



Douglas County Health Complexity Findings

Highlight of Data Included in the 2021 Reports

Report Here: <https://www.oregon.gov/oha/HPA/dsi-tc/ChildHealthComplexityData/Douglas-2021-October.pdf>

Note: There is also a version for Umpqua Health Alliance here:
<https://www.oregon.gov/oha/HPA/dsi-tc/ChildHealthComplexityData/Umpqua-Health-Alliance-2021-October.pdf>

Measuring Children's Health Complexity



Medical Complexity

Defined using the Pediatric Medical Complexity Algorithm (PMCA)

- Leverages system-level data over a three year period
- Takes into account: 1) Utilization of services, 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”

Our work incorporates factors identified by COE4CCN as predictive of a high-cost health care event (e.g. emergency room use).

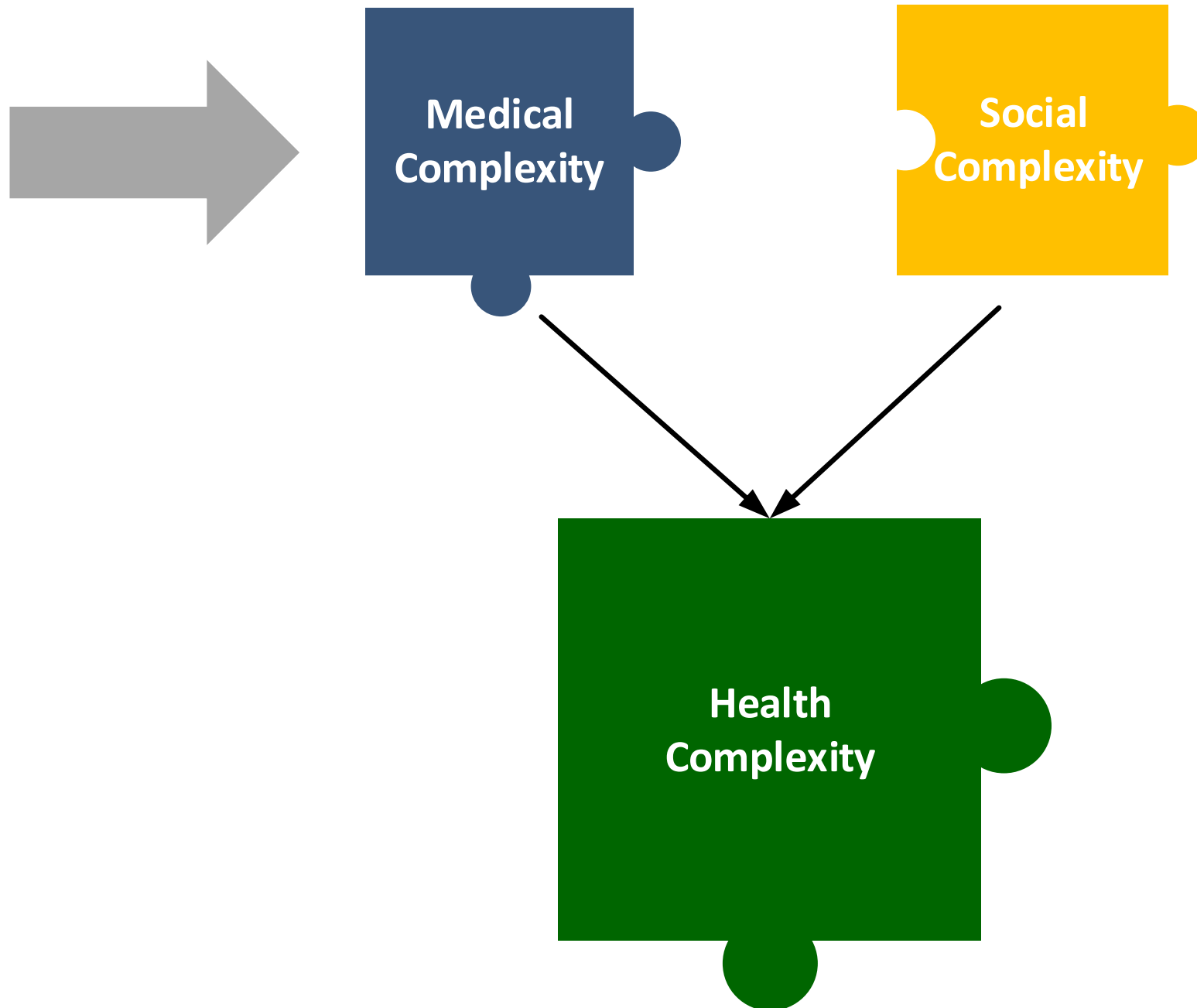
Health Complexity

Combines the factors of **Medical** + **Social** = **Health Complexity**

Part 1: **Pediatric Medical Complexity Algorithm (PMCA)**

Part 2: Indicators of **Social Complexity**

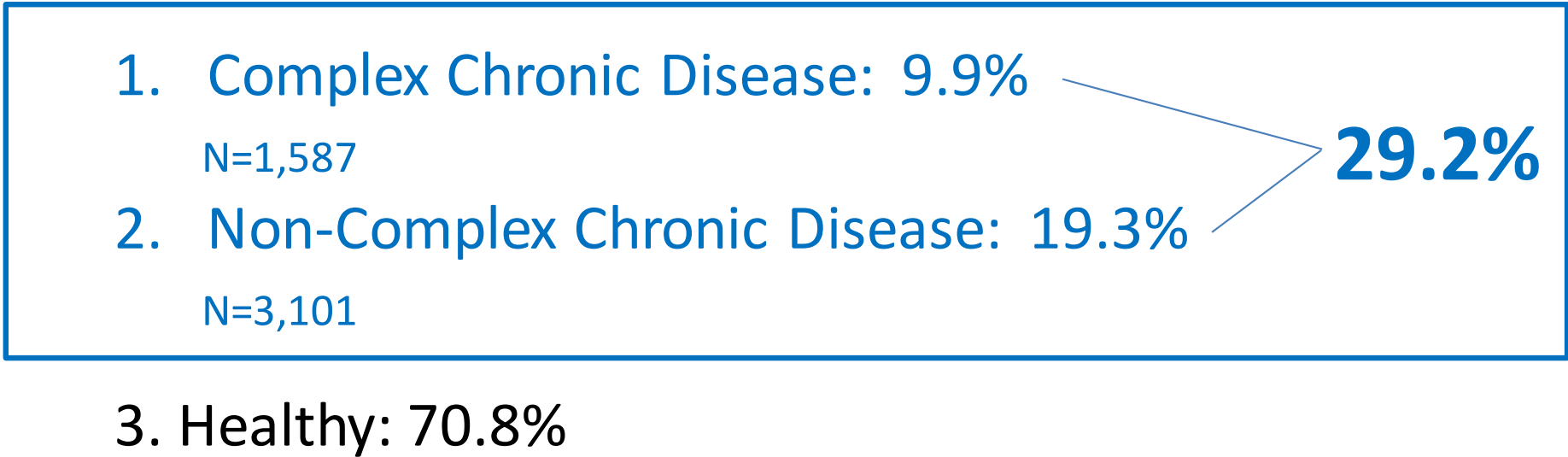
Part 3: **Medical** + **Social** Complexity = **Health Complexity**



Pediatric Medical Complexity Algorithm Findings for Children Enrolled in Medicaid/CHIP

