimbursed as a covered service. A **healthcare team** is a group of healthcare professionals who work together to recommend diagnoses or treatments. Currently, claims for services delivered by two or more providers on the same day for the same diagnosis are frequently denied. The

denial of such claims inhibits efficient referrals (e.g., the immediate referral from a primary care provider to a mental health specialist) and coordinated care.

- A **network**, for the purpose of a PPO or an HMO, is typically a geographic area designated by the employer or the health plan. Providers and provider services are classified as being "in-network" or "out-of-network." The Plan Benefit Model provisions recommended here only cover in-network providers and provider services. Employers should apply their own out-of-network provisions, as appropriate.
- **Plan coordination.** The Plan Benefit Model strongly encourages employers to coordinate the delivery of care when using multiple plan administrators (e.g., vision, dental, behavioral health). Beneficiaries are often confused by multiple plan administration rules and cost-sharing requirements, and employers sometimes duplicate payment for like services (e.g., EAP and mental health treatment services).
- **Flex benefits.** The Plan Benefit Model recommends that employers "flex" benefits for children and women with complex case management needs. All children with special health care needs and all women with high-risk pregnancies should qualify for case management. A definition of case management is provided in the next section. Employers should work with their health plan administrators to determine the exact nature of flex benefits. Some examples include:
  - Extending a single benefit for multiple providers (e.g., home health visits).
  - Providing additional benefits for high-risk populations (e.g., increasing preventive dental care visits from the recommended two visits per year to three visits per year for certain children).
  - Reducing or eliminating copayment or coinsurance amounts on essential services or products.

Key Definitions that Govern Plan Provisions

Most employer-sponsored health plans use a set of definitions to explain and govern plan provisions, and mediate appeals from plan participants and providers when claims are denied. The key definitions that guide the Plan Benefit Model are listed below. Each definition was created or adapted to meet the specific health care needs of children, adolescents, and pregnant women.

Medical Necessity

Medically necessary care is:

- Prescribed by a physician or other qualified healthcare provider.[A]
- Required to prevent, diagnose, or treat an illness, injury, or disease or its symptoms; help maintain, improve, or restore the individual's health or functional capacity; prevent deterioration of the individual's condition; or remedy developmental delays or disabilities.
- Generally agreed to be of clinical value.
- Clinically consistent with the patient's diagnosis and/or symptoms.
- Appropriate in terms of type, scope, frequency, duration, intensity, and delivered in a setting that is appropriate to the needs of the patient. [B,C]

[A] The fact that services are provided, prescribed, or approved by a physician or other qualified healthcare provider does not in and of itself mean that the service is medically necessary.

[B] Care should not be primarily for the convenience of the patient, physician, or another healthcare provider (e.g., elective cesarean delivery).

[C] Care should be rendered in the least intensive setting appropriate for the delivery of the service, procedure, or equipment.

Children With Special Health Care Needs

Children with special health care needs are those who have or are at increased risk for a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that usually required by children of the same age.[14] Children who are victims of abuse or trauma and children in foster care also qualify as "children with special needs" due to their demonstrated risk for physical, emotional, and behavioral problems.[3]

Case Management

Case Management refers to the arrangement, coordination, and monitoring of healthcare services to meet the needs of a particular patient and his/her family. Case management is conducted by a case manager or other qualified healthcare provider who—in collaboration with the patient and the patient's healthcare team—develops, monitors, and revises a plan that outlines the patient's immediate and ongoing health care needs. Case management may also include the coordination or delivery of the following services:

- Arrangement for community services.
- Arrangement for physician ordered services.
- Benefit administration.
- Benefit education/optimization and provider/facility selection.
- Collaboration with care providers within or outside of the healthcare team (e.g., social services, school counselors).
- Crisis intervention.
- Family consultation.
- Patient education.
- Patient advocacy.

The Plan Benefit Model recommends that all children with special health care needs and all women with high-risk pregnancies have access to case management services.

Experimental Treatment Modalities

A drug, device, or procedure will be considered "experimental" if any of the following criteria apply:

- There is insufficient outcome data to substantiate the treatment's safety.
- No reliable evidence demonstrates that the treatment is effective in clinical diagnosis, evaluation, or management of the patient's illness, injury, disease, or its symptoms, or; evaluation of reliable evidence indicates that additional research is necessary before the treatment can be classified as equally or more effective than conventional therapies.
- The treatment is not of proven benefit or not generally recognized by the medical community as effective or appropriate for the patient's specific diagnosis.
- The treatment has not been granted required FDA approval for marketing.[A]
- The treatment is only provided or performed in special settings for research purposes.

[A] This criterion does not exclude 'off label' use.

Plan Integration

Employers are strongly encouraged to systematically coordinate their health plan design and administration activities with other benefit and human resource programs. The Business Group believes this type of integrated approach will lead to decreased healthcare costs. Examples of integration opportunities include:

- Team with workforce scheduling staff to develop alternatives for pregnant and postpartum women and parents of children with special healthcare needs (e.g., compressed workweeks, telecommuting, flex-time, alternative start and end times, and partial workloads).
- Collaborate with disability plan administrators regarding return-to-work strategies for postpartum women.
- Coordinate plan benefit administration activities with employee assistance program (EAP) managers regarding the availability and use of mental health prevention and treatment benefits.
- Include information on the value of preventive services in work/life manager and employee training sessions.
- Include well-child care and prenatal care resources in health promotion materials.
- Incorporate maternal and child health needs into existing worksite-based health promotion programs and policies (e.g., healthy cafeteria, on-site immunizations, campus-wide smoking ban).

Actuarial Analysis

Purpose

Benefit managers charged with administering employer-sponsored health benefits are often forced to make difficult resource allocation decisions. Typically, an employer's benefits budget determines the selection and continuation of health benefits. However, increasing healthcare costs and stagnating quality have led many employers to shift their focus from budget-based allocation decisions to value-based purchasing strategies. **Value-based purchasing** brings together information on the quality of healthcare, including health outcomes and health status, with data on the dollar outlays going towards health.[15] It aligns financial incentives for beneficiaries *and* providers to encourage the use of high-value care while discouraging the use of low-value or unproven services.[16] Employers have also begun to evaluate the medical evidence for benefits, as described in the previous section.

Concepts of evidence and value have helped balance health benefit decisions in recent years. However, the cost impact of benefit modification remains a critical factor in employers' resource allocation decisions. To help employers understand the cost of adopting the Plan Benefit Model recommendations, the Business Group sponsored an actuarial meta-analysis of the model. This analysis estimated the cost impact of the model's recommendations on typical large-employer health

Because preventive services can prevent or reduce the need for treatment they provide a cost-offset. Employers who invest their healthcare dollars in screening, counseling, and preventive medications may be able to avoid spending healthcare dollars on treatment. In some cases, where the cost of screening is *less* than the cost of treatment, employers may be able to save healthcare dollars by investing in preventive services. For more information on cost-offsets, refer to page 77.

plans (PPO and HMO plan types). The analysis provides cost-impact assessments of the following:

- The Plan Benefit Model (in whole);
- Each service category (e.g., preventive services); and
- Each recommended line-item benefit (e.g., immunizations).

The meta-analysis was conduced by PricewaterhouseCoopers, LLP (PwC) in conjunction with the Business Group.

Process

In order to estimate the cost impact of the Plan Benefit Model, PwC:

1. Identified International Classification of Diseases Version 9 (ICD-9) diagnoses codes supported by the Plan Benefit Model.[A]
2. Used these codes and the Plan Benefit Model recommendations to construct a benchmark model, called the PricewaterhouseCoopers' PPO/HMO Benchmark Model (PPO/HMO Benchmark Model) (Figure 2B).
3. Priced the ICD-9 codes and developed utilization and cost estimates for the PPO/HMO Benchmark Model using PwC proprietary health insurance cost models, Medstat data, and data from other private and public-sector sources (e.g., peer-reviewed journal articles, meta-analyses).
4. Used key attributes of the PPO/HMO Benchmark Model to illustrate the employer and employee costs of a standard PPO and HMO. These plan costs were then applied to the Plan Benefit Model in order to calculate the estimated cost increase or decrease of applying the Plan Benefit Model recommendations to a typical large-employer health plan.

The HMO/PPO Benchmark Model is an actuarial model that PwC created in order to develop cost-impact estimates for the Maternal and Child Health Plan Benefit Model (Plan Benefit Model).

PPO/HMO Benchmark Model

The PPO/HMO Benchmark Model (Figure 2B) provides estimates of the average cost of typical large-employer health plan (PPO and HMO plan types). The costs are modeled for 2007 and represent typical utilization rates and service costs for large-employer health plans covering a commercial population of active employees and dependents.[B] The estimates are based on dollar amounts paid to healthcare providers who deliver medical, mental health, dental, and vision services covered under typical employer-sponsored health plans; they do not include administrative costs charged by the health plan administrator.

The PPO/HMO Benchmark Model was based on the following sources:

- PwC proprietary health insurance cost models;
- Large-employer claims experience from the Medstat database of 3 million members for services incurred in 2004; and
- Published healthcare cost reports.

Figure 2B: PricewaterhouseCoopers' HMO/PPO Benchmark Model

	Average Allowed Costs	Amount Paid by Employees	Amount Paid by Employers
HMO plan costs Average per member per month (PMPM)	$322.07	$29.98	$292.10
Average per employee per year (PEPY)	$8,116	$755	$7,361
PPO plan costs Average per member per month (PMPM)	$390.31	$86.52	$303.79
Average per employee per year (PEPY)	$9,836	$2,180	$7,656

PPO/HMO Benchmark Model Terminology

The following items describe terminology used in the PPO/HMO Benchmark Model:

- **Average Allowed Charges PMPM** represents billed charges (less provider discounts) and is equivalent to the total plan costs paid by the employer and the employees.
- **Amount Paid by Employees.** The estimated cost of services paid by employees depends on the cost-sharing provisions of their health plan. In order to facilitate comparisons to a known plan design, the following cost-sharing provisions were used in the PPO/HMO Benchmark Model:
  - **PPO Medical Cost-Sharing.** PPO cost-sharing for medical services includes a $250 deductible, 20% coinsurance, and a $2,500 out-of-pocket (OOP) maximum. The deductible and OOP maximum are on a per member basis. The family deductible is $500, and the family OOP maximum is $5,000. Note that this plan design does not have a fixed dollar copayment for office visits, which is fairly common in today's marketplace. However, many employers are shifting toward coinsurance as the predominant method of cost-sharing.
  - **HMO Medical Cost-Sharing.** HMO cost-sharing for medical services includes $10 copayment for primary care office visits, $25 copayment for specialist office visits, $100 copayment for emergency department visits and inpatient hospital admissions, $50 copayment for outpatient surgery, and 20% coinsurance for durable medical equipment (DME).
  - **Prescription Drugs.** For both PPO and HMO plans, cost-sharing includes $10 copayment for retail generic drugs and $25 copayment for retail brand prescriptions. Required copayment for mail-order prescriptions with a 90-day supply are $20 for generic prescriptions and $50 for brand prescriptions. Prescription drugs are not subject to an OOP maximum in the PPO/HMO Benchmark Model.
  - **Dental.** For both PPO and HMO plans, cost-sharing includes a $50 deductible. There is no coinsurance for preventive services, 20% coinsurance for restorative services, and 50% coinsurance for orthodontic services. The maximum annual dental benefit paid by the employer is $2,500 per member, with a $5,000 family maximum.

- **Vision.** For both PPO and HMO plans, vision exams require a $25 copayment and the maximum annual benefit for eye-wear is $200 per member.

- **Benefits Paid by Employer.** The amount paid by the employer is the difference between the *total allowed amount* and *the amount paid by employees*.

Maternal and Child Health Plan Benefit Model Actuarial Analysis

The Plan Benefit Model actuarial analysis begins on page 18. The data are organized into a PPO cost estimate (Figure 2E) and a HMO cost estimate (Figure 2F). The analysis documents provide estimates of the incremental cost to an employer of adopting each line-item benefit recommended in the Plan Benefit Model. The cost increases are expressed on a per member per month (PMPM) basis and as a percent increase to the PPO/HMO Benchmark Model described in Figure 2B.

Estimated Cost Impact of the Plan Benefit Model

If an employer *did not offer any* of the recommended benefits and choose to adopt the Plan Benefit Model in full, the recommended PPO plan would cost $390.31 PMPM or $9,836 per member per year (PMPY) and the HMO plan would cost $322.07 PMPM or $8,116 PMPY (refer to Figures 2E and 2F).

If an employer's current health plans were identical to the PPO/HMO Benchmark Model and the employer were to adopt all of the Plan Benefit Model recommendations, the employer's health plan costs would increase 10% and 6.2%, respectively (refer to column H in Figures 2E and 2F for line-item benefit cost estimates, and Figures 2C and 2D for high-level summaries). However, because most large employers provide coverage for at least some of the benefits recommended in the Plan Benefit Model (e.g., prenatal care), the total cost increase is likely to be less than noted. Analysis of the variance between an employer's current health plans, the PPO/HMO Benchmark Model, and the Plan Benefit Model is required for an exact cost-impact assessment.

Figure 2C: Estimated Impact of Plan Benefit Model Recommendations on a Typical Large-Employer HMO Plan Design

	Employer Impact of Plan Benefit Model (PMPM)	Total Employer-Adjusted Cost of Plan Benefit Model (PMPM)	Percent Employer Change from Current Cost Estimate (% of total)*
Impact Benefit Additions and Modifications	$13.34	4.6%	6.2%
Impact From Cost-Shifting to Employer/From Employee	$4.44	1.6%	N/A
Total	$17.78	6.2%	**6.2%**

Figure 2D: Estimated Impact of Plan Benefit Model Recommendations on a Typical Large-Employer PPO Plan Design

	Employer Impact of Plan Benefit Model (PMPM)	Total Employer-Adjusted Cost of Plan Benefit Model (PMPM)	Percent Employer Change from Current Cost Estimate (% of total)*
Impact Benefit Additions and Modifications	$20.81	6.9%	9.9%
Impact From Cost-Shifting to Employer/From Employee	$9.50	3.1%	N/A
Total	$30.31	10.0%	**10.0%**

How to Use the Actuarial Analysis Information

Employers can use the actuarial cost estimates listed in Figures 2C-2F to estimate the cost implications of adopting the recommended benefits for their covered population.

It is important to note that the financial data presented in the actuarial analysis documents *cannot* be used to predict the *exact* cost of implementing Plan Benefit Model recommendations for any particular employer. The cost increase estimates were based on the degree to which the HMO/PPO Benchmark Model benefits were *lower* than the benefits recommended in the Plan Benefit Model. If a given employer's current health benefits costs are lower *or* higher than those listed in the HMO/PPO Benchmark Model, or if the employer's current health plan costs do not match the HMO/PPO Benchmark Model costs, then the actuarial analysis cost estimates will not be exact. Therefore, it is important that employers compare their current health benefits to those recommended in the Plan Benefit Model and analyze the variance. A side-by-side comparison tool is provided in Part 3 for this purpose.

Explanation of Terms Used in the Actuarial Analysis Documents

Current Cost Estimate (PMPM)

- **Total costs (PMPM)**, similar to the **Allowed Charges**, represent 100% of the estimated costs that will be paid by the employer and employee. Total costs are expressed on a per member per month (PMPM) basis.
- **Paid by Members (PMPM)** represents the estimated amount or percent of the total costs that are paid by employees and dependents. These costs typically reflect the specific cost-sharing amounts that are included in each covered benefit or service. Employees and dependents are collectively referred to as "members" and costs are expressed on a per member per month (PMPM) basis.
- **Paid by Employer (PMPM)** represents the estimated amount or percent of the total costs that are paid by the employer and are expressed on a per member per month (PMPM) basis.

Revised Benefit Cost Estimate

- **Employer Impact of Plan Benefit Model (PMPM)** represents the estimated change in the employer costs that are created by applying the Plan Benefit Model recommendations to the total costs. These costs typically reflect recommended changes that were made to the cost-sharing strategy or benefit coverage levels.
- **Total Employer-Adjusted Cost of Plan Benefit Model (PMPM)** represents the employer's share of the combined total estimated cost for the Plan Benefit Model.
- **Member Impact of Plan Benefit Model (PMPM)** represents the member's financial portion of the costs associated with each service recommended in the Plan Benefit Model. The change in value from the PPO/HMO Benchmark Model is typically a function of the change in the recommended cost-sharing levels in the Plan Benefit Model.
- **Percent Change from Current Cost Estimate (% of Total)** represents the percentage change to the employer's share of the combined total estimated cost for the Plan Benefit Model.
- **Rationale for Change** summarizes the changes the Plan Benefit Model makes to the PPO and HMO Plan Design Benchmark Model along with the estimated cost or percentage change to the employer's share of the overall benefit plan costs.
- **Coinsurance or Copayment Amount** summarizes the value of the member's cost-sharing responsibility for a specific service category.
- **Coinsurance or Copayment Frequency** summarizes the frequency that a member will be required to pay the coinsurance or copayment amount.

Summary Points

- The Maternal and Child Health Plan Benefit Model (Plan Benefit Model) proposes a set of evidence-informed, comprehensive, standardized, integrated, and sustainable employer-sponsored health benefits for children and adolescents (ages 0 to 21 years), as well as preconception, pregnant, and postpartum women. It includes recommendations on *minimum* health, pharmacy, vision, and dental benefits; cost-sharing arrangements; and other information pertinent to plan design and administration.
- The Plan Benefit Model supports access to essential care services by removing beneficiary cost barriers wherever possible.
- To help employers understand the cost of adopting the Plan Benefit Model recommendations, the Business Group sponsored an actuarial meta-analysis of the model. This analysis estimated the cost impact of the model's recommendations on typical large-employer health plans (PPO and HMO plan types). If an employer *did not offer any* of the recommended benefits and were to adopt the Plan Benefit Model in full, the recommended PPO plan would cost $390.31 PMPM or $9,836 per member per year (PMPY) and the HMO plan would cost $322.07 PMPM or $8,116 PMPY. If an employer's current health plans were identical to the PPO/HMO Benchmark Model and the employer were to adopt all of the Plan Benefit Model recommendations, the employer's health plan costs would increase 10% and 6.2%, respectively.

Footnotes

[A] ICD-9 (2007) diagnosis codes that corresponded to the recommended services were included (ICD-9 diagnosis codes were excluded for general categories of services [e.g., office visits, ED visits]).

[B] The PPO/HMO Benchmark Model did not include the cost of case management services for children with special health care needs or other populations with complex medical needs. An estimate of the cost of adding flex benefits (as described in the Plan Benefit Model) would need to consider the degree to which these services are already provided in an employer's general case management benefit.

