



Agenda Item 8
March 2, 2016

DATE: February 24, 2016

TO: Children and Families Commission of Orange County

FROM: Christina Altmayer, Executive Director 

SUBJECT: Bridges Maternal Child Health Network

ACTION: Receive Report on the Bridges Maternal Child Health Network

SUMMARY:

The Bridges Maternal Child Health Network (Bridges Network) supports children’s healthy development by identifying concerns during the critical first years of life, and providing families with education, screening, and linkage to services including referrals for home visitation services by public health nurses and other professional staff. This report provides an update on the Bridges Network evaluation work including the review by an independent consultant, Health Management Associates to measure health outcomes of families served and the work of the internal Children and Families Commission of Orange County team to review the program management, staffing, operations and technology.

DISCUSSION:

Health Management Associates Evaluation

Under the Commission’s Pay for Success grant from the James Irvine Foundation and the Nonprofit Finance Fund, the Commission engaged an evaluation firm to measure the impact of Network services on at-risk children and pregnant women with respect to utilization of preventive and emergency health care. This work was conducted in partnership with CalOptima, Orange County’s Medi-Cal managed care plan, since a high percentage of Bridges clients are enrolled in the plan. With data provided by CalOptima, Health Management Associates (HMA) compared CalOptima members who received Bridges services to members who did not receive services, with respect to several important maternal and child healthcare quality indicators derived from the national Healthcare Effectiveness Data and Information Set (HEDIS). The California Department of Health Care Services also uses HEDIS data to rank Medi-Cal managed care plans throughout the state.

Process Optimization Results

In parallel with HMA’s data analysis, Commission staff and consultants undertook a program optimization assessment with the goal of identifying strengths and opportunities for improvement in the Bridges Network. The first phase of the assessment was conducted between November and January and focused on strengths and opportunities for improvement in terms of the program management and staffing, processes, and technology. As part of this item, staff will present the Phase 1 results and provide a timeline for completion of the second phase of the program optimization assessment, which will focus on service delivery models and outcomes (Attachment 1).

STRATEGIC PLAN & FISCAL SUMMARY:

The proposed action has been specifically reviewed in relation to the Commission's Strategic Plan and is consistent with the Healthy Children goal. No funding actions are included in this item.

PRIOR COMMISSION ACTIONS:

- December 2015 -- Received Bridges Maternal Child Health Network project update and authorized amendments to agreements with designated individuals to provide Program Optimization Technical Services.
- September 2015 – Received update on *Pay for Success* Project and authorized the acceptance of funds and related contracts.
- July 2015 – Received update on the *Pay for Success* Project and authorized amendment to Agreement with the Hospital Association of Southern California.
- April 2015 – Received update on the *Pay for Success* Project and approve implementing actions.
- March 2015 – Received presentation and update on the *Pay for Success* project and approve plan for implementation.
- February 4, 2015 – Received update on the Bridges Maternal Child Health Network and *Pay for Success* Feasibility Analysis, authorized agreement with NetChemistry, Inc.
- September 2014 – Received update on the feasibility of transitioning the Bridges Maternal Child Health Network Program to a *Pay for Success* Model.

RECOMMENDED ACTION:

Receive report on Bridges Maternal Child Health Network.

ATTACHMENTS:

1. Bridges Maternal Child Health Network: Preliminary Findings from Program Optimization Assessment
2. Bridges Maternal Child Health Network: Evaluating Performance on Key Healthcare Indicators

Contact: Ilia Rolon

Bridges Maternal Child Health
Network: Preliminary Findings from
Program Optimization Assessment



Children & Families Commission of Orange County



1. Provide a summary of the Bridges Maternal Health Network Program (Bridges)
2. Present preliminary findings and recommendations for Phase 1 of Program Optimization Assessment
3. Discuss next steps and timeline



Build and sustain a countywide maternal child health system that is responsive, efficient, and measurably improves the health and development of Orange County's children through:

- Increased access to health coverage
- Early identification and referral of health, behavioral and developmental concerns
- Effective use of healthcare resources