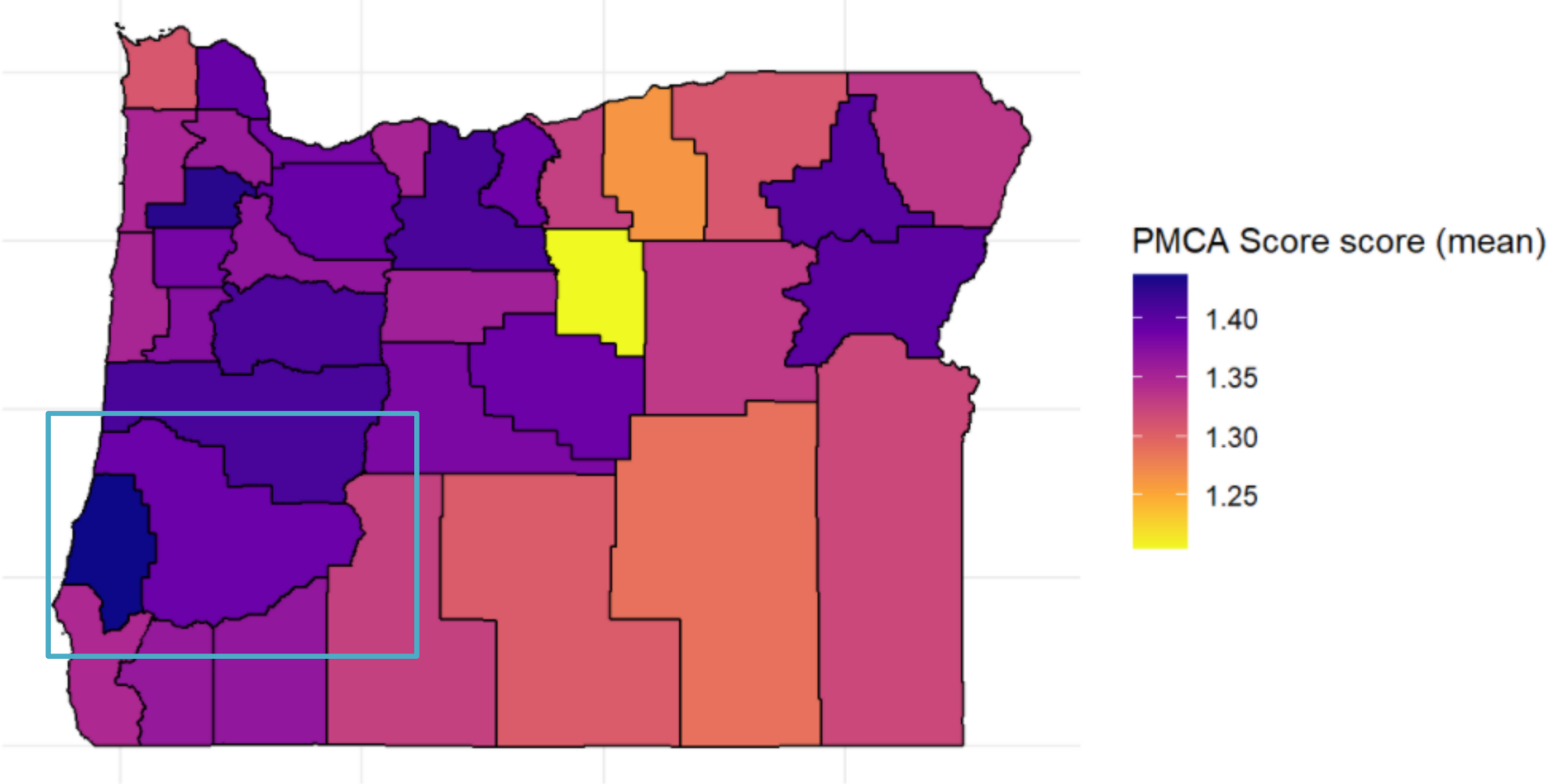
Page 3 of the report: <https://www.oregon.gov/oha/HPA/dsi-tc/ChildHealthComplexityData/Douglas-2021-October.pdf>

Douglas County Publicly Insured as of August 2021: 16,071