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Figure 2E: Pricing Analysis of the Maternal and Child Health Plan Benefit Model (HMO Plan Design)

HMO Benchmark Model Costs and Changes to Meet Minimum Plan Benefit Model Recommendations								
HMO Estimate (2007 Year Dollars)	Current Cost Estimate (PMPM) Average 2007 HMO Cost Per Member Per Month^^			Revised Benefit Cost Estimate				
Plan Benefit Model Recommendations^	Total Costs (PMPM)	Paid by Members (PMPM)	Paid by Employer (PMPM)	Employer Impact of Plan Benefit Model (PMPM)	Total Employer-Adjusted Cost of Plan Benefit Model (PMPM)	Member Impact of Plan Benefit Model (PMPM)	Percent Employer Change from Current Cost Estimate (% of total)*	
I. Preventive Services								
a. Well-Child Services	$2.24	$0.37	$1.87	$0.37	$2.24	$(0.37)	0.1%	
b. Immunizations	$2.21	$-	$2.21	$-	$2.21	$-	0.0%	
c. Preventive Dental Services	$6.86	$-	$6.86	$-	$6.86	$-	0.0%	
d. Early Intervention Services for Mental Health/Substance Abuse	$-	$-	$-	$4.83	$4.83	$-	1.7%	
e. Preventive Vision Services	$-	$-	$-	$0.32	$0.32	$-	0.1%	
f. Preventive Audiology Screening Services	$-	$-	$-	$0.32	$0.32	$-	0.1%	
g. Unintended Pregnancy Prevention Services	$3.07	$-	$3.07	$-	$3.07	$-	0.0%	
h. Preventive Preconception Care	$-	$-	$-	$-	$-	$-	0.0%	
i. Preventive Prenatal Care	$-	$-	$-	$1.61	$1.61	$-	0.6%	
j. Preventive Postpartum Care	$-	$-	$-	$0.32	$0.32	$-	0.1%	
k. Preventive Services (General)	$-	$-	$-	$3.22	$3.22	$-	1.1%	
Category Sub-Total:				$10.99		$(0.37)	3.8%	
II. Recommended Levels of Care for Physician/Practitioner Services								
a. Services Delivered by a Primary Care Provider	$23.72	$1.85	$21.88	$-	$21.88	$-	0.0%	
b. Services Delivered by a Mental Health/Substance Abuse Provider	$4.59	$0.82	$3.94	$0.74	$4.68	$-	0.3%	
c. Services Delivered by a Specialty Provider or Surgeon	$64.21	$2.53	$61.67	$-	$61.67	$-	0.0%	
d. E-Visits and Telephonic Visits	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Category Sub-Total:				$0.74		$0.00	0.3%	

	*Rationale for Change From Current Cost Estimate	Copayment	Copayment Frequency	Estimated Cost-Offset
	The HMO Benchmark Model includes a $10 copayment. Eliminating cost-sharing is estimated to **increase** the employer's plan cost by 0.1%.	-	N/A	Cost-effective
	The HMO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral).**	-	N/A	Children: cost-saving, Adolescents: some cost-effective, some cost-saving in limited populations
	The HMO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral).** If a plan does not currently provide coverage for preventive dental services, including these services with coverage at 100% will increase the employer's plan cost by 2.3%.	-	N/A	Early preventive care: cost-saving, Dental sealants: cost-effective in high-risk populations, Fluoride varnish: cost-effective in high-risk populations
	The HMO Benchmark Model excludes coverage for these services. Adding coverage for these services is estimated to **increase** the employer's plan cost by 1.7%.	-	N/A	Probably cost-saving
	The HMO Benchmark Model excludes coverage for these services. Adding coverage for these services is estimated to **increase** the employer's plan cost by 0.1%.	-	N/A	Cost-effective
	The HMO Benchmark Model excludes coverage for these services. Adding coverage for these services is estimated to **increase** the employer's portion of the plan cost by 0.1%.	-	N/A	Cost-effective
	The HMO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral)**. If a plan does not currently provide coverage for unintended pregnancy prevention services, including these services with coverage at 100% will **increase** the employer's plan cost by $3.07 or 1.1%.	-	N/A	Cost-saving
	The HMO Benchmark Model excludes coverage for these services. Adding coverage for these services is estimated to be **cost neutral.**	-	N/A	Cost-saving
	The HMO Benchmark Model excludes coverage for these services. Adding coverage for these services is estimated to **increase** the employer's plan cost by 0.6%.	-	N/A	Cost-saving
	The HMO Benchmark Model excludes coverage for these services. Adding coverage for these services is estimated to **increase** the employer's plan cost by 0.1%.	-	N/A	Breastfeeding promotion: cost-saving
	The HMO Benchmark Model excludes coverage for these services. Adding coverage for these services is estimated to **increase** the employer's plan cost by 1.1%.	-	N/A	Cost-saving or cost-effective
	The HMO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral).**	1	per visit	N/A
	The HMO Benchmark Model includes a copayment of $25. Reducing the required copayment to $20 is estimated to **increase** the employer's plan cost by 0.10%. If an employer's HMO has a maximum of 30 mental health visits per year, removing this maximum will **increase** the employer's plan cost by $0.58 or 0.2%, assuming a typical level of managed care.	1	per visit	N/A
	The HMO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral).**	1 or 2	per visit	N/A
		Left to TPA	per visit	N/A

Figure 2E: Pricing Analysis of the Maternal and Child Health Plan Benefit Model (HMO Plan Design)

HMO Benchmark Model Costs and Changes to Meet Minimum Plan Benefit Model Recommendations							
HMO Estimate (2007 Year Dollars)	Current Cost Estimate (PMPM) Average 2007 HMO Cost Per Member Per Month^^			Revised Benefit Cost Estimate			
Plan Benefit Model Recommendations^	Total Costs (PMPM)	Paid by Members (PMPM)	Paid by Employer (PMPM)	Employer Impact of Plan Benefit Model (PMPM	Total Employer-Adjusted Cost of Plan Benefit Model (PMPM)	Member Impact of Plan Benefit Model (PMPM)	
III. Emergency Care, Hospitalization, and Other Facility-Based Care							
a. Emergency Room Services	$17.05	$1.94	$15.11	1.56	$16.67	$(1.56)	
b. Inpatient Substance Abuse Detoxification	$0.86	$0.02	$0.84	$-	$0.84	$-	
c. Inpatient Hospital Service: General Inpatient / Residential Care (Including Mental Health / Substance Abuse)	$61.82	$0.59	$61.24	$-	$61.24	$-	
d. Inpatient Hospital Service or Birth Center Facilities: Labor / Delivery	$11.14	$0.09	$11.05	$-	$11.05	$-	
e. Ambulatory Surgical Facility or Outpatient Hospital Services	$69.64	$0.53	$69.11	$-	$69.11	$-	
f. Mental Health / Substance Abuse Partial-Day Hospital (or Day Treatment) or Intensive Outpatient Care Services	$0.19	$0.00	$0.19	$-	$0.19	$-	
Category Sub-Total				$1.56		$(1.56)	
IV. Therapeutic Services / Ancillary Services							
a. Prescription Drugs	$45.47	$14.96	$30.51	$-	$30.51	$-	
b. Dental Services	$17.07	$4.52	$12.55	$2.81	$15.36	$(2.81)	
c. Vision Services	$4.01	$0.17	$3.93	$-	$3.93	$-	
d. Audiology Services	$1.86	$0.62	$1.24	$-	$1.24	$-	
e. Nutritional Services	$-	$-	$-	$1.03	$1.03	$0.26	
f. Occupational, Physical, and Speech Therapy Services	$1.23	$0.31	$0.92	$-	$0.92	$-	
g. Infertility Services	$6.12	$0.30	$5.82	$-	$5.82	$-	
h. Home Health Services	$1.23	$0.21	$1.02	$-	$1.02	$-	
i. Hospice Care	$0.09	$0.01	$0.08	$-	$0.08	$-	
j. Durable Medical Equipment & Supplies	$2.33	$0.40	$1.93	$0.56	$2.49	$0.02	
- Medical Food				$0.09	$0.09	$0.02	
k. Transportation Services	$0.61	$-	$0.61	$-	$0.61	$-	
Category Sub-Total:				$4.49		$(2.51)	

	Percent Employer Change from Current Cost Estimate (% of total)*	*Rationale for Change From Current Cost Estimate	Copayment	Copayment Frequency	Estimated Cost-Offset
	0.5%	The HMO Benchmark Model includes a $100 copayment for ER services. Reducing the required copayment to $20 for urgent care services is estimated to **increase** the employer's plan cost by 0.50%.	3 or 5	per visit	N/A
	0.0%	The HMO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral).**	4	per admission	N/A
	0.0%	The HMO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral).**	4	per admission	N/A
	0.0%	The HMO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral).**	4	per admission	N/A
	0.0%	The HMO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral).**	3	per admission	N/A
	0.0%	The HMO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral).**	3	per episode	N/A
	0.5%				
					:
	0.0%	The HMO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral).**	Tiered	per fill/refill	N/A
	1.0%	The Plan Benefit Model includes member coinsurance for restorative and orthodontic procedures (20% and 50% respectively) will **increase** the employer's plan cost by 1.00%.	2	per visit	N/A
	0.0%	The HMO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral).**	2	per visit	N/A
	0.0%	The HMO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral).**	2	per visit	N/A
	0.4%	The HMO Benchmark Model excludes coverage for these services. Adding coverage for these services is estimated to **increase** the employer's plan cost by 0.40%.	2	per visit	N/A
	0.0%	The HMO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral).**	2	per visit	N/A
	0.0%	The HMO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral).** If a plan does not currently provide coverage for infertility services, including these services with a $100+ copayment will **increase** the employer's cost by $5.82 or 2.0%.	5	per visit/unit/ or per cycle	N/A
	0.0%	The HMO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral).**	2	per visit	N/A
	0.0%	The HMO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral).**	5	one time	N/A
	0.2%	The HMO Benchmark Model excludes coverage for hearing aids. Adding coverage for hearing aids will **increase** the employer's plan cost 0.2%.	1	per unit	Cochlear ear implants: cost-effective
	0.0%	The HMO Benchmark Model excludes coverage for medical foods. Adding coverage for medical foods will result in a negligible increase to the employer's plan cost **(cost neutral)**.	1	per unit	Donor breast milk: cost-saving for limited populations
	0.0%	The HMO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral).**	2 or 5	per use	N/A
	1.6%				

Figure 2E: Pricing Analysis of the Maternal and Child Health Plan Benefit Model (HMO Plan Design)

HMO Benchmark Model Costs and Changes to Meet Minimum Plan Benefit Model Recommendations							
HMO Estimate (2007 Year Dollars)	**Current Cost Estimate (PMPM) Average 2007 HMO Cost Per Member Per Month^^**			**Revised Benefit Cost Estimate**			
Plan Benefit Model Recommendations^	**Total Costs (PMPM)**	**Paid by Members (PMPM)**	**Paid by Employer (PMPM)**	**Employer Impact of Plan Benefit Model (PMPM**	**Total Employer-Adjusted Cost of Plan Benefit Model (PMPM)**	**Member Impact of Plan Benefit Model (PMPM)**	
V. Laboratory Diagnostic, Assessment, and Testing Services							
a. Laboratory Services	$6.50	$-	$6.50	$-	$6.50	$-	
b. Diagnostic, Assessment, and Testing (Medical and Psychological) Services	$8.23	$-	$8.23	$-	$8.23	$-	
Category Sub-Total:				$0.00		$0.00	
Plan Design Total							
				$17.78	$309.88	$(4.44)	
Estimated Impact of Plan Benefit Model							
Impact of Plan Benefit Model Recommendations (Benefit Additions and Modifications):				$13.34	4.6%		
Impact From Cost-Shifting to Employer/From Member:				$4.44	1.5%	$(4.44)	
Total				$17.78	6.2%		
HMO Benchmark Model Costs							
Total Per Member Per Month (PMPM)	$322.07	$29.98	$292.10	$17.78		$(4.44)	
Total Per Employee Per Month (PEPM)	$676.35	$62.96	$613.41	$37.35		$(9.32)	
Total Per Employee Per Year (PEPY)	$8,116	$755	$7,361	$448		$(112)	

			Copayment	Copayment Frequency	Estimated Cost-Offset
	Percent Employer Change from Current Cost Estimate (% of total)*	***Rationale for Change From Current Cost Estimate**			
	0.0%	The HMO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral).**	1 - 4	per battery	N/A
	0.0%	The HMO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral).**	1 - 4	per battery	N/A
	0.0%				
	6.2%				
	-14.81%				

Notes

Refer to the Maternal and Child Health Model Plan Benefit Model for a description of recommended benefits.

1. The term "member" represents employees and dependents. The Benchmark Model costs are summarized on a per member per month (PMPM) basis.
2. The Benchmark Model average costs shown in this table are for a HMO plan with the following member cost-sharing specifications:
   - Medical: office visit copays = $10 PCP/ $25 specialist; outpatient surgery = $50; ER copay = $100; inpatient = $100 per admission.
   - Prescription drugs: $10 generic and $25 brand copay for prescriptions (mail order = 2 times retail).
   - Dental services: $50 deductible, 0%/20%/50% coinsurance for preventive/restorative /orthodontic services, with a $5,000 maximum benefit per year.
3. A given employer's health plan costs may vary from the rates shown above due to differences in plan design, member demographics, provider payment rates, or level of managed care practices for medical and mental health services.
4. Unless otherwise noted, changes in coverage to meet the minimum Plan Benefit Model recommendations are applicable to all members.

*Cost estimates for select Plan Benefit Model recommendations are based on assumptions developed by the Business Group for (a) the degree to which the service is currently covered by large-employer health plans, and (b) the prevalence of the condition the service seeks to address.

Figure 2F: Pricing Analysis of the Maternal and Child Health Plan Benefit Model (PPO Plan Design)

PPO Benchmark Model Costs and Changes to Meet Minimum Plan Benefit Model Recommendations							
PPO Estimate (2007 Year Dollars)	Current Cost Estimate^^ Average 2007 PPO Cost Per Member Per Month (PMPM)			Revised Benefit Cost Estimate			
Plan Benefit Model Recommendations^	Total Costs (PMPM)	Paid by Members (PMPM)	Paid by Employer (PMPM)	Employer Impact of Plan Benefit Model (PMPM)	Total Employer-Adjusted Cost of Plan Benefit Model (PMPM)	Member Impact of Plan Benefit Model (PMPM)	
I. Preventive Services							
a. Well-Child Services	$2.24	$0.84	$1.40	$0.84	$2.24	$(0.84)	
b. Immunizations	$2.21	$0.83	$1.38	$0.83	$2.21	$(0.83)	
c. Preventive Dental Services	$7.60	$-	$7.60	$-	$7.60	$-	
d. Early Intervention Services for Mental Health / Substance Abuse				$5.85	$5.85	$-	
e. Preventive Vision Services				$0.39	$0.39	$-	
f. Preventive Audiology Screening Services				$0.39	$0.39	$-	
g. Unintended Pregnancy Prevention Services	$3.42	$1.19	$2.23	$1.19	$3.42	$(1.19)	
h. Preventive Preconception Care				$-	$-	$-	
i. Preventive Prenatal Care				$1.95	$1.95	$-	
j. Preventive Postpartum Care				$0.39	$0.39	$-	
k. Preventive Services (General)				$3.90	$3.90	$-	

	Percent Employer Change From Current Cost Estimate (% of Total)*	*Rationale for Change From Current Cost Estimate	Coinsurance	Coinsurance Frequency	Estimated Cost-Offset
	0.3%	The PPO Benchmark Model includes a deductible and 20% member coinsurance. Eliminating the deductible and coinsurance is estimated to **increase** the employer's plan cost by 0.3%.	-	N/A	Cost-effective
	0.3%	The PPO Benchmark Model includes a deductible and 20% member coinsurance. Eliminating the deductible and member coinsurance is estimated to **increase** the employer's plan cost by 0.3%.	-	N/A	Children: cost-saving, Adolecents: some cost-effective, some cost-saving in limited populations
	0.0%	The PPO Benchmark Model is consistent with the Plan Benefit Model (cost neutral). If a plan does not currently provide coverage for preventive dental services, including these services with coverage at 100% will **increase** the employer costs by 2.5%. If the employer's PPO covers these services but requires 20% member coinsurance, eliminating the coinsurance will **increase** the employer's plan cost by $1.52 or 0.5%.	-	N/A	Early preventive care: cost-saving, Dental sealants: cost-effective in high-risk populations, Flouride varnish: cost-effective in high-risk populations
	1.9%	The PPO Benchmark Model excludes coverage for these services. Adding coverage for these services is estimated to **increase** the employer's plan cost by 1.9%.	-	N/A	Probably cost-saving
	0.1%	The PPO Benchmark Model excludes coverage for these services. Adding coverage for these services is estimated to **increase** the employer's plan cost by 0.1%.	-	N/A	Cost-effective
	0.1%	The PPO Benchmark Model excludes coverage for these services. Adding coverage for these services is estimated to **increase** the employer's plan cost by 0.1%.	-	N/A	Cost-effective
	0.4%	The PPO Benchmark Model includes a deductible and 20% member coinsurance. Eliminating the deductible and coinsurance will **increase** the employer's plan cost by $1.19 or 0.4%. If a plan does not currently provide coverage for unintended pregnancy prevention services, including these services with coverage at 100% will **increase** the employer's plan cost by $1.19 or 1.1%.	-	N/A	Cost-saving
	0.0%	The PPO Benchmark Model excludes coverage for these services. Adding coverage for these services is estimated to be **cost neutral**.	-	N/A	Cost-saving
	0.6%	The PPO Benchmark Model excludes coverage for these services. Adding coverage for these services and eliminating cost-sharing is estimated to **increase** the employer's plan cost by 0.6%.	-	N/A	Cost-saving
	0.1%	The PPO Benchmark Model excludes coverage for these services. Adding coverage for these services and eliminating cost-sharing is estimated to **increase** the employer's plan cost by 0.1%.	-	N/A	Breastfeeding promotion: cost-saving
	1.3%	The PPO Benchmark Model excludes coverage for these services. Adding coverage for these services and eliminating cost-sharing are estimated to **increase** the employer's cost by 1.3%.	-	N/A	Cost-saving or cost-effective

Figure 2F: Pricing Analysis of the Maternal and Child Health Plan Benefit Model (PPO Plan Design)

PPO Benchmark Model Costs and Changes to Meet Minimum Plan Benefit Model Recommendations							
PPO Estimate (2007 Year Dollars)	Current Cost Estimate^^ Average 2007 PPO Cost Per Member Per Month (PMPM)			Current Cost Estimate^^ Average 2007 PPO Cost			
Plan Benefit Model Recommendations^	Total Costs (PMPM)	Paid by Members (PMPM)	Paid by Employer (PMPM)	Employer Impact of Plan Benefit Model (PMPM)	Total Employer-Adjusted Cost of Plan Benefit Model (PMPM)	Member Impact of Plan Benefit Model (PMPM)	
II. Recommended Levels of Care for Physician/Practitioner Services							
a. Services Delivered by a Primary Care Provider	$26.76	$10.05	$16.70	$2.13	$18.83	$(2.13)	
b. Services Delivered by a Mental Health/Substance Abuse Provider	$5.34	$1.06	$4.28	$0.91	$5.19	$(0.13)	
c. Services Delivered by a Specialty Provider or Surgeon	$74.70	$14.84	$59.86	$2.47	$62.33	$(2.47)	
d. E-Visits and Telephonic Visits	N/A	N/A	N/A	N/A	N/A	N/A	
Category Sub-Total:				$5.51		$(4.73)	
III. Emergency Care, Hospitalization, and Other Facility-Based Care							
a. Emergency Room Services	$19.84	$3.90	$15.94	$1.82	$17.76	$(1.82)	
b. Inpatient Substance Abuse Detoxification	$1.17	$0.12	$1.05	$-	$1.05	$-	
c. Inpatient Hospital Service: General Inpatient / Residential Care (Including Mental Health / Substance Abuse)	$84.44	$9.00	$75.44	$0.30	$75.74	$(0.30)	
d. Inpatient Hospital Service or Birth Center Facilities: Labor / Delivery	$15.21	$1.62	$13.59	$-	$13.59	$-	
e. Ambulatory Surgical Facility or Outpatient Hospital Services	$81.02	$15.93	$65.09	$-	$65.09	$-	
f. Mental Health / Substance Abuse Partial-Day Hospital (or Day Treatment) or Intensive Outpatient Services	$0.24	$0.03	$0.21	$-	$0.21	$-	
Category Sub-Total:				$2.12		$(2.12)	

Per Member Per Month (PMPM)			Coinsurance	Coinsurance Frequency	Estimated Cost-Offset
	Percent Employer Change From Current Cost Estimate (% of Total)*	*Rationale for Change From Current Cost Estimate			
	0.7%	The PPO Benchmark Model includes a deductible and 20% member coinsurance. Reducing the coinsurance to 10% is estimated to **increase** the employer's cost by 0.7%.	10%	per visit	N/A
	0.3%	The PPO Benchmark Model includes 20% member coinsurance. Reducing the coinsurance to 10% is estimated to **increase** the employer's cost by 0.1%. If an employer's PPO has a maximum of 30 mental health visits per year, removing this maximum will **increase** employers cost by $0.61 or 0.20%, assuming a typical level of managed care.	10%	per visit	N/A
	0.8%	The PPO Benchmark Model includes a deductible and 20% member coinsurance. Reducing the coinsurance to 15% is estimated to **increase** the employer's plan cost by 0.8%.	10% or 15%	per visit	N/A
	N/A		Left to TPA	per visit	N/A
	1.8%				
	0.6%	The PPO Benchmark Model includes 20%-25% member coinsurance and this range is consistent with the Plan Benefit Model (cost neutral). Reducing the urgent care coinsurance to 10% is estimated to **increase** the employer's cost by 0.6%.	20% or 25%	per visit	N/A
	0.0%	The PPO Benchmark Model includes a deductible. Eliminating the deductible will result in a negligible increase to the employer's plan cost **(cost neutral)**.	25%	per episode	N/A
	0.1%	The PPO Benchmark Model includes a deductible. Eliminating the deductible is estimated to **increase** the employer's plan cost by 0.1%.	25%	per episode	N/A
	0.0%	The PPO Benchmark Model includes a deductible. Eliminating the deductible will result in a negligible increase to the employer's plan cost **(cost neutral)**.	25%	per episode	N/A
	0.0%	The PPO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral)**.	20%	per episode	N/A
	0.0%	The PPO Benchmark Model includes a deductible. Eliminating the deductible will result in a negligible increase to the employer's plan cost **(cost neutral).** This cost estimate assumes there are no changes in managed care practices.	20%	per episode	N/A
	0.7%				

Figure 2F: Pricing Analysis of the Maternal and Child Health Plan Benefit Model (PPO Plan Design)

PPO Benchmark Model Costs and Changes to Meet Minimum Plan Benefit Model Recommendations								
PPO Estimate (2007 Year Dollars)	Current Cost Estimate^^ Average 2007 PPO Cost Per Member Per Month (PMPM)			Current Cost Estimate^^ Average 2007 PPO Cost				
Plan Benefit Model Recommendations^	Total Costs (PMPM)	Paid by Members (PMPM)	Paid by Employer (PMPM)	Employer Impact of Plan Benefit Model (PMPM)	Total Employer-Adjusted Cost of Plan Benefit Model (PMPM)	Member Impact of Plan Benefit Model (PMPM)	Percent Employer Change From Current Cost Estimate (% of Total)*	
IV. Therapeutic Services / Ancillary Services								
a. Prescription Drugs	$58.23	$21.16	$37.06	$-	$37.06	$-	0.0%	
b. Dental Services	$18.90	$5.01	$13.90	$3.11	$17.01	$-	1.0%	
c. Vision Services	$4.77	$1.73	$3.03	$1.73	$4.77	$-	0.6%	
d. Audiology Services	$2.25	$0.50	$1.75	$-	$1.75	$-	0.0%	
e. Nutritional Services				$1.22	$1.22	$0.35	0.4%	
f. Occupational, Physical, and Speech Therapy Services	$1.43	$0.31	$1.12	$0.23	$1.35	$(0.23)	0.1%	
g. Infertility Services	$7.42	$1.47	$5.94	$-	$5.94	$-	0.0%	
h. Home Health Services	$1.43	$0.52	$0.91	$-	$0.91	$-	0.0%	
i. Hospice Care	$0.11	$0.02	$0.08	$-	$0.08	$-	0.0%	
j. Durable Medical Equipment & Supplies	$2.71	$0.98	$1.72	$0.55	$2.27	$0.06	0.2%	
- Medical Foods				$0.11	$0.11	$0.03	0.0%	
k. Transportation Services	$0.70	$0.26	$0.45	$-	$0.45	$-	0.0%	
Category Sub-Total:				$6.95		$0.21	2.3%	
V. Laboratory Diagnostic, Assessment, and Testing Services								
a. Laboratory Services	$8.71	$1.93	$6.78	$-	$6.78	$-	0.0%	
b. Diagnostic, Assessment, and Testing (Medical and Psychological) Services	$10.17	$2.12	$8.04	$-	$8.04	$-	0.0%	
Category Sub-Total:				$0.00		$0.00	0.0%	

