UCSF

University of California
San Francisco

Whole Child Model Evaluation

CCS Best Practices Conference
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Agenda

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- Evaluation Methodologies
- Research Questions and Analysis Methods
- Next Steps
- Questions and Discussion

Project Team

- Megumi Okumura, MD, MAS: Co-Principal Investigator
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Evaluation Aims, Evaluation Questions, and Overview

Overview of California Welfare & Institutions Code (WIC) Section 14094.18 (2018)

Evaluate the Whole Child Model program, which includes access to primary and specialty care and youth transitions from Whole Child Model program to adult Medi-Cal coverage and evaluate if the managed care delivery system improves access to care, quality of care, and the patient experience.

This evaluation will cover all items included in WIC section 14094.18 (2018).

Evaluation Aims

1. Measure the impact of the Whole Child Model (WCM) program on access to care, service use, quality of care, and coordination of care for patients and their families;
2. Assess the cost of the program;
3. Assess the impact on the health system; and,
4. Assess any additional lessons learned.

Evaluation Questions

1. What is the impact of the WCM on children's access to CCS services?
2. What is the impact of the WCM on the patient's and family's satisfaction?
3. What is the impact of the WCM on providers' satisfaction with the delivery of services and reimbursement?
4. What is the impact of the WCM on the quality of care received?
5. What is the impact of the WCM on care coordination?
6. What is the impact of the WCM on dollar amounts expended on health care services and total cost of care?

Evaluation Methodologies

Methodology and Data Collection

- In-depth interviews with parents/guardians of children in the WCM and classic CCS counties (N=26)
- Randomized telephone survey of parents/guardians of children in the WCM and a comparison group from classic CCS counties (N=2,883)
- Interviews with key stakeholders (N=58 interviews with 87 informants)
- Analysis of administrative/utilization data (2009 - current)
  - Management Information System / Decision Support System (MIS/DSS) and CMS NET, CAIR, and CAIR2
  - Department of Health Care Access and Information (formerly known as OSHPD) Patient Discharge Database and Emergency Department
  - Grievance and appeals data
- Analysis of cost effectiveness

UCSF will submit final report with findings and recommendations to DHCS by December 31, 2022.

Limitations of Evaluation

- This is a broad-scale evaluation and is not meant to capture specificities of children who are outliers and needing far more or far less care than average.
- This is not an evaluation of CCS SCCs (Specialty Care Centers)
- Will evaluate the cost to the state based on capitation rates and FFS claims paid, so will not be able to evaluate what the cost is to the health plan to deliver the care.

Telephone Survey Overview

- **Purpose:** To assess participant satisfaction, experiences with care and perceived changes in access to care, quality of care, and coordination of care since transition into the WCM.
- **Analysis:** Descriptive statistics and comparisons between children who transitioned to the WCM program to those in classic CCS comparison counties.
- **Sample size: 2,883** respondents from each of two groups: Parents/guardians from WCM counties and parents/guardians from classic CCS counties.

Telephone Survey Process

- CCS Advisory Group (via DHCS) provided feedback on survey instrument; UCSF conducted pilot interviews in English and Spanish to test the questions and instrument.
- Survey research firm conducted pilot interviews, in English and Spanish, to test the software.
- Recruitment letters were mailed to parents/guardians, starting on March 16, 2020; Data collection lasted from March 27 – June 30, 2020.

Completed Telephone Surveys, by CCS Group

CCS Group	Completed Survey
HPSM (Health Plan of San Mateo), Phase I	316
WCM: Phase I	790
WCM: Phase II	451
WCM: Phase III	321
Classic CCS	1,005
Total	2,883

(**76.3% response rate**)

Key Informant Interviews

- Completed 58 interviews with 87 key informants (KIs)
- Conducted interviews in every WCM county except for two
- Key informants included:
  - Staff from CCS, including the Medical Therapy Programs (MTP)
  - All WCM managed care plans (MCPs)
  - Providers and staff from special care centers
  - Advocacy group representatives
  - 11 CCS Advisory Group members

Key Informant Interviews: Thematic Topics

- Perspectives on the transition to the WCM
- Impact on authorizations
- Change in transportation and reimbursement procedures
- Difficulties and disruptions with Medi-Cal re-enrollment
- Differences between CCS case management and MCP case management
- Impact of the WCM on quality of care, including providers and durable medical equipment (DME)
- Out-of-pocket and time-loss economic burden

Utilization Data for Analysis

Dataset	What the Data Contain and/or Will Show
MIS/DSS (Management Information System/Decision Support System)	Monthly eligibility and plan enrollment data; fee-for-service (FFS) and managed care claims data for all services
CMS (Children's Medical Services) Net	Statewide eligibility, case management, and service authorization information integrated with the Medi-Cal Eligibility Data System (MEDS) and the California Medicaid Management Information System (CA MMIS) used by CCS
Patient Discharge Database	All-payer database of discharges from all non-federal, non-correctional hospitals in the state
Emergency Department Database	All-payer data base of Emergency Department visits not resulting in hospitalizations at that hospital
CAIR/CAIR2 (California Immunization Registry)	Records all vaccinations given in California (agency must have reported to the state)