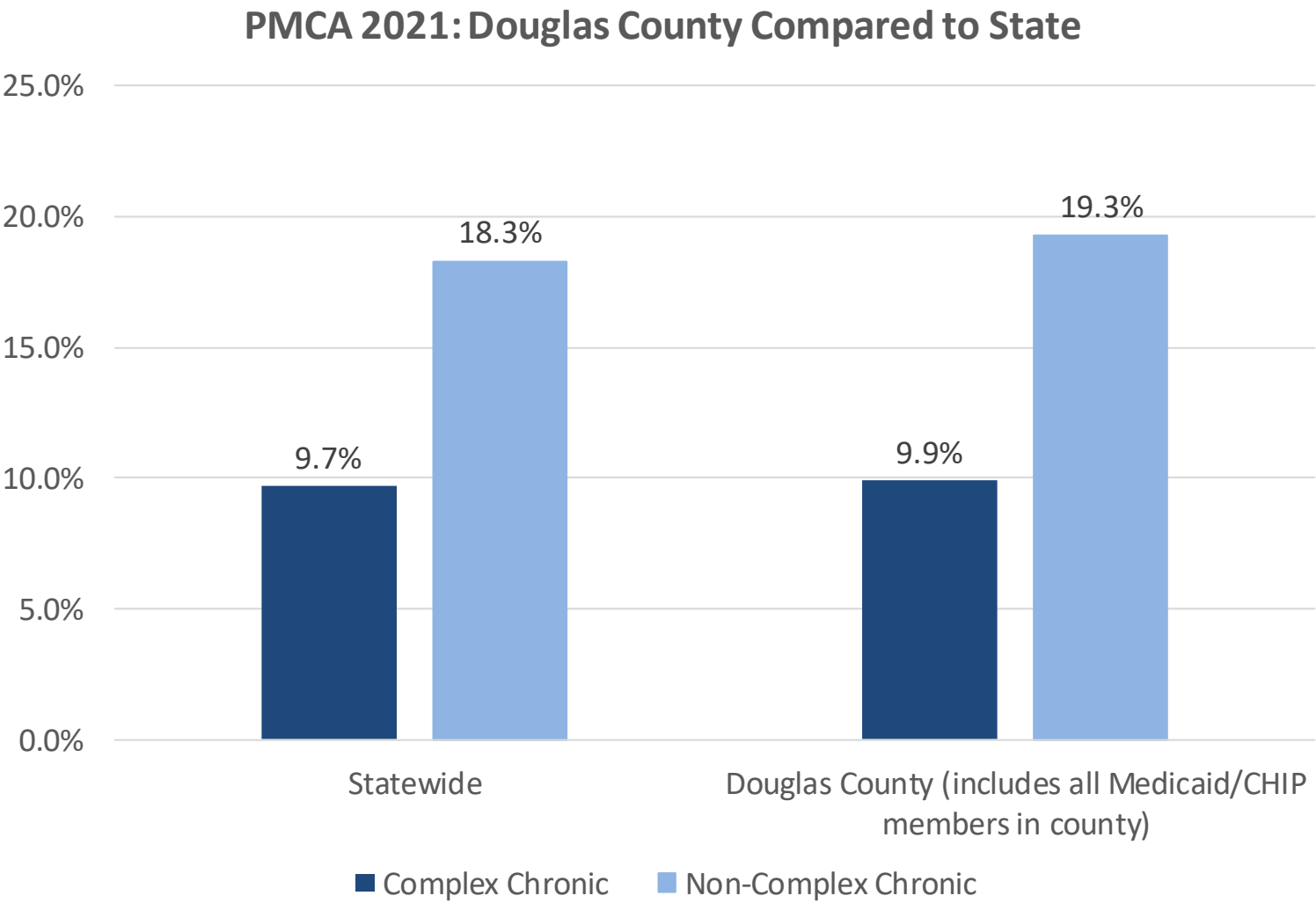
There is a **statistically significant** difference in the distribution of the three PMCA Categories **across counties** in Oregon.