Per Member Per Month (PMPM)		Coinsurance	Coinsurance Frequency	Estimated Cost-Offset
	*Rationale for Change From Current Cost Estimate			
	The PPO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral)**.	Tiered	per fill/re-fill	N/A
	The PPO Benchmark Model includes member coinsurance for restorative and orthodontic procedures (20% and 50% respectively). Decreasing the coinsurance to 15% and setting the annual maximum benefit at $5,000 will **increase** the employer's plan cost by 1.0%.	15%	per visit	N/A
	The PPO Benchmark Model includes a deductible and 20% member coinsurance. Eliminating the deductible and decreasing the coinsurance to 15% will **increase** the employer's plan cost by 0.6%.	15%	per visit	N/A
	The PPO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral)**.	15%	per visit	N/A
	The PPO Benchmark Model excludes coverage for these services. Adding coverage for these services will **increase** the employer's plan cost by 0.4%.	15%	per visit	N/A
	The PPO Benchmark Model includes a deductible and 20% member coinsurance. Eliminating the deductible, decreasing the coinsurance to 15%, and increasing the annual visit limit from 60 visits to 75 visits will **increase** the employer's plan cost by 0.1%.	15%	per visit	N/A
	The PPO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral)**. If a plan does not currently provide coverage for these services, including these services with 25%+ member coinsurance will **increase** the employer's plan cost by $5.94 or 2.0%.	25%	per visit/unit or per cycle	N/A
	The PPO Benchmark Model includes 20% member coinsurance. Reducing the coinsurance to 10% will result in a negligible increase to the employer's plan cost **(cost neutral)**.	15%	per visit	N/A
	The PPO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral)**.	25%	one-time	N/A
	The PPO Benchmark Model excludes coverage for hearing aids. Adding coverage for hearing aids will **increase** the employer's plan cost 0.2%.	10%	per unit	Cochlear ear implants: cost-effective
	The PPO Benchmark Models excludes coverage for medical foods. Adding coverage for medical foods will result in a negligible increase to the employer's plan cost **(cost neutral)**.	10%	per unit	Donor breast milk: cost-saving for limited populations
	The PPO Benchmark Model is consistent with the Plan Benefit Model **(cost neutral)**.	15% or 25%	per use	N/A
	The PPO Benchmark Model is consistent with the Plan Benefit Model (cost neutral).	10% - 25%	per battery	N/A
	The PPO Benchmark Model is consistent with the Plan Benefit Model (cost neutral).	10% - 25%	per battery	N/A

Figure 2F: Pricing Analysis of the Maternal and Child Health Plan Benefit Model (PPO Plan Design)

PPO Benchmark Model Costs and Changes to Meet Minimum Plan Benefit Model Recommendations							
PPO Estimate (2007 Year Dollars)	Current Cost Estimate^^ Average 2007 PPO Cost Per Member Per Month (PMPM)			Current Cost Estimate^^ Average 2007 PPO Cost Per Member Per Month (PMPM)			
Plan Benefit Model Recommendations^	Total Costs (PMPM)	Paid by Members (PMPM)	Paid by Employer (PMPM)	Employer Impact of Plan Benefit Model (PMPM)	Total Employer-Adjusted Cost of Plan Benefit Model (PMPM)	Member Impact of Plan Benefit Model (PMPM)	Percent Employer Change From Current Cost Estimate (% of Total)*
Plan Design Total				$30.31	$334.10	$(9.50)	10.0%
Estimated Impact of Plan Benefit Model							
Impact of Plan Benefit Model Recommendations (Benefit Additions and Modifications):				$20.81	6.9%		
Impact From Cost-Shifting to Employer/From Member:				$9.50	3.1%	$(9.50)	-11.0%
			Total:	**$30.31**	**10.0%**		
PPO Benchmark Model Costs							
Total Per Member Per Month (PMPM)	$390.31	$86.52	$303.79	$30.31		$(9.50)	
Total Per Employee Per Month (PEPM)	$819.65	$181.69	$637.96	$63.66		$(19.95)	
Total Per Employee Per Year (PEPY)	$9835.9	$2180.33	$7655.56	$763.89		$(239.40)	

Notes

1. The term "member" represents employees and dependents. The Benchmark Model costs are summarized on a per member per month (PMPM) basis.
2. The Benchmark Model average costs shown in this table are for a PPO plan with the following member cost-sharing specifications:
   - Medical services other than prescription drugs: $250 deductible, 20% coinsurance, subject to a $2,500 out-of-pocket limit.
   - Prescription drugs: $10 copay for generic and $25 copay for brand prescriptions (mail order = 2 times retail).
   - Dental services: $50 deductible, 0%/20%/50% coinsurance for preventive/restorative/orthodontic services, with a $2,500 maximum benefit per year.
3. A given employer's health plan costs may vary from the rates shown above due to differences in plan design, member demographics, provider payment rates, or level of managed care practices for medical and mental health services.
4. Unless otherwise noted, changes in coverage to meet the minimum Plan Benefit Model recommendations are applicable to all members.

   *Cost estimates for select Plan Benefit Model recommendations are based on assumptions developed by the Business Group for (a) the degree to which the service is currently covered by large-employer health plans, and (b) the prevalence of the condition the service seeks to address.

2 Maternal and Child Health Plan Benefit Model: Evidence-Informed Coverage

Maternal and Child Health Plan Benefit Model

Index of Services

Sample Plan Benefit Key

<table>
<tr><th colspan="4">Recommended Plan Benefits: One of Five Types of Service</th></tr>
<tr><th colspan="4">The Specific Type of Benefit</th></tr>
<tr><th colspan="2">Definition of Benefit</th><th colspan="2">Covered Providers</th></tr>
<tr><td colspan="2">A summary definition of the type of benefit and/or rationale for including the benefit.</td><td colspan="2">Covered providers and/or related benefit information.</td></tr>
<tr><th>Recommended Benefit Coverage Limits</th><th>Recommended Exceptions</th><th>Inclusions</th><th>Exclusions</th></tr>
<tr><td>Typically expressed as the maximum amount of benefit covered by the plan.</td><td>Plan provisions that reflect unique circumstances and allow for exceptions to be made.</td><td>Particular benefits that should be covered by the type of benefit.</td><td>Particular benefits that should not be covered by the type of benefit.</td></tr>
<tr><th>Recommended Cost-Sharing</th><th>Copayment / Coinsurance Level (0-5 / 0%-25%)</th><th colspan="2">Out-of-Pocket Maximum</th></tr>
<tr><td>Recommendation on copayment (HMO model) or coinsurance (PPO model) amount.</td><td>Recommended copayment and coinsurance (in-network) levels correspond to the key summarized below:

Copayment / Coinsurance
0 = $0 / = 0%
1 = $10 – $20 / = 10%
2 = $25 – $40 / = 15%
3 = $45 – $60 / = 20%
4 = $75 - $100 / = 25%
5 = $100+ / = 25%+</td><td colspan="2">Denotes whether individual expenses apply to the maximum expense paid per individual or per family in a single calendar year. After that amount is reached, the health plan will pay 100% of covered charges for the remainder of the calendar year.

Individual (1): $1,500
Individual plus one (2): $3,000
Family (3+): $4,500</td></tr>
<tr><td rowspan="2">Actuarial Impact</td><th>Cost of Recommended Benefits (PMPM)</th><th colspan="2">Cost Impact</th></tr>
<tr><td>The per member per month (PMPM) estimate of the total employer cost of the benefit as it is described in this plan.</td><td>One of the following:
• Decrease
• Neutral
• Increase</td><td>The estimated employer cost impact will be influenced by an individual employer's health plan design and administration rules. If an employer's current health plans were identical to the HMO/PPO Benchmark Model and the employer were to adopt all of the Plan Benefit Model recommendations, the employer's health plan costs would increase 10% and 6.2%, respectively. Cost-offset values associated with preventive services are excluded from this calculation.</td></tr>
<tr><th colspan="4">Citations</th></tr>
<tr><td>Source</td><td>Actual reference</td><td colspan="2">The strength of the reference, which will be one of the following:
1. Evidence-Based Research
2. Recommended Guidance (e.g., Expert Opinion, Expert Consensus, Expert Panel)
3. Federally Vetted
4. Industry Standard
5. Actuarial Analysis</td></tr>
</table>

I. Recommended Minimum Plan Benefits: Preventive Services

A. WELL-CHILD SERVICES

Definition of Benefit	Covered Providers
Medical services designed to promote and protect the health of infants, children, and adolescents. These services include comprehensive health assessments; age-appropriate screening, counseling, preventive medication, and preventive treatment; parent and child education; and anticipatory guidance.[1]	Covered services must be furnished by or under the direction of a primary care provider (family physician, pediatrician, nurse practitioner, general practitioner, internal medicine physician).

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
26 visits between birth and 21 years of age.[1]	Include provisions for children with complex case-management needs (e.g., flex benefits).	All appropriate preventive care. Medical necessity supported by the Plan Benefit Model definition.	All others as defined by the health plan.

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
None	0 / 0%	N/A

Actuarial Impact[2]	Cost of Recommended Benefits (PMPM)	Cost Impact
	$ 2.24 (HMO) $ 2.24 (PPO)	The HMO Benchmark Model includes a $10 copayment. The PPO Benchmark Model includes a deductible and 20% member coinsurance. Eliminating cost-sharing for both plans is estimated to **increase** the employer's plan cost by: • $0.37 PMPM / 0.1% of total plan costs (HMO) • $0.84 PMPM / 0.3% of total plan costs (PPO)

Citations

1. Bright Futures Recommendation	Hagan JF, Shaw JS, Duncan P, eds. *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents,* 3rd edition. Elk Grove Village, IL: American Academy of Pediatrics; 2007.	Recommended Guidance: Expert Opinion
2. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

I. Recommended Minimum Plan Benefits: Preventive Services

B. IMMUNIZATIONS

Definition of Benefit	Covered Providers
Screening for susceptibility to vaccine-preventable diseases, immunizations, and related services.[1]	Covered services must be furnished by or under the direction of a primary care provider (family physician, pediatrician, nurse practitioner, general practitioner, internal medicine physician), physician's assistant, certified nurse midwife, OB-GYN, or other qualified provider.

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
No limits for children and adolescents (0 to 21 years), women planning a pregnancy, and women who are pregnant.[1,2]	N/A	• All immunizations and associated care recommended by the Advisory Committee on Immunization Practices (ACIP).[A] • Immunizations to address travel, occupational, and other high-risk activities. [A]	All others as defined by the health plan.

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
No cost-sharing for ACIP recommended routine and high-risk immunizations; minimal cost-sharing for travel immunizations.	0 / 0% (general); 1 / 10% (travel)	Copayment and coinsurance amounts apply toward maximum.

Actuarial Impact[3]	Cost of Recommended Benefits (PMPM)	Cost Impact
	$ 2.21 (HMO) $ 2.21 (PPO)	The HMO Benchmark Model is consistent with the Plan Benefit Model (cost **neutral**). The PPO Benchmark Model includes a deductible and 20% member coinsurance. Eliminating the deductible and coinsurance are estimated to **increase** the employer's cost by: • $.83 PMPM / 0.3% of total plan costs (PPO)

Citations

1. Advisory Committee on Immunization Practices	Centers for Disease Control and Prevention. General recommendations on immunization: recommendations of the Advisory Committee on Immunization Practices and the American Academy of Family Physicians. *MMWR*. 2006; 55(No. RR-15):1-48.	Recommended Guidance
2. American Academy of Pediatrics	American Academy of Pediatrics. Pickering LK, Backer CJ, Long SS, McMillan JA, eds. *Red Book: 2006 Report of the Committee on Infectious Diseases*, 27th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2006.	Recommended Guidance: Expert Opinion
3. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model*. Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

[A] The Advisory Committee on Immunization Practices (ACIP) releases updated recommendations on immunizations at regular intervals. Employers should instruct their health plan administrator(s) to provide coverage for newly-recommended immunizations immediately following approval from ACIP.

I. Recommended Minimum Plan Benefits: Preventive Services

C. PREVENTIVE DENTAL SERVICES

Definition of Benefit	Covered Providers
Covered preventive services include risk assessments and anticipatory guidance in order to promote oral health,[1] oral examinations, and diagnostic procedures.[2]	Covered services must be furnished by or under the direction of a licensed dentist or licensed dental hygienist. Licensed dental hygienists must be overseen by a dentist or primary care provider or operate in conformance with state regulation for the independent practice of preventive dentistry. Risk assessments, anticipatory guidance, and fluoride varnish may be performed by a primary care provider.

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
One preventive visit during the first 12 months of life [1,2]; 2 visits per calendar year for all beneficiaries aged 2 to 21 years [2,5]; 1 visit during the preconception period and 1 visit during pregnancy for all women.[5] Additional visits to implement and maintain preventive equipment (e.g., space maintainer) and procedures are covered, as medically necessary.	N/A	All appropriate preventive care, including: • Prophylaxis (cleaning of teeth) – limited to 2 treatments per calendar year.[2,3] • Sealants – (once every 3 years, from the last date of service, on permanent molars for children under age 16).[2,3] • Space maintainer (primary teeth only).[3] • Bitewing x-rays (one set per calendar year).[2,3] • Complete series x-rays (one complete series every 3 years).[2,3] • Periapical x-rays[2,3] • Routine oral evaluations (limited to 2 per calendar year).[2,3] • Fluoride varnish or gel applications (1 treatment per calendar year for children under age 16 at low or average risk; 4 treatments per calendar year for children under age 16 at moderate or high risk).[4] • Fluoride supplementation.[2, 6]	All others as defined by the health plan. *Please refer to the "Dental Services" benefit for additional coverage guidelines.*

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
None	0 / 0%	N/A

Actuarial Impact[7]	Cost of Recommended Benefits (PMPM)	Cost Impact
	$ 6.86 (HMO) $ 7.60 (PPO)	The HMO and PPO Benchmark Models are consistent with the Plan Benefit Model (cost **neutral**).

Citations

1. Bright Futures Recommendation	Hagan JF, Shaw JS, Duncan P, eds. *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents,* 3rd edition. Elk Grove Village, IL: American Academy of Pediatrics; 2007.	Recommended Guidance: Expert Opinion
2. American Academy of Pediatric Dentistry	American Academy of Pediatric Dentistry. Guideline on Periodicity of Examination, Preventive Dental Services, Anticipatory Guidance, and Oral Treatment for Children. Revised 2003. American Academy of Pediatric Dentistry. Clinical Affairs Committee – Infant Oral Health Subcommittee Guidelines on Infant Oral Health Care. Revised 2004.	Recommended Guidance: Expert Opinion
3. Federal Employee Health Benefit Plan	U.S. Office of Personnel Management, Federal Employees Health Benefits Program. S*ample plan characteristics (Aetna: Individual practice plan with a consumer driven health plan option and a high deductible health plan option).*Available at: https://www.opm.gov/insure/07/brochures/pdf/73-828.pdf. Accessed on January 15, 2007.	Federally Vetted
4. American Dental Association	Evidence Based Clinical Recommendations: Professionally Applied Topical Fluoride. Report of the Council on Scientific Affairs, ADA May 2006.	Recommended Guidance: Expert Opinion
5. Maternal and Family Health Benefits Advisory Board	Maternal and Family Health Benefits Advisory Board. Washington, DC: National Business Group on Health; August 2007.	Recommended Guidance: Expert Opinion
6. U.S. Preventive Services Task Force	U.S. Preventive Services Task Force. *Dental caries screening in preschool children: Summary of recommendation.* Rockville, MD: Agency for Healthcare Research and Quality; 2004. Available at: http://www.ahrq.gov/clinic/uspstf/uspsdnch.htm. Accessed on June 1, 2007.	Evidence-Based Research
7. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

I. Recommended Minimum Plan Benefits: Preventive Services

D. EARLY INTERVENTION SERVICES FOR MENTAL HEALTH / SUBSTANCE ABUSE

Definition of Benefit	Covered Providers
Medical services designed to educate and counsel individuals and families about behaviors that facilitate mental health, improve personal resiliency, facilitate early intervention and prevent the escalation of sub-clinical problems, and monitor and treat V-code conditions.	Covered services must be furnished by or under the direction of a primary care provider (family physician, pediatrician, nurse practitioner) or a mental health professional (psychiatrist, clinical psychologist, licensed clinical social worker, licensed professional counselor, psychiatric nurse practitioner).[1]

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
8 visits per calendar year [2]	Include provisions for children with complex case-management needs (e.g., flex benefits). Consider extending benefit for multiple providers.	Screening (including family psychosocial screening), monitoring, and treatment of DSM-IV V-code conditions.	All others as defined by the health plan. *Please refer to the "Mental Health / Substance Abuse" benefit for additional coverage information.*

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
None	0 / 0%	N/A

	Cost of Recommended Benefits (PMPM)	Cost Impact
Actuarial Impact[3]	$ 4.83 (HMO) $ 5.85 (PPO)	The HMO and PPO Benchmark Models exclude coverage for these services. Adding coverage for these services is estimated to **increase** the employer's plan cost by: • $4.83 PMPM / 1.7% of total plan costs (HMO) • $5.43 PMPM / 1.9% of total plan costs (PPO)

Citations

1. U.S. Department of Health and Human Services, Bureau of Health Professionals	U.S. Department of Health and Human Services, Bureau of Health Professionals. *Health Professional Shortage Area Guidelines for Mental Health Care Designation.* Available at: http://bhpr.hrsa.gov/shortage/hpsaguidement.htm. Accessed on January 12, 2007.	Recommended Guidance
2. Maternal and Family Health Benefits Advisory Board	Maternal and Family Health Benefits Advisory Board. Washington, DC: National Business Group on Health; August 2007.	Recommended Guidance: Expert Opinion
3. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. Actuarial analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model. Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

I. Recommended Minimum Plan Benefits: Preventive Services

E. PREVENTIVE VISION SERVICES

Definition of Benefit	Covered Providers
Medical services designed to identify children who may have eye or vision abnormalities, or risk factors for developing eye problems. Examination of the eyes should be performed beginning in the newborn period and at all subsequent well-child care visits. Additional preventive vision screening is recommended for children who are unable to be screened in well-child care due to time or health constraints.[1]	Covered services must be furnished by or under the direction of a primary care provider (family physician, pediatrician, nurse practitioner, general practitioner, internal medicine physician).

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
2 visits outside of regular well-child care[A] between birth and age 5.[1-3]	Include provisions for children with complex case-management needs (e.g., flex benefits).	Screening to detect amblyopia, strabismus, and defects in visual acuity in children younger than age 5 years.[2] Exams include: visual acuity tests, stereopsis, vision history, external eye inspection, ophthalmoscopic examination, tests for ocular muscle motility and eye muscle imbalances, and monocular distance acuity.[3]	All others as defined by the health plan. *Please refer to the "Vision Services" benefit for additional coverage information.*

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
None	0 / 0%	N/A

	Cost of Recommended Benefits (PMPM)	Cost Impact
Actuarial Impact[4]	$ 0.32 (HMO) $ 0.39 (PPO)	The HMO and PPO Benchmark Models exclude coverage for these services. Adding coverage for these services is estimated to **increase** the employer's plan cost by: • $0.32 PMPM / 0.1% of total plan costs (HMO) • $0.39 PMPM / 0.1% of total plan costs (PPO)

Citations

1. American Academy of Ophthalmology	American Academy of Ophthalmology. Pediatric eye evaluations. Preferred Practice Pattern. *AAO*; 2002.	Recommended Guidance: Practice Guideline
2. U.S. Preventive Services Task Force	U.S. Preventive Services Task Force. *Guide to Clinical Preventive Services*. 3rd ed. Rockville, MD: Agency for Healthcare Research and Quality; 2003.	Evidence-Based Research
3. American Academy of Pediatrics; American Association of Certified Orthoptists; American Association for Pediatric Ophthalmology and Strabismus; American Academy of Ophthalmology	Committee on Practice and Ambulatory Medicine, Section on Ophthalmology. American Association of Certified Orthoptists; American Association for Pediatric Ophthalmology and Strabismus; American Academy of Ophthalmology. Eye examination in infants, children, and young adults by pediatricians. *Pediatrics*; 2003 Apr;111(4 Pt 1):902-7.	Recommended Guidance
4. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model*. Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

[A] Most children and adolescents receive routine vision screening during the course of well-child care. However, young children who are uncooperative, children with special needs, and children who miss or delay well-child care need access to vision screening outside of designated preventive visits. The "Preventive Vision Services" screening benefit is designed to support this need.

I. Recommended Minimum Plan Benefits: Preventive Services

F. PREVENTIVE AUDIOLOGY SCREENING SERVICES

Definition of Benefit	Covered Providers
Medical services to detect and diagnose speech, hearing, and language disorders.	Covered services must be furnished by or under the direction of a primary care provider (family physician, pediatrician, nurse practitioner, general practitioner, internal medicine physician) or a covered specialist (audiologist or speech pathologist).

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
3 visits between birth and 19 years of age. Services must be rendered during the course of a well-child care visit or with referral from a PCP to a covered specialist.[1]	Include provisions for children with complex case-management needs (e.g., flex benefits).	All appropriate preventive care. Medical necessity supported by the Plan Benefit Model definition.	All others as defined by the health plan.