TARGET POPULATION	SERVICES PROVIDED	OUTCOMES
PRENATAL SERVICES		
 <p>Mothers at risk for poor birth outcomes including low income mothers, those with late or no prenatal care, first time teen mothers, single mothers, and mothers at risk for substance use</p>	<p>Home visitation to provide:</p> <ul style="list-style-type: none"> • Support for a healthy pregnancy • Breastfeeding education • Healthy infant development education 	<ul style="list-style-type: none"> • Early and consistent prenatal care • Improved mother's wellbeing and healthy infant development • Decreased pre-term and low birth weights • Reduced frequency of newborn admission to a Neonatal Intensive Care Unit
INFANT AND FAMILY SCREENING AT BIRTH		
 <p>3 SYSTEM ENTRY POINTS</p>  <p>Infants at risk for health or developmental delays including medically high-risk infants</p>	<p>Prescreening Electronic review of admission data considering risk factors (income, prenatal care, age of mother, paternity status, etc.). Approximately 90% of mothers at 10 hospitals accounting for 71% of Orange County births are prescreened.</p> <p>Bedside Screening Hospital bedside interview of mother based on Prescreening results. Approximately 50% of prescreened mothers receive a bedside screening.</p> <p>Referral to Services</p> <ul style="list-style-type: none"> • Public Health Nurse in-home services • Home visitation to promote healthy infant development and maternal/infant attachment using Partners in Parenting Education (PIPE) <p>Kit for New Parents Parent education information</p>	<p>Approximately 18% of mothers screened at bedside are referred to services and 46% of those successfully complete services, leading to:</p> <ul style="list-style-type: none"> • Effective use of the health care system • Improved mother's wellbeing and healthy infant development • Improved healthy parent/child interaction • Reduced Emergency Department visits
TODDLER SERVICES		
 <p>Toddlers at risk for developmental delays</p>	<p>Home visitation using the "Triple P" Positive Parenting Program</p>	<ul style="list-style-type: none"> • Improved healthy parent/child interaction • Prevention of behavioral, emotional, & developmental concerns in children

Bridges Network Programs and Services



Programs	Duration of Services/ Point of Service	Intensity of Services
<i>Prenatal Home Visitation (MOMS Orange County)</i>	<i>Prenatal up to age 1</i>	<ul style="list-style-type: none"> An average of 4 home visits with pregnant clients 9 home visits for infants in their first year
<i>Public Health Nursing – Health Access Promotion</i>	<i>Birth up to 5 years of age</i>	<ul style="list-style-type: none"> Frequency of home visits is based on medical and social services needs
<i>Public Health Nursing – Medically High Risk Newborns</i>	<i>Birth to age 3, most finish at age 2</i>	<ul style="list-style-type: none"> Level I – PHN provides a minimum of 6 home visits within the first 6 months following enrollment and phone contacts as needed; families remain in Level I for the first 6 months of services Level II – PHN provides at least bimonthly home visits to families with phone contacts as needed; remain at this level for the second 6 months of their first year of service Level III – PHN provides at least quarterly home visits to families with phone contacts as needed; remains at this level until the age of 36 months Client status evaluated at 12 and 18 months
<i>Public Health Nursing - Nurse-Family Partnership®</i>	<i>Prenatal up to age 2</i>	<ul style="list-style-type: none"> Home visits weekly for the first 4 weeks of service to pregnant women and every other week after until delivery; weekly during the 6 weeks after delivery; every other week through the child's 21st month; monthly through the child's 24th month
<i>Public Health Nursing – Perinatal Substance Abuse Services Initiative/ Assessment and Coordination Team</i>	<i>Prenatal up to 12 months</i>	<ul style="list-style-type: none"> Follow up to ensure child receives well-child checks, immunizations and developmental screenings at 6 months of age and/or until case closure, depending on length of service
<i>Hospital Based Screening and Referral (10 hospitals)</i>	<i>Bedside in hospitals</i>	<ul style="list-style-type: none"> Pre-screen Full screen
<i>Infant Home Visitation (Children's Bureau and Child Abuse Prevention Center)</i>	<i>Any 6-month period from birth up to 18 months</i>	<ul style="list-style-type: none"> Length of visit: 1.0-1.5 hours Frequency of visits: every other week; may be weekly for higher need/risk Number of visits: average between 12- 20
<i>Toddler Home Visitation (Children's Bureau and Child Abuse Prevention Center)</i>	<i>Any 3-6 month period from 18 months through age 5 years</i>	<ul style="list-style-type: none"> Length of visit: 1.0-1.5 hours Frequency of visits: every other week; may be weekly for higher need/risk Number of visits: average between 8-20