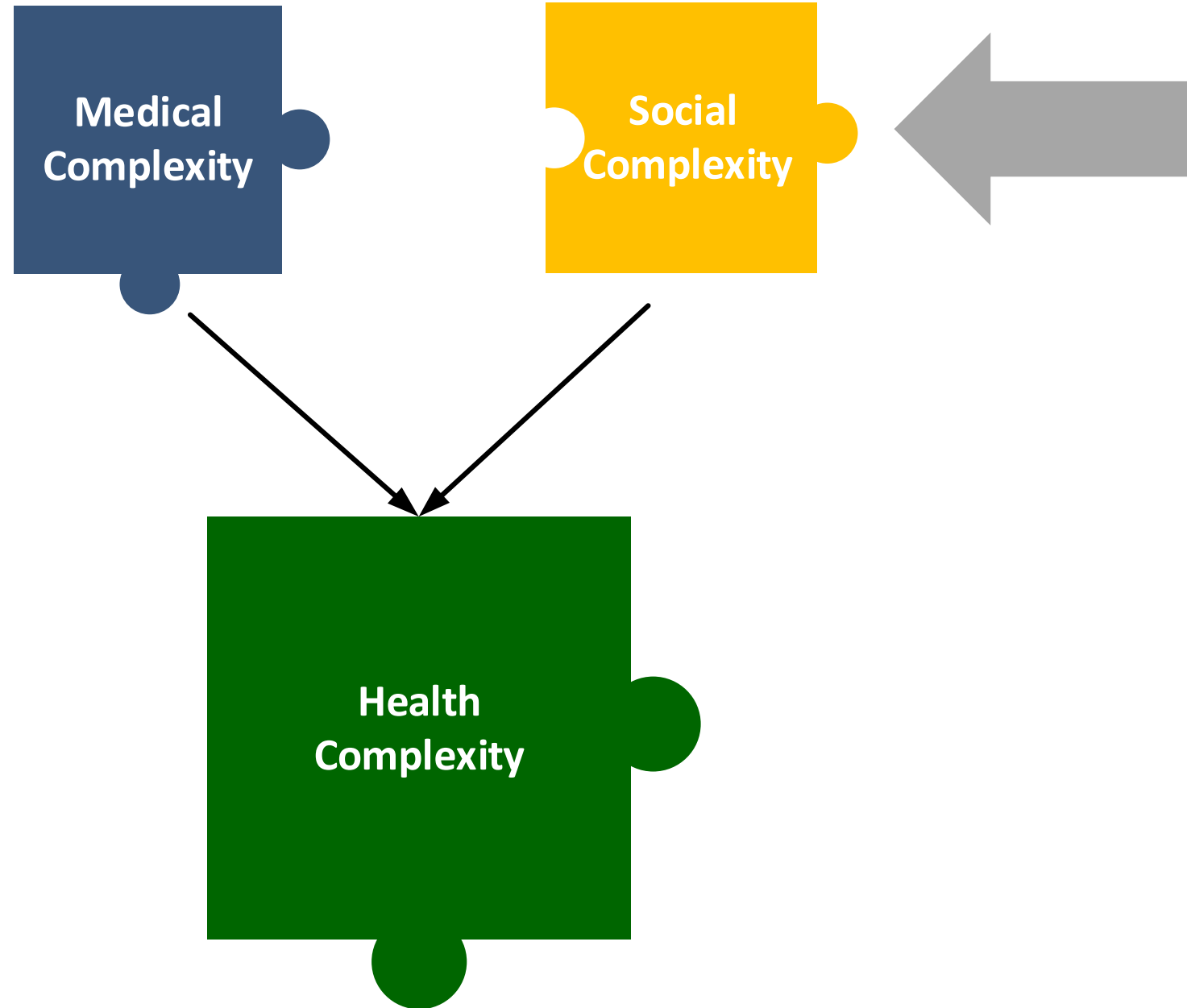
Average PMCA **Medical Complexity** Score by County