Utilization Data for Analysis

Dataset	What the Data Contain and/or Will Show
Clinical Data/HEDIS Data (Healthcare Effectiveness Data and Information Set)	HbA1c (2 health plans), vaccination, and Depression screening (2 health plans)
Referral Data	Health plan authorization data
Grievance and Appeals Data	Grievances and appeals, as submitted to health plans
State Fair Hearings Data	Outcomes of requested legal hearings for medical denial or grievance

Econometrics Data for Analysis

Dataset	What the Data Contain and/or Will Show
DHCS Blue and White Sheet Rate Calculation Reports: Lower Bound Capitation Rate & Base Case Estimates	Provides the capitation payment rates for WCM and classic CCS children for managed care years by counties and health plans; Used to estimate capitation rates for CCS children for years prior to WCM
MIS/DSS (Management Information System/Decision Support System) claims data	FFS costs for children not in managed care
DHCS Medi-Cal Managed Care Financial Reports	Used to estimate combination of child and disability capitation rates by county and by health plan
Revenue/Loss Reports (when available specific to CCS children)	Used to determine actual annual expenditures and medical loss ratio changes over time and pre-/post-WCM (1 health plan)
Telephone Survey	Used to calculate costs burden of families (out-of-pocket and time-loss costs)

Research Questions and Analysis Methods

Research Question #1:
What is the impact of the Whole Child Model on children's access to CCS services?

Objective: Evaluate CCS client access to primary, specialty, and behavioral health services and to appropriate screening for services.

- In-depth interviews with parents/guardians
- Telephone survey with parents/guardians
- Analysis of claims data

Relationship to WIC: *The type and location of CCS services and the extent to which CCS services are provided in-network compared to out of network.*

Research Question #1 (continued)

Analysis of parent and stakeholder data:

- Qualitative data from parent interviews were examined to identify current perceptions of access to care and changes since transition to WCM.
- Key informant interview data were examined to identify stakeholders' and providers' perceptions of changes to access to care as well as the underlying causes of any changes and recommendations for lessons learned/course corrections.
- Telephone survey data are being analyzed to measure access to care and compare WCM with classic CCS counties.

Research Question #1 (continued)

Analysis of claims data on overall healthcare visits and CCS provider utilization:

- Evaluating the number of specialty care visits
- Evaluating the number of visits to specialty care centers
- Evaluating primary care visits (EPSDT [Early and Periodic Screening, Diagnostic, and Treatment], well-child visit, and acute follow up)
- Evaluating mental/behavioral health visits and pharmacological interventions of CCS members
- Evaluating the proportion of CCS paneled providers providing services for healthcare and mental healthcare visits

Research Question #1 (continued)

Additional analysis of claims and Department of Health Care Access and Information (formerly known as OSHPD) data:

- Inpatient admissions (all admissions, ambulatory care sensitive discharges, 30-day readmission rates)
- Emergency room visits
- Outpatient services (MTU [Medical Therapy Units], rehabilitation, occupational therapy, speech)
- Durable medical equipment
- Home health services
- Pharmacy use
- Ancillary services (i.e., radiology)

Research Question #2:
What is the impact of the Whole Child Model on the patient's and family's satisfaction?

Objective: Evaluate and compare the level of satisfaction with specialty and primary care services in the WCM compared to classic CCS counties.

- In-depth interviews with parents/guardians
- Telephone survey with parents/guardians

Relationship to WIC: *Improvement in the patient/family experience and patient/family satisfaction.*

Research Question #2 (continued)

Analysis of parent and stakeholder data:

- Data from interview with parents identified areas of satisfaction or dissatisfaction with current CCS services and the transition to WCM.
- Telephone survey data are being analyzed to measure levels of satisfaction with care in a variety of domains to compare WCM and classic CCS family perceptions of satisfaction.

Research Question #2 (continued)

Analysis of appeals and grievances:

- Data from the appeals and grievances files from DHCS are being analyzed to summarize:
  - Number of grievances/petitions
  - Reasons for grievances/petitions
  - Extension of continuity of care period for durable medical equipment
  - Extension of continuity to CCS providers
  - Number of, reasons for, and results of appeals
  - Differences between WCM and classic CCS counties

Research Question #3:

What is the impact of the Whole Child Model on providers' satisfaction with the delivery of services and reimbursement through WCM?

Objective: Evaluate provider perceptions of the WCM.

- Key informant interviews with CCS providers, WCM health plans, advocates, healthcare providers, state & local agencies, etc.
- Telephone survey with parents/guardians

Relationship to WIC: *Network and provider participation, including participation of pediatricians, pediatric specialists, and pediatric subspecialists, by specialty and subspecialty.*

Research Question #3 (continued)

Analysis of stakeholder and parent data:

- Data from key informant interviews, including CCS providers, WCM health plans, advocates, healthcare providers, state & local agencies have been analyzed. Data has also been summarized to examine provider experiences, satisfaction with delivery of services, and cost burden.

