

System-Level Approaches to Identify Children with Health Complexity and Develop Models for Complex Care Management

Stakeholder Meeting to Obtain Feedback 11/8/17

A Project of the Oregon Pediatric Improvement Partnership Supported by the Lucile Packard Foundation for Children's Health



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Welcoming Remarks

Jeremy Vandehey, Acting Director of Health Policy and Analytics, Oregon Health Authority



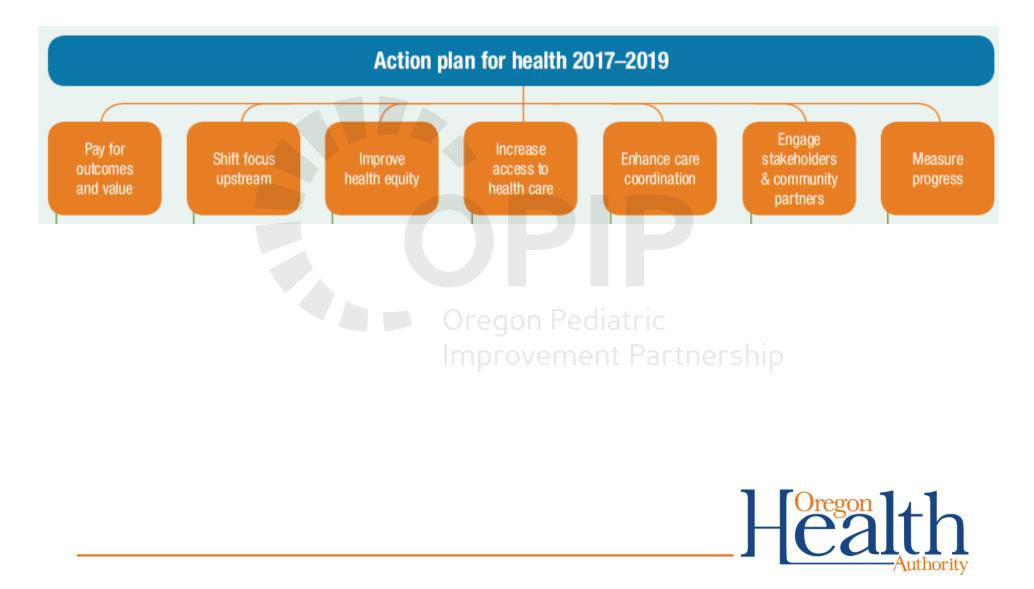
Waiver Renewal: Key Components The Next Level of Reform

- 1. Build on transformation with focus on integration of physical, behavioral, and oral health care through a performance driven system
- 2. More deeply address **social determinants of health and health equity** with the goal of improving population health and health outcomes
- 3. Commit to continuing to hold down costs through an integrated budget that grows at a sustainable rate
- 4. Continue to expand the coordinated care model





Oregon Health Policy Board's Action Plan



Importance of a Focus on Children

- Within OHA, children are an important population to focus efforts:
 - Children represent about 2 in 5 publicly insured clients.
 - Children 0-18 years old are 42% of clients enrolled in Medicaid
 - Children with medical & social complexity represent an important opportunity to focus our efforts to enhance coordinated care:
 - National studies show that children with special health care needs represent roughly 15-20% of the childhood population and account for 80% of the healthcare expenditures for all children.
 - There is also an unquantifiable cost to families
 - » Families are required to become care coordinators in addition to their role as the care taker of the child.
 - » Impacts well being, ability to work, and family functioning
 - Early life experiences, such as Adverse Childhood Events, can impact lifelong health.
 - Children with exposure to ACES are more likely to be adults with chronic conditions
 - Value in intervening early and building resilience
 - Social complexity impacts the complexity of medical conditions



Oregon Health Authority, Health Analytics' Commitment to this Work

Jon Collins, PhD Health Analytics Director

Oregon Pediatric Improvement Partnership



Power of Data

- Strength of robust claims data across types of services, service lines, and CCOs enrolled
- Centralized staffing to analyze data
 - Value in centralized learning curve
 - Value in facilitation of across agency agreements about how data can be shared
 - May be cumbersome for this to be done within silos or for specific groups
- Value in more robust data to understand state level population needs, regional needs
 - Understand better child health needs based on data available
 - Informing shared conversations across departments
- Identify federal, state, local and private partners that are leads or influence the area/determinate
 - Identify related performance measures or quantified objectives
- Consider how this information can possibly be used to enhance Medicaid Value Based Payments for addressing Social Determinants of Health



From Data to Information

- Scope of Today's Conversation: Discussion with CCOs to facilitate sharing of information that aligns with the goals of this project
- For this project, OHA has committed to providing in-house resources to analyze <u>and share information to CCOs about</u>:
 - Medical complexity
- Social Complexity, which involves coordination and collaboration with various state agencies and significant data cleaning efforts

Health Complexity for Children

- Commitment anchored to hypothesis that this meaningful information will be used by CCOs
- A key goal for today is to understand how, within the scope of this project and work, we can set this up for success
 - Given significant staffing resource are being invested, we need to understand ROI in terms of use by CCOs in partnership with many of the stakeholders in the room



Agenda for Today:

1) Context Setting: Key Components of the Project, Efforts Leading up to the LPCHF Proposal, Importance of Public/Private Stakeholder Engagement

2) Review Specific System-level Data that Will be Used to Operationalize Health Complexity Based on Indicators of Medical & Social Complexity Part 1: Pediatric Medical Complexity Algorithm Part 2: Indicators of Social Complexity Part 3: Medical + Social Complexity = Health Complexity

- 3) Input from Attendees and Group-Level Discussion
 - Part 1: Targeted input related to specific components of data scoring & dissemination
 - Part 2: Global input anchored to the scope of the project

4) Next Steps



Problem.....or Opportunity!

- Despite wonderful gains in patient centered primary care homes, coordinated care organizations, and other efforts related to complex care management, there is a need to provide enhanced supports to children with health complexity.
 - In order to impact children's future health & preventable chronic conditions, we need to address predictive social determinants of health and build resilience
- One component of this effort needs to include a system-level focus.
 - At a system-level, in order to focus on children with health complexity, there is a need to be able to identify them.
 - In order to identify children with health complexity that may benefit from complex health management, systems need:
 - Methods that are valid, reliable and meaningful for children
 - Standardized and feasible using data available at the system-level
 - Include data that takes into account

Medical Complexity AND

- + Social Complexity
 - Health Complexity



Efforts that Led Up to OPIP's Proposal

- OPIP efforts with practices and health systems focused on:
 - Identifying children and youth with special health care needs
 - Care Coordination, methods for tiering patients
 - Complex Care Management Pilot within Kaiser Permanente Northwest (KPNW)
- Stakeholder Engagement on the Need and Opportunity for System-Level Methods to Identify Children with Health Complexity
 - OPIP Partners Meetings (Public and Private Stakeholders): Fall 2015, Spring 2016
 - August 11th 2016- Meeting of Leaders within OHA, State Departments that Address Social Complexity, CCOs and Health Care Providers
 - Value and Need was Confirmed Amongst Attendees;
 - CCOs Indicated they would USE the Information
- Follow-Up to 8/11/16 Meeting
 - **OHA Health Analytics**
 - Pediatric Medical Complexity Algorithm
 - Data request to the Integrated Client Services Data Warehouse
 - **OPIP**
 - Continued work with KPNW to pilot complex health management for children, Develop system-level approaches to identify children with health complexity
 - OPIP asked to submit a proposal to Lucile Packard Foundation for
 - Children's Health



OPIP Funded Proposal from

Lucile Packard Foundation for Children's Health

- Title: System-Level Approaches to Identify Children with Health Complexity and Develop Models for Complex Care Management
- Goal: Inform health systems on novel and generalizable approaches to identify, and design complex care management programs for, children with health complexity.
- Time Period: August 2017-March 2019
- Key Partners:
 - Oregon Health Authority (Letter from Leslie Clement, Partnership with OHA Health Analytics)
 - Kaiser Permanente Northwest Publicly & Privately insured
 - Coordinated Care Organizations (Health Share of Oregon Submitted a Letter of Support)

Children We Are Focusing On: Some Definitions

• Medical Complexity

- Utilize the Pediatric Medical Complexity Algorithm (PMCA)
 - Takes into account: 1) Utilization, 2) Diagnoses, 3) Number of Body Systems Impacted
 Assigns child into one of three categories: a) Complex with chronic conditions;
 - b) Non-Complex, with chronic conditions; or c) Healthy.
- Social Complexity:
 - Defined by The Center of Excellence on Quality of Care Measures for Children with Complex Needs (COE4CCN) as "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".
 - Operationalizing factors identified by *COE4CCN* as predictive of a high-cost health care event (e.g. emergency room use).
- Health Complexity: Combines medical and social complexity to create global score.
 - COE4CCN findings were that the children we may be most able to positively impact and lower costs through complex care management are those with:
 - Some level of medical complexity AND social complexity risk factors



OPIP

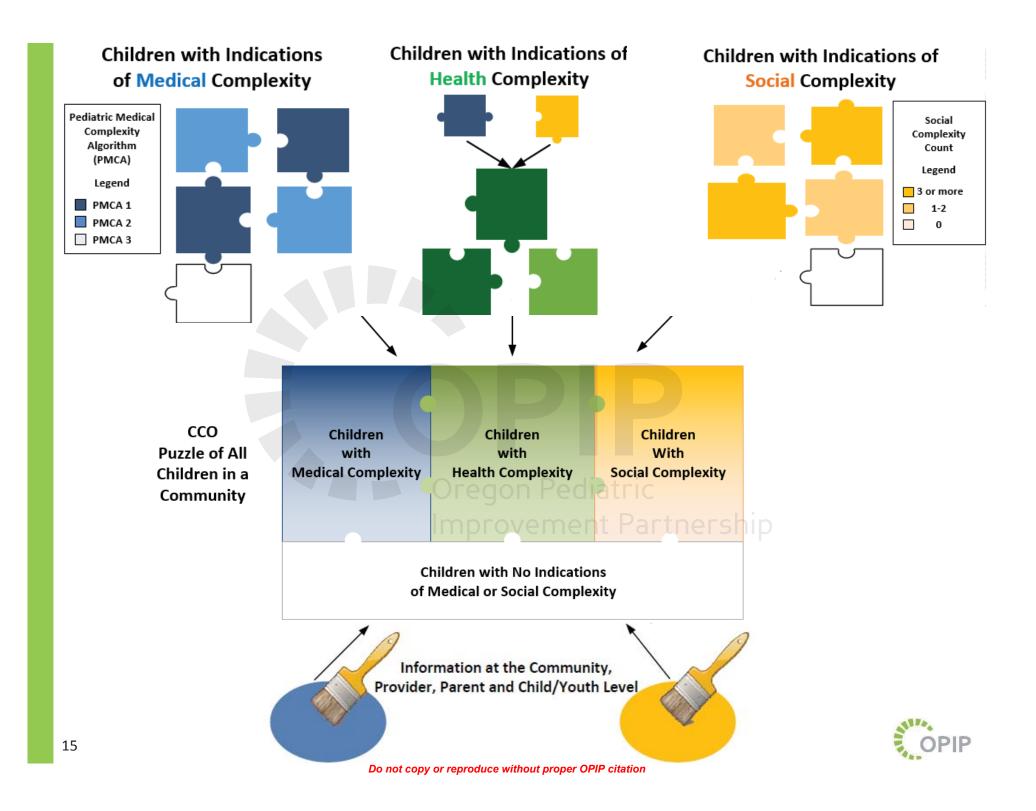
Social Complexity Factors Identified by the