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
None	0 / 0%	N/A

Actuarial Impact[2]	Cost of Recommended Benefits (PMPM)	Cost Impact
	$ 0.32 (HMO) $ 0.39 (PPO)	The HMO and PPO Benchmark Models exclude coverage for these services. Adding coverage for these services is estimated to **increase** the employer's plan cost by: • $0.32 PMPM / 0.1% of total plan costs (HMO) • $0.39 PMPM / 0.1% of total plan costs (PPO)

Citations

1. Maternal and Family Health Benefits Advisory Board	Maternal and Family Health Benefits Advisory Board. Washington, DC: National Business Group on Health; August 2007.	Recommended Guidance: Expert Opinion
2. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model*. Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

I. Recommended Minimum Plan Benefits: Preventive Services

G. UNINTENDED PREGNANCY PREVENTION SERVICES

Definition of Benefit	Covered Providers
Medical services designed to facilitate the prevention of unintended pregnancies and promote healthy approaches to family planning.[1]	Covered services must be furnished by or under the direction of a primary care provider (family physician, pediatrician, nurse practitioner, general practitioner, internal medicine physician), a certified nurse midwife, or an OB-GYN.

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
No limits on counseling services when provided by an approved provider. No limits on medications, procedures, or devices when prescribed by an approved provider.	N/A	Covered services include[2]: • **All** FDA-approved prescription contraceptive methods (e.g., pills, patches, IUDs, diaphragms, and vaginal rings), and voluntary sterilization (e.g., tubal ligation, vasectomy). • Abortion and all related services. • Medically appropriate laboratory examinations and tests, counseling services, and patient education.	All others as defined by the health plan. *Please refer to "Preventive Services (General)" and "Laboratory Diagnostic, Assessment, and Testing Services" for information on coverage for STI screening and counseling.*

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
None	0 / 0%	N/A

Actuarial Impact[3]	Cost of Recommended Benefits (PMPM)	Cost Impact
	$ 3.07 (HMO) $ 3.42 (PPO)	The HMO Benchmark Model is consistent with the Plan Benefit Model (cost **neutral**). The PPO Benchmark Model includes a deductible and 20% member coinsurance. Eliminating the deductible and coinsurance will increase the employer's plan cost by: • $1.19 PMPM / 0.4% of total plan costs (PPO)

Citations

1. Kaiser Family Foundation	The Henry J. Kaiser Foundation. *Medicaid Benefits: Online Database, Benefits by Service, Definition / Notes (October, 2004).* Available at: http://www.kff.org/medicaid/benefits/service_main.jsp. Accessed January 15, 2007.	Industry Standard
2. Federal Employee Health Benefit Plan	U.S. Office of Personnel Management, Federal Employees Health Benefits Program. *Sample plan characteristics (Aetna: Individual practice plan with a consumer driven health plan option and a high deductible health plan option).* Available at: https://www.opm.gov/insure/07/brochures/pdf/73-828.pdf. Accessed on January 17, 2007.	Federally Vetted
3. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

I. Recommended Minimum Plan Benefits: Preventive Services

H. PREVENTIVE PRECONCEPTION CARE

Definition of Benefit		Covered Providers	
Medical services aimed at improving the health outcomes of pregnant women and infants by promoting the health of women of reproductive age *prior* to conception.[1]		Covered services must be furnished by or under the direction of a primary care physician (family physician, general practitioner, internal medicine physician, OB-GYN[A]), nurse practitioner, or a medical professional who is licensed to provide pregnancy-related primary care services (e.g., certified nurse midwife).	
Recommended Benefit Coverage Limits	**Recommended Exceptions**	**Inclusions**	**Exclusions**
2 preconception care visits per calendar year[1]	Include provisions for women with complex case-management needs (e.g., flex benefits).	All appropriate preventive care. Medical necessity supported by the Plan Benefit Model definition.	All others as defined by the health plan.
Recommended Cost-Sharing	**Copayment / Coinsurance Level (0-5 / 0-25%)**	**Out-of-Pocket Maximum**	
None	0 / 0%	N/A	
Actuarial Impact[2]	**Cost of Recommended Benefits (PMPM)**	**Cost Impact**	
	N/A (already included in standard office visit estimate)	The HMO and PPO Benchmark Models exclude coverage for these services. Adding coverage for these services is estimated to be cost **neutral**.	

Citations		
1. Centers for Disease Control and Prevention	Centers for Disease Control and Prevention. *Recommendations to Improve Preconception Health and Health Care --- United States A Report of the CDC/ATSDR Preconception Care Work Group and the Select Panel on Preconception Care.* Available at: http://www.cdc.gov/MMWR/preview/mmwrhtml/rr5506a1.htm. Accessed on September 1, 2007.	Recommended Guidance: Expert Opinion
2. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

[A] Obstetricians and gynecologists (OB-GYNs) are considered "primary care providers" only when they are providing preconception, prenatal, and postpartum care. They are considered "medical specialists" when providing all other types of services. Copayment/coinsurance amounts should be adjusted accordingly.

I. Recommended Minimum Plan Benefits: Preventive Services

I. PREVENTIVE PRENATAL CARE

Definition of Benefit	Covered Providers
Prenatal care: Medical services designed to facilitate the health of a pregnant woman or fetus, or that have become necessary as a result of pregnancy. Covered services may also address conditions that might complicate a pregnancy, threaten a woman's ability to carry the fetus to term, or deliver the fetus safely.[1] **Prenatal pediatric care:** A single visit designed to allow a pediatrician (or other primary care provider) to gather basic information from parents, provide information and advice, and identify high-risk situations in which parents may need to be referred to appropriate resources for help.[2] This visit is relevant only in situations where the infant's primary care provider did not provide prenatal care to the infant's mother.	Covered services must be furnished by or under the direction of a primary care physician (family physician, general practitioner, internal medicine physician, OB-GYN[A]), nurse practitioner, or a medical professional who is licensed to provide pregnancy-related primary care services (e.g., certified nurse midwife).

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
20 prenatal care visits[1] 1 prenatal pediatric visit[2]	Include provisions for women with complex case-management needs (e.g., flex benefits).	All appropriate preventive care including all routine screening and diagnostic tests (e.g., amniocentesis, chorionic villus sampling, etc). Medical necessity supported by the Plan Benefit Model definition.	All others as defined by the health plan.

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
None	0 / 0%	N/A

	Cost of Recommended Benefits (PMPM)	Cost Impact
Actuarial Impact[3]	$ 1.61 (HMO) $ 1.95 (PPO)	The HMO and PPO Benchmark Models exclude coverage for these services. Adding coverage for these services is estimated to **increase** the employer's plan cost by: • $1.61 PMPM / 0.6% of total plan costs (HMO) • $1.95 PMPM / 0.6% of total plan costs (PPO)

Citations

1. American Academy of Pediatrics & American College of Obstetricians and Gynecologists	American Academy of Pediatrics & American College of Obstetricians and Gynecologists. *Guidelines for Perinatal Care,* 5th ed. Elk Grove Village, IL; American Academy of Pediatrics & American College of Obstetricians and Gynecologists; October 2002. (Source recommends 15 prenatal care visits, plus one per week after week 40)	Recommended Guidance: Expert Opinion
2. American Academy of Pediatrics	Committee on Psychosocial Aspects of Child and Family Health. Policy statement: The prenatal visit. Pediatrics. 2001; 107(6):1456-1458. American Academy of Pediatrics. Pickering LK, Backer CJ, Long SS, McMillan JA, eds. *Red Book: 2006 Report of the Committee on Infectious Diseases,* 27th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2006.	Recommended Guidance: Expert Opinion
3. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

[A] Obstetricians and gynecologists (OB-GYNs) are considered "primary care providers" only when they are providing preconception, prenatal, and postpartum care. They are considered "medical specialists" when providing all other types of services. Copayment/coinsurance amounts should be adjusted accordingly.

I. Recommended Minimum Plan Benefits: Preventive Services

J. PREVENTIVE POSTPARTUM CARE

Definition of Benefit	Covered Providers
Medical services that are necessary for the health of the woman post-pregnancy and/or the newborn infant.[1]	Covered services must be furnished by or under the direction of a primary care physician (family physician, general practitioner, internal medicine physician, OB-GYN[A]), nurse practitioner, or a medical professional who is licensed to provide pregnancy-related primary care services (e.g., certified nurse midwife). In addition, lactation consultants credentialed by the International Board of Lactation Consultant Examiners (IBCLCs) are approved for the provision of breastfeeding counseling, training, and support.[3]

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
One postpartum care visit per pregnancy (delivered between 21 and 56 days after delivery). [2] 5 lactation consultation visits per pregnancy. [3, B]	N/A	All appropriate preventive care. Medical necessity supported by the Plan Benefit Model definition. Lactation benefit supported by medical necessity of mother *or* infant.	All others as defined by the health plan.

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
None	0 / 0%	N/A

Actuarial Impact[4]	Cost of Recommended Benefits (PMPM)	Cost Impact
	$ 0.32 (HMO) $ 0.39 (PPO)	The HMO and PPO Benchmark Models exclude coverage for these services. Adding coverage for these services is estimated to **increase** the employer's plan cost by: • $0.32 PMPM / 0.1% of total plan costs (HMO) • $0.39 PMPM / 0.1% of total plan costs (PPO)

Citations		
1. Kaiser Family Foundation	The Henry J. Kaiser Foundation. Medicaid Benefits: *Online Database, Benefits by Service, Definition / Notes (October, 2004).* Available at: http://www.kff.org/medicaid/benefits/service_main.jsp. Accessed on January 15, 2007.	Industry Standard
2. American Academy of Pediatrics & American College of Obstetricians and Gynecologists	American Academy of Pediatrics & American College of Obstetricians and Gynecologists. *Guidelines for Perinatal Care.* 5th ed. Elk Grove Village, IL; American Academy of Pediatrics & American College of Obstetricians and Gynecologists; October 2002.	Recommended Guidance: Expert Opinion
3. United States Breastfeeding Committee	Association of Women's Health, Obstetric and Neonatal Nurses. *United States Breastfeeding Committee Recommendations.* Available at: http://www.usbreastfeeding.org/breastfeeding/index.htm. Accessed on February 1, 2007.	Recommended Guidance
4. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

[A] Obstetricians and gynecologists (OB-GYNs) are considered "primary care providers" only when they are providing preconception, prenatal, and postpartum care. They are considered "medical specialists" when providing all other types of services. Copayment/coinsurance amounts should be adjusted accordingly.

[B] Lactation consultation visits may be used at any point during pregnancy and in the year after birth.

I. Recommended Minimum Plan Benefits: Preventive Services

K. PREVENTIVE SERVICES (GENERAL)

Definition of Benefit	Covered Providers
Medical services that are designed to detect the existence of, or risk for, diseases, conditions, and problems in asymptomatic people.	Covered services must be furnished by or under the direction a primary care provider (family physician, general practitioner, internal medicine physician, nurse practitioner, pediatrician), or other qualified provider.

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
Coverage for clinical preventive services for at-risk children, adolescents, and women of childbearing-age that are not typically delivered in routine: • Well-child care • Preventive preconception, prenatal, or postpartum care. Frequency as defined by the U.S. Preventive Services Task Force or other cited reference.	N/A	All appropriate preventive care. Screening services for high-risk populations are covered, as deemed medically necessary. Services may include, but are not limited to: • Alcohol misuse screening and counseling[1,2] • Cervical cancer screening[2] • Chlamydia screening[2] • Depression screening[2] • Diabetes[2] • Gonorrhea screening[2] • HIV screening[2] • Hypertension[2] • Lead screening[3] • Lipids[2] • Obesity[2] • Sexually transmitted infection (STI) counseling • Syphilis[2] • TB screening[3] • Tobacco use screening and counseling[2]	All others as defined by the health plan.

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
None	0 / 0% (office visits and any covered screening services)	N/A

Actuarial Impact[4]	Cost of Recommended Benefits (PMPM)	Cost Impact
	$ 3.22 (HMO) $ 3.90 (PPO)	The HMO and PPO Benchmark Models exclude coverage for these services. Adding coverage for these services is estimated to **increase** the employer's plan cost by: • $3.22 PMPM / 1.1% of total plan costs (HMO) • $3.90 PMPM / 1.3% of total plan costs (PPO)

Citations

1. American Academy of Pediatrics	American Academy of Pediatrics. Alcohol use and abuse: a pediatric concern. Pediatrics 2001;108:185-9; Kulig JW. Tobacco, alcohol, and other drugs: the role of the pediatrician in prevention, identification, and management of substance abuse. *Pediatrics.* 2005;115:816-21. American Academy of Pediatrics. In: Pickering LK, Backer CJ, Long SS, McMillan JA, eds. *Red Book: 2006 Report of the Committee on Infectious Diseases,* 27th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2006.	Recommended Guidance: Expert Consensus

I. Recommended Minimum Plan Benefits: Preventive Services

K. PREVENTIVE SERVICES (GENERAL) *continued*

Citations		
2. U.S. Preventive Services Task Force	Information on U.S. Preventive Services Task Force (USPSTF) recommendations can be found at: http://www.ahrq.gov/clinic/uspstf/uspstopics.htm • Screening for alcohol misuse. Summary of Recommendations / Supporting Documents. *Guide to Clinical Preventive Services.* Rockville, MD: Agency for Health Care Research and Quality; 2004. *Recommended for adults age 18 and older only.* • Screening for cervical cancer. Summary of Recommendations / Supporting Documents. *Guide to Clinical Preventive Services.* 2nd ed. Rockville, MD: Agency for Health Care Research and Quality; 2003. • Screening for chlamydial infection. Summary of recommendations / Supporting documents. *Guide to Clinical Preventive Services.* Rockville, MD: Agency for Healthcare Research and Quality; 2007. • Screening for depression. Summary of Recommendations / Supporting Documents. *Guide to Clinical Preventive Services.* Rockville, MD: Agency for Healthcare Research and Quality; 2002. *Recommended for adults age 18 and older only.* • Screening for diabetes mellitus, adult type II. Summary of Recommendations / Supporting Documents. *Guide to Clinical Preventive Services.* 2nd ed. Rockville, MD: Agency for Healthcare Research and Quality; 2003. Recommended for high-risk adults age 18 and older. • Screening for gonorrhea: Recommendation Statement. AHRQ Publication No. 05-0579-A, May 2005. Agency for Healthcare Research and Quality, Rockville, MD. Recommended for sexually active women only. • Screening for high blood pressure. Summary of Recommendations / Supporting Documents. *Guide to Clinical Preventive Services.* Rockville, MD: Agency for Healthcare Research and Quality; 2003. *Recommended for adults age 18 and older only.* • Screening for lipid disorders in adults. Summary of Recommendations / Supporting Documents. *Guide to Clinical Preventive Services.* Rockville, MD: Agency for Health Care Research and Quality; 2001. *Recommended for adults age 18 and older only.* • Screening for obesity, adult type II. Summary of Recommendations / Supporting Documents. *Guide to Clinical Preventive Services.* Rockville, MD: Agency for Healthcare Research and Quality; 2003. *Recommended for high-risk adults age 18 and older.* • Screening for Syphilis Infection: Recommendation Statement. July 2004. Agency for Healthcare Research and Quality, Rockville, MD. *Recommended for high-risk women and all pregnant women.* • Tobacco use. Summary of Recommendations / Supporting Documents. Rockville, MD: Agency for Healthcare Research and Quality; 2003.	Evidence-Based Research
3. Centers for Disease Control and Prevention	Centers for Disease Control and Prevention. Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health care settings. *MMWR.* 2006;55 (RR14):1-17. Centers for Disease Control and Prevention. *Screening young children for lead poisoning: guidance for state and local public health officials.* Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service, CDC; 1997. Available at: www.cdc.gov/nceh/lead. Accessed June 1, 2007. Centers for Disease Control and Prevention. Targeted tuberculin testing and treatment of latent tuberculosis infection. *MMWR.* 2000;49 (RR-6):1-54.	Expert Opinion
4. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

II. Recommended Minimum Plan Benefits: Physician / Practitioner Services

A. SERVICES DELIVERED BY A PRIMARY CARE PROVIDER

Definition of Benefit	Covered Providers
Medical services delivered in the primary care setting that are diagnostic, therapeutic, rehabilitative, or palliative in nature.[A]	Covered services must be furnished by a primary care physician (family physician, general practitioner, internal medicine physician, pediatrician), a medical professional who operates under a physician (e.g., nurse practitioner, physician's assistant), or a specialist physician or medical professional who is licensed to provide primary care services (e.g., certified nurse midwife, OB-GYN[B]).

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
No limits	N/A	All medically necessary care. Medical necessity supported by the Plan Benefit Model definition. May include services related to physical, mental, oral, or vision problems or conditions.	N/A

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
Per visit copayment	1 / 10%	Copayment and coinsurance payments apply toward maximum.

Actuarial Impact[1]	Cost of Recommended Benefits (PMPM)	Cost Impact
	$ 21.88 (HMO) $ 18.83 (PPO)	The HMO Benchmark Model is consistent with the Plan Benefit Model (cost **neutral**). The PPO Benchmark Model includes a deductible and 20% member coinsurance. Reducing the coinsurance to 10% is estimated to **increase** the employer's plan cost by: • $2.13 PMPM / 0.7% of total plan costs (PPO)

Citations

1. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

[A] Services may be provided in school-based health centers and other non-traditional settings so long as the provider is included in the plan's network.
[B] Obstetricians and gynecologists (OB-GYNs) are considered "primary care providers" only when they are providing preconception, prenatal, and postpartum care. They are considered "medical specialists" when providing all other types of services. Copayment/coinsurance amounts should be adjusted accordingly.

II. Recommended Minimum Plan Benefits: Physician / Practitioner Services

B. SERVICES DELIVERED BY A MENTAL HEALTH / SUBSTANCE ABUSE PROVIDER

Definition of Benefit	Covered Providers
Medical services delivered by or under the direction of a mental health professional or primary care provider that are diagnostic, therapeutic, rehabilitative, or palliative in nature.	Covered services must be furnished by or under the direction of a mental health professional (psychiatrist, clinical psychologist, licensed clinical social worker, licensed professional counselor, psychiatric nurse specialist) or a primary care provider (family physician, pediatrician, nurse practitioner, general practitioner, internal medicine physician).[1]

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
No limits for DSM-IV diagnoses. May require referral from a primary care provider.	N/A	All medically necessary care. Medical necessity supported by the Plan Benefit Model definition.	V-codes as described in the DSM-IV. *Please refer to "Early Intervention Services for Mental Health / Substance Abuse" for additional coverage information.*

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
Per visit copayment	1 / 10%	Copayment and coinsurance amounts apply toward maximum.

	Cost of Recommended Benefits (PMPM)	Cost Impact
Actuarial Impact[2]	$ 4.68 (HMO) $ 5.19 (PPO)	The HMO Benchmark Model includes a copayment of $25 and the PPO Benchmark Model includes 20% member coinsurance. Reducing the required copayment to $20 and the member coinsurance to 10% is estimated to **increase** the employer's plan cost. If either plan has a maximum of 30 mental health visits per year, removing this maximum will increase the employer's plan cost. The estimated total cost increase would be: • $0.74 PMPM / 0.3% of total plan costs (HMO) • $0.91 PMPM / 0.3% of total plan costs (PPO)

Citations

1. U.S. Department of Health and Human Services, Bureau of Health Professionals	U.S. Department of Health and Human Services, Bureau of Health Professionals. *Health Professional Shortage Area Guidelines for Mental Health Care Designation.* Available at: http://bhpr.hrsa.gov/shortage/hpsaguidement.htm. Accessed on January 12, 2007.	Recommended Guidance
2. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

II. Recommended Minimum Plan Benefits: Physician / Practitioner Services

C. SERVICES DELIVERED BY A SPECIALTY PHYSICIAN OR SURGEON

Definition of Benefit		Covered Providers	
Medical services delivered by a specialty physician or surgeon that are diagnostic, therapeutic, rehabilitative, or palliative in nature.		Covered services must be furnished by or under the direction of a physician trained in a specialty area such as: allergy and immunology, anesthesiology, dermatology, emergency medicine, medical genetics, neurological surgery, neurology/child neurology, nuclear medicine, obstetrics/gynecology[A], ophthalmology, orthopedic surgery, otolaryngology, pathology, physical medicine and rehabilitation, plastic surgery, psychiatry, radiology, surgery, thoracic surgery, urology, or other recognized medical specialty.	
Recommended Benefit Coverage Limits	**Recommended Exceptions**	**Inclusions**	**Exclusions**
No limits. May require a referral from a primary care provider.	Recommend reducing member coinsurance to 10% for treatment of chronic conditions with referral from a primary care provider.	All medically necessary care. Medical necessity supported by the Plan Benefit Model definition. May include services related to physical, mental, oral, or vision problems or conditions	N/A
Recommended Cost-Sharing	**Copayment / Coinsurance Level (0-5 / 0-25%)**	**Out-of-Pocket Maximum**	
Per visit copayment	1 / 10% if referred by a PCP for treatment of a chronic condition; 2 / 15% in all other circumstances	Copayment and coinsurance amounts apply toward maximum.	
Actuarial Impact[1]	**Cost of Recommended Benefits (PMPM)**	**Cost Impact**	
	$ 61.67 (HMO) $ 62.33 (PPO)	The HMO Benchmark Model is consistent with the Plan Benefit Model (cost **neutral**). The PPO Benchmark Model includes a deductible and 20% member coinsurance. Reducing member coinsurance to 15% is estimated to **increase** the employer's plan cost by: • $2.47 PMPM / 0.8% of total plan costs (PPO)	
Citations			
1. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. Actuarial *Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model*. Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.		Actuarial Analysis

[A] Obstetricians and gynecologists (OB-GYNs) are considered "primary care providers" only when they are providing preconception, prenatal, and postpartum care. They are considered "medical specialists" when providing all other types of services.

