



# Complex Care Management for Children and Youth with Special Health Care Needs (CYSHCN)

*August 11<sup>th</sup>, 2016*

Northwest Health Foundation –  
Bamboo Room

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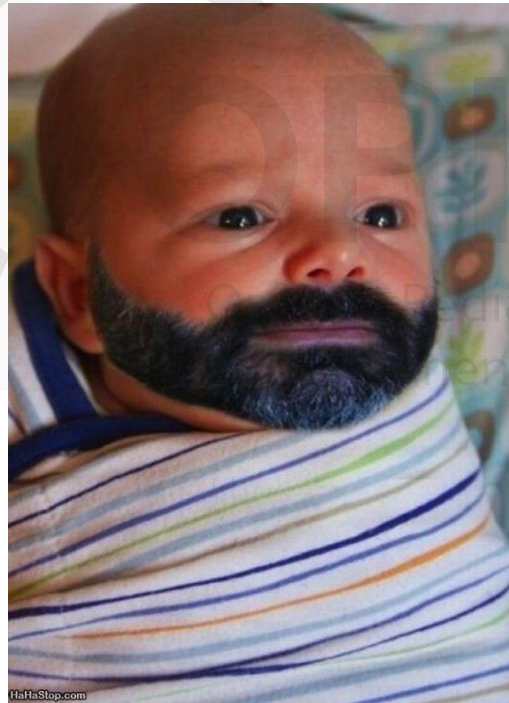


# Agenda

1. **Spotlight** of OPIP efforts with practices and health systems focused on care coordination and complex care management
2. **Keynote** from Rita Mangione-Smith, MD, MPH:  
Development of Innovative Methods to Stratify Children with Complex Needs for Tiered Care: Assessing Both Medical and Social Complexity
3. **Shared discussion about opportunities** for health systems to obtain and leverage data about children in existing state-level databases to inform complex care management **for children**
  - Input gathered will be used to inform OPIP proposal to Lucile Packard Foundation for Children's Health

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# **Focus for Today is on Children..... And Children are NOT Little Adults**



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# This meeting will be a success if .....

- ❖ **Participants** learn about the important factors to **identifying children and youth with special health care needs (CYSHCN)**... and how it is different than identifying adults with special health care needs
- ❖ **Participants** learn about **innovation** occurring within practices and systems focused on CYSHCN
- ❖ **Participants** learn about **barriers to this innovation** and potential solutions that participants could help to support focused on:
  - **System-level data** and how it can be used to identify children who could benefit from care coordination
  - Support for **effective complex care management** that meets the needs of children and their families
- ❖ **Opportunities** are identified among participants for the **sharing and use of data** to identify WHO and what **complex care management** program would be most useful to **meet the needs of children**

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# Confirmed Attendees

## State

- **Nancy Allen** – Intensive Services Coordinator, Addictions & Mental Health Department, OHA
- **Sarah Bartelmann\*** – Metrics Manager, Health Analytics Department OHA
- **Margaret Braun** – Senior Researcher, Oregon Youth Authority
- **Lisa Bui \*** – Quality Improvement Director, Health Policy & Analytics Department, OHA
- **Leslie Clement** – Director, Health Policy & Analytics Department, OHA
- **Lori Coyner** – State Medicaid Director, OHA
- **Angela Long** – Business Intelligence Director, Oregon Department of Human Services
- **Alison Martin** – Assessment & Evaluation Coordinator, Oregon Center for Children & Youth with Special Health Needs
- **Jeffrey McWilliams** – Medical Director, Kepro & Oregon Health Plan Care Coordination (OHPCC)
- **Susan Otter** – Director & State Coordinator for Health Information Technology, Health Policy & Analytics Department, OHA
- **Alfonso Ramirez** – Children & Families Behavioral Health Services Manager, Health Systems Division, OHA
- **Jim Rickards** – Chief Medical Officer, OHA
- **Evan Saulino \*** – PCPCH Clinical Advisor, PCPCH Program, OHA
- **Sen. Elizabeth Steiner Hayward** – Senator for District 17: NW Portland/Beaverton
- **Karen Wheeler** – Integrated Health Programs Director, Health Systems Division, OHA
- **Cate Wilcox\*** – Manager, Maternal & Child Health Section, OHA