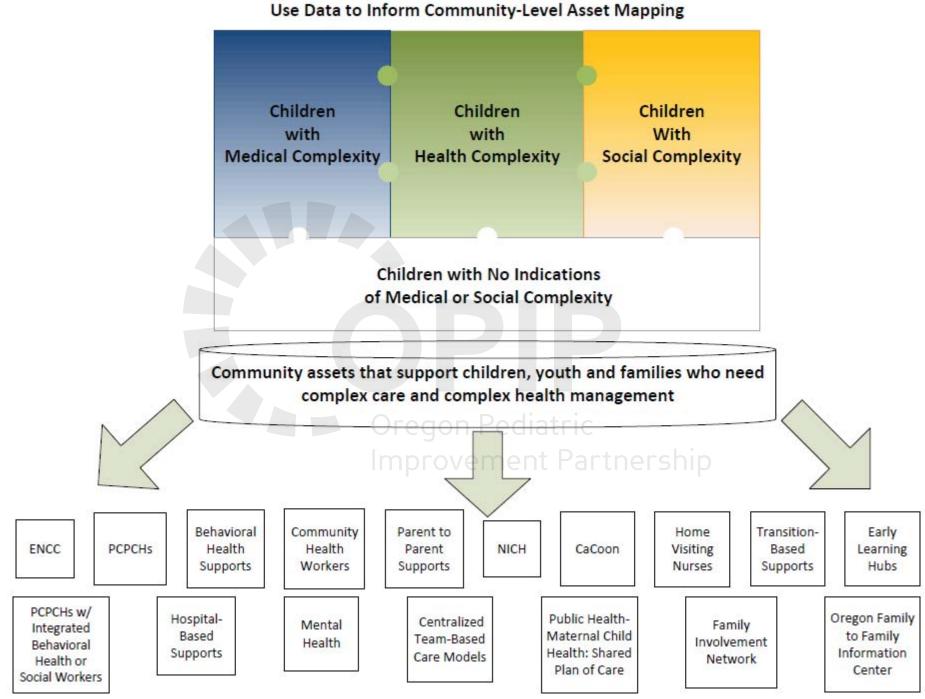
Center of Excellence on Quality of Care Measures for Children with Complex Needs (COE4CCN)

- 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

- COE4CCN Identified an additional 6 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 treatment
- Child criminal justice involvement





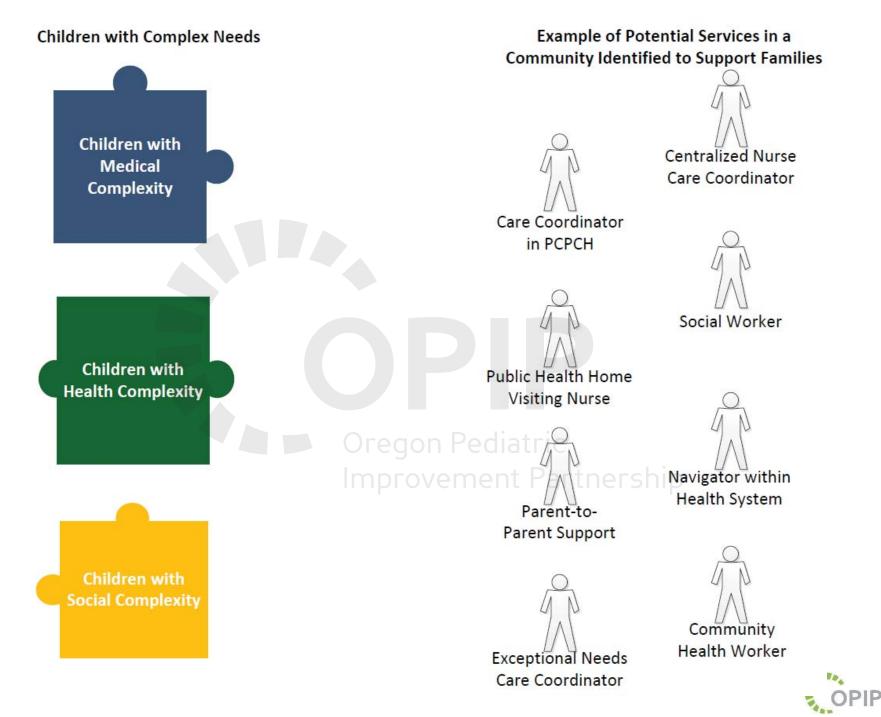


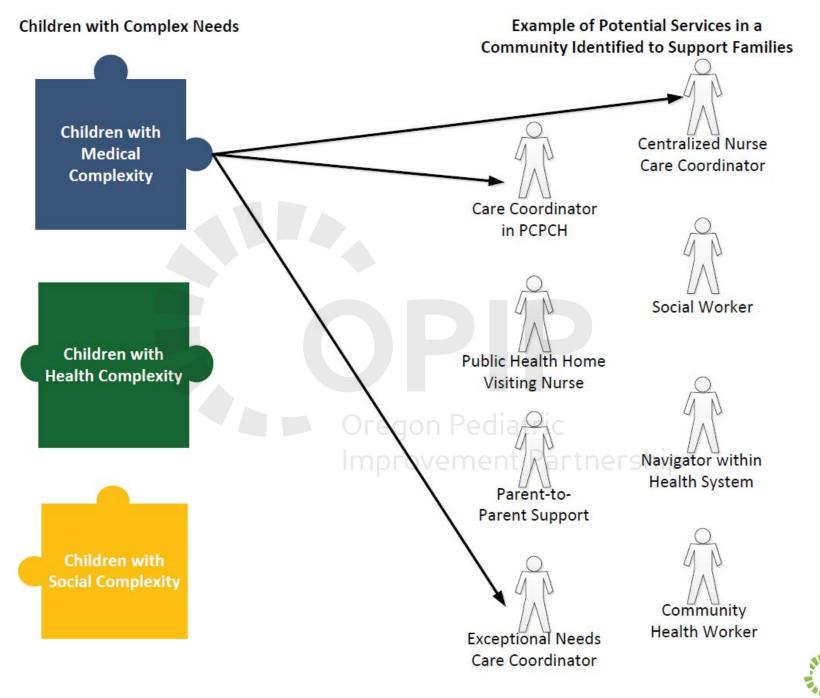
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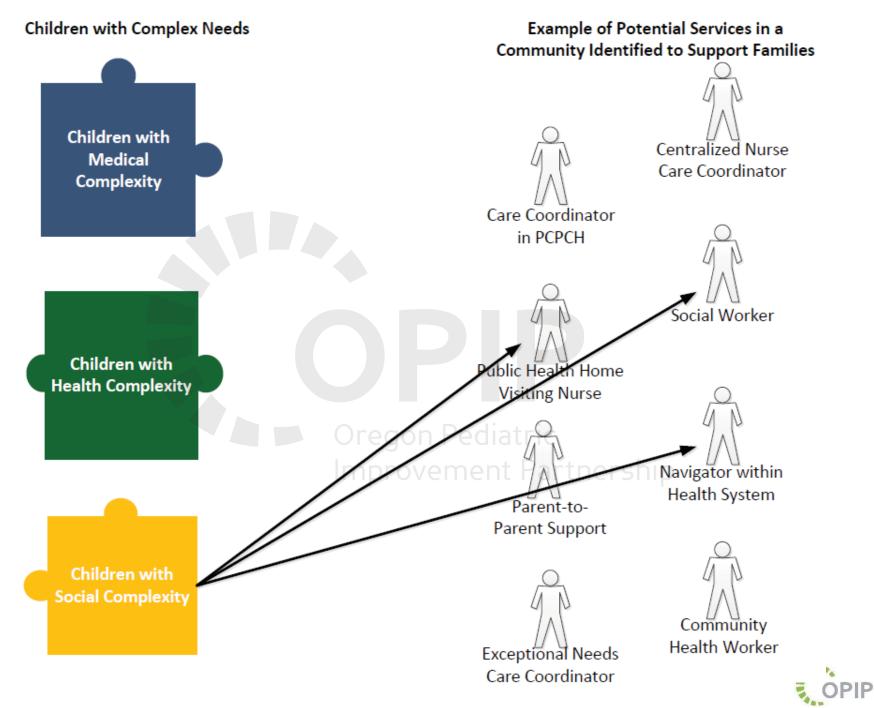
Value of Indicator Data

- Prioritize who would benefit from further assessments and information about health complexity and complex care and/or care coordination needs gathered from the primary care provider and patient/family.
 - Culture shift on the front-line of the medical and social indictors of health and opportunities for support.
- Combined with this assessment information:
- Prioritize which children/families to receive complex health management vs. which children could benefit from enhanced care coordination
- Propose the <u>best match team</u> for that child/family and best match <u>outreach approach</u>
- Use system-level quantitative metrics to determine and track resource investments needed for each child/family