Program Data, FY 2014-15



Programs	Commission Investment	Number of Unduplicated Children Served	Number of Unduplicated Adults Served	Number of Services for Children	Number of Services for Parents
<i>Prenatal Home Visitation (MOMS Orange County)</i>	\$720,000	786	571	6,552	15,343
<i>Public Health Nursing (Includes prenatal and postnatal home visitation)</i>	\$1,500,000	682	770	3,533	4,452
<i>Hospital Based Screening and Referral (10 hospitals)</i>	\$1,300,000	11,457	20,005	55,938	93,862
<i>Infant Home Visitation (Children's Bureau and Child Abuse Prevention Center)</i>	\$1,220,000	1,054	1,037	6,987	13,447
<i>Toddler Home Visitation (Children's Bureau and Child Abuse Prevention Center)</i>	\$558,000	588	543	4,905	6,502
<i>Centralized Program Management (reduced to \$291,500 in FY 15/16)</i>	\$314,360	N/A	N/A	N/A	N/A
<i>Total Bridges Funding</i>	\$5,612,360				

Presentation of Bridges Study Results
Lisa Maiuro, Health Management Associates

Program Optimization Assessment



Objectives

- Phase 1: Assess current provider practices within the Bridges Network and identify opportunities for streamlined or improved processes
- Phase 2: Assess service model and identify opportunities for improved outcomes (scheduled for 2016, Q3 and 4)

Key Inputs

- Monthly Bridges Leadership Committee meetings
- Documentation of Network service outputs
- Analysis of Bridges data reports
- Surveys and site visits with all Network providers:
 - 10 Bridges hospitals
 - Prenatal home visitation programs
 - Infant and toddler home visitation programs
- Service providers' input regarding strengths and limitations of Network's current data information technology infrastructure

Findings and Recommendations
Program Management & Staffing



Strengths

- Mutually supportive referral relationships
- Low staff turnover; many long-term employees in the Network
- Network partners committed to success

Opportunities for Improvement/Recommended Action Items

- Facilitate Network trainings to continually enhance existing skill sets
- Dedicate resources for continuous data quality assurance to improve data integrity across the Network

Findings and Recommendations
Processes



- Screening for Risk
- Referral to Services
- Client Engagement and Enrollment
- Service Delivery



Strengths

- Nearly all mothers are pre-screened via automated process, allowing staff to more efficiently determine which patients to fully screen at bedside

Findings

- Some hospitals are unable to screen all mothers due to insufficient staffing and complex client needs
- Tablets are not fully functional for intended use

Recommended Action Items

- Explore viability of replacing tablets to increase efficiencies in service delivery
- Assess ability to interface with hospital data systems to eliminate double entry
- Evaluate hospital staffing resource needs based on factors such as patient volume, demographics and average risk scores

Referral to Services



Strengths

- Automated referral process increases efficiency and accuracy; reduces number of duplicated or lost referrals

Findings

- A gap exists between the number of moms who would appear to benefit from the program, based on screening, and the number who accept a referral. Rates vary among Bridges hospitals, with a range of 41% to 93%.

Contributing factors

- Some patients are ineligible for the program because they reside out of county or already receiving County or other agency services
- Some patients decline the referral due to a fear of a stranger, like a social worker, coming into their home to judge their parenting skills
- Understanding of home visitation program varies at each hospital
- Limited external program outreach and marketing resources



Opportunities for Improvement/Recommended Action Items

- Develop system performance metrics and share with all Network partners
- Develop and implement community-based awareness program to promote Bridges Network; target providers, community agencies in multiple languages
- Facilitate provider/hospital meetings to share best practices and further develop referral relationships (e.g. joint training, peer learning, job shadowing).



Strengths

- Consistent and regular communication between hospital and home visitation partners facilitates thorough follow-up

Findings

- Opportunity to increase the uptake of program services. Gap exists between number of clients referred and number who enroll in a program. Difficult to identify exact variance due to different definitions of “enrollment.”