## CCOs and Health Systems

- **Maggie Bennington-Davis** – Chief Medical Officer, Health Share of Oregon
- **Jim Carlough** – President & CEO, Yamhill CCO
- **Casey Grabenstein** – Maternal Child Health Program Manager, CareOregon
- **Anna Jimenez** – Medical Director, FamilyCare
- **Bhaves Rajani** – Medical Director, Yamhill CCO
- **Mindy Stadtlander** – Executive Director, Network & Clinical Services, CareOregon
- **Anna Stern** – Medical Director, WVCH
- **Joyce Liu\*** – Medical Director of Medicaid, KPNW Region
- **Dave Wagner** – IDD Psychology, OHSU (Representing NICH)

## Providers and OPIP Steering Committee Members:

- **Gregory Blaschke\*** - President, Oregon Pediatric Society; Pediatrician, OHSU Department of Pediatrics
- **Albert Chaffin\*** – Pediatrician, Pediatric Associates of the NW; Children's Health Alliance/Children's Health Foundation
- **Doug Lincoln\*** – Pediatrician, Metropolitan Pediatrics

\* **OPIP Steering or Partner Committee Member**

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# Helping to Support Today

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# THANKS



- **Oregon Center for Children and Youth with Special Health Needs**
  - <http://www.ohsu.edu/xd/outreach/occyshn/>
  - Enhancing Systems of Services (SOS) Project:  
<https://www.ohsu.edu/xd/outreach/occyshn/programs-projects/sos.cfm>
- **Kaiser Permanente Care Management Institute**
- **Northwest Health Foundation for offering this free space for the meeting**

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# Some Background:

## Why Was OPIP Interested in Holding This Meeting?

### 1) OPIP Collection, Examination and Use of Quality of Care Data by CYSHCN

- **Disparities by type of health care need**

- Stratified data by consequences rather than diagnosis
- Disparities by type of consequence

- **Disparities by family and social factors**

- Examples: race/ethnicity, language spoken at home, education of the parent, health status of the parent

### 2) OPIP Support to Front-Line Practices on Medical Home for Children and CYSHCN

- **Enhancing Child Health in Oregon (ECHO) Learning Collaborative**

- Eight primary care sites (5 pediatric, 3 family medicine; 3 Urban, 2 Suburban, 3 rural)

- **Tri-State Children's Health Improvement Consortium (T-CHIC) Learning Collaborative**

- 21 sites across OR (ECHO Sites), AK, and WV

- **Patient Centered Primary Care Institute (PCPCI) Learning Collaborative**

- Five pediatric practices across the state

- **OCCYSHN's Enhancing Systems of Services (SOS) federal grant.**

- **OPIP Subcontract: Leading Learning Curriculum and Site-Level Coaching to Pilot Methods to Improve Access to and Quality of Medical Homes for CYSHCN**

- One of these sites is Kaiser Permanente Northwest –  
Work is at a practice AND system-level

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# Relevant to Today's Discussions:

## Key Learnings About Complex Care Management in Primary Care

- Identifying CYSHCN requires a **multi-faceted** approach
- Primary care practices have **access to two data sources** (not all) to identify CYSHCN
  - Clinic-level data about diagnosis and use of health care within their practice
  - Parent and patient-reported data
    - Big focus of OPIP's facilitation efforts – largely new to most practices
    - Content focus: 1) Medical complexity; 2) Social complexity; 3) Care coordination needs
    - Practices would benefit from information about health and health services received OUTSIDE of the practice in order to be more effective as the primary care home
- In order to **effectively implement care coordination** and complex care management, **additional staffing is needed**
  - Given current payment, most practices can afford a limited number of staff
  - Given the emphasis on reducing costs, efforts typically look at medical complexity....but those may be the wrong kids to focus on
- Care coordination and **complex care coordination needs differ by child/family**
  - Practices need to use assessment tools to understand care coordination needs
  - Practices observe that **families with social complexity require a different type** of care coordination and would often benefit from different care coordination staffing
- Given **limited resources and staffing**, tools are needed to identify and weight: 1) WHO should receive care coordination, 2) WHAT care coordination team is best for the child and family



# OPIP Work with Kaiser Permanente Northwest (KPNW) Via SOS Project



- Region-level activities to impact all children enrolled in KPNW
  - N=93,637 paneled to pediatrician. N= 115,500 in systems (includes FM)
  - 17,254 pediatric Medicaid patients
- Team Based Care (TBC) exists for adults not children
- Initial pilot level activities focused on children in Mt. Scott (MTS) and new pediatric Team Based Care for Complex Care Management, with potential to spread clinics across region