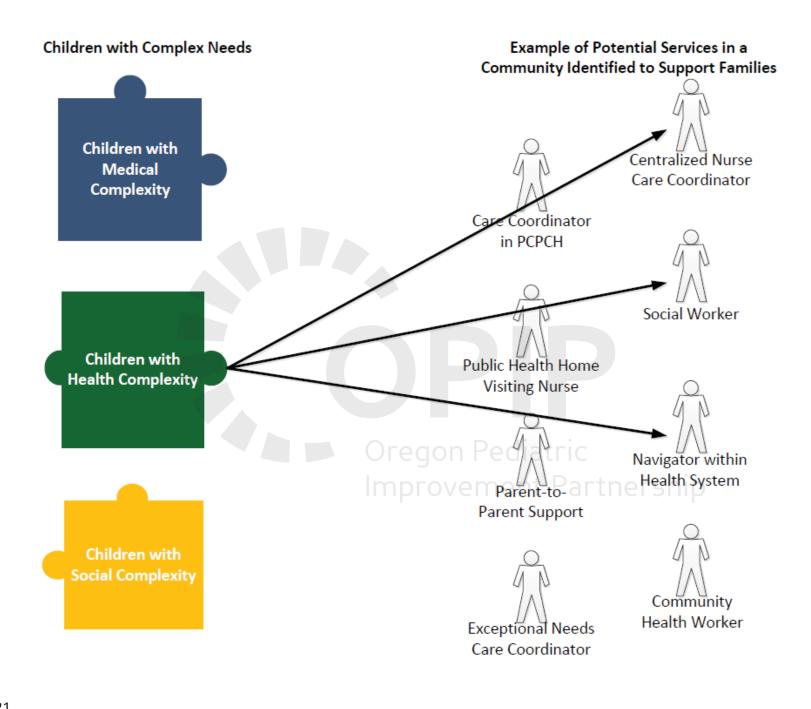








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Purpose and Scope for Today's Conversation

- Engagement of **public and private stakeholders**, including CCOs, on the component of the project that relates to <u>Oregon Health Authority- Health</u> <u>Analytics</u> efforts to analyze, score, and <u>disseminate data to CCOs</u> on:
 - Medical Complexity
 - Social Complexity
 - A global indicator of Health Complexity
- Input We Need Today Given Timing of the Project & Specific to the Scope
 - Analysis within OHA focused on indicators of medical and social complexity
 - Sharing this indicator information with CCOs
- Future meetings will focus on health complexity indicators, complex care management models
- Therefore, given short time period and need for insight on current project priorities we will be very strict about within scope conversations
 - Please use the feedback sheet provided to raise important issues for future discussion and consideration



Let's Get Polling

- Let's find out more about who is here today.
- List of attendees in your packet.
- We intentionally invited public and private stakeholders to this meeting.
- Let's see who we have here today.
 - 1. Please indicate which group you represent:
 - a) Coordinated Care Organization
 - b) Oregon Health Authority Pediatric
 - c) State Department mprovement Partnership
 - d) Health care providers, IPA for Health Care Providers
 - e) Parents of children with health complexity
 - f) Other (Please Specify)





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Hearing About the

Value and Need for this Work from the End Users

- Parents of children with health complexity
 - Is there a need for and value in these efforts focused on identifying children with health complexity and sharing these indicators with Coordinated Care Organizations?
- Health Care Providers
 - Given the current infrastructure, do children and their families with health complexity get the supports they need?
 - Have you seen the different and collective impact that medical and social complexity has on your ability to provide quality care that maximizes the child's health?
 - Is there value in OHA leveraging data available to identify this important a group of children with specific indicators?
- Coordinated Care Organizations
 - Will this information help you understand your pediatric population and their potential needs better?
 - Do you currently have a standardized, valid method to use system-level data to identify children with health complexity?

Review of Specific Data Used to Operationalize Global Indicator of Health Complexity Based on Flags of Medical and Social Complexity

Oregon Pediatric
Improvement Partnership



Figure 2.0: Overview of System-Level Data used to Identify Children with Medical and Social Complexity, with the goal of Classifying Children with Health Complexity Who Would Benefit from Complex Care Management and Novel Data Sharing to CCOs/Health Systems

Children with Medical Complexity

Children Identified & Classifications Used: A Medical Complexity Score will be used, which incorporates utilization, diagnosis, and number of body systems impacted. The three categories of complexity are: 1) Children with Complex Chronic Disease 2) Children with Non-Complex Chronic Disease 3) Children without Chronic Disease

Standardized Scoring & Reporting Method: Pediatric Medical Complexity Algorithm (PMCA)

Data Source: Based on Oregon Health Authority (OHA) medical claims related to utilization and diagnosis. Examines all claims for publicly insured children, across all providers, in the last three years, regardless of lapse in insurance or changes to the CCO to which the child is assigned.

Child-Level Data from OHA to CCO

Data Sharing Through Project:

For children assigned to the CCO/KPNW, child-level PMCA classifications (see three categories above).

Periodicity

Data are currently being run, and sharing to CCOs is expected within 2017. It is currently expected that there will be annual sharing of this information.

Children with

Social Complexity

Children Identified & Classifications Used: A Social Complexity Score (indicating the number of social complexity

risk factors identified) will be created based on "a set of cooccurring individual, family, or community characteristics that 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.*

Standardized Scoring & Reporting Method:

None currently exists. This project supports development of a scoring algorithm. Some elements of this data may be ready at different times. Therefore, there may be sharing of data based on program eligibility and administrative data shared separately from Integrated Client Services (ICS) data. Data Sources: Three: 1) OHA Program Eligibility, 2) Administrative data used for Chronic Illness and Disability Payment System (CDPS), & 3) Integrated Client Services (ICS) Data Warehouse for the child and their parents. ICS includes data across the Oregon Department of Human Services (DHS) and OHA client-based services. Includes data from the following DHS Programs: Aging and People with Disabilities, Child Welfare, Developmentally Disabled, Self-Sufficiency, Vocational Rehabilitation. Includes data from the following OHA Programs: Alcohol and Drug (AD), Contraceptive Care (C-Care), Family Health Insurance Assistance Program (FHIAP), Healthy Kids Connect (HKC), Medical Assistance Programs (MAP), Mental Health (MH), Women Infants Children (WIC). Includes data from the following external agencies: Department of Corrections (DOC), Oregon Housing and Community Services.

Child-Level Data to OHA/CCO/KPNW

Data Sharing Through Project:

OHA Medicaid/CCO/KPNW will receive child-level social complexity score(s) for children assigned to them. This data will provide information about total complexity, but won't provide specific information on specific risk factors. Data based on the program and CDPS data sources may be shared separately and at different times than data from ICS.

Periodicity: To be determined through the project's facilitated discussions. Data have been obtained by OHA, and they are currently being assessed for validity and additional factors. Goal is to implement data sharing by Spring 2018.

Children with Health Complexity

Children Identified & Classification Used: A Health Complexity Score will be created that combines the Medical Complexity Score and Social Complexity Score. This project supports the facilitation of conversations across public and private stakeholders about the scoring algorithms that will be used and the final classification to be made for each child.

Standardized Scoring & Reporting Method: None currently exists. *This project supports these data being combined for the first time.*

Data Source:

Medical Complexity & Social Complexity information at a child level for children insured by Medicaid.

Child-level Data from OHA to CCOs/KPNW

Data Sharing Through Project:

For children assigned to their CCO/KPNW, Health Complexity Score.

Periodicity

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Note About This Session

- Review each component in detail in first so that full picture can be understood
 - The power is in the bigger picture
 - That said, different data is available at different parts and we want to support folks in using data available
 - This is a data sharing quality improvement project with PDSA cycles related to data sharing
- Then we will open it up for your input about individual parts or sections once you the larger picture is clear
- Given our short time today and given limited resources provided in the project, we want to hone in on questions within the scope of project



Figure 2.0: Over Complexity Who

(PMCA)

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OPIP

Part 1: Pediatric Medical Complexity Algorithm

- Developed by a team at Seattle Children's, Validated by Center of Excellence on Quality of Care Measures for Children with Complex Needs (COE4CCN)
 - For children 0 to 18 insured
 - Developed as a way to target and allocate care coordination resources
- Based on Claims and Diagnosis
- Categorizes complexity into three categories:
 - 1) Complex Chronic Disease,
 - 2) Non-Complex Chronic Disease, and
 - 3) Without Chronic Disease
- Takes into account three main factors:
 - Diagnoses
 - Number of body systems impacted vement Partnership
 - Patient utilization
- The three categories are co-linear with COST (*i.e.* as complexity increases, so does cost)

Slide adapted from overview materials provided here: http://www.seattlechildrens.org/research/child-health-behavior-and-development/mangione-smith-lab/measurement-tools/



Pediatric Medical Complexity Algorithm (PMCA)

1) Complex Chronic Disease

- Sig. chronic condition in two or more body systems
- Progressive condition associated with deteriorating health and decreased life expectancy in adulthood OR
- Technology dependent for 6 months OR
- Malignancy, excluding those in remission for more than five years

2) Non-Complex Chronic Disease, and

- Chronic conditions that are lifelong but not complex
 - One body system
 - Conditions not progressive
- Episodic chronic conditions with variable duration and severity

3) Without Chronic Disease

- No chronic conditions
- Occasional self-limited acute
 - (e.g. ear infection)



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- 📃 🗾 Oregon Pediatrio

- Technology dependent for 6 monthsment Partnership
 - Ex Ventilator, G-Tube, Tracheostomy -OR-
- Malignancy excluding those in remission for \geq 5 years



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 Improvement Partnership
 - Episodic chronic conditions that have variable duration and severity
 - Ex: ADHD, Asthma, Diabetes



3) Healthy Group

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

Oregon Pediatric Improvement Partnership



OHA Application of the Pediatric Medical Complexity Algorithm (PMCA)

Current Proposal Based on Developers Recommendations:

- Use the "Most Conservative" approach given robustness of data
- Look back period: 2 years, across all services
 Across all CCOs or programs child enrolled
 - Across all types of services (Physical, Mental, Dental)



Important Disclaimers: What is There and What is Not There

- PMCA not a population estimate of CYSHCN at-large
- PMCA is intentionally based on claims, diagnoses and utilization, to target kids that <u>may</u> have care coordination needs as they are accruing costs
- Because it is based on utilization
 - Does not capture medically complex children who are not accessing services
 - Does not capture medically complex children who cannot access specialized services
 Oregon Pediatric
 - Does not capture kids whose various diagnoses were not coded, the complexity of their medical information not in the data we have access to
- Medical Complexity DOES NOT equal need for complex care management....and Vice Versa



Preliminary Findings

Data Summarized by...