II. Recommended Minimum Plan Benefits: Physician/ Practitioner Services

D. E-VISITS AND TELEPHONIC SERVICES

Definition of Benefit	Covered Providers
Two-way electronic communication (via email or telephone) between a beneficiary and a provider that takes the place of an office visit for a non-urgent problem or question specific to the beneficiary.[1] Must include clinical decision making, a review of symptoms, and the provision of clinical advice. Communication may be initiated by either the beneficiary or the provider. [1,2]	Covered services must be furnished by a physician, a medical professional who operates under a physician (e.g., nurse practitioner, physician's assistant), or a medical professional who is licensed to provide primary care services (e.g., certified nurse midwife).

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
Appropriate uses for e-mail communication include: prescription refills; test results; routine follow-up inquiries; reporting of home health monitoring/self-management of chronic disease [1,2]; and information on how to take medications, apply dressings, and follow pre-and post-operative instructions.[2] Appropriate uses for telephonic communication include: calls for provider management of a new problem, including counseling, medical management, and coordination of care not resulting in an office visit within 24 hours; calls for provider management about an existing problem for which the beneficiary was not seen in a face-to-face encounter in the previous 7 days; and calls related to care plan oversight for beneficiaries with special needs in residential settings and those with a chronic disease who require provider supervision over a period of time during a calendar month.[3] No other limits.		All medically necessary care. Medical necessity supported by the Plan Benefit Model definition. May include services related to physical, mental, oral, or vision problems or conditions.	• Scheduling. • Appointment reminders and courtesy calls. • Communication that results in an office visit within the subsequent 24 hours. • All others as defined by the health plan.

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
Determined by plan administrator based on negotiated rates.	Determined by plan administrator based on negotiated rates.	Copayment and coinsurance payments apply toward maximum. Employers are encouraged to partner with health plan administrators to test/pilot this benefit in a target market.

Actuarial Impact[4]	Cost of Recommended Benefits (PMPM)	Cost Impact
	Data not available. Employers are encouraged to partner with their health plan administrator(s) to test/ pilot this benefit in a target market.	Data not available

Citations

1. California Healthcare Foundation	E-Encounters. Health Reports. Oakland, CA: California Healthcare Foundation; 2001.	Industry Standard
2. American Medical Association	American Medical Association. *Young Physicians Section. Guidelines for Physician-Patient Electronic Communications. Updated 2004.* Available at: http://www.ama-assn.org/ama/pub/category/2386.html. Accessed on June 12, 2007.	Recommended Guidance
3. American Academy of Pediatrics	American Academy of Pediatrics. Payment for telephone care. Policy statement. *Pediatrics.* 2006; 118(4): 1768-1773.	Recommended Guidance: Expert Opinion
4. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

III. Recommended Minimum Plan Benefits: Emergency Care, Hospitalization, and Other Facility-Based Care

A. EMERGENCY ROOM SERVICES AND URGENT CARE SERVICES

Definition of Benefit	Covered Providers
Emergency Room Services: Services provided to a beneficiary experiencing a sudden or unexpected condition that may endanger his/her life or could result in a serious injury or disability and thus requires immediate medical attention. Declaration of an emergency service is based on the prudent lay person standard. **Urgent Care Services:** Ambulatory care services delivered to a beneficiary who is experiencing a medical condition that is serious or acute and requires medical attention within 24 hours, yet does not pose an immediate threat to life or health.	Covered services must be furnished by or under the direction of a physician in a hospital emergency department or an urgent care center.[1]

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
No limits	N/A	All medically necessary care. Medical necessity supported by the Plan Benefit Model definition. May include services related to physical, mental, oral, or vision problems or conditions.	• Elective care or non-emergent care and follow-up care recommended by non-plan providers that has not been approved by the plan or provided by plan providers; • Emergency care provided outside the service area if the need for care could have been foreseen before leaving the service area; • Medical and hospital costs resulting from a normal full-term delivery of a baby outside the service area.[1]

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
Per visit copayment	3 / 20% (true emergency); 5 / 25%+ (non-emergent); 2 / 10% (urgent care)	Copayment and coinsurance amounts apply toward maximum.

	Cost ofRecommended Benefits (PMPM)	Cost Impact
Actuarial Impact[2]	$ 16.67 (HMO) $ 17.76 (PPO)	The PPO/HMO Benchmark Model includes 20% to 25% member coinsurance/ $100 copayment for ER services. These ranges are consistent with the Plan Benefit Model (cost **neutral**). Reducing the required copayment to $20 and the member coinsurance to 10% for urgent care services is estimated to **increase** the employer's plan cost by: • $1.56 PMPM / 0.5% of total plan costs (HMO) • $1.82 PMPM / 0.6% of total plan costs (PPO)

Citations

1. Federal Employee Health Benefit Plan	U.S. Office of Personnel Management, Federal Employees Health Benefits Program. *Sample plan characteristics (Aetna: Individual practice plan with a consumer driven health plan option and a high deductible health plan option).* Available at: https://www.opm.gov/insure/07/brochures/pdf/73-828.pdf. Accessed on January 17, 2007.	Federally Vetted
2. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

III. Recommended Minimum Plan Benefits: Emergency Care, Hospitalization, and Other Facility-Based Care			
B. INPATIENT SUBSTANCE ABUSE DETOXIFICATION			
Definition of Benefit		**Covered Providers**	
Medical services designed to facilitate the medical process of detoxification from alcohol or any other drug.[1]		Covered services must be furnished by or under the direction of a psychiatrist, addictionist, or primary care physician (family physician, general practitioner, internal medicine physician, pediatrician) in an accredited facility.	
Recommended Benefit Coverage Limits	**Recommended Exceptions**	**Inclusions**	**Exclusions**
No limits. Requires pre-certification.	N/A	All medically necessary care. Medical necessity supported by the Plan Benefit Model definition.	All others as defined by the health plan.
Recommended Cost-Sharing	**Copayment /Coinsurance Level (0-5 / 0-25%)**	**Out-of-Pocket Maximum**	
Per episode copayment. One-time coinsurance based on negotiated occupancy rate.	4 / 25%	Copayment and coinsurance amounts apply toward maximum.	
Actuarial Impact[2]	**Cost ofRecommended Benefits (PMPM)**	**Cost Impact**	
	$ 0.84 (HMO) $ 1.05 (PPO)	The HMO Benchmark Models is consistent with the Plan Benefit Model (cost **neutral**). The PPO Benchmark Model includes a deductible. Eliminating the deductible will result in a negligible increase in benefit costs (cost **neutral**).	
Citations			
1. Federal Employee Health Benefit Plan	U.S. Office of Personnel Management, Federal Employees Health Benefits Program. *Sample plan characteristics (Aetna: Individual practice plan with a consumer driven health plan option and a high deductible health plan option).* Available at: https://www.opm.gov/insure/07/brochures/pdf/73-828.pdf. Accessed on January 17, 2007.		Federally Vetted
2. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.		Actuarial Analysis

III. Recommended Minimum Plan Benefits: Emergency Care, Hospitalization, and Other Facility-Based Care

C. INPATIENT HOSPITAL SERVICE: GENERAL INPATIENT/RESIDENTIAL CARE (INCLUDING MENTAL HEALTH/SUBSTANCE ABUSE)

Definition of Benefit	Covered Providers
Medical services that are diagnostic, therapeutic, rehabilitative, or palliative in nature and are furnished in a facility such as a hospital or appropriately accredited residential treatment facility.	Covered services must be furnished by or under the direction of a physician, dentist, mental health professional (clinical psychologist, licensed clinical social worker, licensed professional counselor, psychiatric nurse practitioner, psychiatrist), or other qualified provider.[1]

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
Admissions may require pre-certification. Periodic recertification of the beneficiary's continued need for care may also be required. Mental health admissions require a DSM-IV diagnosis. No other limits.	N/A	All medically necessary care. Medical necessity supported by the Plan Benefit Model definition. May include services related to physical, mental, oral, or vision problems or conditions. Coverage also includes[2]: • Ward, semi-private, or intensive care accommodations. • General nursing care. • Meals and special diets. • Operating, recovery, and other treatment rooms. • Prescribed drugs and medicines. • Diagnostic laboratory tests and X-rays. • Administration of blood and blood products. • Blood products, derivatives and components, artificial blood products and biological serum. • Dressings, splints, casts, and sterile tray services. • Medical supplies and equipment, including oxygen. • Anesthetics, including nurse anesthetist services. • Take-home items. • Medical supplies, appliances, medical equipment, and any covered items billed by a hospital for use at home.	All others as defined by the health plan.

Recommended Cost-Sharing	Copayment /Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
Per episode copayment. One-time coinsurance based on negotiated occupancy rate.	4 / 25%	Copayment and coinsurance amounts apply toward maximum.

	Cost ofRecommended Benefits (PMPM)	Cost Impact
Actuarial Impact[3]	$ 61.24 (HMO) $ 75.74 (PPO)	The HMO Benchmark Model is consistent with the Plan Benefit Model (cost **neutral**). The PPO Benchmark Model includes a deductible. Eliminating the deductible is estimated to **increase** the employer's plan cost by: • $0.30 PMPM / 0.1% of total plan costs (PPO)

III. Recommended Minimum Plan Benefits: Emergency Care, Hospitalization, and Other Facility-Based Care		
C. INPATIENT HOSPITAL SERVICE: GENERAL INPATIENT/RESIDENTIAL CARE (INCLUDING MENTAL HEALTH/SUBSTANCE ABUSE) *continued*		
Citations		
1. U.S. Department of Health and Human Services, Bureau of Health Professionals	U.S. Department of Health and Human Services, Bureau of Health Professionals. *Health Professional Shortage Area Guidelines for Mental Health Care Designation*. Available at: http://bhpr.hrsa.gov/shortage/hpsaguidement.htm. Accessed on January 12, 2007.	Recommended Guidance
2. Federal Employee Health Benefit Plan	U.S. Office of Personnel Management, Federal Employees Health Benefits Program. *Sample plan characteristics (Aetna: Individual practice plan with a consumer driven health plan option and a high deductible health plan option)*. Available at: https://www.opm.gov/insure/07/brochures/pdf/73-828.pdf. Accessed on January 17, 2007.	Federally Vetted
3. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model*. Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

III. Recommended Minimum Plan Benefits: Emergency Care, Hospitalization, and Other Facility-Based Care

D. INPATIENT HOSPITAL SERVICE OR BIRTH CENTER FACILITIES: LABOR / DELIVERY

Definition of Benefit	Covered Providers
Medical services specifically designed to facilitate labor and delivery. These services may be diagnostic, therapeutic, or rehabilitative in nature and are typically furnished in a hospital or birth center.	Covered services must be furnished by or under the direction of a primary care physician (family physician, general practitioner, internal medicine physician, OB-GYN[A]), nurse practitioner, or a medical professional who is licensed to provide pregnancy-related primary care services (e.g., certified nurse midwife).

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
2+ days: vaginal delivery (pending risk level).[1, 2] 4+ days: cesarean delivery, excluding the day of delivery (pending risk level).[1, 2]	Include provisions for women with high-risk pregnancies.	All medically necessary care. Medical necessity supported by the Plan Benefit Model definition. Coverage also includes[3]: • Ward, semi-private, or intensive care accommodations. • General nursing care. • Lactation consultations. • Meals and special diets. • Operating, recovery, maternity, and other treatment rooms. • Prescribed drugs and medicines. • Diagnostic laboratory tests. • Administration of blood and blood products. • Blood products, derivatives and components, artificial blood products, and biological serum. Blood products include any product created from a component of blood such as, but not limited to, plasma, packed red blood cells, platelets, albumin, factor VIII, immunoglobulin, and prolastin • Medical supplies and equipment, including oxygen. • Anesthetics, including nurse anesthetist services. • Take-home items. • Medical supplies, appliances, medical equipment, and any covered items billed by a hospital for use at home.	All others as defined by the health plan.

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
Per episode copayment. One-time coinsurance based on negotiated occupancy rate.	4 / 25%	Copayment and coinsurance amounts apply toward maximum.

	Cost ofRecommended Benefits (PMPM)	Cost Impact
Actuarial Impact[4]	$ 11.05 (HMO) $ 13.59 (PPO)	The HMO Benchmark Model is consistent with the Plan Benefit Model (cost **neutral**). The PPO Benchmark Model includes a deductible. Eliminating the deductible will result in a negligible increase in benefit costs (cost **neutral**).

III. Recommended Minimum Plan Benefits: Emergency Care, Hospitalization, and Other Facility-Based Care		
D. INPATIENT HOSPITAL SERVICE OR BIRTH CENTER FACILITIES: LABOR / DELIVERY *continued*		
Citations		
1. American Academy of Pediatrics & American College of Obstetricians and Gynecologists	American Academy of Pediatrics & American College of Obstetricians and Gynecologists. *Guidelines for Prenatal Care*, 3rd ed. Elk Grove Village, IL; American Academy of Pediatrics & American College of Obstetricians and Gynecologists; 1992.	Recommended Guidance: Expert Opinion
2. American Academy of Pediatrics	Committee on Fetus and Newborn. Policy Statement: Hospital stay for healthy newborns. *Pediatrics.* 2004; 113(5): 1434-1436. Available at: http://pediatrics.aappublications.org/cgi/content/full/113/5/1434. Accessed on September 14, 2006.	Recommended Guidance: Expert Opinion
3. Federal Employee Health Benefit Plan	U.S. Office of Personnel Management, Federal Employees Health Benefits Program. *Sample plan characteristics (Aetna: Individual practice plan with a consumer driven health plan option and a high deductible health plan option).* Available at: https://www.opm.gov/insure/07/brochures/pdf/73-828.pdf. Accessed on January 17, 2007.	Federally Vetted
4. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

[A] Obstetricians and gynecologists are considered "primary care providers" only when they are providing preconception, prenatal, and postpartum care. They are considered "medical specialists" when providing all other types of services.

III. Recommended Minimum Plan Benefits: Emergency Care, Hospitalization, and Other Facility-Based Care

E. AMBULATORY SURGICAL CENTERS OR OUTPATIENT HOSPITAL SERVICES

Definition of Benefit	Covered Providers
Medical services that are preventive, diagnostic, therapeutic, or rehabilitative in nature and are delivered in an ambulatory surgical centers or an outpatient hospital facility.	Covered services must be furnished by or under the direction of a physician or other qualified provider.

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
Some services may require pre-certification. No other limits.	N/A	All medically necessary care. Medical necessity supported by the Plan Benefit Model definition. May include services related to physical, oral, or vision problems or conditions.	All others as defined by the plan.

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
Per visit copayment. Per visit coinsurance based on negotiated rate.	3 / 20%	Copayment and coinsurance amounts apply toward maximum.

Actuarial Impact[1]	Cost ofRecommended Benefits (PMPM)	Cost Impact
	$ 69.11 (HMO) $ 65.09 (PPO)	The HMO and PPO Benchmark Models are consistent with the Plan Benefit Model (cost **neutral**).

Citations		
1. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

III. Recommended Minimum Plan Benefits: Emergency Care, Hospitalization, and Other Facility-Based Care

F. MENTAL HEALTH / SUBSTANCE ABUSE PARTIAL-DAY HOSPITAL (DAY TREATMENT) OR INTENSIVE OUTPATIENT SERVICES

Definition of Benefit	Covered Providers
Mental health and substance abuse services that are therapeutic, rehabilitative, or palliative in nature.[1]	Covered services must be furnished by or under the direction of a physician, mental health professional (clinical psychologist, licensed clinical social worker, licensed professional counselor, psychiatric nurse practitioner, psychiatrist), or other qualified provider.[1]

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
Mental health admissions require a DSM-IV diagnosis. Requires pre-certification. Partial-day hospital programs must include a minimum of 3 hours of clinical services per day, 5 days per week.[3] No other limits.	Include additional coverage for halfway houses (in lieu of inpatient care), when appropriate.	All medically necessary care. Medical necessity supported by the Plan Benefit Model definition. Treatment includes structured group activities for multiple hours during a day and assertive community treatment comprised of intensive therapy, skill training, and other community support services for beneficiaries difficult to engage in treatment.	All others as defined by the health plan.

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
Per episode copayment. One time coinsurance based on negotiated rate.	3 / 20%	Copayment and coinsurance amounts apply toward maximum.

	Cost ofRecommended Benefits (PMPM)	Cost Impact
Actuarial Impact[4]	$ 0.19 (HMO) $ 0.21 (PPO)	The HMO Benchmark Model is consistent with the Plan Benefit Model (cost **neutral**). The PPO Benchmark Model includes a deductible. Eliminating the deductible will result in a negligible increase in benefit costs (cost **neutral**). This assumes there are no changes in managed care practices.

Citations

1. Kaiser Family Foundation	The Henry J. Kaiser Foundation. *Medicaid Benefits: Online Database, Benefits by Service, Definition / Notes (October, 2004).* Available at: http://www.kff.org/medicaid/benefits/sv_foot.jsp#14. Accessed on January 13, 2007.	Industry Standard
2. U.S. Department of Health and Human Services, Bureau of Health Professionals	U.S. Department of Health and Human Services, Bureau of Health Professionals. *Health Professional Shortage Area Guidelines for Mental Health Care Designation.* Available at: http://bhpr.hrsa.gov/shortage/hpsaguidement.htm. Accessed on January 12, 2007.	Recommended Guidance
3. U.S. Armed Services Health Care Services (TriCare)	TriCare. *TriCare: Behavioral Healthcare Services.* Available at: http://www.tricare.mil/mybenefit/Download/Forms/BHC_Br_Lo_Res.pdf. Accessed on August 9, 2007.	Federally Vetted
4. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

IV. Recommended Minimum Plan Benefits: Therapeutic Services / Ancillary Services

A. PRESCRIPTION DRUGS

Definition of Benefit		Covered Providers	
Medications used to prevent, treat, or manage a medical condition.		Medications may only be dispensed by a state-licensed pharmacist, physician, or provider under the direction of a physician.	
Recommended Benefit Coverage Limits	**Recommended Exceptions**	**Inclusions**	**Exclusions**
A diagnosis is required for all prescriptions. Medication is covered when, and only when, it: 1) requires a prescription; and 2) is used to prevent, treat, or manage a specific illness or condition. No other limits.	Consider waiving/reducing the copayment/coinsurance for children with special health care needs; consider offering experimental drugs for children with terminal illnesses.	All medically necessary medications. Medical necessity supported by the Plan Benefit Model definition.	All others as defined by the health plan.
Recommended Cost-Sharing	**Copayment / Coinsurance Level (0-5 / 0-25%)**	**Out-of-Pocket Maximum**	
Copayment and coinsurance amounts defined by brand, generic, and non-formulary drug categories.	Range: 0-4 / 0%-25% (based on formulary)	Copayment and coinsurance amounts apply toward maximum.	
Actuarial Impact[1]	**Cost ofRecommended Benefits (PMPM)**	**Cost Impact**	
	$ 30.51 (HMO) $ 37.06 (PPO)	The HMO and PPO Benchmark Models are consistent with the Plan Benefit Model (cost **neutral**).	
Citations			
1. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.		Actuarial Analysis

IV. Recommended Minimum Plan Benefits: Therapeutic Services / Ancillary Services

B. DENTAL SERVICES

Definition of Benefit	Covered Providers
Medical services specifically designed to address oral health. These services may be diagnostic, therapeutic, or rehabilitative in nature.	Covered services must be furnished by or under the direction of a licensed dentist or licensed dental hygienist. Licensed dental hygienists must be overseen by a dentist or primary care provider. Dental services may be provided in the outpatient setting, in emergency rooms, or in the inpatient setting, according to need.

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
Annual limit: $5,000 per person.	Include provisions for children with complex case-management needs (e.g., flex benefits).	All medically necessary care. Medical necessity supported by the Plan Benefit Model definition. Coverage also includes: • Amalgam and resin-based composite restorations ("fillings").[1, 2] • Extractions (oral surgery) such as simple, surgical, soft tissue and bony impacted teeth.[1] • General anesthesia, intravenous sedation,[1] oral sedation, and nitrous oxide. • Occlusal guards (for bruxism only) —limited to one every 3 years, from the last date of service.[1] • Crowns (prefabricated stainless steel crowns and resin).[1, 2] • Osseous surgery ("periodontics") —one per quadrant every 3 years, from the last date of service.[1] • Implants.[4] • Prosthetics.[4] • Endodontic procedures (e.g., root canal treatment, pulpotomies, pulpectomies).[3] • Orthodontics covered only when treatment meets medical necessity criteria.[4]	• Orthodontics, when not medically necessary.[1] • Dental treatment for cosmetic purposes.[1]

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
Per visit copayment. Per visit coinsurance based on negotiated rate.	2 / 15%	Copayment and coinsurance amounts apply toward maximum.

	Cost ofRecommended Benefits (PMPM)	Cost Impact
Actuarial Impact[5]	$ 15.36 (HMO) $ 17.01 (PPO)	The HMO/PPO Benchmark Model includes member coinsurance for restorative and orthodontic procedures (20% and 50% respectively) and the PPO Benchmark Model includes a $2,500 annual maximum benefit. Decreasing the member coinsurance to the recommended 15% and setting the annual maximum benefit at $5,000 for both plans will **increase** the employer's plan cost by: • $2.81 PMPM / 1.0% of total plan costs (HMO) • $3.11 PMPM / 1.0% of total plan costs (PPO)

IV. Recommended Minimum Plan Benefits: Therapeutic Services / Ancillary Services		
B. DENTAL SERVICES *continued*		
Citations		
1. Federal Employee Health Benefit Plan	U.S. Office of Personnel Management, Federal Employees Health Benefits Program. *Sample plan characteristics (Aetna: Individual practice plan with a consumer driven health plan option and a high deductible health plan option).* Available at: https://www.opm.gov/insure/07/brochures/pdf/73-828.pdf. Accessed on January 17, 2007.	Federally Vetted
2. American Academy of Pediatric Dentistry	American Academy of Pediatric Dentistry. *Guidelines on Pediatric Restorative Dentistry. Clinical Guidelines Reference Manual* 2005-2006; Revised 2004.	Recommended Guidance: Expert Opinion
3. American Academy of Pediatric Dentistry	American Academy of Pediatric Dentistry. Guidelines on pulp therapy for primary and young permanent teeth. Clinical Guidelines Reference Manual 2005-2006. American Academy of Pediatric Dentistry; 2004.	Recommended Guidance: Expert Opinion
4. Maternal and Family Health Benefits Advisory Board	Maternal and Family Health Benefits Advisory Board. Washington, DC: National Business Group on Health; August 2007.	Recommended Guidance: Expert Opinion
5. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model*. Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

IV. Recommended Minimum Plan Benefits: Therapeutic Services / Ancillary Services

C. VISION SERVICES

Definition of Benefit	Covered Providers
Services to assess and address vision problems including refractive exams for eyeglasses and contacts, exams and assessments for other low vision aids, and vision therapy.	Covered services must be furnished by an ophthalmologist or optometrist.