## Three Parts to the OPIP Learning Curriculum & Support

#1	#2	#3
Support for Pilot of Complex Care MTS: Developing tools, strategies and care coordination methods	Based on MTS learning, support to develop standardized team-based care tools for CYSHCN that will be spread around KPNW	Develop System-Level Methods to Identify CYSHCN that Would Benefit from Complex Care Management

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## Development of Innovative Methods to Stratify Children with Complex Needs for Tiered Care: Assessing both Medical and Social Complexity

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University of Washington and Seattle Children's Research Institute



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## System-Level Data Used to Identify Potential Children for Complex Care Management

**Part 1: Medically Complex**  
(1)Complex chronic, (2)Non-Complex Chronic, (3)Healthy  
Using Pediatric Medical Complexity Algorithm (PMCA)

### Medically & Socially Complex

**Part 2: Socially Complex**  
Categories TBD based on #s  
Based on Available System-Level Data  
Related to Social Complexity Factors  
Predictative of High Costs

Using Part 1 & Part 2  
**IDENTIFY & SPECIFY:**  
1) Who Should Receive Team Based Care (TBC),  
2) Proposed Level of Complex Care Management,  
3) Proposed Best Team for Assessment

**Part 1:**  
PCP Gestalt  
related to Social Risk  
Factors & Care  
Coordination Needs

**Part 2:**  
TBC Team  
Intake and  
Assessment

**FINAL**  
Tailored TBC  
Model and Team  
Identified for Child:  
1) LEVEL of Complex Care Needed – Levels 1-4  
2) BEST MATCH CARE TEAM  
-- Within TBC, Specific Lead Person Identified  
AND/OR  
-- Complex care management provided within other programs  
(Model line, ENCC, Spec. Services)

Monthly Flag of  
Patients with a  
High Cost Event  
(ER, UC, Hospitalization)

Enhanced Data To Be Used  
for the Part 2 Identification

**ALL PATIENTS:**  
Standardized Screening & Assessments  
For **Social Complexity** and **Care Coordination** Needs  
at New Patient Visits and Periodic Well-Visit Checks.

# Relevant to Today's Discussions: Preliminary Learnings Related to Identifying and Tiering for Complex Care Management



- Team based care tools developed for adults provide an invaluable start....but much refinement is needed to be meaningful and useful for children & families
  - Refinement by age of child
  - Refinement by family context
  - Methods of engagement and outreach seem to require different approaches than what has worked with adults with chronic conditions/ on hospice
- Even within a “closed” system like KPNW, barriers to being able to access data across payors, by specific services, and about the parent
  - Mental health services, substance abuse services – special requests needed
  - Mental health services provided outside of KPNW for Medicaid insured children (KPNW is only “physical health” provider for children within CCO)
- System wants a focus on highest costs patients, but those may not be the kids who benefit from complex care management that impacts costs
- Missing data on social complexity risk factors that exist within state data systems
- Spotlight Provided at **OPIP Partner Meeting**: [oregon-pip.org](http://oregon-pip.org)

**PUNCHLINE FROM MEETING:** Given this is new and focus on children is new→  
Value in starting a state-level conversation to inform the pilot work already

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## Introduction of Dr. Mangione-Smith

### Important Note about the Handouts:

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# Development of Innovative Methods to Stratify Children with Complex Needs for Tiered Care: Assessing both Medical and Social Complexity

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# COE4CCN: Who are we?

- Multi-stakeholder, multi-disciplinary consortium of organizations
- Funded by AHRQ/CMS from 3/2011 – 3/2016 to:
  - Develop rigorous methods to identify children with complex needs – *both medical and social*
    - in data available to state Medicaid agencies



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# COE4CCN: Who are we?

- Seattle Children's Research Institute
- Cincinnati Children's Hospital Medical Center
- Children's Hospital Los Angeles
- Kaiser Permanente: Southern CA
- MN Department of Health Services
- MN Chapter of the AAP
- MN Family Voices
- RAND
- WA Department of Social and Health Services
- WA Chapter of the AAP
- WA Department of Health