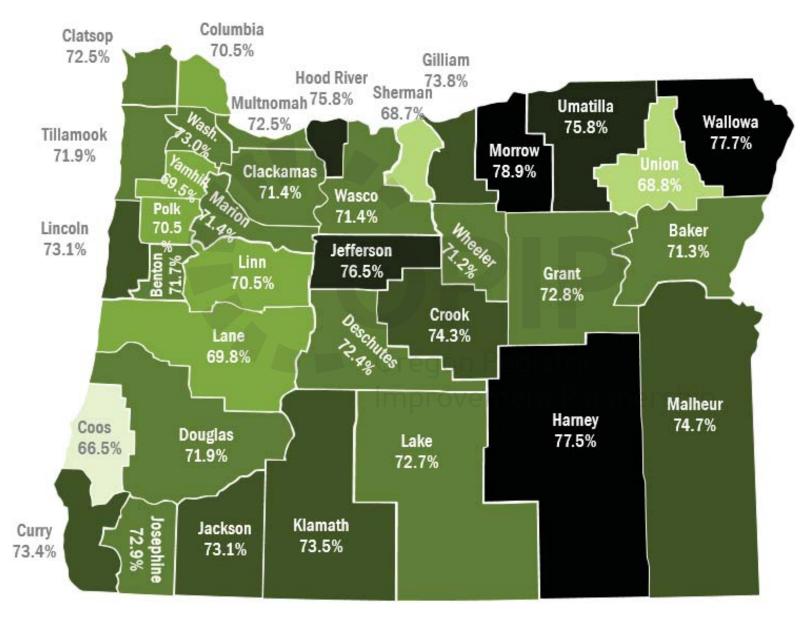
1) State

2) Regional Variation

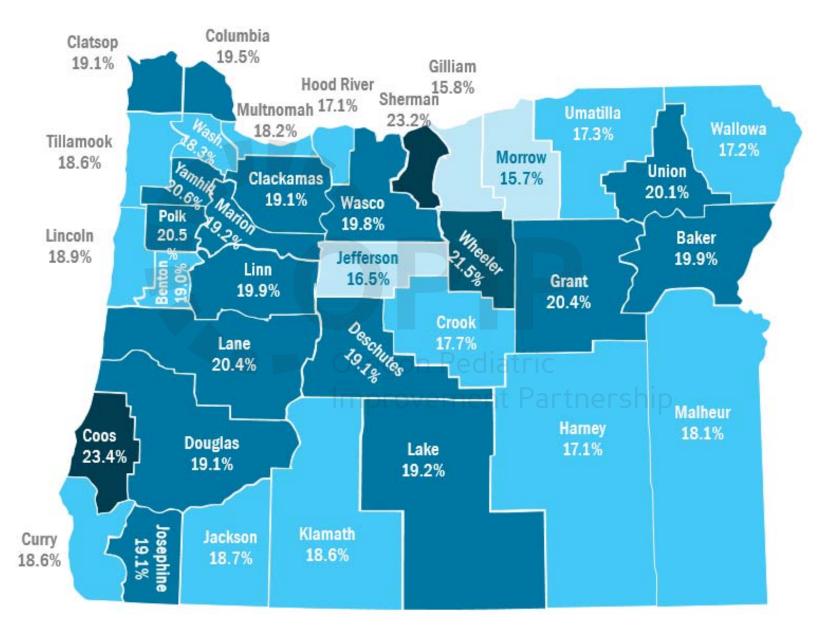
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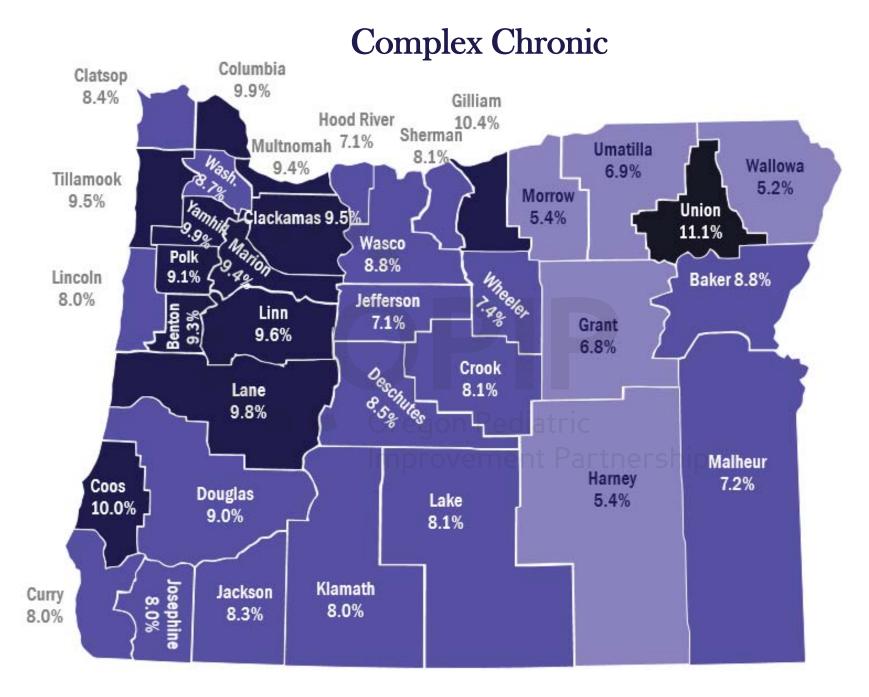


Non-Chronic Healthy



Non-Complex Chronic





Baker	71.3%	19.9%	8.8%
Benton	71.7%	19.0%	9.3%
Clackamas	71.4%	19.1%	9.5%
Clatsop	72.5%	19.1%	8.4%
Columbia	70.5%	19.5%	9.9%
Coos	66.5%	23.4%	10.0%
Crook	74.3%	17.7%	8.1%
Curry	73.4%	18.6%	8.0%
Deschutes	72.4%	19.1%	8.5%
Douglas	71.9%	19.1%	9.0%
Gilliam	73.8%	15.8%	10.4%
Grant	72.8%	20.4%	6.8%
Harney	77.5%	17.1%	5.4%
Hood River	75.8%	17.1%	7.1%
Jackson	73.1%	18.7%	8.3%
Jefferson	76.5%	16.5%	7.1%
Josephine	72.9%	19.1%	8.0%
Klamath	73.5%	18.6%	8.0%
Lake	72.7%	19.2%	8.1%
Lane	69.8%	20.4%	9.8%
Lincoln	73.1%	18.9%	8.0%
Linn	70.5%) regon Pediati	19.9%	9.6%
Malheur	74.7%	18.1%	7.2%
Marion	714%nprovement P	19.2%	9.4%
Morrow	78.9%	15.7%	5.4%
Multnomah	72.5%	18.2%	9.4%
Polk	70.5%	20.5%	9.1%
Sherman	68.7%	23.2%	8.1%
Tillamook	71.9%	18.6%	9.5%
Umatilla	75.8%	17.3%	6.9%
Union	68.8%	20.1%	11.1%
Wallowa	77.7%	17.2%	5.2%
Wasco	71.4%	19.8%	8.8%
Washington	73.0%	18.3%	8.7%
Wheeler	71.2%	21.5%	7.4%
Yamhill	69.5%	20.6%	9.9%

Non-Chronic Healthy - Non-Complex Chronic - Complex Chronic

Additional Options We Will be Exploring

- Children for whom Medicaid is the 2nd Insurance
 - Examining the feasibility and validity of using the All Payor All Claims (APAC) to understand indications of medical complexity through the first insurance
 - Estimates indicate that we have claims for approximately 80% of Oregon's population.
 - Known gaps in APAC are
 - –1) ERISA self-insured plans are exempt due to Gobeille, and
 - –2) Oregon's reporting threshold is 5,000 covered lives.



Proposal for Sharing to CCOs (Scope of This Project)

- Proposal is anchored to hypothesis this information will be used.
- We will share data over course of the project.
 - If we see the data is used by CCOs in a meaningful way, then we want to explore how and the periodicity

Current Proposal:

- a) Global Report: CCO rate and comparisons to other CCOs
 - Overall, By Age Groups, Race-Ethnicity, County
 - Periodicity of Sharing: Annually ediatric
- b) Child-level indicator score based on PMCA labelling
 - Categorical Variable: 1) Children with Complex Chronic Disease, 2) Children with Non-Complex Chronic Disease, 3) Children without Chronic Disease
 - Periodicity of Sharing: Annually



Figure 2.0: Overview of System-Level Data used to Identify Children with M Complexity Who Would Benefit from Complex Care Management and Nove and Social Complexity, with the goal of Classifying Children with Health varing to CCOs/Health Systems

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Children Identified & Classifications Used:A Social Complexity Score (indicating the number of social complexity risk factors identified) will be created based on "a set of cooccurring individual, family, or community characteristics that 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.*

Standardized Scoring & Reporting Method:

None currently exists. This project supports development of a scoring algorithm. Some elements of this data may be ready at different times. Therefore, there may be sharing of data based on program eligibility and administrative data shared separately from Integrated Client Services (ICS) data. Data Sources: Three: 1) OHA Program Eligibility, 2) Administrative data used for Chronic Illness and Disability Payment System (CDPS), & 3) Integrated Client Services (ICS) Data Warehouse for the child and their parents. ICS includes data across the Oregon Department of Human Services (DHS) and OHA client-based services. Includes data from the following DHS Programs: Aging and People with Disabilities, Child Welfare, Developmentally Disabled, Self-Sufficiency, Vocational Rehabilitation. Includes data from the following OHA Programs: Alcohol and Drug (AD), Contraceptive Care (C-Care), Family Health Insurance Assistance Program (FHIAP), Healthy Kids Connect (HKC), Medical Assistance Programs (MAP), Mental Health (MH), Women Infants Children (WIC). Includes data from the following external agencies: Department of Corrections (DOC), Oregon Housing and Community Services.

Child-Level Data to OHA/CCO/KPNW

Data Sharing Through Project:

OHA Medicaid/CCO/KPNW will receive child-level social complexity score(s) for children assigned to them. This data will provide information about total complexity, but won't provide specific information on specific risk factors. Data based on the program and CDPS data sources may be shared separately and at different times than data from ICS.

Periodicity: To be determined through the project's facilitated discussions. Data have been obtained by OHA, and they are currently being assessed for validity and additional factors. Goal is to implement data sharing by Spring 2018.

* Social Complexity as defined by The Center of Excellence on Quality of Care Measures for Children with Complex Needs (COE4CCN)

Children with Health Complexity

Children Identified & Classification Used: A Health Complexity Score will be created that combines the Medical Complexity Score and Social Complexity Score. This project supports the facilitation of conversations across public and private stakeholders about the scoring algorithms that will be used and the final classification to be made for each child.

Standardized Scoring & Reporting Method: None currently exists. *This project supports these data being combined for the first time.*

Data Source:

Medical Complexity & Social Complexity information at a child level for children insured by Medicaid.

Child-level Data from OHA to CCOs/KPNW

Data Sharing Through Project:

For children assigned to their CCO/KPNW, Health Complexity Score.

Periodicity To be determined through the project's facilitated discussions. Goal is to implement data sharing by Fall 2018.