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
Refractive exams (limit 1 per calendar year)[1]; treatment of eye diseases and injury; replacement lenses and frames or contact lenses every year or each time a prescription changes.	Include provisions for children with complex case-management needs (e.g., flex benefits).	• Refractive eye exams.[1] • Corrective eyeglasses and frames.[2] • Contact lenses.[2] • Fitting of contact lenses.[2] • Eye exercises.[1,2]	All others as defined by the health plan.

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
Per visit copayment or per visit coinsurance based on negotiated rate. No copayment/ coinsurance on glasses or contacts purchase. Monetary limit on eyeglasses, frames, and contacts: $200 per calendar year.[3]	2 / 15%	Copayment and coinsurance amounts apply toward maximum.

Actuarial Impact[4]	Cost ofRecommended Benefits (PMPM)	Cost Impact
	$ 3.93 (HMO) $ 4.77 (PPO)	The HMO Benchmark Model is consistent with the Plan Benefit Model (cost **neutral**). The PPO Benchmark Model includes a deductible and 20% member coinsurance. Eliminating the deductible and decreasing the member coinsurance to 15% will **increase** the employer's cost by: • $1.73 PMPM / 0.6% of total plan costs (PPO)

Citations

1. American Academy of Ophthalmology	Committee on Practice and Ambulatory Medicine, Section on Ophthalmology. American Association of Certified Orthoptists; American Association for Pediatric Ophthalmology and Strabismus; American Academy of Ophthalmology. Eye examination in infants, children, and young adults by pediatricians. *Pediatrics*. 2003 Apr;111(4 Pt 1):902-7.	Recommended Guidance: Expert Opinion
2. Federal Employee Health Benefit Plan	U.S. Office of Personnel Management, Federal Employees Health Benefits Program. *Sample plan characteristics (Aetna: Individual practice plan with a consumer driven health plan option and a high deductible health plan option).* Available at: https://www.opm.gov/insure/07/brochures/pdf/73-828.pdf. Accessed on January 17, 2007.	Federally Vetted
3. Eye Med	Average cost of top 10 child-appropriate frames and polycarbonate lenses from Lens Crafters, Pearle Vision, Target, and Sears Optical.	Industry Standard
4. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model*. Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

IV. Recommended Minimum Plan Benefits: Therapeutic Services / Ancillary Services

D. AUDIOLOGY SERVICES

Definition of Benefit	Covered Providers
Medical services specifically designed to address hearing loss. These services may be diagnostic, therapeutic, or rehabilitative in nature.	Covered services must be furnished by or under the direction of a state-licensed/board-certified audiologist or speech-language pathologist.[1]

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
No limit. Requires pre-certification and/or referral.	Include provisions for children with complex case-management needs (e.g., flex benefits).	All medically necessary assessment and treatment including[1]: • Audiological, tinnitus, vestibular and balance assessment; central auditory, cochlear implant, assistive listening device (ALD), auditory rehabilitation, and hearing aid assessment and fitting. • Treatment of audiologic (aural) rehabilitation/habilitation, vestibular and balance, auditory processing, and cerumen management problems.	All others as defined by the health plan. *Please refer to the "Durable Medical Equipment (DME), Supplies & Medical Foods" benefit for additional information on equipment /device coverage.*

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
Per visit copayment. Per visit coinsurance based on negotiated rate.	2 / 15%	Copayment and coinsurance amounts apply toward maximum.

Actuarial Impact[2]	Cost ofRecommended Benefits (PMPM)	Cost Impact
	$ 1.24 (HMO) $ 1.75 (PPO)	The HMO/PPO Benchmark Model is consistent with the Plan Benefit Model (cost **neutral**).

Citations		
1. American Speech-Language-Hearing Association	American Speech-Language-Hearing Association. *Model Health Care Benefits, Ideal Health Plan Coverages for Audiology and Speech-Language Pathology Services.* Available at: http://www.asha.org/public/add-benefits/model-benefits.htm#speech and http://www.asha.org/public/add-benefits/providers.htm. Accessed on July 12, 2007.	Recommended Guidance
2. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

IV. Recommended Minimum Plan Benefits: Therapeutic Services / Ancillary Services

E. NUTRITIONAL SERVICES

Definition of Benefit	Covered Providers
Medical services that are diagnostic, therapeutic, or rehabilitative in nature and are specifically designed to address diet and nutrition. These services should include a comprehensive process for defining an individual's nutrition and hydration status using medical, nutrition, and medication intake histories, physical examination, anthropomorphic measures, and laboratory data. Nutritional services may also involve interventions and counseling to promote appropriate nutrition and fluid intake. Nutrition therapy, as a component of medical treatment, includes enteral and parenteral nutrition care.[1]	Covered services must be furnished by or under the direction of a physician, nurse practitioner, or other licensed provider (e.g., registered dietitian) working under the direction a physician.

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
Limited to 25 visits per calendar year. Requires pre-certification and/or referral.[2]	Include provisions for children with complex case-management needs (e.g., flex benefits).	All medically necessary care. Medical necessity supported by the Plan Benefit Model definition.	All others as defined by the health plan.

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
Per visit copayment. Per visit coinsurance based on negotiated rate.	2 / 15%	Copayment and coinsurance amounts apply toward maximum.

Actuarial Impact[3]	Cost ofRecommended Benefits (PMPM)	Cost Impact
	$ 1.03 (HMO) $ 1.22 (PPO)	The HMO and PPO Benchmark Models exclude coverage for these services. Adding coverage for these services is estimated to **increase** the employer's plan cost by: • $1.03 PMPM / 0.4% of total plan costs (HMO) • $1.22 PMPM/ 0.4% of total plan costs (PPO)

Citations

1. American Dietetic Association	Definition provided by the American Dietetic Association. Adapted from: Joint Commission on Accreditation of Healthcare Organizations. *2007 Standards for Ambulatory Care.* 2007:361-362.	Recommended Guidance: Professional Guideline
2. Maternal and Family Health Benefits Advisory Board	Maternal and Family Health Benefits Advisory Board. Washington, DC: National Business Group on Health; August 2007.	Recommended Guidance: Expert Opinion
3. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

IV. Recommended Minimum Plan Benefits: Therapeutic Services / Ancillary Services

F. OCCUPATIONAL, PHYSICAL, AND SPEECH THERAPY SERVICES

Definition of Benefit	Covered Providers
Occupational Therapy Services: Medical services designed to: • Assist people regain performance skills lost through injury or illness[1] • Develop skills inhibited by a problem present at birth or a developmental delay.[2] Individualized programs are designed to improve quality of life by recovering or developing competence, maximizing independence, and preventing injury or disability, so that a person can cope with school, work, home, and social life.[1] **Physical Therapy Services:** Medical services designed to relieve symptoms, improve function, and prevent further disability for individuals disabled by chronic or acute disease or injury. Physical therapy services may also be used to help people develop skills inhibited by a problem present at birth or a developmental delay.[2] Treatment may include various forms of heat and cold, electrical stimulation, therapeutic exercises, ambulation training, and training in functional activities.[3] **Services for Speech, Hearing and Language Disorders:** Medical services for beneficiaries with speech, hearing, and language disorders. Services may also be used to help people develop skills inhibited by a problem present at birth or a developmental delay.[1] Services may be diagnostic, rehabilitative, or corrective in nature.[4]	Covered services must be furnished by or under the supervision of a primary care provider (family physician, general practitioner, internal medicine physician, nurse practitioner, pediatrician), licensed occupational therapist, physical therapist, speech pathologist, or speech therapist.

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
Combined total of 75 visits per calendar year. Requires pre-certification and/or referral.[5]	Include provisions for children with complex case-management needs (e.g., flex benefits). Consider extending benefit for multiple providers.	All medically necessary care. Medical necessity supported by the Plan Benefit Model definition.	• Recreational or educational therapy.[5] • Exercise programs/ hippotherapy (exercise on horseback).[5]

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
Per visit copayment or per visit coinsurance based on negotiated rate.	2 / 15%	Copayment and coinsurance amounts apply toward maximum.

	Cost ofRecommended Benefits (PMPM)	Cost Impact
Actuarial Impact[6]	$ 0.92 (HMO) $ 1.35 (PPO)	The HMO Benchmark Model is consistent with the Plan Benefit Model (cost **neutral**). The PPO Benchmark Model includes a deductible and 20% member coinsurance. Eliminating the deductible, decreasing the member coinsurance to 15%, and increasing the annual visit limit from 60 visits to 75 visits will **increase** the employer's cost by: • $0.23 PMPM / 0.1% of total plan costs (PPO)

IV. Recommended Minimum Plan Benefits: Therapeutic Services / Ancillary Services		
F. OCCUPATIONAL, PHYSICAL, AND SPEECH THERAPY SERVICES *continued*		
Citations		
1. Aetna Medical Definition	Aetna. *Clinical Policy Bulletin.* Available at: http://www.aetna.com/cpb/medical/data/200_299/0250.html. Accessed on April 3, 2006.	Industry Standard
2. Maternal and Family Health Benefits Advisory Board	Maternal and Family Health Benefits Advisory Board. Washington, DC: National Business Group on Health; August 2007.	Recommended Guidance: Expert Opinion
3. Aetna Medical Definition	Aetna. *Clinical Policy Bulletin.* Available at: http://www.aetna.com/cpb/medical/data/300_399/0325.html. Accessed on April 1, 2007.	Industry Standard
4. Kaiser Family Foundation	The Henry J. Kaiser Foundation. *Medicaid Benefits: Online Database, Benefits by Service, Definition / Notes (October, 2004).* Available at: http://www.kff.org/medicaid/benefits/sv_foot.jsp#14. Accessed on January 11, 2007.	Industry Standard
5. Federal Employees Health Benefits Program	Blue Cross Blue Shield. *Federal Employee Program Service Benefit Plan., 2006 Benefits. Section 5(a): Medical Services and Supplies Provided by Physicians and Other Health Care Professionals.* Available at: http://www.fepblue.org/benefits/benefits06/benftsbpbsection5a-06.html#top. Accessed on September 16, 2006.	Federally Vetted
6. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

IV. Recommended Minimum Plan Benefits: Therapeutic Services / Ancillary Services

G. INFERTILITY SERVICES

Definition of Benefit	Covered Providers
Medical services designed to diagnose and address infertility.	Covered services must be furnished by or under the direction of a primary care provider (family physician, general practitioner, internal medicine physician, nurse practitioner) or qualified physician specialist (e.g., OB-GYN, fertility specialist).

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
Medications are subject to formulary requirements.	N/A	Covered services include[1]: • Medically appropriate laboratory examinations and tests; counseling services and patient education. • Examination and treatment. • Testing for diagnosis and surgical treatment of the underlying cause of infertility. • Fertility drugs (oral and injectable). • Artificial insemination (intravaginal insemination [IVI], intracervical insemination [ICI], intrauterine insemination [IUI]).	Excluded services[1]: • Assisted reproductive technology (ART) procedures, such as: in vitro fertilization, embryo transfer including, but not limited to, gamete GIFT and zygote ZIFT; and ovulation induction. • Services and supplies related to the aforementioned services. • Reversal of voluntary, surgically-induced sterility. • Treatment for infertility when the cause of the infertility was a previous sterilization with or without surgical reversal. • Infertility treatment of any type when the FSH level is 19 mIU/ml or greater on day 3 of a menstrual cycle. • Sperm processing. • Purchasing, freezing, and storing of donor sperm or donor eggs. • All others as defined by the health plan.

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
Per visit/unit copayment. Per visit/unit coinsurance based on negotiated rate. Cost-sharing for artificial insemination determined per cycle.	5 / 25%+	Does not apply.

Actuarial Impact[2]	Cost ofRecommended Benefits (PMPM)	Cost Impact
	$ 5.82 (HMO) $ 5.94 (PPO)	The PPO/HMO Benchmark model is consistent with the Plan Benefit Model (cost **neutral**).

Citations		
1. Federal Employee Health Benefit Plan	U.S. Office of Personnel Management, Federal Employees Health Benefits Program. *Sample plan characteristics (Aetna: Individual practice plan with a consumer driven health plan option and a high deductible health plan option).* Available at: https://www.opm.gov/insure/07/brochures/pdf/73-828.pdf. Accessed on January 17, 2007.	Federally Vetted
2. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

IV. Recommended Minimum Plan Benefits: Therapeutic Services / Ancillary Services

H. HOME HEALTH SERVICES

Definition of Benefit	Covered Providers
Medical services that are provided to a beneficiary at his/her place of residence upon physician order as part of a written plan of care.	Covered providers include registered nurses and credentialed home health aides employed by a home health agency. In addition, plans may choose to have home health agencies provide, when medically necessary and ordered by the beneficiary's physician: nutritional services, physical therapy, and occupational therapy services; and speech pathology/ audiology services. Alternatively, the plan may allow a home health agency to arrange for therapy services to be provided by professionals at a medical rehabilitation facility.[1]

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
No limit. Requires pre-certification and/or referral.	N/A	All medically necessary care. Medical necessity supported by the Plan Benefit Model definition. Coverage also includes[1,2]: • Respite care including respite inpatient stays when there are no available qualified home health professionals within the geographic area. • Hospice and palliative care services. • Early intervention services as prescribed by a physician. • Medical daycare. • Oxygen therapy. • Intravenous therapy. • Medications. • Nutritional services.[3]	The following services are excluded[2]: • Nursing care requested by, or for the convenience of, the beneficiary or the beneficiary's family. • Transportation. • Home care primarily for personal assistance that does not include a medical component and is not diagnostic, therapeutic, or rehabilitative. • Services provided by a family member or resident in the beneficiary's home. • Services rendered at any site other than the beneficiary's home.

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
Per visit copayment. Per visit coinsurance based on negotiated rate.	1 / 10%	Copayment and coinsurance amounts apply toward maximum.

	Cost ofRecommended Benefits (PMPM)	Cost Impact
Actuarial Impact4	$ 1.02 (HMO) $ 0.91 (PPO)	The HMO Benchmark Model is consistent with the Plan Benefit Model (cost **neutral**). The PPO Benchmark Model includes 20% member coinsurance. Reducing the member coinsurance to 10% will result in a negligible increase to the employer's cost (cost **neutral**).

IV. Recommended Minimum Plan Benefits: Therapeutic Services / Ancillary Services		
H. HOME HEALTH SERVICES *continued*		
Citations		
1. Committee on Child Health Financing, American Academy of Pediatrics	Committee on Child Health Financing, Section on Home Care; American Academy of Pediatrics. Financing of pediatric home health care. *Pediatrics.* 2006; 118(2): 834-838.	Recommended Guidance: Expert Opinion
2. Federal Employee Health Benefit Plan	U.S. Office of Personnel Management, Federal Employees Health Benefits Program. *Sample plan characteristics (Aetna: Individual practice plan with a consumer driven health plan option and a high deductible health plan option).* Available at: https://www.opm.gov/insure/07/brochures/pdf/73-828.pdf. Accessed on January 17, 2007.	Federally Vetted
3. American Dietetic Association	American Dietetic Association. Adapted from: Joint Commission on Accreditation of Healthcare Organizations. *2007 Standards for Ambulatory Care.* 2007:361-362.	Recommended Guidance: Professional Guideline
4. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; July 2007.	Actuarial Analysis

IV. Recommended Minimum Plan Benefits: Therapeutic Services / Ancillary Services

I. HOSPICE CARE

Definition of Benefit	Covered Providers
Medical and social services designed to support and care for persons in the last phase of an incurable illness so that they may live as fully and comfortably as possible.[1]	Covered services must be furnished by or under the direction of a licensed and/or accredited hospice.

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
8 months of coverage for beneficiaries with terminal illnesses.[2]	Additional periods are available as prescribed / authorized.	All medically necessary care. Medical necessity supported by the Plan Benefit Model definition. Covered services also include[2]: • Routine home care, continuous home care, inpatient respite care, and general inpatient care. • Prescribed physician visits. • Nursing care. • Services of home health aides. • Medical social services. • Physical therapy. • Medical appliances and supplies including durable medical equipment rental. • Prescription drugs. • Bereavement services.	All others as defined by the health plan.

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
One-time copayment	Recommended copayment for both HMO or PPO plan types: 5	Copayment applies toward maximum.

Actuarial Impact[3]	Cost ofRecommended Benefits (PMPM)	Cost Impact
	$ 0.08 (HMO) $ 0.08 (PPO)	The HMO/PPO Benchmark Model is consistent with the Plan Benefit Model (cost **neutral**).

Citations

1. National Hospice and Palliative Care Organization Definition of Hospice	von Gunten CF, Ferris FD, Portenoy RK, Glajchen M. *CAPC Manual: How to Establish a Palliative Care Program.* New York, NY: Center to Advance Palliative Care, 2001. Available at: http://64.85.16.230/educate/content/elements/nhpcodefinition.html. Accessed January 1, 2007.	Recommended Guidance: Expert Opinion
2. Hospice Foundation of America	Hospice Foundation of America. *Hospice Services and Expenses.* Available at: http://www.hospicefoundation.org/hospiceInfo/services.asp. Accessed on January 1, 2007.	Recommended Guidance: Expert Opinion
3. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

IV. Recommended Minimum Plan Benefits: Therapeutic Services / Ancillary Services	
J. DURABLE MEDICAL EQUIPMENT (DME), SUPPLIES, & MEDICAL FOODS	
Definition of Benefit	**Covered Providers**
Durable medical equipment (DME) and supplies are necessary medical products suitable for use in the home. DME must be[1]: 1. Prescribed by an attending physician; 2. Considered medically necessary; 3. Primarily and customarily used only for a medical purpose; 4. Designed for prolonged use; and 5. Intended for a specific therapeutic purpose. **Medical foods** are foods used to prevent, treat, or manage a medical condition that requires the addition or restriction of a specific dietary component to address: • A physical, physiologic, or pathologic condition resulting in inadequate nutrition.[2] • An inherited metabolic disorder (does not include common hypercholesterolemia).[2] • A condition resulting in impairment of oral intake that affects normal development and growth.[2] • A condition, such as prematurity, illness, allergy, or separation that does not allow an infant to be breastfed or fed with its own mother's breast milk.[3]	N/A

(continues on page 72)

IV. Recommended Minimum Plan Benefits: Therapeutic Services / Ancillary Services

J. DURABLE MEDICAL EQUIPMENT (DME), SUPPLIES, & MEDICAL FOODS *continued*

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
A. Covers the rental or purchase (at the plan's option) and the repair and adjustment of durable medical equipment. B. Covers food and formula for special dietary use of accepted medical benefit to cover nutritional support costs over and above usual foods. C. Covers banked human milk, including processing and shipping fees.	Include provisions for children with complex case-management needs (e.g., flex benefits).	All medically necessary equipment. Medical necessity supported by the Plan Benefit Model definition. Covered items include[1]: 1. Home dialysis equipment. 2. Oxygen equipment. 3. Hospital beds. 4. Wheelchairs, braces, crutches, and walkers. 5. Continuous passive motion (CPM) and dynamic orthotic cranioplasty (DOC) devices. 6. High-quality breast pumps for assistance with breastfeeding. Limit one per lifetime.[4] Covered devices include[5]: 1. Hearing aids, ALDs, and cochlear implants with accessories. Limit: $2,000 for a hearing aid or ALD allowance per ear every 2 years; replacement earmolds covered in full up to four times per year for children 7 years of age or under; $2,000 cochlear implant speech processor allowance every 5 years; an ALD for use specifically with a cochlear implant covered in full once every 5 years. Covered medical foods include: 1. Foods for supplying particular dietary needs that exist by reason of a physical, physiologic, pathologic, or other condition.[2] 2. Foods for supplying particular dietary needs which exist by reason of age.[2] 3. Foods for supplementing or fortifying the ordinary or usual diet with medically necessary vitamins, minerals, or other dietary properties.[2] 4. Coverage for all medical equipment and medical supplies necessary for the delivery of foods for special dietary use, including, but not limited to, administration tubing, bags, and pumps.[2] 5. Banked donor human milk and requisite supplies: $2,500 limit per infant.[3]	Excluded items[1]: 1. Exercise equipment. 2. Lifts (e.g., seat, chair, or van lifts). 3. Car seats. 4. Air conditioners, humidifiers, dehumidifiers and purifiers. 5. Equipment for cosmetic purposes. 6. Topical Hyperbaric Oxygen Therapy (THBO). 7. Computer equipment, devices, and aids (including computer equipment) such as story boards or other communication aids. 8. All others as defined by the plan.