# Why is it important to identify children with complex needs and have tiered care?

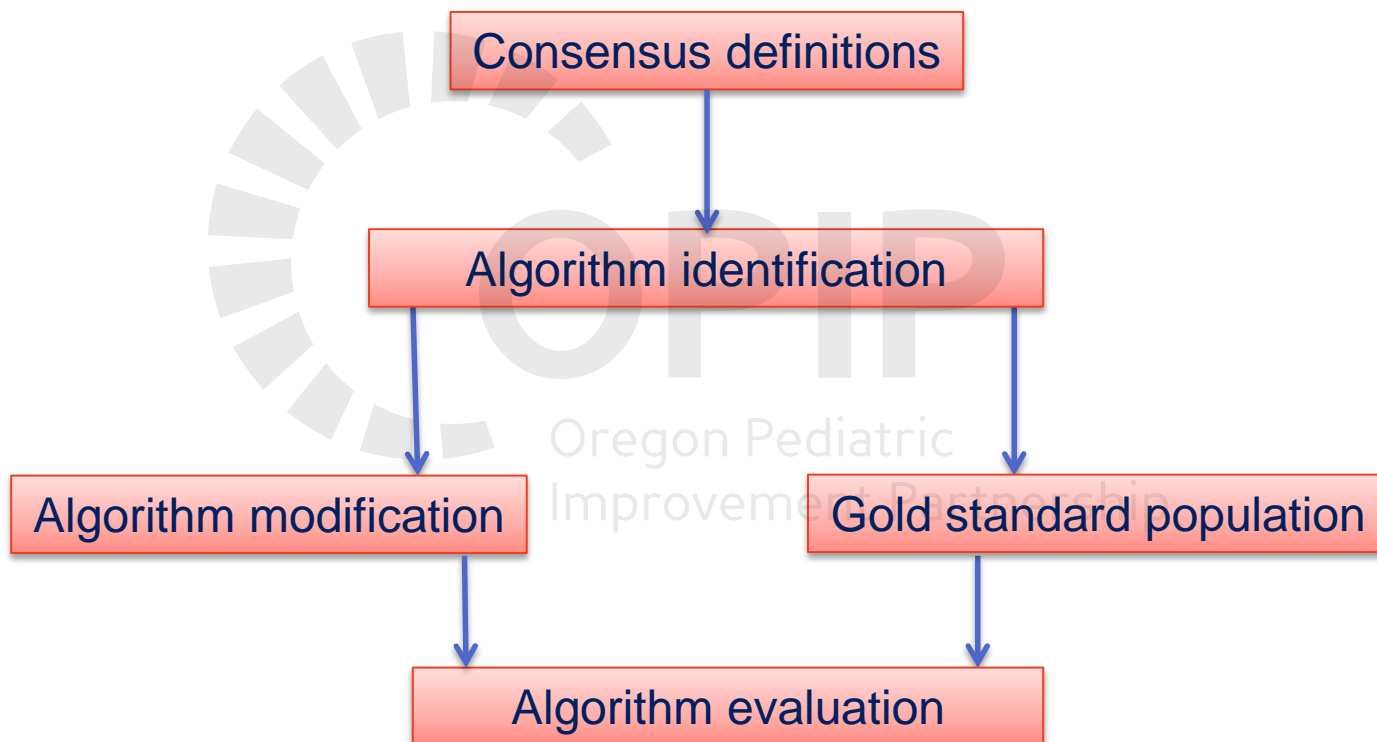
- Current focus on cost containment
  - “High Value Care”
  - Value = Quality/Cost
- If we have limited resources to address the problems faced by children with complex needs...
  - How should those resources be allocated?
    - Based on numbers of diagnoses?
    - Based on utilization patterns?
    - Based on the social context in which they live?
    - Something else?



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# COE4CCN Started with Medical Complexity

Four stages of work:



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# Defining Levels of Medical Complexity

- Developed definitions for 3 groups of children:
  - Children with Complex Chronic Disease
  - Children with Non-Complex Chronic Disease
  - Children without Chronic Disease

# Three Groups Defined: 1) Complex Chronic Disease

- Children with *Complex* Chronic Disease
  - Significant chronic condition in  $\geq 2$  body systems
    - Body system examples:
      - Pulmonary
      - Gastrointestinal
      - Mental health
    - OR-
  - Progressive condition that is associated with deteriorating health with a decreased life expectancy in adulthood
    - OR-
  - Technology dependent for 6 months
    - Ex – Ventilator, G-Tube, Tracheostomy
    - OR-
  - Malignancy – excluding those in remission for  $\geq 5$  years



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# Three Groups Defined: 2) Non-Complex Chronic Disease

- Children with *Non-Complex* Chronic Disease
  - Chronic Conditions that are lifelong but not complex
    - These are conditions that involve a single body system
    - Conditions are not progressive and are not expected to shorten life expectancy
    - Ex: type 1 diabetes
  - OR-
  - Episodic chronic conditions that have variable duration and severity
    - Ex: ADHD, Asthma, Diabetes