OPIP

Children with

Social Complexity

Children Identified & Classifications Used:A Social Complexity Score (indicating the number of social complexity risk factors identified) will be created based on "a set of cooccurring individual, family, or community characteristics that 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.*

Standardized Scoring & Reporting Method:

None currently exists. This project supports development of a scoring algorithm. Some elements of this data may be ready at different times. Therefore, there may be sharing of data based on program eligibility and administrative data shared separately from Integrated Client Services (ICS) data. Data Sources: Three: 1) OHA Program Eligibility, 2) Administrative data used for Chronic Illness and Disability Payment System (CDPS), & 3) Integrated Client Services (ICS) Data Warehouse for the child and their parents. ICS includes data across the Oregon Department of Human Services (DHS) and OHA client-based services. Includes data from the following DHS Programs: Aging and People with Disabilities, Child Welfare, Developmentally Disabled, Self-Sufficiency, Vocational Rehabilitation. Includes data from the following OHA Programs: Alcohol and Drug (AD), Contraceptive Care (C-Care), Family Health Insurance Assistance Program (FHIAP), Healthy Kids Connect (HKC), Medical Assistance Programs (MAP), Mental Health (MH), Women Infants Children (WIC). Includes data from the following external agencies: Department of Corrections (DOC), Oregon Housing and Community Services.

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Trying to Anchor Work to Center of Excellence on Quality of Care Measures for Children with Complex Needs (COE4CCN) Factors

- 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

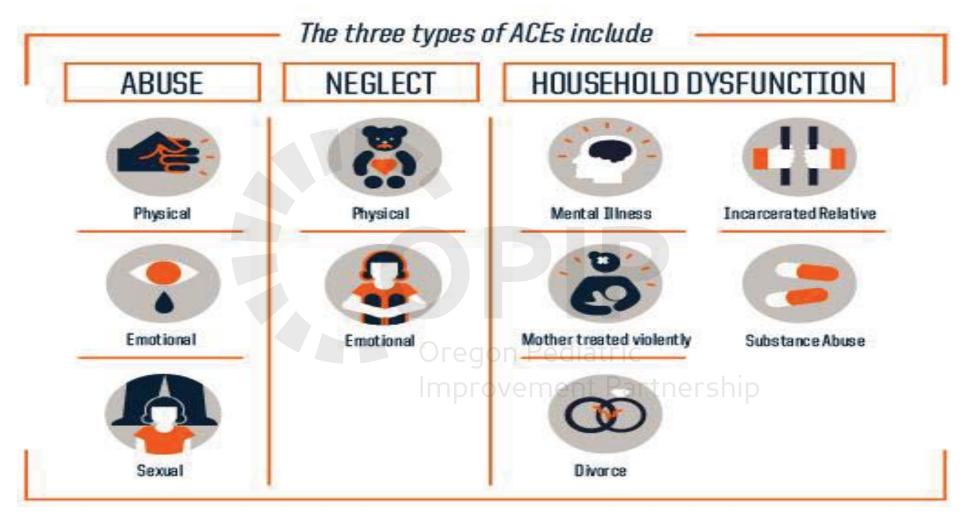
10.Parent substance abuse

- 11.Discontinuous insurance coverage
- 12.Foster care

- COE4CCN Identified an additional 6 SC risk factors that may be associated with worse outcomes:
 - 1. Parent death
 - 2. Parent criminal justice involvement
 - 3. Homelessness
 - 4. Child mental illness
- on **P5.** di Child substance abuse
- pinment reatment need
 - 6. Child criminal justice involvement



ACE Informed Approach





Important Note: ONLY Global Counts Will be Shared

- The following slides will show the specific indicators that are being used to develop a global social complexity indicator.
- Individual data will not be shared at an identifiable manner in accordance with data sharing agreements.

Oregon Pediatric Improvement Partnership



Indicators Included GLOBAL Social Complexity Based on Available Data and Agreements and Feasibility to Merge with OHA-Analytics Data At This Time:

- 1. Poverty
 - Child or child's parent(s) have history on SNAP caseload
 - Severe Poverty- child or child's parent(s) have a history on TANF caseload
- 2. Mental Health <u>Child has a history of interaction with mental</u> health services
- 3. Mental Health <u>Parent</u> of child has a history of interaction with mental health services
- 4. Parental Incarceration
- 5. Foster Care ORKids
- 6. Death of parent or primary caregiver.



DRAFT PROPOSAL: GLOBAL Social Complexity Indicator

- Look Back Time Period: Last 16 Years
- Notes About Specific Indicators:
 - Mental Health (Child or Family): Does not consider if interaction was one time or repeated.
 - Parental Incarceration: Based on history with Department of Corrections. Only includes state-level felonies. Lesser crimes are not included in the data
 - Foster Care Child has been placed in foster care. This can include kinship care where the child is placed with a relative.
 - Death of parent Child has experienced the death of a parent or primary caregiver. This will not include any parent(s) who died outside of Oregon.



Preliminary Learnings at the Process

- State of Integrated Client Services and Integrated Client Services Data Warehouse
- Data sharing agreements that create warehouse different than...
 - Data sharing agreements of combined data and then sharing with specific entities
- Importance of building collaboration and trust
- Importance of match between proposed use and sharing
- Importance engaging various OHA offices (e.g. Equity and Inclusion)
- Value of centralized data cleaning and structure
 - Analytic conventions to clean data-de-duplicate/what's in/out
 - Analytic conventions/decisions must create alignment with use and interpretation of findings



Preliminary Findings--All Exploration

- Social program data availability and degree of overlap with risk factor list
- Service enrollment observations vs. unique individuals which need to be counted differently
- How children are paired with families
- Determine whether service data include parents or children or both
- Determine whether risk factor is defined by parents or only children in denominators
- Degree to which risk factors overlap



Children Observations Integral Process of Linking and Attributing Observations to Specific Children

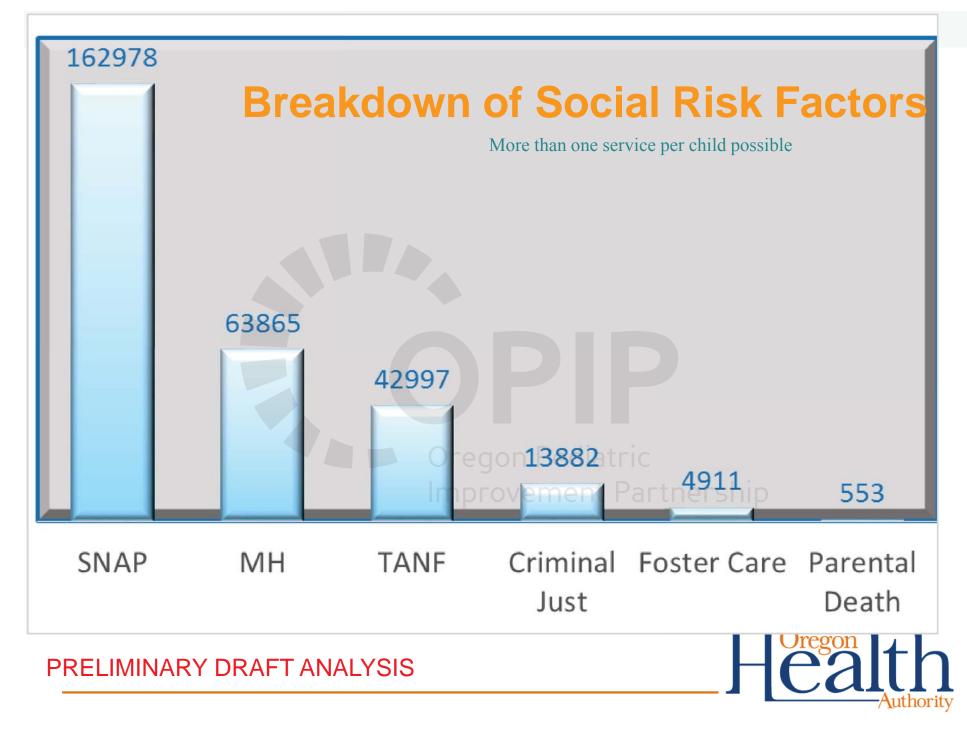
232,622 Individual Children

400,083 Flagged Observations

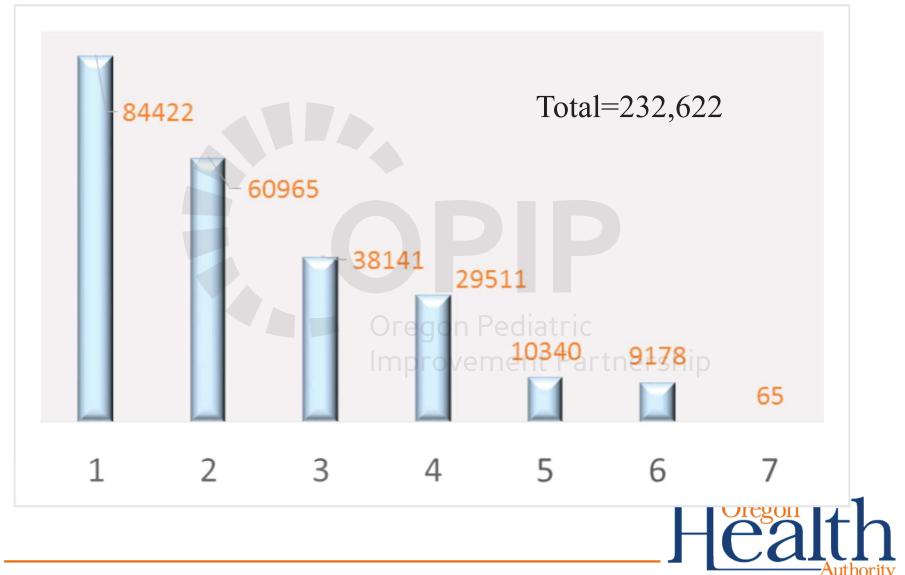
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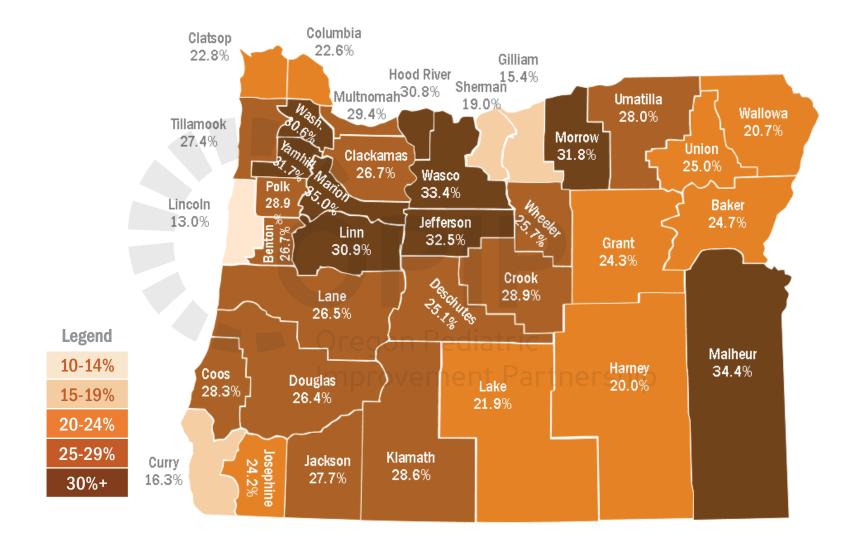