Contributing factors

- Lost to follow-up
- Client refused service, including passive decline or no consent
- Lack of perceived need at the time program is offered



Opportunities for Improvement/Recommended Action Items

- To ensure integrity of data, create crosswalk of agencies' operational definitions of "Client Enrollment"
- Explore ways to "introduce" the home visitor to patient at bedside
- Develop strategy to market services post partum, consider incorporating additional touch points (e.g., pediatrician offices)
- Facilitate ongoing forum for line staff from hospitals and provider agencies to share best practices
- While most programs provide prompt follow-up, there is a need to establish a standard for timely follow-up on all referrals



Strengths

- Prenatal service models (e.g., MOMS Orange County and Nurse Family Partnership) are validated by published research
- Infant and home visitation providers use evidence-informed, Commission-selected curricula

Findings

- Hospital daily procedures are not thoroughly documented for purposes of onboarding new staff and preserving program standards and practices
- No centralized, systematic process in place to review program educational materials to ensure they are up-to-date
- Home visitation model may benefit from further study, e.g., exploration of expanded entry points, optimal service duration for measurable outcomes



Opportunities for Improvement/Recommended Action Items:

- Conduct analysis of optimal program length to achieve targeted program outcomes; explore the concept of an “open” care coordination model with flexible entry points for clients
- Develop a systematic and collaborative approach to review educational materials and curricula used with clients to ensure the most accurate and current information and resources are available to providers
- Request that service providers document and maintain current all policies and procedures relating to delivery of Network services
- Work with providers to develop improved guidance regarding Commission-related funding matters that impact service delivery

Findings and Recommendations
Technology



Background:

Two systems are currently used to capture Bridges Network service data. Both collect client-level and service data but neither system currently captures all data needed to demonstrate successful outcomes and manage performance.

Strengths:

- Data system facilitates timely referrals to participating providers
- Data systems assist with aggregation of some program data

Findings:

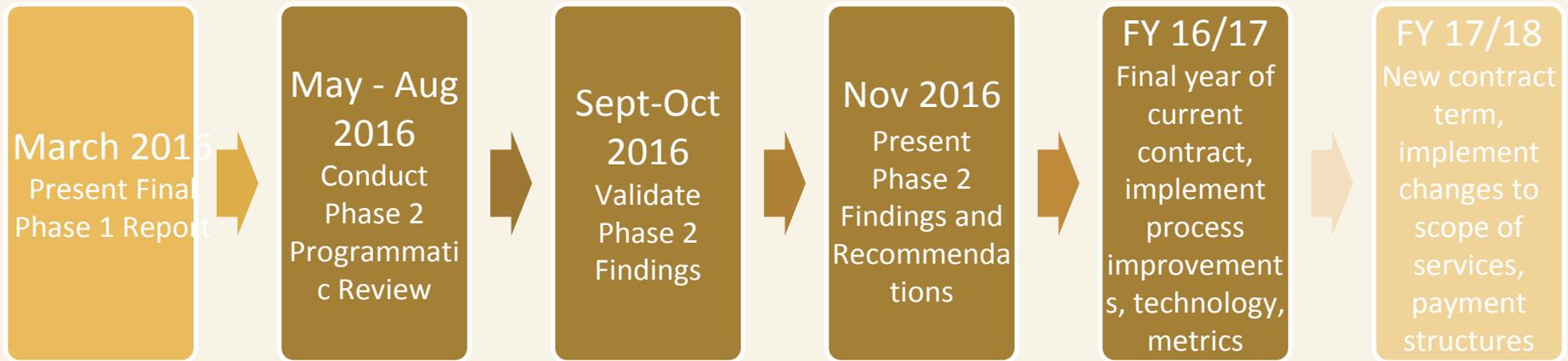
- Significant opportunities for enhanced use of technology to manage and aggregate data to guide programmatic decisions