# Three Groups Defined: 3) Healthy Group

- Children who are Healthy
  - No chronic conditions
  - Occasional self-limited acute illnesses
    - Ex: Ear infections, pneumonia, bronchiolitis

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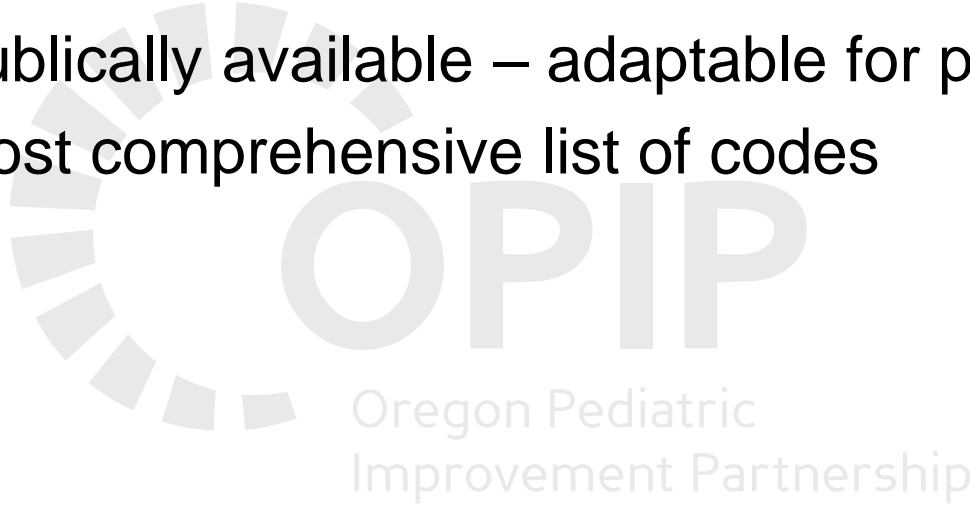
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# Algorithm Identification

- Identified existing algorithms that could be applied to administrative data to potentially identify these groups
  - Proprietary
    - 3M Clinical Risk Groups (CRGs)
  - Publicly Available
    - Feudtner's Complex Chronic Conditions (CCCs)
    - Perrin/Kuhlthau's Chronic Conditions List (CCL)
    - Chronic Illness and Disability Payment System (CDPS)

# Algorithm Selection and Adaptation

- Selected CDPS
  - Publically available – adaptable for pediatrics
  - Most comprehensive list of codes



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# Algorithm Adaptation

- Adapted CDPS algorithm = Pediatric Medical Complexity Algorithm (PMCA)
  - Removed codes consistent with adult illness
    - Ex: COPD
  - Removed all codes related to childbirth
  - Removed all codes consistent with acute illness
    - Ex: Acute otitis media, femur fracture, pneumonia
  - Assigned body system to each grouper category
    - Ex: pulmonary, mental health, cardiac
  - Classified each remaining condition as either
    - Progressive
    - Non-Progressive



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# Development of SAS Code for PMCA to Categorize Children

Category	Less Conservative Approach	More Conservative Approach
<b>COMPLEX CHRONIC CONDITION</b>		
• <b>Progressive Condition</b>	$\geq 1$ claim	$\geq 1$ claim
• <b>Malignancy</b>	$\geq 1$ claim	$\geq 1$ claim
• <b>Other</b>	$\geq 1$ claim per body system for 2 different body systems	$\geq 2$ claims per body system for 2 different body systems
<b>NON-COMPLEX CHRONIC CONDITION</b>		
	$\geq 1$ claim for a single body system not flagged as progressive or malignancy	$\geq 1$ claim for a single body system not flagged as progressive or malignancy
<b>HEALTHY</b>		
	None of the above	None of the above

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# Identification of a Gold Standard Population

- Detailed chart review using consensus definitions
  - Patients with one ED visit or hospitalization to Seattle Children's Hospital in 2010 and insured by WA State Medicaid
    - 350 Children with Complex Disease
    - 100 Children with Non-Complex Disease
    - 250 Children without Chronic Disease
  - 678 identified in WA Medicaid database
    - PMCA applied to these data



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# Sensitivity and Specificity of PMCA in WA Medicaid Claims Data – Less versus More Conservative Approach

	Complex Chronic		Non-Complex Chronic		Healthy	
	sensitivity	specificity	sensitivity	specificity	sensitivity	specificity
PMCA: Less	91%	79%	37%	88%	69%	94%
PMCA: More	89%	85%	45%	91%	80%	91%