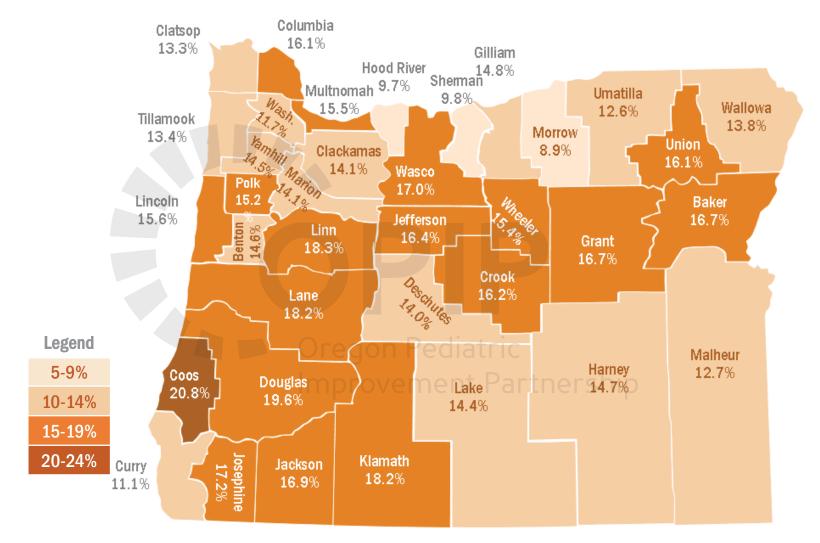
Risk Factor Count Per Child Preliminary Exploratory Analysis Findings



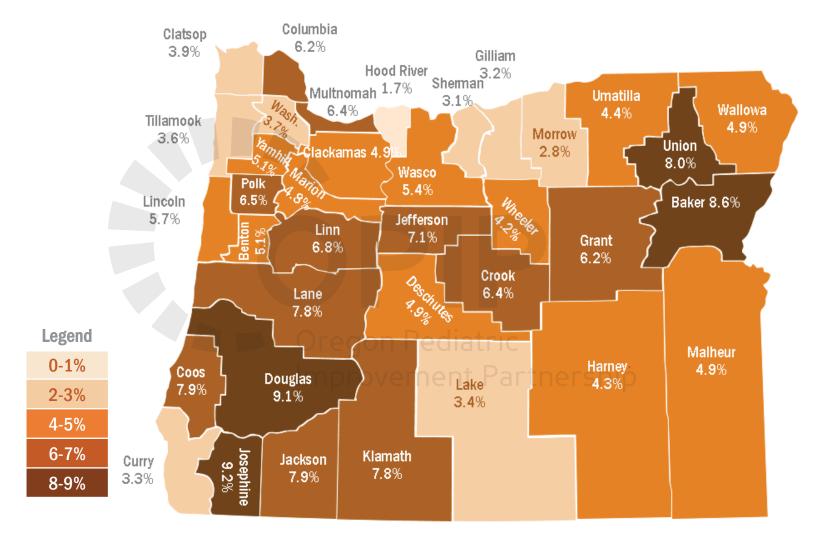
Percent of children with 1-2 social risk factors



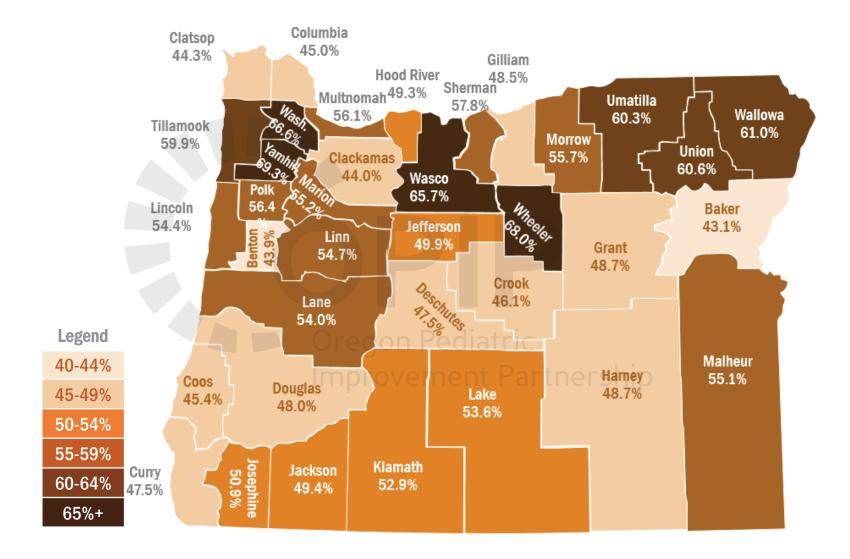
Percent of children with 3-4 social risk factors