IV. Recommended Minimum Plan Benefits: Therapeutic Services / Ancillary Services		
J. DURABLE MEDICAL EQUIPMENT (DME), SUPPLIES, & MEDICAL FOODS *continued*		
Recommended Cost-Sharing	**Copayment / Coinsurance Level (0-5 / 0-25%)**	**Out-of-Pocket Maximum**
Per unit coinsurance. Annual limit: $25,000 per person. *Please refer to "Inclusions" list for line-item amounts.*	Recommended coinsurance for both HMO or PPO plan types: 10%	Coinsurance applies toward maximum.
Actuarial Impact[6]	**Cost ofRecommended Benefits (PMPM)**	**Cost Impact**
	DME: $ 2.49 (HMO) $ 2.27 (PPO) **Medical foods:** $ 0.09 (HMO) $ 0.11 (PPO)	**DME:** The HMO/PPO Benchmark Model excludes coverage for hearing aids. Adding coverage for hearing aids will **increase** the employer's plan cost by: • $0.56 PMPM / 0.02% of total plan costs (HMO) • $0.55 PMPM / 0.02% of total plan costs (HMO) **Medical foods:** The HMO/PPO Benchmark Model excludes coverage for medical foods. Adding coverage for medical foods will result in a negligible increase to the employer's plan cost (cost **neutral**).

Citations		
1. Federal Employees Health Benefits Program	Blue Cross Blue Shield. *Federal Employee Program Service Benefit Plan, 2006 Benefits. Section 5(a): Medical Services and Supplies Provided by Physicians and Other Health Care Professionals.* Available at: http://www.fepblue.org/benefits/benefits06/benftsbpbsection5a-06.html#top. Accessed on September 12, 2006.	Federally Vetted
2. American Academy of Pediatrics	Committee on Nutrition; American Academy of Pediatrics. Reimbursement for foods for special dietary use. Policy Statement. *Pediatrics.* 2003; 111(5); 1117-1119.	Recommended Guidance: Expert Opinion
3. United States Breastfeeding Committee	Association of Women's Health, Obstetric and Neonatal Nurses. *United States Breastfeeding Committee Recommendations.* Available at: http://www.usbreastfeeding.org/breastfeeding/index.htm. Accessed on February 1, 2007.	Recommended Guidance: Expert Opinion
4. American Academy of Pediatrics	Section on Breastfeeding. Breastfeeding and the use of human milk. *Pediatrics.* 2005;115(2):496-506.	Recommended Guidance: Expert Opinion
5. American Speech-Language-Hearing Association	American Speech-Language-Hearing Association. *Model Health Care Benefits, Ideal Health Plan Coverages for Audiology and Speech-Language Pathology Services.* Available at: http://www.asha.org/public/add-benefits/model-benefits.htm#speech and http://www.asha.org/public/add-benefits/providers.htm. Accessed on July 12, 2007.	Recommended Guidance
6. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

IV. Recommended Minimum Plan Benefits: Therapeutic Services / Ancillary Services

K. TRANSPORTATION SERVICES

Definition of Benefit	Covered Providers
Transportation by ground ambulance or emergency medical service to the nearest hospital for emergency treatment.	N/A

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
Local professional ambulance transport services to or from the nearest hospital equipped to adequately treat the condition. May require prior approval for lengthy trips.[1]	N/A	Transportation for ground, air, or watercraft when medically appropriate, and when 1) associated with covered hospital inpatient care, 2) related to a medical emergency, or 3) associated with covered hospice care.[1]	• Ambulance transportation to receive non-emergent outpatient or inpatient services. • "Ambulette" / "cabulance" service. • Air ambulance without prior approval.

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
Per unit copayment. Per unit coinsurance based on negotiated rate.	2 / 15% (emergency); 5 / 25%+ (non-emergency)	Copayment and coinsurance amounts apply toward maximum.

Actuarial Impact[2]	Cost ofRecommended Benefits (PMPM)	Cost Impact
	$ 0.61 (HMO) $ 0.45 (PPO)	The HMO/PPO Benchmark Model is consistent with the Plan Benefit Model (cost **neutral**).

Citations		
1. Kaiser Family Foundation	The Henry J. Kaiser Foundation. *Medicaid Benefits: Online Database, Benefits by Service, Definition / Notes (October, 2004).* Available at: http://www.kff.org/medicaid/benefits/sv_foot.jsp#14. Accessed on January 1, 2007.	Industry Standard
2. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

V. Recommended Minimum Plan Benefits: Laboratory, Diagnostic, Assessment, and Testing Services

A. LABORATORY SERVICES

Definition of Benefit	Covered Providers
Medical services that confirm or deny the existence or severity of a particular disease or condition.[1]	Services may be performed by qualified providers in several settings (e.g., inpatient hospital, outpatient hospital, clinic, provider's office). Covered laboratory services may be performed and billed by independent clinical laboratories.

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
No limits	Include provisions for children with complex case-management needs (e.g., flex benefits).	All medically necessary laboratory tests provided or ordered and billed by a qualified provider, including, but not limited to[1]: • Blood tests • Urinalysis • Non-routine Pap tests • Pathology • X-rays	All others as defined by the health plan.

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
Per unit copayment. Per unit coinsurance.	Range: 1-4 / 10%-25% (depending on base cost)	Copayment and coinsurance amounts apply toward maximum.

Actuarial Impact[2]	Cost ofRecommended Benefits (PMPM)	Cost Impact
	$ 6.50 (HMO) $ 6.78 (PPO)	The HMO/PPO Benchmark Model is consistent with the Plan Benefit Model (cost **neutral**).

Citations		
1. Federal Employees Health Benefits Program	Blue Cross Blue Shield. *Federal Employee Program Service Benefit Plan, 2006 Benefits. Section 5(a): Medical Services and Supplies Provided by Physicians and Other Health Care Professionals.* Available at: http://www.fepblue.org/benefits/benefits06/benftsbpbsection5a-06.html#top. Accessed on September 1, 2006.	Federally Vetted
2. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

V. Recommended Minimum Plan Benefits: Laboratory, Diagnostic, Assessment, and Testing Services

B. DIAGNOSTIC, ASSESSMENT, AND TESTING (MEDICAL AND PSYCHOLOGICAL) SERVICES

Definition of Benefit	Covered Providers
Diagnostic, assessment, and testing services designed to confirm or deny the existence or severity of a particular disease or condition.	Services must be furnished by or under the direction of a physician or mental health professional (clinical psychologist, licensed clinical social worker, psychiatric nurse practitioner, psychiatrist). Psychological and neuropsychological tests can be performed by technicians and computers in addition to tests performed by physicians, clinical psychologists, independently practicing psychologists, and other qualified non-physician practitioners.[1]

Recommended Benefit Coverage Limits	Recommended Exceptions	Inclusions	Exclusions
No limits. Some services may require pre-authorization.	Include provisions for children with complex case-management needs (e.g., flex benefits).	All medically necessary diagnostic and assessment tests provided or ordered and billed by an approved provider, including, but not limited to[A]: • Allergy testing. • Basic or comprehensive metabolic panel test. • CAT Scans/MRI. • Ultrasounds. • Neuropsychological examinations, assessments, and related tests. [2,3,B]	All others as defined by the health plan.

Recommended Cost-Sharing	Copayment / Coinsurance Level (0-5 / 0-25%)	Out-of-Pocket Maximum
Per unit copayment. Per unit coinsurance.	Range: 1-4 / 10%-25% (depending on base cost)	Copayment and coinsurance amounts apply toward maximum.

Actuarial Impact[4]	Cost ofRecommended Benefits (PMPM)	Cost Impact
	$ 8.23 (HMO) $ 8.04 (PPO)	The HMO/PPO Benchmark Model is consistent with the Plan Benefit Model (cost **neutral**).

Citations		
1. Center for Medicare and Medicaid Services	CMS Manual System. *Pub 100-02 Medicare Benefit Policy. Effective Date 9/29/06.* Available at: http://www.cms.hhs.gov/Transmittals/downloads/R55BP.pdf. Accessed on September 1, 2006.	Federally Vetted
2. American Psychological Association	American Psychological Association. New Medicare Billing Rules for Testing Services. Available at: http://www.apapractice.org/apo/in_the_news/new_medicare_billing.html#. Accessed on January 6, 2007; American Psychological Association. *Division 40: Clinical Neuropsychology.* Available at: http://www.div40.org/. Accessed on January 4, 2007.	Recommended Guidance: Professional Guideline, Expert Opinion
3. National Academy of Neuropsychology	National Academy of Neuropsychology. *About NAN.* Available at: http://nanonline.org/about.shtm. Accessed on January 15, 2007.	Recommended Guidance: Expert Opinion
4. PricewaterhouseCoopers	PricewaterhouseCoopers LLP. *Actuarial Analysis of the National Business Group on Health's Maternal and Child Health Plan Benefit Model.* Atlanta, GA: PricewaterhouseCoopers LLP; August 2007.	Actuarial Analysis

[A] A comprehensive recommendation regarding genetic testing is beyond the scope of this document. Employers should consult with their plan administrator(s) about the evidence of benefit for genetic testing. Employers are encouraged to provide coverage for genetic testing when it meets medical necessity criteria for the beneficiary or his/her family, and when the results of the test will inform a major medical decision (e.g., selecting one type of treatment over another, terminating a pregnancy).

[B] Neuropsychological evaluations are important when determining or outlining subtle and severe neurocognitive deficits among patients with cerebrovascular conditions, traumatic brain injury, epilepsy, multiple sclerosis, and HIV; as well as hydrocephalus, neurotoxic exposure, brain tumors; and other common medical conditions such as thyroid and collagen-vascular disorders, among others. Neuropsychological evaluations also provide critical adjunctive information for the diagnosis of conditions such as dementia.

2 Maternal and Child Health Plan Benefit Model: Evidence-Informed Coverage

The Benefits of Prevention and Early Detection: A Cost-Offset Addendum to the Actuarial Analysis of The Maternal and Child Health Plan Benefit Model

This document is an addendum to the actuarial analysis tables located on page 18-31. It provides an annotated bibliography of studies that support the cost-offset value of prevention.

Introduction

The Maternal and Child Health Plan Benefit Model (Plan Benefit Model) emphasizes prevention. Some clinical preventive services prevent disease or injury (e.g., cervical cancer screening); others catch disease in early stages when treatment is most effective and least expensive (e.g., STI screening). Because clinical preventive services can prevent or reduce the need for treatment, they provide a **cost-offset**. Employers who invest their healthcare dollars in screening, counseling, and preventive medications may be able to avoid spending healthcare dollars on treatment services. In some cases, when the cost of screening is *less* than the cost of treatment, employers may be able to save healthcare dollars by investing in prevention.

This annotated bibliography provides an overview of key studies that support the cost-offset value of prevention. Employers are encouraged to analyze their own claims data, and review other sources, in order to identify additional cost-offset opportunities.

Key Definitions

A health intervention is termed **cost-saving** when the reduction in costs resulting from the intervention exceeds the cost required to develop and deliver the intervention.

A health intervention is considered **cost-effective** when the net cost per unit of health generated (e.g., fewer sick days, fewer cases of measles) is favorable relative to other health services. Cost-effective interventions do not reduce net healthcare costs, but they provide a good value per dollar.

I. Preventive Services

a. Well-Child Services

Impact: *Cost-effective*

Cost-effectiveness analyses of well-child care are limited; however, some studies have predicted cost-offsets or cost-savings associated with comprehensive and timely preventive care for children and adolescents.

- A study conducted by the American Academy of Pediatrics (AAP) found that it would have cost $4.3 billion to provide comprehensive clinical preventive services to all 10- to 24-year-olds in 1998. If the delivery of comprehensive clinical preventive services (as defined by the AAP) prevented 1% of the $700 billion in costs associated with preventable adolescent injuries, a hypothetical net savings of $2.7 billion would result.
  Reference: Hedberg VA, Bracken AC, Stashwick CA. Long-term consequences of adolescent health behaviors: implications for adolescent health services. *Adolesc Med.* 1999;10(1):137-151.
- Several studies have demonstrated cost-savings associated with preventive care for publicly-insured children. For example, Medicaid-enrolled children who are up-to-date on their well-child check-ups through 2 years of age are 48% less likely to experience an avoidable hospitalization.
  Reference: Hakim RB, Bye BV. Effectiveness of compliance with pediatric preventive care guidelines among Medicaid beneficiaries. *Pediatrics*. 2001:108; 90-97.
- Children with incomplete well-child care in the first 6 months of life are significantly more likely than children with complete care to visit an emergency department for an upper respiratory tract infection, gastroenteritis, or asthma. In fact, children with incomplete care are 60% more likely to visit an emergency department for any cause compared to children who are up-to-date on their well-child care. ***Reference:*** Hakim RB, Ronsaville DS. Effect of compliance with health supervision guidelines among U.S. infants on emergency department visits. *Arch Pediatr Adolesc Med.* 2002;156:1015-1020.
- When well-care visits for children aged 0 to 4 years include parental injury prevention counseling using the AAP's TIPP sheets, the cost is $2,800 per quality-adjusted life year saved (in year 2002 dollars). This counseling is cost-effective when judged using commonly accepted cost-effectiveness benchmarks.
  Reference: Miller TR, Galbraith MS. Injury prevention counseling by pediatricians: A benefit-cost comparison. *Pediatrics*. 1995;96:1-4.

b. Immunizations

7-Vaccine Routine Childhood Immunization Schedule

Impact: *Cost-saving*

Background: Numerous studies have documented that the cost of providing immunizations to children and adolescents is less expensive than treating vaccine-preventable diseases.
Summary: The cost of providing the 7-vaccine series to children was estimated at $2.3 billion (direct) and $2.8 billion (societal). In the absence of vaccination, the cost of disease among children would amount to $12.3 billion in direct costs and $46.6 billion in societal costs (societal costs

include lost productivity due to premature mortality and permanent disability, and lost opportunity costs associated with caretakers taking time off work to care for ill children). Therefore, the 7-vaccine series demonstrated a net direct cost-savings of $9.9 billion and a net societal cost-savings of $43.3 billion.
Methods: A decision tree was constructed using a hypothetical cohort of infants born in one year in the United States (n= 3.8 million). Population-based estimates of vaccination coverage, published vaccine efficacies, historical data on disease incidence prior to vaccination, and disease incidences for 1995-2001 were used to determine direct and societal costs.
Reference: Zhou F, Santoli J, Messonnier ML, et al. Economic evaluation of the 7-vaccine routine childhood immunization schedule in the United States, 2001. *Arch Pediatr Adolesc Med.* 2005;159(12):1136-1144.

Rotavirus Vaccination (*New immunization not captured in the 7-vaccine series*)
Impact: *Cost-effective*

Background: Rotavirus is a common illness among children in the United States. The illness can lead to severe dehydration, physician visits, hospitalization, emergency department visits, and death.
Summary: Though not likely to be cost-saving, the rotavirus vaccine is considered cost-effective from both direct-cost and societal-cost perspectives. A national rotavirus immunization program was estimated to prevent 13 deaths, 44,000 hospitalizations, 137,000 emergency department visits, 256,000 office visits, and 1.1 million episodes requiring a parent to stay at home with a child under 5 years of age. This study concluded that the rotavirus vaccination would generate a cost-effectiveness ratio of $336 per case prevented from the health care perspective, and $138 per case prevented from the societal perspective. Nevertheless, a second study concluded that a universal rotavirus vaccine program in the US would cost $77.30 per case averted from the health care and give a net saving of $80.75 per case averted from the societal perspectives, respectively. The cost per quality-adjusted life-year (QALY) was found to be $104,610 when we considering a child with one caregiver.
Methods: A cost-effectiveness analysis was performed using the Monte Carlo method, taking into account both societal and direct-cost perspectives. Using cumulative probability distributions, the investigators (a) estimated the total annual number of rotavirus cases for a cohort of 4 million children between 0 and 59 months of age, and (b) calculated the number of cases that would require healthcare and the associated costs. They then compared these figures to the cost of a vaccination program. However, this study used intermediate outcomes (i.e. cases and hospitalizations) rather than quality-adjusted life-years (QALYs) gained. The 2009 study incorporated herd immunity into the cost-effectiveness analysis and indicated that a rotavirus vaccination program would prevent about 90% of rotavirus incidence, mortality, hospitalization and emergency department visits annually.
References: Shim E, Galvani AP. Impact of transmission dynamics on the cost-effectiveness of rotavirus vaccination. *Vaccine*. 2009;27:4025-4030.
Widdowson MA, Meltzer MI, Zhang X, Bresee JS, Parashar UD, Glass RI. Cost-effectiveness and potential impact of rotavirus vaccination in the United States. *Pediatrics*. 2007;119(4):684-697.

Adolescent Vaccines

Impact: *Some cost-effective, some cost-saving in limited populations*

Summary: Adolescent vaccines are less cost-effective than childhood vaccines and none are cost-saving at the population level. However, adolescent vaccines do provide sizable health benefits. From the societal perpective, the hepatitis A and B; and pertussis, tetanus, and diphtheria combination (Tdap) vaccines are cost-saving for limited populations (college freshmen and 10 to 19-year-olds, respectively). From the payer perspective, adolescent vaccines cost $9,000 to $219,000 per life-year saved. Among recently recommended immunizations, the most cost-effective are the pertussis and human papillomavirus (HPV) vaccines. The least cost-effective immunization is the meningococcal vaccine.

Methods: A systematic review of the economic literature on adolescent vaccines was conducted and results were synthesized.

Reference: Ortega-Sanchez IR, Lee GM, Jacobs R, Prosser LA, Molinari NA, Zhang X, et al. Projected cost-effectiveness of new vaccines for adolescents in the United States. *Pediatrics*. 2007;121 suppl:S63-S78.

c. Preventive Dental Services

Preventive Dental Visits

Impact: *Cost-saving*

Background: Early dental visits appear to establish a pattern of preventive dental maintenance among children. Early dental visits reduce future dental risk by improving oral health. As oral health improves, oral health costs decrease.

Summary: Early dental visits are cost-effective in reducing the need for restorative care, even though early visits appear to increase the utilization of preventive care services (and preventive costs) later in childhood. In fact, there is a correlation between the age of a child's first dental visit and their total (preventive and restorative) dental costs.

Methods: A cohort of preschool-aged Medicaid-enrolled children were classified in two groups: those who had received a preventive dental visit before age one and those who had not. Health records were analyzed for increased rates of preventive visits, restorative care, and emergency visits. Utilization was used as a proxy for direct costs.

Reference: Lee JY, Bouwens T, Savage MF, Vann WF Jr. Examining the cost-effectiveness of early dental visits. *Pediatr Dent.* 2006;28:102-105.

Age at First Dental Visit	Total Dental Costs
Before age 1	$262
1- 2 years	$399
2- 3 years	$449
3- 4 years	$492
4-5 years	$546

Pediatric Dental Sealants

Impact: *Cost-effective in high-risk populations*

Background: Dental sealants are used to prevent dental caries in children. Dental caries (cavities) are caused by the acid byproducts of oral bacteria. They cause pain, and require restorative treatment to prevent further decay and infection.

Summary: From the third-party payer, direct-cost perspective, dental sealants used on children aged 5 to 7 years are cost-effective because they reduce the need for restorative care. Approximately 11% of children who had sealant treatment required subsequent restorative care, while 33% of children without sealants required restorative care. The cost of restorative care among patients with sealants was $55.50, while the cost of restorative care among patients without sealants averaged $71.90. These findings are limited to high-risk populations. When applied to a broader population, dental sealants would likely have a more moderate cost-effectiveness ratio due to the reduced incidence of dental caries. When examining both high and low risk populations, a second study concluded risk-based sealants cost an estimated $53.80 and sealing all populations was $54.60, compared to $68.10 for the non-sealed populations. The analysis indicated sealing no teeth was more costly and less effective than the other two strategies. Sealing all was found to be the most effective strategy as it cost $13.50 per tooth and an additional $.08 per tooth for each cavity-free month gained.

Methods: The first study used the direct-cost perspective and used actual Medicaid reimbursements for 9,549 children enrolled in the Alabama Medicaid program. The second study was based off of a Markov model used to construct events representing the natural history of sealant retention, cavity formation, and their associated health states. The outcome measures were the incremental cost per month gained in a cavity-free state over a ten-year period.

References: Dasanayake AP, Li Y, Kirk K, Bronstein J, Childers NK. Restorative cost-savings related to dental sealants in Alabama Medicaid children. *Pediatr Dent.* 2003 Nov-Dec;25(6):572-6.
Quinonez RB, Downs SM, Shugars D, Christensen J, Vann WF. Assessing cost-effectiveness of sealant placement in children. *Journal of Public Health Dentistry.* 2005;65(2):82-89.

Fluoride Varnish

Impact: *Cost-effective in high-risk populations*

Background: Fluoride varnish protects teeth from enamel erosion. Fluoride varnish has been shown to reduce dental caries by as much as 38% in children.

Summary: The application of fluoride varnish was found to be cost-effective in reducing early childhood caries in low-income populations. Fluoride varnish cost $7.18 for each cavity-free month gained per child and $203 per treatment averted.

Methods: The study used a decision tree analysis and a Markov model to calculate the effects of dental disease and treatment costs after fluoride varnish. The population sample was limited to Medicaid-enrolled children, and the analysis took the Medicaid payer's perspective. Since children enrolled in Medicaid are generally low-income and at higher risk for dental disease, the findings are limited to similar low-income, high-dental-risk populations. It is unclear if fluoride varnish would be cost-effective in the general population.