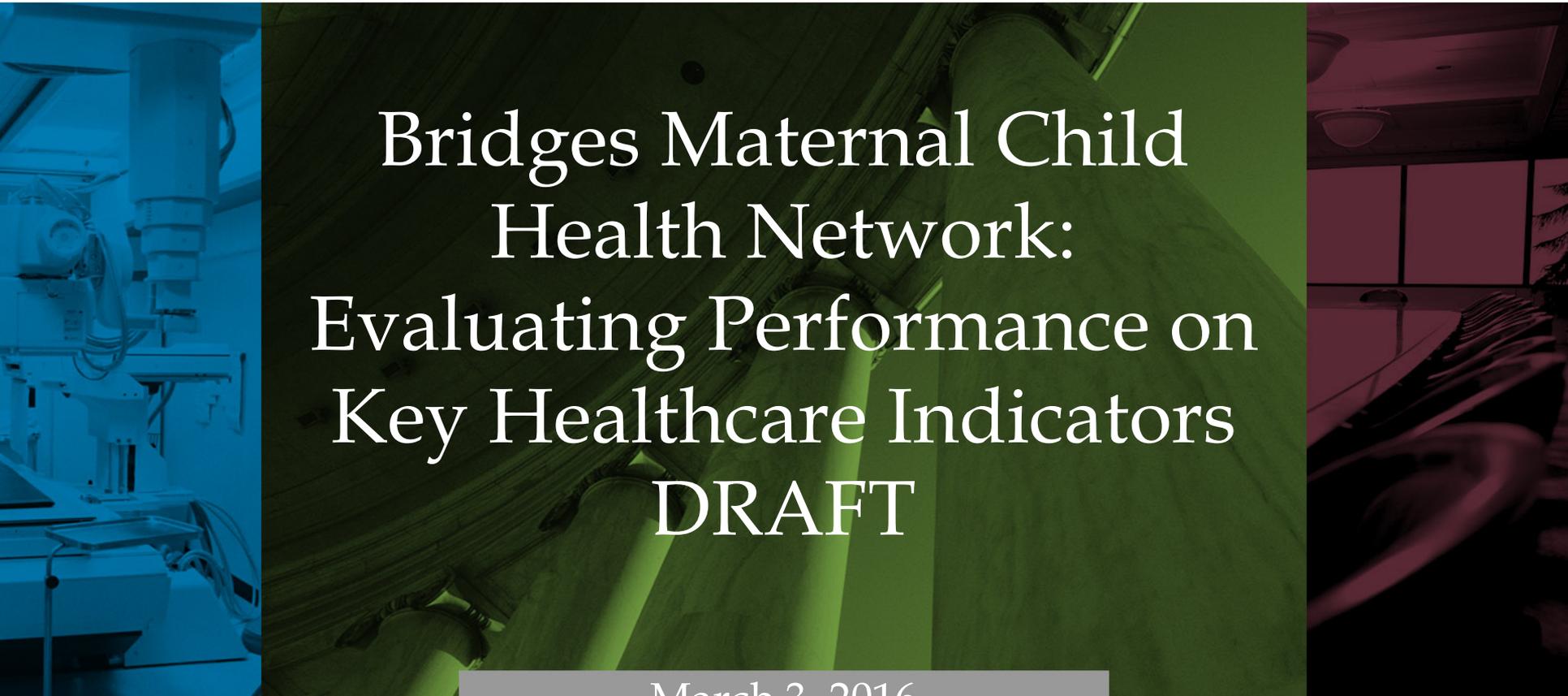
Opportunities for Improvement/Recommended Action Items:

- Enhance ability to:
 - Evaluate effectiveness of the Network and its component programs;
 - Identify service gaps
- Identify program needs that can be more readily addressed technologically (e.g., reports that can help with quality improvement and outcomes reporting)
- Support rigorous monitoring of performance measures
- Identify technology solutions or overlays that increase the efficiency with which data are extracted for evaluation and program improvements
- Enhance ability to measure and evaluate effectiveness of program outreach and marketing

Timeline of Next Steps



HEALTH MANAGEMENT ASSOCIATES



Bridges Maternal Child
Health Network:
Evaluating Performance on
Key Healthcare Indicators
DRAFT

March 3, 2016

Lisa Maiuro, MSPH PhD

HealthManagement.com

Agenda

- Evaluation Goal
- Methodology and Metrics
- Results
- Conclusions

Evaluation Goal

- To determine whether CalOptima members who received services from the Bridges Maternal Child Health Network (Bridges Network) during calendar year 2013 had better health outcomes than a matched group of CalOptima members who did not participate in the Bridges Network.

General Methodology

- Identified a subset of health plan quality measures to evaluate performance of Bridges Network participants
- Developed a matched comparison group of Non-Bridges Network participants
- Conducted Z-tests to determine whether there was a significant difference between comparison group and Bridges Network participants

Metrics

- We examined a subset of 8 Healthcare Effectiveness Data and Information Set (HEDIS) measures for Bridges Network participants and a matched comparison group.
- Measures related to prenatal and postpartum health care:
 - Percentage of women who had a prenatal care visit in the first trimester or within 42 days of enrollment in the health plan.
 - Percentage of women who had a postpartum visit on or between 21 and 56 days after delivery.
- Measures related to children's healthcare included:
 - Percentage of children 12-24 months and 2-6 years who had a visit with a primary care practitioner within the last year.
 - Percentage of enrolled children up to two years old appropriately immunized with combo 3: (4) DTaP; (3) IPV; (1) MMR; (3) Hib; (2) HepB; (1) chicken pox vaccine (VZV); (4) pneumococcal conjugate [(4- 3 -1 -3 -2- 1- 4)].