Percent of children with 5+ social risk factors



Percent of children with **0** social risk factors



Baker 49.9% 24.7% 16.7% 8.6% Benton 53.8% 26.7% 14.6% 5.1% Clackamas 34.4% 22.8% 14.6% 5.1% Calasop 59.9% 22.8% 13.3% 3.3% Columbia 65.2% 22.8% 16.1% 6.2% Coos 43.1% 28.9% 16.2% 6.4% Crook 48.5% 28.9% 16.2% 6.4% Deschutes 56.1% 28.9% 16.2% 6.4% Douglas 45.0% 26.4% 19.6% 9.1% Gilliam 66.6% 18.4% 14.8% 3.2% Hamey 61.0% 20.0% 14.7% 4.3% Hamey 61.0% 20.0% 14.7% 4.3% Josephine 49.3% 22.3% 16.4% 7.1% Jackson 47.5% 26.0% 13.2% 7.3% Lake 60.3% 22.9% 13.2% 7.3% Jackso	Social Risk Factor Score:	0	1-2	3-4 5+
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Klamath 45.4% 28.6% 18.2% 7.8% Lake 60.3% 21.9% 14.4% 3.4% Lane 47.5% 26.5% 18.2% 7.8% Lincoln 65.7% 13.0% 15.6% 5.7% Linn 44.0% 30.9% 18.3% 6.8% Malheur 48.0% 34.4% 12.7% 4.9% Marion 46.1% 35.0% 14.1% 4.8% Morrow 56.4% 31.8% 8.9% 2.8% Multromah 48.7% 29.4% 15.5% 6.4% Polk 49.4% 28.9% 15.2% 6.5% Sherman 68.0% 19.0% 9.8% 3.1% Tillamook 55.7% 27.4% 13.4% 4.9% Umatilla 55.1% 28.0% 12.6% 4.4% Wallowa 60.6% 20.7% 13.8% 4.9% Washington 54.0% 33.4% 17.0% 5.4% Washington 54.0% 30.6% 11.7% 3.7%	Jefferson	43.9%	32.5%	16.4% 7.1%
Lake 60.3% 21.9% 14.4% 3.4% Lane 47.5% 26.5% 18.2% 7.8% Lincoln 65.7% 13.0% 15.6% 5.7% Linn 44.0% 30.9% 18.3% 6.8% Malheur 48.0% 34.4% 12.7% 4.9% Marion 46.1% 35.0% 14.1% 4.8% Morow 56.4% 31.8% 8.9% 2.89 Multnomah 48.7% 29.4% 15.5% 6.4% Polk 49.4% 28.9% 15.2% 6.5% Sherman 68.0% 19.0% 9.8% 3.19 Tillamook 55.7% 27.4% 13.4% 3.6% Umatilla 55.1% 28.0% 12.6% 4.4% Wallowa 60.6% 20.7% 13.8% 4.9% Waskington 54.0% 30.6% 11.7% 3.7%	Josephine	49.3%	24.2%	17.2% 9.2%
Lane 47.5% 26.5% 18.2% 7.8% Lincoln 65.7% 13.0% 15.6% 5.7% Linn 44.0% 30.9% 18.3% 6.8% Malheur 48.0% 34.4% 12.7% 4.9% Marion 46.1% 35.0% 14.1% 4.8% Morrow 56.4% 31.8% 8.9% 2.89 Multhomah 48.7% 29.4% 15.5% 6.4% Polk 49.4% 28.9% 15.2% 6.5% Sherman 68.0% 19.0% 9.8% 3.19 Tillamook 55.7% 27.4% 13.4% 3.6% Umatilla 55.1% 28.0% 12.6% 4.4% Union 50.9% 25.0% 16.1% 8.0% Wallowa 60.6% 20.7% 13.8% 4.9% Washington 54.0% 33.4% 17.0% 5.4% Wheeler 54.7% 25.7% 15.4% 4.2%	Klamath	45.4%	28.6%	18.2% 7.8%
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Linn 44.0% 30.9% 18.3% 6.8% Malheur 48.0% 34.4% 12.7% 4.9% Marion 46.1% 35.0% 14.1% 4.8% Morow 56.4% 31.8% 8.9% 2.89 Multho mah 48.7% 29.4% 15.5% 6.4% Polk 49.4% 28.9% 15.2% 6.5% Sherman 68.0% 19.0% 9.8% 3.19 Tillamook 55.7% 27.4% 13.4% 3.6% Umatilla 55.1% 28.0% 12.6% 4.4% Union 50.9% 25.0% 16.1% 8.0% Wallowa 60.6% 20.7% 13.8% 4.9% Wasco 44.3% 33.4% 17.0% 5.4% Washington 54.0% 30.6% 11.7% 3.7%	Lane	47.5%	26.5%	18.2% 7.8%
Malheur 48.0% 34.4% 12.7% 4.9% Marion 46.1% 35.0% 14.1% 4.8% Morrow 56.4% 31.8% 8.9% 2.89 Multnomah 48.7% 29.4% 15.5% 6.4% Polk 49.4% 28.9% 15.2% 6.5% Sherman 68.0% 19.0% 9.8% 3.19 Tillamook 55.7% 27.4% 13.4% 3.6% Umatilla 55.1% 28.0% 12.6% 4.4% Union 50.9% 25.0% 16.1% 8.0% Wallowa 60.6% 20.7% 13.8% 4.9% Wasco 44.3% 33.4% 17.0% 5.4% Washington 54.0% 30.6% 11.7% 3.7% Wheeler 54.7% 25.7% 15.4% 4.2%	Lincoln	65.7%	13.0%	15.6% 5.7%
Marion 46.1% 35.0% 14.1% 4.8% Morrow 56.4% 31.8% 8.9% 2.89 Multho mah 48.7% 29.4% 15.5% 6.4% Polk 49.4% 28.9% 15.2% 6.5% Sherman 68.0% 19.0% 9.8% 3.19 Tillamook 55.7% 27.4% 13.4% 3.6% Umatilla 55.1% 28.0% 12.6% 4.4% Union 50.9% 25.0% 16.1% 8.0% Wallowa 60.6% 20.7% 13.8% 4.9% Wasco 44.3% 33.4% 17.0% 5.4% Washington 54.0% 30.6% 11.7% 3.7% Wheeler 54.7% 25.7% 15.4% 4.2%	Linn	44.0% OTEQ	30.9% d L I C	18.3% 6.8%
Morrow 56.4% 31.8% 8.9% 2.8% Multnomah 48.7% 29.4% 15.5% 6.4% Polk 49.4% 28.9% 15.2% 6.5% Sherman 68.0% 19.0% 9.8% 3.19 Tillamook 55.7% 27.4% 13.4% 3.6% Umatilla 55.1% 28.0% 12.6% 4.4% Union 50.9% 25.0% 16.1% 8.0% Wallowa 60.6% 20.7% 13.8% 4.9% Wasco 44.3% 33.4% 17.0% 5.4% Washington 54.0% 30.6% 11.7% 3.7% Wheeler 54.7% 25.7% 15.4% 4.2%	Malheur	48.0%	34.4%	12.7% 4.9%
Multhomah 48.7% 29.4% 15.5% 6.4% Polk 49.4% 28.9% 15.2% 6.5% Sherman 68.0% 19.0% 9.8% 3.19 Tillamook 55.7% 27.4% 13.4% 3.6% Umatilla 55.1% 28.0% 12.6% 4.4% Union 50.9% 25.0% 16.1% 8.0% Wallowa 60.6% 20.7% 13.8% 4.9% Wasco 44.3% 33.4% 17.0% 5.4% Washington 54.0% 30.6% 11.7% 3.7% Wheeler 54.7% 25.7% 15.4% 4.2%	Marion	46.1%	VCI IC 35.0% CI U	14.1% 4.8%
Polk 49.4% 28.9% 15.2% 6.5% Sherman 68.0% 19.0% 9.8% 3.19 Tillamook 55.7% 27.4% 13.4% 3.6% Umatilla 55.1% 28.0% 12.6% 4.4% Union 50.9% 25.0% 16.1% 8.0% Wallowa 60.6% 20.7% 13.8% 4.9% Wasco 44.3% 33.4% 17.0% 5.4% Washington 54.0% 30.6% 11.7% 3.7% Wheeler 54.7% 25.7% 15.4% 4.2%	Morrow	56.4%	31.8%	8.9% 2.8%
Sherman 68.0% 19.0% 9.8% 3.19 Tillamook 55.7% 27.4% 13.4% 3.6% Umatilla 55.1% 28.0% 12.6% 4.4% Union 50.9% 25.0% 16.1% 8.0% 1 Wallowa 60.6% 20.7% 13.8% 4.9% 4.9% 4.4% 4.2% Washington 54.0% 30.6% 11.7% 3.7% 4.2%	Multnomah	48.7%	29.4%	15.5% 6.4%
Tillamook 55.7% 27.4% 13.4% 3.6% Umatilla 55.1% 28.0% 12.6% 4.4% Union 50.9% 25.0% 16.1% 8.0% Wallowa 60.6% 20.7% 13.8% 4.9% Wasco 44.3% 33.4% 17.0% 5.4% Washington 54.0% 30.6% 11.7% 3.7% Wheeler 54.7% 25.7% 15.4% 4.2%	Polk	49.4%	28.9%	15.2% 6.5%
Umatilla 55.1% 28.0% 12.6% 4.4% Union 50.9% 25.0% 16.1% 8.0% Wallowa 60.6% 20.7% 13.8% 4.9% Wasco 44.3% 33.4% 17.0% 5.4% Washington 54.0% 30.6% 11.7% 3.7% Wheeler 54.7% 25.7% 15.4% 4.2%	Sherman	68.0%	19	.0% 9.8% 3.1%
Umatilia 55.1% 28.0% 12.6% 4.4% Union 50.9% 25.0% 16.1% 8.0% Wallowa 60.6% 20.7% 13.8% 4.9% Wasco 44.3% 33.4% 17.0% 5.4% Washington 54.0% 30.6% 11.7% 3.7% Wheeler 54.7% 25.7% 15.4% 4.2%	Tillamook	55.7%	27.4%	13.4% 3.6%
Wallowa 60.6% 20.7% 13.8% 4.9% Wasco 44.3% 33.4% 17.0% 5.4% Washington 54.0% 30.6% 11.7% 3.7% Wheeler 54.7% 25.7% 15.4% 4.2%	Umatilla	55.1%	28.0%	12.6% 4.4%
Wasco 44.3% 33.4% 17.0% 5.4% Washington 54.0% 30.6% 11.7% 3.7% Wheeler 54.7% 25.7% 15.4% 4.2%	Union	50.9%	25.0%	16.1% 8.0%
Wasco 44.3 % 33.4 % 17.0 % 54.9 % Washington 54.0 % 30.6 % 11.7 % 3.7 % Wheeler 54.7 % 25.7 % 15.4 % 4.2 %	Wallowa	60.6%	20.7%	13.8% 4.9%
Wheeler 54.7% 25.7% 15.4% 4.2%	Wasco	44.3%	33.4%	17.0% 5.4%
		54.0%	30.6%	
Yamhill 48.7% 31.7% 14.5% 5.1%		54.7%	25.7%	
	Yamhill	48.7%	31.7%	14.5% 5.1%

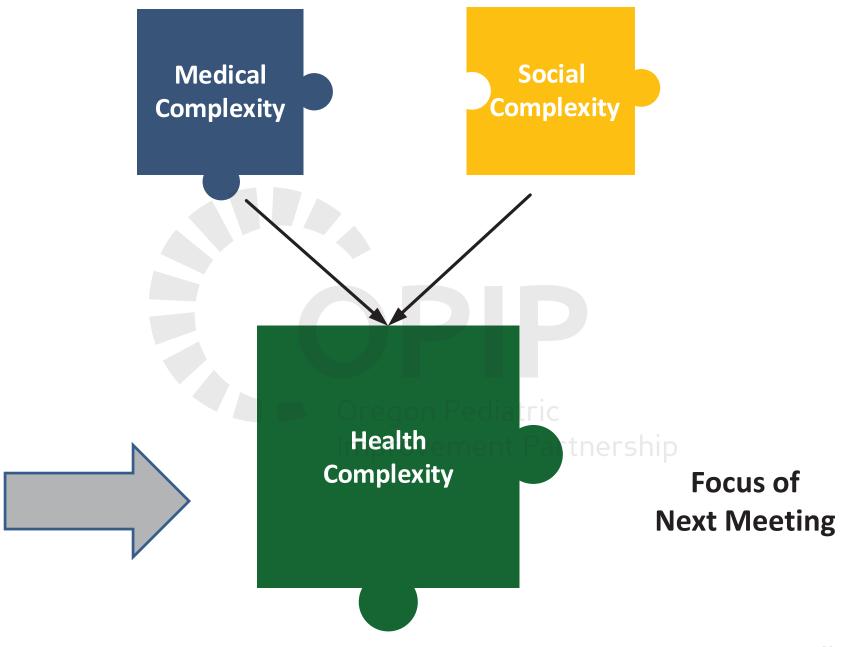
PRELIMINARY DRAFT ANALYSIS

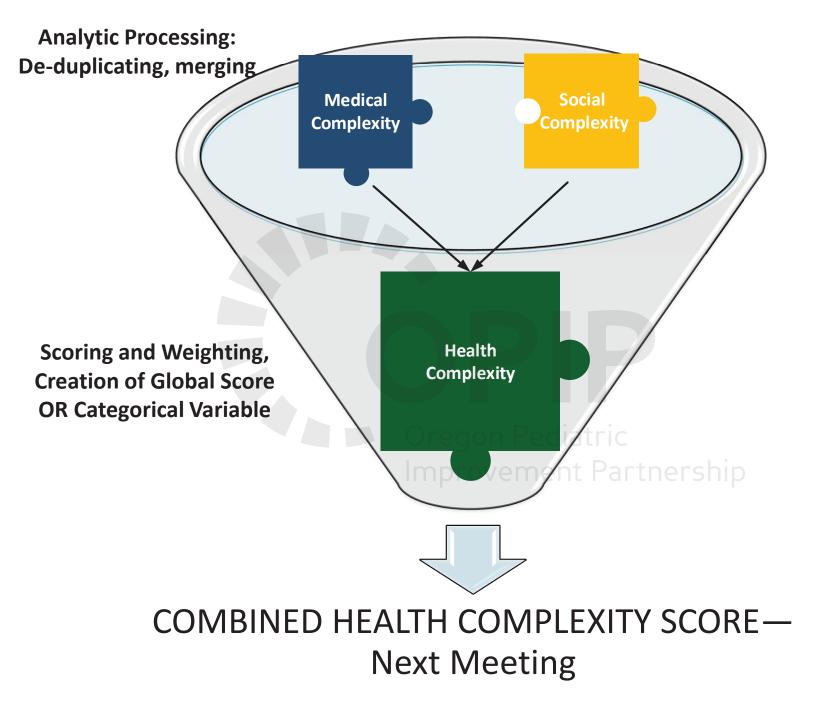
Proposal for Sharing to CCOs (Scope of This Project)

Proposal Anchored Observed Use by CCO:

- a) Global Rates: CCO rate and comparisons to other CCO
 - Overall, Lagged Snapshots by Age Groups, Race-Ethnicity, County
 - Periodicity of Sharing: Annually
- b) Child-level indicator score to CCOs
 - Total Score Only, not why they scored that way
 - Periodicity of Sharing: Annually







Next Meeting: Health Complexity Scoring

- Cross tab analysis of medical and social complexity
 - Examine distribution
- Explore options for scoring
 - Equal weight of each factor vs differential weights
 - Categorical variable egon Pediatric
 - High medical, High social
 - High medical, no social
 - Low medical, High Social
 - Medium Medical, Medium Social





Input from Attendees

- Part 1: Specific Input on Specific Components
- Part 2: Global Input Anchored to Ensuring Meaningful and Appropriate Use