Reference: Quinonez RB, Stearns SC, Talekar BS, Rozier RG, Downs SM. Simulating cost-effectiveness of fluoride varnish during well-child visits for Medicaid-enrolled children. *Arch Pediatr Adolesc Med.* 2006;160(2):164-170.

d. Early Intervention Services for Mental Health / Substance Abuse

Impact: *Probably Cost-saving*

Background: Data to support the cost-effectiveness of early intervention services for non-Medicaid adolescent populations are limited. However, experience with adults suggests that early intervention services provide a cost-offset by addressing mental health conditions early, before they escalate into mental illness or substance abuse disorders that require long-term or intensive care.
References: Holder HD, Cunningham DW. Alcoholism treatment for employees and family members: its effect on health care costs. *Alcohol Health and Res World.* 1992;16:149-153.
American Psychological Association. *Defining medical cost offset: Policy implications.* Available at: http://www.apa.org/practice/offset3.html. Accessed on September 7, 2007.

e. Preventive Vision Services

Vision Screening

Impact: *Cost-effective*

Background: Eye disorders are the most common reason that children become handicapped in the United States. Some eye disorders, including cataracts, strabismus, refractive error, astigmatism, and ocular disease, cause severe and permanent vision damage or blindness. Other problems can be corrected with glasses, patching, eye drops, or optical blurring.
Summary: This article evaluated the costs and benefits of vision screening methods for preschoolers and school-aged children. All of the benefit-to-cost ratios exceeded 1.0, meaning that all of the studied screening programs had long-term benefits (e.g., reduced disability) that exceeded the cost of screening.
Methods: A decision analytic model was used to compare visual acuity screening and photoscreening in children at three different age intervals. Published estimates from the literature, managed care databases, and U.S. Government sources were used to provide epidemiological data and cost data.
Reference: Joish V, Malone D, Miller J. A cost-benefit analysis of vision screening methods for preschoolers and school-age children. *J AAPOS.* 2003;7(4):283-90.

f. Preventive Audiology Screening Services

Newborn Hearing Screening Example

Impact: *Cost-effective*

Background: Congenital hearing loss affects between 1 and 3 out of every 1,000 children. Hearing loss carries a lifetime of medical and social costs, including special education, adaptive equipment, social and community services, and lost wages due to underdevelopment of language and reading ability. Early detection and subsequent intervention can improve language acquisition and later school and work performance for children with hearing loss. Universal screening can detect 86 out of 110 cases of hearing loss per 100,000 children screened.
Summary: Newborn hearing screening strategies were examined for cost-effectiveness. Universal

newborn hearing screening was found to cost approximately $44,000 per quality-adjusted life year saved when deafness was diagnosed within 6 months of age. This figure is cost-effective in comparison to commonly accepted cost-effectiveness benchmarks. A second study found that the expected cost of universal newborn hearing screening was -$1750, indicating that the long-term value of performing the test exceeds the immediate costs when the probability of each test outcome is considered. This result is the expected cost each time the screening test is administered, so this cost should be multiplied by the total number of tests to be administered to find the total expected costs for all tests.
Methods: Using the societal perspective, investigators performed a cost-effectiveness analysis on a hypothetical birth cohort of 80,000 infants. Projected outcomes of (a) no screening, (b) selective screening, and (c) universal screening were compared. The second study utilized test performance ratios in relation to cost effectiveness to calculate the expected cost for universal newborn hearing and screening.
References: Keren R, Helfand M, Homer C, McPhillips H, Lieu TA. Projected cost-effectiveness of statewide universal newborn hearing screening. *Pediatrics*. 2002;110(5):855-864.
Gorga MP, Neely ST. Cost-effectiveness and test-performance factors in relation to universal newborn hearing screening. *Mental Retardation and Developmental Disabilities Research Reviews.* 2003;9:103-108.

g. Unintended Pregnancy Prevention Services

Impact: *Cost-saving*

Adolescents
Background: Each year in the United States, one out of every eight women aged 15 to 19 years becomes pregnant. Eighty-five percent (85%) of these pregnancies are unintended, meaning that they are either unwanted or mistimed. The social and economic consequences of teenage pregnancy are substantial. Each year unintended pregnancies among adolescents cost more than $1.3 billion in direct healthcare expenditures. Induced and spontaneous abortions that result from adolescent pregnancy cost more than $180 million. Effective contraceptives prevent unintended pregnancy; many also have the added benefit of protecting adolescents from sexually transmitted infections (STIs).
Summary: Under the most conservative assumptions, the average annual cost of not using contraception was estimated at $1,267 per adolescent at risk of unintended pregnancy. In private medical practice, savings range from a low of $1,794 for the use of spermicides at 1 year of use to a high of $12,318 for levonorgestrel implants at 5 years; in the public sector, savings range from a low of $779 for spermicides at 1 year of use to a high of $5,420 for levonoregestrel implants at 5 years.
Methods: A cost analysis was performed comparing (a) the cost of using 11 different methods of contraception (required physician visits or supplies), the cost of treating negative side effects (as well as the cost avoided due to beneficial side effects such as cancer prevention), and the cost of unintended pregnancies (births, spontaneous abortions, induced abortions, and ectopic pregnancies) that occurred during contraceptive use, to (b) the cost of not using any method of contraception. Costs were analyzed from both the private-payer perspective and the public-sector perspective. Private-sector costs were derived from the 1993 Medstat MarketScan database, which contains payment information from large-employer programs, Blue Cross/Blue Shield plans, and other third-party payer plans.
Reference: Trussell J, Koeing J, Stewart F, Darroch JE. Medical care cost-savings from adolescent contraceptive use. *Family Plan Persp.* 1997:29:248-203 & 295.

Davtyan C. Contraception for adolescents: evidence-based case review. *The Western Journal of Medicine.* 2000;172:166-171.

All Women
Summary: All contraceptive methods evaluated in this study produced a significant cost-savings in as little as one year from the societal perspective. Savings were derived from both financial savings and health gains. Compared to no contraception, oral contraceptives result in cost-savings of $8,827, the vaginal ring results in cost-savings of $8,996, and the monthly injectable results in cost-savings of $8,770.
Methods: A cost-utility analysis was completed using a Markov model and the societal perspective. Costs were calculated based on women of average health and fertility ranging from 15 to 50 years of age, who were sexually active and in a mutually monogamous relationship. Costs included professional fees, supplies, medications, fitting/insertion, and/or surgical and facility costs, depending on the method.
Reference: Sonnenberg FA, Burkman RT, Hagerty CG, Speroff L, Speroff T. Costs and net health effects of contraceptive methods. *Contraception*. 2004;69(6):447-459.

h. Preventive Preconception Care
Impact: *Cost-saving*

Background: Women with poorly controlled chronic disease prior to conception (or during the early stages of pregnancy) are at higher risk for complications during pregnancy. For example, poorly controlled diabetes is associated with a higher risk of birth defects, fetal death, and macrosomia for the infant; poorly controlled diabetes also increases a pregnant woman's risk for organ damage. Preconception care includes (a) preventive services and screening offered to women who expect to become pregnant in the near future, (b) preconception care for women who have given birth and intend to bear another child at some point in the future, and (c) counseling about the impact of preexisting health conditions on pregnancy outcomes.
Summary: From the direct-cost perspective, preconception care was found to be cost-saving.

- In a prospective analysis of a hypothetical comprehensive preconception care program, maternal and infant hospitalization costs were reduced by $1,720 per enrollee (woman). The investigators calculated that every $1 spent on preconception care would save $1.60 in maternal and fetal care costs.
- In a matched retrospective analysis of a cohort from California, investigators observed reduced maternal and infant hospitalization costs of $5.19 for every $1 spent on preconception care.
- In a third study, women enrolled in a preconception care program (the intervention group) received two outpatient visits prior to pregnancy and then regular prenatal care. Pregnant women in the intervention group experienced fewer congenital malformations (4.2% versus 13.5%) compared to women in the prenatal care-only group. The infants of women in the preconception care program were also 50% less likely to require neonatal intensive care unit (NICU) hospitalization.

Methods: A meta-analysis of three prior studies on preconception care.
Reference: Grosse SD, Sotnikkov SV, Leatherman S, Curtis M. The business case for preconception care: methods and issues. *Matern Child Health J.* 2006;10(5 Suppl):S93-9.

i. Preventive Prenatal Care

Impact: *Cost-saving in high-risk populations*

- For high-risk populations, intensive prenatal care offers significant cost-savings over conventional care. Savings mainly result from reduced hospital and NICU admission rates among neonates. Depending on the population, cost-savings range from $1,768 to $5,560 per infant/mother pair.
  References: Reece EA, Lequizamon G, Silva J, Whiteman V, Smith D. Intensive interventional maternity care reduced infant morbidity and hospital costs. *J Matern Fetal Neonatal Med.* 2002;Mar11(3):204-210; Ross MG, Sandhu M, Bernis R, Nessim S, Bradonier JR, Hobel C. The West Los Angeles preterm birth prevention project II. Cost-effectiveness analysis of high-risk pregnancy interventions. *Obstet Gynecol.* 1994;83(4): 506-511.
- One study that evaluated the effects of augmented prenatal care on women at high risk for a low birthweight (LBW) birth who were enrolled in a managed care organization, found a positive return on investment (ROI). The program included basic prenatal care, prenatal education, and case management. The program saved $13,961.42 per single LBW birth prevented and $18.981.08 per multiple (e.g., twins) LBW birth prevented. After program costs were considered, the return on investment equaled 37%; for every dollar invested in the program, $1.37 was saved.
  Reference: Sackett K, Pope RK, Erdley WS. Demonstrating a positive return on investment for a prenatal program at a managed care organization: an economic analysis. *J Perinat Neonat Nur.* 2004;18(2):117-127.
- Many of the individual interventions that comprise prenatal care are either cost-saving or cost-effective. However, there is considerable disagreement in the field with regards to the cost-effectiveness of comprehensive prenatal care among low- or medium-risk women in the general population. New research has pointed out methodological flaws in many older studies that indicated prenatal care was cost-effective population wide. For more information, please refer to:
  - Goulet C, Gevry H, Lemay M, et al. A randomized clinical trial of care for women with preterm labour: home management versus hospital management. *Canadian Medical Association Journal*. 2001;164(7):985-991.
  - McCormick MC. Prenatal care—necessary but not sufficient. *Health Services Research*. 2001;36(2):399-403.
  - Fiscella K. Does prenatal care improve birth outcomes? A critical review. *Obstet and Gynecol*. 1995;85(3):468-79.
  - Hueston WJ, Quattlebaum RG, Benich JJ. How much money can early prenatal care for teen pregnancies save?: a cost-benefit analysis. *Journal of the American Board of Family Medicine*. 2008;21(3):184-189.
  - Lu MC, Toche V, Alexander GR, Kotelchuck M, Halfon N. Preventing low birthweight: is prenatal care the answer. *J Matern Fetal Neonatal Med*. 2003;13: 362-380.
  - Alexander GR, Korenbrot G. The role of prenatal care in preventing low birth weight. *The Future of Children*. 1995;5:103-20.
  - Alexander GR, Kotelchuck M. Assessing the role and effectiveness of prenatal care: history, challenges, and directions for future research. *Public Health Rep*. 2001;116:306-316.

j. Preventive Postpartum Care

Breastfeeding Promotion /Lactation Consultation Examples
Impact: *Cost-saving*

Background: Breastfeeding improves the short- and long-term health of women and their infants, and breastfed infants have lower total healthcare costs than infants who are not breastfed. Breastfeeding decreases the incidence or severity of diarrhea, lower respiratory infections, otitis media, bacterial meningitis, botulism, UTIs, and necrotizing enterocolitis. It may also protect against sudden infant death syndrome (SIDS), insulin-dependent diabetes, and allergic diseases. Benefits to mothers include reductions of hip fractures during menopause, less postpartum bleeding, and reduced risk of ovarian and pre-menopausal breast cancers. Health plans and private payers can realize savings from supporting the promotion of exclusive breastfeeding.
Summary: Compared to breastfed infants, formula-fed infants cost the healthcare system more money in their first-year of life due to their increased rate of illness and hospitalization. For example, in the first year of life, never-breastfed infants (compared to breastfed infants) experience 2,033 excess office visits, 212 excess days of hospitalization, and 609 excess prescriptions per 1,000 infants. This additional health care cost the managed care system studied between $331 and $475 per never-breastfed infant. A second study found that hospital, doctor, or clinic visits for four or more upper respiratory tract infections were significantly greater if predominant breastfeeding was stopped before 2 months or partial breastfeeding was stopped before 6 months. Predominant breastfeeding for less than six months was associated with an increased risk for two or more hospital, doctor, or clinic visits and hospital admission for wheezing lower respiratory illness. Breastfeeding for less than 8 months was associated with a significantly increased risk for two or more hospital, doctor, or clinic visits or hospital admissions because of wheezing lower respiratory illnesses. A third study found infants who were exclusively breastfed for six months experienced less morbidity from gastrointestinal infection than those who were mixed breastfed for three or four months, and no deficits were demonstrated in growth among infants from either developing or developed countries who were exclusively breastfed for six months or longer.
Methods: Epidemiological information was collected on the most common childhood illnesses, along with cost data for the treatment of these illnesses. Data was analyzed to ascertain the excess medical costs associated with formula-feeding. The second study was conducted via a literature review. The third study was a prospective birth cohort of 2,602 liveborn children in Perth, Western Australia.
References: Ball TM, Wright AL. Health care costs of formula-feeding in the first year of life. *Pediatrics*. 1999;103(4):870-876.
Kramer MS, Kakuma R. Optimal duration of exclusive breastfeeding. *Cochrane Database System Review*. 2002;1
Oddy WH, Sly PD, Kde Klerk NH, et al. Breastfeeding and respiratory morbidity in infancy: a birth cohort study. *Archives of Disease in Childhood*. 2003;88:224-228

k. Preventive Services (General)

Impact: *Cost-saving or cost-effective*

In general, clinical preventive services are cost-effective; some are cost-saving. Examples of the cost-offset of clinical preventive services recommended in the Plan Benefit Model follow:

Children and/or Adolescents		Childbearing-age Women/ Pregnant Women
Alcohol misuse screening and counseling	Not available	Cost-saving: Each $1 invested in screening and brief counseling interventions saves approximately $4 in healthcare costs.[1, 2]
Chlamydia screening	Cost-effective/cost-saving: Screening for chlamydia allows clinicians to identify affected patients and begin treatment earlier in the course of disease, thereby improving outcomes and avoiding the health and economic consequences of latent disease such as pelvic inflammatory disorder (PID) and infertility.[3] A review of 10 cost-effectiveness studies found that screening was more cost-effective than simply testing symptomatic women, and that in some instances, screening was cost-saving even at prevalence rates as low 1.1%.[4]	
Cervical cancer screening	Cost-effective: A conventional Pap test repeated every 3 years from the onset of sexual activity up to the age of 75 costs $11,830 per quality-adjusted life year saved (in year 2000 dollars).[5] In comparison to other preventive interventions and to commonly accepted cost-effectiveness benchmarks, cervical cancer screening is highly cost-effective.[6]	
Gonorrhea screening	Cost-effective/cost-saving: Screening for gonorrhea allows for the early recognition of disease and immediate treatment, which can prevent the costly complications of late-stage disease such as PID. The average lifetime cost of PID has been estimated to range from $1,060 to $3,626 in year 2000 dollars.[7] The average lifetime cost for women who develop major complications of PID is $6,350 for chronic pelvic pain, $6,840 for an ectopic pregnancy, and $1,270 for infertility: 79% of these costs have been found to occur within 5 years of the precipitating infection.[8]	
HIV screening	Not available	Cost-saving: Compared to no screening, a universal screening program targeting pregnant women would save an estimated $3.69 million dollars and prevent 64.6 cases of pediatric HIV infection for every 100,000 pregnant women screened.[9]
Lead screening	Cost-effective/cost-saving: Compared to no screening, universal screening of all 1-year old children for elevated blood lead levels (BLLs) would produce economic benefits exceeding program costs in communities where at least 11% to 17% of children have elevated BLLs.[10]	Not applicable
Sexually Transmitted Infections (STI) (Combined Data)	Avoiding adverse outcomes of pregnancy associated with untreated STIs can offset 19% to 35% of the costs of prenatal care in certain populations of high-risk women.[11]	
Syphilis	Not available	Cost-effective: Serological screening of pregnant women can be cost-effective even when there is a very low prevalence of maternal infection because screening is inexpensive while treating congenital syphilis is costly.[12] For example, treatment for early stage syphilis ($41.26) is much less expensive than treatment for later stage disease ($2,062) (both figures in year 2001 dollars).[13]
Tobacco use screening and counseling	Cost-effective: Cost data on adolescent tobacco cessation is limited, but in adult populations the cost-effectiveness of tobacco cessation programs is quite well-established, with many approaches yielding costs under $1,000 per quality-adjusted life year saved.[14]	Cost-saving: Tobacco cessation treatment for pregnant women is considered one of the most cost-saving preventive services.[15,16] Clinical trials have shown that $6 are saved in healthcare costs for every $1 invested in smoking cessation programs for pregnant women.[17]

1. Fleming MF, Mundt MP, French MT, Manwell LB, Stauffacher EA, Barry KL. Brief physician advice for problem alcohol drinkers: long-term efficacy and benefit-cost analysis. A randomized controlled trial in community-based primary care settings. *Alcohol Clin Exp Res*. 2002;26:36-43.
2. Gentilello LM, Ebel BE, Wickizer TM, Salkever DS, Rivara FP. Alcohol interventions for trauma patients treated in emergency departments and hospitals: A cost benefit analysis. *Ann Surg*. 2005;241:541-50.
3. U.S. Preventive Services Task Force. Screening for chlamydial infection: recommendations and rationale. *Am Fam Physician*. 2002;65(4):673-76.
4. Blandford JM, Gift TL. Productivity losses attributable to untreated chlamydial infection and associated pelvic inflammatory disease in reproductive-aged women. *Sex Transm Dis*. In press.
5. Mandelblatt JS, Lawrence WF, Womack SM, Jacobson D, Bin YI, Yi-Ting H. et al. Benefits and costs of using HPV testing to screen for cervical cancer. *JAMA*. 2002;287(18):2372-2381.
6. Eichler H, Kong SX, Gerth WC, Mavros P, Jönsson B. Use of cost-effectiveness analysis in health-care resource allocation decision-making: how are cost-effectiveness thresholds expected to emerge? *Value Health*. 2004;7(5):518-528.
7. Chesson HW, Blandford JM, Gift TL, Tao G, Irwin KL. The estimated direct medical cost of sexually transmitted diseases among American youth, 2000. *Perspect Sex Reprod Health*. 2004;36(1):11-19.
8. Yeh JM, Hook EW, Goldie SJ. A refined estimate of the average lifetime cost of pelvic inflammatory disease. *Sex Transm Dis*. 2003;30(5):369-78.
9. Immergluck LC, Cull WL, Schwatrz A, Elstein AS. Cost-effectiveness of universal compared with voluntary screening for human immunodeficiency virus among pregnant women in Chicago. *Pediatrics*. 2000;105(4):E54.
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11. Kuiper H, Richwald GA, Rotblatt H, Asch S. The communicable disease impact of eliminating publicly funded prenatal care for undocumented immigrants. *Matern Child Health J*. 1999:3(1):39-52.
12. Schmid G. Economic and programmatic aspects of congenital syphilis prevention. *Bull World Health Organ*. 2004;82(6):402-409.
13. Blandford JM, Gift TL. The cost-effectiveness of single-dose azithromycin for treatment of incubating syphilis. *Sex Transm Dis*. 2003;30(6):502-8.
14. Cromwell J, Bartosch WJ, Fiore MC, Hasselblad V, Baker T. Cost-effectiveness of the clinical practice recommendations in the AHCPR guideline for smoking cessation. *JAMA*. 1997:278,1759-1766.
15. U.S. Public Health Service. *Treating Tobacco use and Dependence: A Systems Approach*. Rockville, MD: Office of the U.S. Surgeon General; U.S. Public Health Service; U.S. Department of Health and Human Services; 2000.
16. Maciosek MV, Coffield AB, Edwards NM, Goodman MJ, Flottemesch TJ, Solberg LI. Priorities among effective clinical preventive services: results of a systematic review and analysis. *Am J Prev Med*. 2006;31(1):52-61.
17. Marks JS, Koplan JP, Hogue CJR, et al. A cost-benefit/cost-effectiveness analysis of smoking cessation for pregnant women. *Am J Prev Med*. 1990;6:282-291.

II. Recommended Levels of Care for Physician/Practitioner Services

Not Applicable

III. Emergency Care, Hospitalization, and Other Facility-Based Care

Not Applicable

IV. Therapeutic Services/Ancillary Services

j. Durable Medical Equipment, Supplies, Medical Food

Durable Medical Equipment
Cochlear Implants in Children
Impact: *Cost-effective*

Summary: Cochlear implants in children are cost-effective from the direct medical perceptive and cost-saving from the societal perspective. Cochlear implants for children with bilateral deafness result in lifetime cost-savings of $53,198 per child when indirect costs like changes in future education and earning potential are considered.
Methods: Pre-intervention, post-intervention, and cross-sectional surveys were administered to parents of profoundly deaf children with a cochlear implant or anticipating a cochlear implant.
Reference: Cheng AK, Rubin HR, Power NR, Mellon NK, Francis HW, Niparko JK. Cost-utility analysis of the cochlear implant in children. *JAMA*. 2000;284(7):850-856.

Medical Foods
Donor Breast Milk Example
Impact: *Cost-saving for limited populations*

Background: The health benefits of human breast milk have been well-established. Breast milk provides growth factors, hormones, digestive enzymes, and immunologic factors, which are impossible to replicate with formula. Many preterm infant/mother pairs are unable to breastfeed; without access to donor milk, these infants are unable to receive the health benefits of breast milk.
Summary: Preterm infants who do not receive human breast milk are at an increased risk for costly health problems such as necrotizing enterocoltis and sepsis. The incremental cost of *not* feeding preterm infants human milk is $9,669 per infant, even when the cost of alternate forms of nutrition are included. Using donor human breast milk could save approximately $11 in NICU costs for each $1 spent on donor milk if the mother's milk is unavailable for two months, and $37 for each $1 spent on donor milk if the mother's milk is unavailable for 1 month.
Methods: A cost-effectiveness analysis from the direct-cost perspective was performed using data from published articles.
Reference: Wight NE. Donor human milk for preterm infants. *J Perinatol*. 2003;21:249-254.

V. Laboratory Diagnostic, Assessment, and Testing Services
Not Applicable