Metrics (2)

- Measures related to children's healthcare, continued:
 - Percentage of members who turned 15 months old during the measurement year and who had 0, 1, 2, 3, 4, 5, or 6 well-child visits with a primary care provider (PCP) during their first 15 months of life.
 - Percent of children age 3-17 who had an outpatient visit with weight assessment and counseling for nutrition and physical activity for children.
 - Percent of children with well-child visits in 3rd, 4th, 5th and 6th years of life.
 - Emergency department visits for children as measured by visits per member month. This is a visit-based measure, rather than population measure.

Defining Bridges Network and Comparison Groups

The Bridges Network group included participants in the following programs:

- Hospital-based screening and referral at 10 birthing hospitals
- MOMS Orange County and Health Care Agency (HCA) / Public Health Nursing prenatal and post-partum supportive health services
- Infant & Toddler Home Visitation by Children's Bureau of Southern California and the Orange County Child Abuse Prevention Center

Defining Bridges Network and Comparison Groups (2)

Criteria for selecting the Bridges cohort included:

- Must have received a "visit" within 2013
- Must have an Commission intake/exit survey completed
- Must be served by infant/toddler/health access south
- Post partum cases not referred by the hospital were also included

Results: HEDIS Summary

- **Prenatal and Postnatal Visits Better for Bridges group:** The percentage of Bridges participants with a prenatal or a postnatal visit was significantly higher than the comparison group's, based on HEDIS measures.
- **Emergency Department Visits for Children Lower in the Bridges Group:** Emergency department visits for children, as measured by visits per member month, were significantly lower for the Bridges participants.

Results: HEDIS Summary

- **Well Child Visits at 100% for Bridges and Comparison Group:** The percentage of members who turned 15 months old during the measurement year and who had 0, 1, 2, 3, 4, 5, or 6 well-child visits with a PCP during their first 15 months of life was excellent for both Bridges and comparison groups.

Results: HEDIS Summary

- **No Significant Difference between Bridges and Comparison Group for:**
 - Percentage of children age 3-17 who had an outpatient visit with weight assessment and counseling for nutrition and physical activity for children
 - Percentage of children with well-child visits in 3rd, 4th, 5th and 6th years of life.
 - Percentage of children who had a visit with a PCP within the last year.

Results: HEDIS Summary

- **No significant difference between Bridges and comparison group for:**
 - Percentage of enrolled children up to two years old appropriately immunized with combo 3: (4) DTaP; (3) IPV; (1) MMR; (3) Hib; (2) HepB; (1) chicken pox vaccine (VZV); (4) pneumococcal conjugate [(4- 3 -1 -3 -2- 1- 4)].
- **The comparison group was significantly better than the Bridges cohort for:**
 - Percentage of children who had a visit with a primary care practitioner within the last year.

Conclusion

- CalOptima members who received services from the Bridges Maternal Child Health Network (Bridges Network) during calendar year 2013 had significantly better health outcomes on important HEDIS measures than a matched group of CalOptima members who did not participate in the Bridges Network.
- *The Bridges Maternal Child Health Network (Bridges Network) is important to ensuring the health of CalOptima members.*

Appendix

HEDIS Results: Bridges PCP Prenatal Visits Were Higher

- Prenatal visits were higher for Bridges group: The percentage of Bridges participants with a prenatal visit, 73%, was significantly higher than the comparison group, 63%.

Measure	Bridges	Comparison Group	P -value
PPC: Prenatal	72.70%	63.20%	<0.0001

HEDIS Results: Bridges PCP Postpartum Visits Were Higher

- **Postpartum visits were higher for Bridges group:** The percentage of Bridges+ participants with a postpartum visit, 44%, was significantly higher than in the comparison group, 39%.

Measure	Bridges	Comparison Group	P -value
PPC Postpartum	44.30%	39.30%	0.0011

HEDIS Results: Bridges Ambulatory ED Visits (AMB-ED) Were Lower

- Emergency department visits for children were lower in the Bridges group: Emergency Department visits for children as measured by visits per member month were significantly lower: 160 visits per thousand member months for the Bridges participants compared to 220 for the comparison group.

Measure	Bridges (Visits/ 1000MM)	Comparison Group (Visits/ 1000MM)	P -value
AMB-ED	160	220	0.0045