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# Sensitivity and Specificity of PMCA in WA Medicaid Claims Data - FFS vs. MC: More Conservative Approach

	Complex Chronic		Non-Complex Chronic		Healthy	
	sensitivity	specificity	sensitivity	specificity	sensitivity	specificity
PMCA: FFS	89%	71%	35%	95%	78%	93%
PMCA: MC	89%	88%	49%	88%	81%	88%



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# Key Points and Recommendations

- Identifying children with medical complexity is different than identify adults with medical complexity
  - In pediatrics – multiple low prevalence conditions
  - Requires a method that considers *both diagnoses and utilization*
- For optimal performance, we recommend:  
Medicaid claims data: PMCA algorithm, *more* conservative approach, up to 3 years of data



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# Identification of Children with *Medical Complexity*

- Critical to identify these children in the era of health care reform
- Delegate limited resources and funds
- Most likely to benefit from care coordination
- May suffer the worst quality of care

# Identification of Children with *Non-Complex Chronic Disease*

- Most difficult to correctly classify
- Nature of these conditions
  - Range in severity from mild to severe
  - Episodic – some largely resolve with increasing age
- Results in highly variable health care utilization over time
- May benefit from resources such as care coordination when *social complexity* is also present



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# What is “Social Complexity”?

One potential definition:

*“A set of co-occurring individual, family or community characteristics that can have a direct impact on health outcomes or an indirect impact by affecting a child’s access to care and/or a family’s ability to engage in recommended medical and mental health treatments.”*



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# Can we validly identify children with social complexity using administrative data?

- Two studies conducted to answer this question
  - WA State Medicaid data study
    - What SC risk factors can we identify?
    - Do children with these risk factors have increased ED utilization?
      - Potential marker for poor access to a medical home
  - MN State Medicaid data study
    - What SC risk factors can we identify?
    - Are they concordant with caregiver reports of SC?
    - Does SC predict caregiver reported need for care coordination services?

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# WA Medicaid Study

- Literature review to identify SC risk factors associated with poor outcomes:
  - ↑ ED utilization
  - ↑ Ambulatory care sensitive hospitalizations
  - ↓ Well child care visits
  - ↓ Frequency of being fully vaccinated
  - ↓ Continuity of care

# WA Medicaid Study

- Identified 12 SC risk factors from literature review related to worse outcomes
  1. Parent domestic violence
  2. Parent mental illness
  3. Parent physical disability
  4. Child abuse/neglect
  5. Poverty
  6. Low English proficiency
  7. Foreign born parent
  8. Low parent educational attainment
  9. Adolescent exposure to intimate partner violence
  10. Parent substance abuse
  11. Discontinuous insurance coverage
  12. Foster care

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# WA Medicaid Study

- Hypothesized 6 additional SC risk factors that may be associated with worse outcomes:
  1. Parent death
  2. Parent criminal justice involvement
  3. Homelessness
  4. Child mental illness
  5. Child substance abuse
  6. Child criminal justice involvement

# WA Medicaid Study: Database

- WA Department of Social and Health Services Integrated Database includes:
  - Medicaid claims and encounter data
  - Payment and service records
  - Arrest records
- Records for children are linked to biological parents in the database
  - 83% of children in the database (n= 505,357) had 1 or 2 biological parents in the database

# Thirteen of the 18 SC risk factors could be identified in the database

1. Parent domestic violence
2. Parent mental illness
3. Child mental illness
4. Child abuse/neglect – child welfare system involvement
5. Severe poverty (TANF eligible)
6. Low English proficiency
7. Foreign born parent\*
8. Homelessness
9. Foster care\*
10. Parent death
11. Parent criminal justice involvement
12. Child criminal justice involvement
13. Child substance abuse

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\* Not included due to co-linearity with other SC risk factors

# Are these risk factors associated with increased ED utilization?

- Controlled for medical complexity using the Pediatric Medical Complexity Algorithm (PMCA)
- Controlled for child gender, age, race, ethnicity
- Wanted to understand the *independent effect* of having these SC risk factors on ED utilization



# WA State Medicaid Population: Medical Complexity

	<5 years (N=180,198)	5-17 years (N=325,169)
Medical complexity (PMCA)		
Healthy (no chronic condition)	84%	79%
Non-complex chronic	11%	16%
Complex chronic	5%	5%



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# What about Social Complexity?