- Qualitative interviews with parents have been analyzed to assess the impact of the WCM on the CCS system and on WCM and CCS organizations. Lessons learned and recommendations for course correction have been summarized.

Research Question #4:
What is the impact of the Whole Child Model on the quality of care received?

Objective: Evaluate the impact of the WCM on quality of care.

- In-depth interviews with parents/guardians
- Telephone survey with parents/guardians
- Key informant interviews with stakeholders
- Analysis of administrative data
- Metrics of standards of care: HbA1c and Depression screening
- Immunization rates

Relationship to WIC: *Improvement to quality of care.*

Research Question #4 (continued)

Analysis of parent and stakeholder data:

- Qualitative data from interviews with parents were analyzed to identify which areas of quality domains were the most important to families and where they saw changes in quality since the transition to WCM.
- Telephone survey data from parents/guardians includes a variety of of self-reported quality measures that are being compared to the CCS population.
- Key informant interview data have been analyzed to identify important changes in quality of care that providers and stakeholders identified.

Research Question #4 (continued)

Analysis based on pediatric quality measures:

- Immunization rates
  - Evaluation of rates of recommended immunizations by age group and type of immunization
- Well-child visits
  - Evaluation of proportion of children who receive their EPSDT or standard well-child visits
- Disease metrics
  - HbA1c goals of children with Type I diabetes (for 2 health plans and 1 classic CCS county)

Research Question #5:
What is the impact of the Whole Child Model on care coordination?

Objective: Evaluate the care coordination experience in the WCM counties vs classic CCS counties.

- In-depth interviews with parents/guardians
- Telephone survey with parents/guardians
- Key informant interviews with stakeholders
- Analysis of administrative data

Relationship to WIC: *Is there decreased use of hospitalizations and emergent care services?*

Research Question #5 (continued)

Analysis of parent and stakeholder data:

- Parent interview data were examined to identify experiences with WCM care coordination and any differences in effectiveness since the transition to WCM.
- Parent telephone survey data are being used to measure any differences in parent perceptions of care coordination between WCM and classic CCS counties.
- Key informant interview data were examined to describe the differences in care coordination scope, quality, and effectiveness. Recommendations for improvements and course corrections have been summarized.

Research Question #5 (continued)

Analysis of administrative data:

- Care coordination claims
- Number of referrals received

Research Question #6:

What is the impact of the WCM on capitation amounts to be expended on health care services and total spent on care?

Objective: Compare the total mean annual care costs, costs by high-cost services and CCS-condition types, and cost-effectiveness between the WCM and classic CCS counties to evaluate cost efficiency.

- Telephone survey with parents/guardians
- Analysis of claims utilization, classic CCS costs, capitation rates, and encounter data
- Analysis of cost-effectiveness, comparing cost changes per change in units of effectiveness (pediatric quality measures)

Research Question #6 (continued)

Analysis of parent data :

- Telephone survey with parents included exploratory questions on any changes in out-of-pocket costs, including direct financial impact and indirect financial burdens (e.g., transportation costs, time away from work, school missed).

Research Question #6 (continued)

Analysis of total mean costs and cost PMPM (per member per month) across years by county

- Determine total annual healthcare costs PMPM and also by type of high-cost service (hospital, pharmacy, physician) and by high-cost eligible disease diagnosis
- Determine predictors of total cost and cost PMPM by using regression analysis to determine which factors are driving costs (e.g., patient characteristics, plan characteristics, county characteristics)
- Compare annual cost PMPM before and after initiation of WCM overall and by WCM vs classic CCS counties, using difference in difference analysis to determine the effect of transition to WCM on cost of care while controlling for county and time
- Focus on potential cost shifting between hospitalization and physician visits

Research Question #6 (continued)

Analysis of Cost-Effectiveness (to understand the added costs or cost savings per unit of care improvement or decline)

- Conduct a cost effectiveness analysis:
  - Calculate the incremental cost-effectiveness ratio (ICER)
  - ICER = Change in CCS costs pre- and post-WCM / Change in effectiveness or outcomes pre and post WCM
- Cost = Total Reimbursement = FFS + Capitated Reimbursement
- Effectiveness Outcomes =
  - 1. 30-day readmission rate
  - 2. Mortality
  - 3. Proportion of children successfully immunized
  - 4. Grievances
  - 5. Others

General Statistical Analysis Approach

- Longitudinal data analysis (data spanning from 2013 - current)
- Control for disease modifying factors and use of propensity scores
- Compare across and between Whole Child Model and classic CCS counties
- Use of Differences-in-Differences analysis and regression modeling for outcomes

Next Steps

Next Steps

- Continued analysis of all data
- Submit interim reports to DHCS in December 2021 and June 2022
- Submit final report to DHCS in December 2022
- DHCS to solicit final policy recommendations upon receipt of final report

Questions and Discussion

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