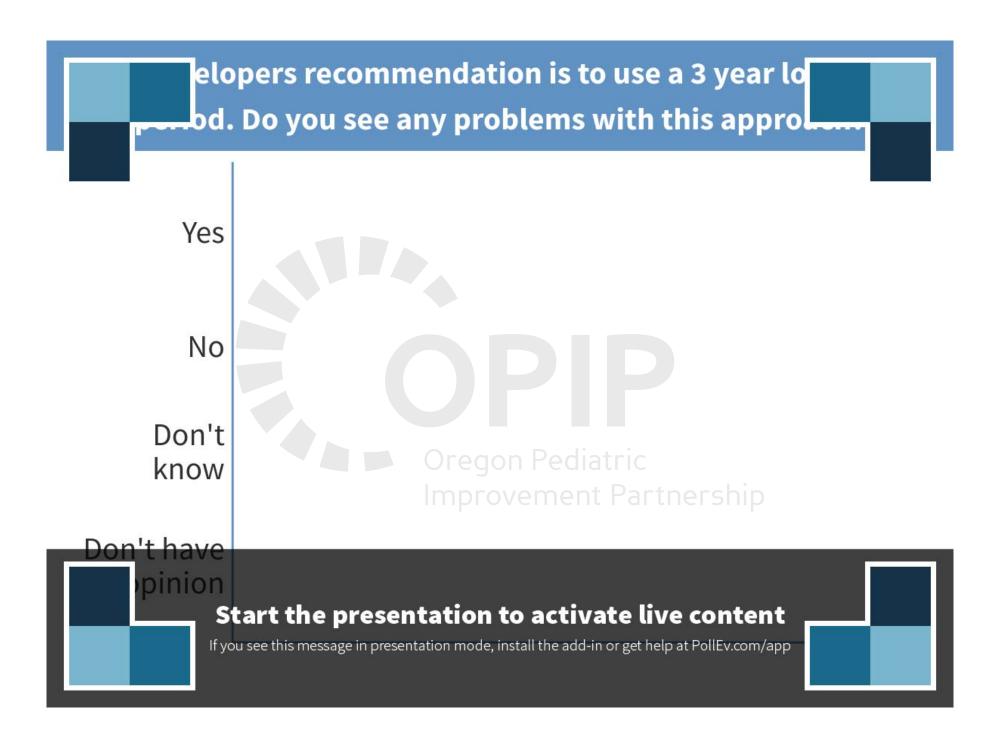
Specific Input Needed Part 1: Medical Complexity and Pediatric Medical Complexity Algorithm (PMCA)

The preliminary data shown today used a 2-year look back period.

That said, given the quality of data the developers recommend a **3**year look back time period. This is the time period we are using in KPNW.

- 1) Do you see any problems with using a **3-year** look back period?
 - a) Yes
 - b) No
 - c) Don't know
 - d) Don't have an opinion





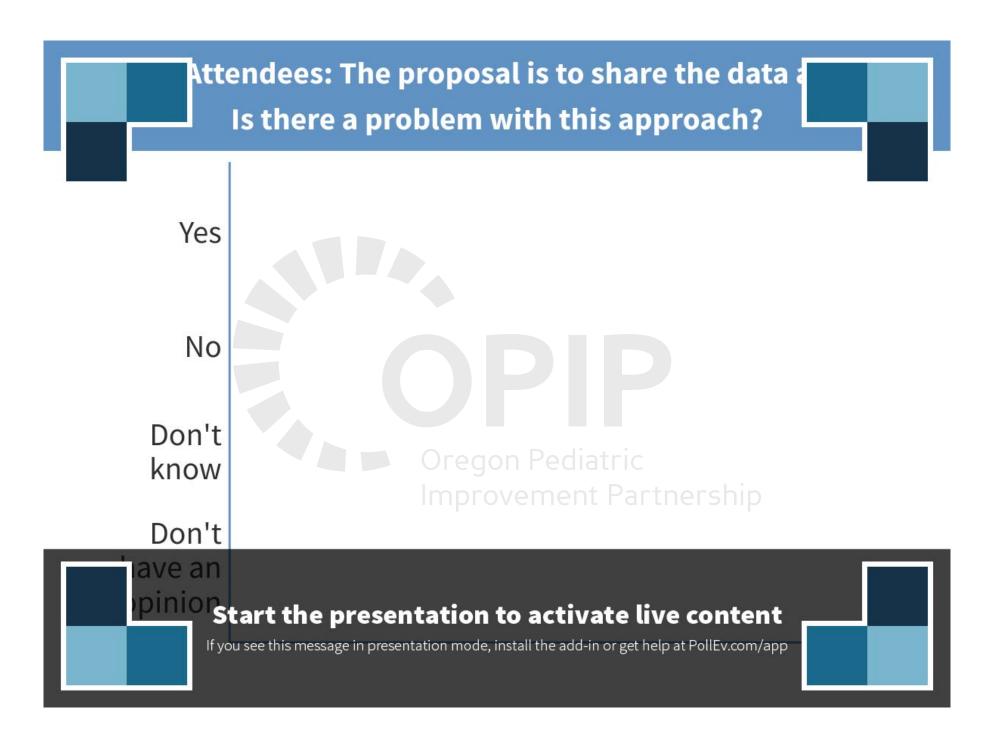
Specific Input Needed Part 1: Medical Complexity and Pediatric Medical Complexity Algorithm (PMCA)

For the attendees from CCOs in the room.

2) The proposal is to share the data annually. Is there a problem with this approach?

- a) Yes
- b) No Oregon Pediatric Improvement Partnersh
- c) Don't know
- d) Don't have an opinion



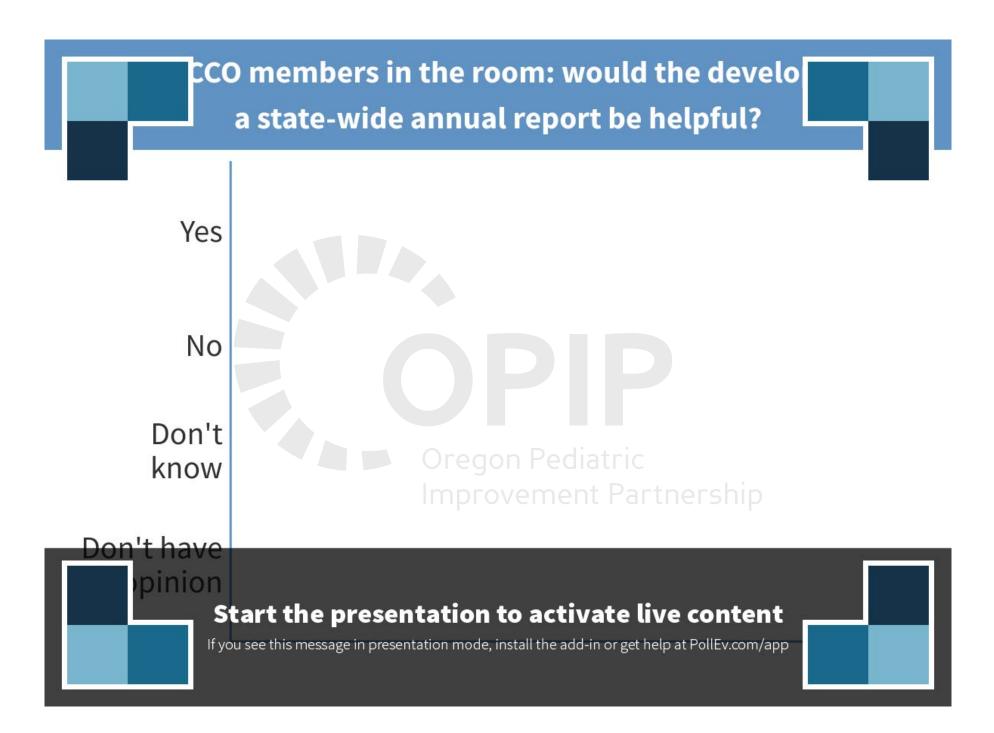


Specific Input Needed Part 1: Medical Complexity and Pediatric Medical Complexity Algorithm (PMCA)

3) For non-CCO members in the room, would the development of a **state-wide annual report** be helpful?

- a) Yes
- b) No
- c) Don't know
- d) Don't have an opinion vement Partnership





Specific Input Needed Part 2: Social Complexity

4) Given the literature on the impact of these factors, the proposal is to **look back 16 Years** and identify whether there was ever this flag for a child and his/her family. Do you see any problems with this look-back period?

- a) Yes
- b) No Oregon Pediatric
- c) Don't know Improvement Partnership
- d) Don't have an opinion

If Yes, what time period would you propose:

• Answer in years



h the literature on the impact of these factors is to look back 16 years about whether there flag for a child and his/her family. Is there a problem this look-back period?



Specific Input Needed Part 2: Social Complexity

5) Given the data shown was preliminary and exploratory, what **questions do you have about the findings related to the social indicators**? Was there something that seemed questionable in the data?

Oregon Pediatric Improvement Partnership



Specific Input Needed on Data Sharing Overall

Significant OHA resources are needed to support this data analysis, data cleaning, and data sharing. We will need indicators that is investment in staff resources is justified given the use of the data provided.

6) What would be good indicators that CCOs are using this information?





Input from Attendees

- Part 1: Specific Input on Specific Components
- Part 2: Global Input Anchored to Ensuring Meaningful and Appropriate Use



Ensuring the data flags are used as indicators, not as classifications or labels.

- What are specific ways we can communicate about the data to make this clear?
- Are there models for other kinds of indicator data where this has worked well?

Oregon Pediatric Improvement Partnership



For Non-CCO attendees:

- How can CCO's best leverage and use this information to stimulate community-level conversations?
- What are key assets that need to be engaged in communities that can help support children with health complexity?
- Are there existing activities where this information could be useful?



Value of this Data Integration and Data Sharing Pilot to Inform Other Efforts in the State

This is the first time that data from the Integrated Client Services Data Warehouse will be merged, at a child-level, with data from OHA Health Analytics and then shared with CCOs.

 Are there other efforts that the learnings from this novel pilot can help inform? Improvement Partnership



Wrap Up and Next Steps

- CCO Learning Session Directly Following This Meeting, Spotlight on KPNW Efforts to Identify Children with Health Complexity and Provide Complex Health Management
- Spring Stakeholder Meeting For You All
 - Grant Time Period: April 18
 - Any special considerations in terms of time?
 - Proposal is to have the meeting in Salem
- In the meantime, the door is always open for constructive feedback and input
 - Colleen Reuland: reulandc@ohsu.edu
 - Valerie Stewart: VALERIE.T.STEWART@dhsoha.state.or.us