Social Complexity Risk Factors	<5 years (N=180,198)	5-17 years (N=325,169)
<b>Parent</b>		
Domestic violence	5%	4%
Death	<1%	2%
Mental illness	31%	33%
Criminal justice involvement	44%	40%
<b>Family</b>		
Child welfare system involvement	28%	35%
Homelessness	17%	17%
Poverty	27%	23%
Limited English proficiency	26%	19%
<b>Child</b>		
Mental illness	n/a	18%
Substance abuse treatment need	n/a	2%
Juvenile/criminal justice involvement	n/a	3%

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# What about Social Complexity?

Number of Social Complexity Risk Factors	<5 years (N=180,198)	5-17 years (N=325,169)
0	21%	20%
1	30%	27%
2	20%	21%
3	14%	15%
4	9%	10%
≥5	6%	8%



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# Social Complexity and Emergency Department Visits

Social Complexity Risk Factors	Odds Ratio	95% Confidence Interval	
<b>Parent</b>			
Domestic violence	1.0	1.0	1.0
Death	1.1	1.0	1.1
Mental illness	1.2	1.2	1.2*
Criminal justice involvement	1.1	1.1	1.1*
<b>Family</b>			
Child welfare system involvement	1.1	1.1	1.1*
Homelessness	1.1	1.1	1.1*
Poverty	1.3	1.3	1.4*
Limited English proficiency	1.1	1.0	1.1*
<b>Child</b>			
Mental illness	1.2	1.2	1.2*
Substance abuse treatment need	1.5	1.5	1.6*
Juvenile/criminal justice involvement	1.5	1.5	1.6*

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# Social Complexity and Emergency Department Visits

Number of Social Complexity Risk Factors	Risk Ratio	95% Confidence Interval	
1	1.3	1.2	1.3*
2	1.5	1.5	1.6*
3	1.7	1.7	1.8*
4	2.0	2.0	2.1*
≥5	2.4	2.4	2.5*

\*Significant at  $p < .0001$

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# What have we concluded from this study?

- 9 SC risk factors identifiable in state data are associated with ↑ ED utilization which may indicate poor access to outpatient primary care and need for care coordination:
  - Severe Poverty
  - Limited English proficiency
  - Parent mental illness
  - Parent criminal justice involvement
  - Child welfare system involvement (child abuse/neglect)
  - Homelessness
  - Child mental illness
  - Child substance abuse treatment need
  - Child juvenile or criminal justice involvement



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# What have we concluded from this study?

- The association of these risk factors with ED utilization follows a dose-response pattern
  - ↑ numbers of SC risk factors → ↑ ED visits

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# MN Medicaid Study

- Objectives:

- Determine which SC risk factors could be identified in a different state database
- Determine concordance between administrative data determined SC risk factors and caregiver reports of SC risk factors
- Assess whether presence of SC risk factors predict caregiver reported need for care coordination services



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# MN Medicaid Study: SC risk factors identifiable in MN database

- 8 of the previously targeted 18 SC risk factors were identifiable:
  - Found in both MN and WA databases:
    1. Severe poverty ( $\geq 50\%$  FPL)
    2. Child welfare system involvement (child abuse/neglect)
    3. Parent mental illness
    4. Low English proficiency
    5. Homelessness
  - Found in MN database but not in WA database:
    6. Parent substance abuse
    7. Parent physical disability
    8. Discontinuous child insurance coverage

# MN Medicaid Study

- 460 child-biological parent dyads in MN Medicaid database
- All children with non-complex chronic disease based on applying PMCA to MN Medicaid claims data
  - Chronic disease involving a single body system
    - EX: Asthma, Epilepsy, or Diabetes
- Assessed for SC risk factors two ways
  - MN administrative database
  - Parent survey report

# MN Medicaid Study: Administrative Data

Social Complexity Risk Factors	N= 460
<b>Parent</b>	
Mental illness	8%
Physical disability	13%
Substance abuse	10%
<b>Family</b>	
Child welfare system involvement	16%
Homelessness	1%
Severe Poverty	53%
Limited English proficiency	14%
<b>Child</b>	
Insurance gap $\geq$ 3 months	6%



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# MN Medicaid Study: Administrative Data

Number of Social Complexity Risk Factors	N = 460
0	29%
1	35%
2	25%
≥ 3	11%

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# MN Medicaid Study: Concordance

Social Complexity Risk Factors: <b>Admin Data</b>	Social Complexity Risk Factors: <b>Parent Survey</b>	<b>Correlation</b>
<b>Parent</b>		
Mental illness	<u>SF-12</u> : Activities limited due to MH	0.57***
Physical disability	<u>SF-12</u> : Activities limited due to PH	0.46***
Substance abuse	Not asked	N/A
<b>Family</b>		
Child welfare involvement	Not asked	N/A
Homelessness	1+ nights on street last 12 mo.	0.72***
Severe Poverty	Not asked	N/A
Limited English proficiency	Speaks English “not well” or “not at all”	0.85***
<b>Child</b>		
Insurance gap $\geq$ 3 mo.	Child had no insurance $\geq$ 3 mo.	0.79***

\*\*  $p < .01$ , \*\*\*  $p < .001$

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# MN Medicaid Study: Does SC predict parent-reported need for CC?

Predictor Variable	OR (95% CI)	P-Value
Any SC Risk Factor (unadjusted)	1.65 (1.07, 2.53)	0.02
Any SC Risk Factor (adjusted)	1.53 (0.98, 2.37)	0.06
Age (years)	1.03 (0.99, 1.08)	0.11
Male gender	0.96 (0.65, 1.42)	0.83
Non-Hispanic Black	2.32 (1.49, 3.61)	<0.001
Hispanic	1.35 (0.67, 2.73)	0.40
Other Race	1.06 (0.56, 1.98)	0.86

# What have we concluded from our work?

- As we think about “tiered care”, keep in mind...
  - Even children with a single SC risk factor are at risk for worse outcomes and/or increased reported need for care coordination
- Given limited resources, we may need to focus on children with:
  - medical complexity
  - multiple social complexity risk factors
  - both non-complex chronic disease and social complexity
  - all of the above



# What can we do about medical and social complexity?

- Care coordination can
  - Help with access to care and services
    - For children and their caregivers
  - Improve communication
    - Between providers and families
    - Between different providers
- Care coordination can't
  - Prevent homelessness
  - Address poverty
  - Reduce adverse childhood experiences
- These are problems that will require very different solutions



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# Key Points

- Social complexity is - by itself - predictive of worse utilization patterns for children
- Key social complexity risk factors include *adult risk factors*
  - EX: Caregiver mental illness
- No one organization will have all the data needed to determine a child's level of medical and social complexity
- Data sharing across organizations is essential

# Recommendations for Designing Care Management Programs

- Comprehensive assessment at enrollment
  - Level Medical Complexity – PMCA
  - Social Complexity
- Determines the disciplines you need on your care team
  - Nursing, social workers, patient navigators/community health workers

# Recommendations for Designing Care Management Programs

- Comprehensive plan of care developed based on child's medical and social complexity profile
- Level of service provided depends on child's profile
- Potential interventions are tailored to need:
  - ED/IP episode of care follow-up
  - School advocacy
  - Providing PCP with needed supports
  - 30 or 60 day check-ins when stabilized





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# **Time for Our Shared Discussion: Opportunities to Build Off and Leverage These Learnings for Children and Youth in Oregon**



# Questions for Our Health System and Primary Care Providers Attendees:

- What resonated for you based on the data presented?
- What strategies do you use now to identify children to receive care coordination and/or complex care management?
- Health Systems: How many children within your health systems have parents also in your system?
  - Do you know the percent?
  - Have you already strategized on how you may use information at the family-level to better meet their needs?
- **What risk factors presented do you wish you had access to data about in order to better serve children and families?**
- **Based on the findings presented, what is the most exciting opportunity you think should be explored?**

# What have we concluded from this study?

- 9 SC risk factors identifiable in state data are associated with ↑ ED utilization which may indicate poor access to outpatient primary care and need for care coordination:
  - Severe Poverty
  - Limited English proficiency
  - Parent mental illness
  - Parent criminal justice involvement
  - Child welfare system involvement (child abuse/neglect)
  - Homelessness
  - Child mental illness
  - Child substance abuse treatment need
  - Child juvenile or criminal justice involvement



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## Questions for Our Partners Within the State

- **Of the social complexity risk factors presented, which ones do you have access to?**
- What would it take to enable data sharing to better support children and families?
  - **Based on the findings presented, what is the most exciting opportunity you think should be explored?**
  - What are learnings from data sharing already occurring about children (e.g. foster care)?
  - What are there the biggest barriers and why?



## Next Steps

- OPIP will send a **summary of the meeting** from today
- Refinement and enhancement of processes in **KPNW**, broader work across KP (OPIP's component ends in December)
- Proposal to **Lucile Packard Foundation on Children's Health** to support KPNW work related to stratification, tiering, and convening of this group to share specific learning
- If helpful, **support discussions about opportunities** identified today