PMCA Medical Complexity:

Douglas County Comparison to Statewide Data





18 Social Complexity Factors

Identified by the Center of Excellence on Quality of Care Measures for Children with Complex Needs (COE4CCN) as Associated in Literature with Worse Health Outcomes and Costs

12 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 studies showed worse outcomes or consensus on impact:

13. Parent death
14. Parent criminal justice involvement
15. Homelessness
16. Child mental illness
17. Child substance abuse treatment need
18. Child criminal justice involvement

INDICATOR: Descriptive Information* (Source)	CHILD FACTOR	FAMILY FACTOR	TOTAL
POVERTY – CHILD: For Child - Access of Temporary Assistance for Needy Families (TANF), Below 37% Federal Poverty Level (ICS, data available 2000-2017)	X		X
POVERTY – PARENT: Parent Access of TANF (ICS, data available 2000-2017)		X	X
FOSTER CARE: Child received foster care services (ICS, data available 2000-2017)	X		X
PARENTAL DEATH: Death of parent/primary caregiver in OR (ICS-Death Certificate in Oregon, data available 1989-2017)		X	X
PARENTAL INCARCERATION: Parent incarcerated or supervised by the Dept. of Corrections in Oregon (ICS-Department of Corrections for state felony charges, not including county/municipal charges, data available 2000-2017)		X	X
MENTAL HEALTH – CHILD: Received mental health services through DHS/OHA (ICS- NMH Caseloads, data available 2000-2017)	X		X
MENTAL HEALTH – PARENT: Received mental health services through DHS/OHA (ICS- NMH Caseloads, data available 2000-2017)		X	X
SUBSTANCE ABUSE – CHILD: Substance abuse treatment through DHS/OHA (ICS- AD Caseloads, data available 2000-2017)	X		X
SUBSTANCE ABUSE – PARENT: Parent – Substance abuse treatment through DHS/OHA (ICS- AD Caseloads, data available 2000-2017)		X	X
CHILD ABUSE AND NEGLECT: ICD-9, ICD-10 dx codes related used by provider (OHA Medicaid Claims Data, data available 2002-2017)	X		X
POTENTIAL LANGUAGE BARRIER: Language other than English listed in the primary language field (OHA Medicaid Enrollment, most current data for family)		X	X
PARENTAL DISABILITY: Parent is eligible for Medicaid due to a recognized disability (OHA Medicaid Enrollment, data available 2002-2019)		X	X
TOTAL NUMBER OF INDIVIDUAL FLAGS	5	7	12

* Look back period includes pre-natal period through the lifetime of the child, unless an exception is noted due to availability of data.

Douglas County: Findings on Prevalence of Each Social Complexity Indicator

INDICATOR	CHILD FACTOR	FAMILY FACTOR
Poverty – TANF (for Child and by Parent)	45.6% (n=7,325)	44.1% (n=7,090)
Foster Care – Child receiving foster care services DHS ORKids	16.9% (n=2,718)	
Parent Death – Death of parent/primary caregiver in OR		2.9% (n=466)
Parental Incarceration – Parent incarcerated or supervised by the Dept. of Corrections in Oregon		24.5% (n=3,937)
Mental Health: Child – Received mental health services through DHS/OHA	38.2% (n=6,140)	
Mental Health: Parent – Received mental health services through DHS/OHA		52.0% (n=8,357)
Substance Abuse: Child – Substance abuse treatment through DHS/OHA	3.8% (n=604)	
Substance Abuse: Parent – Substance abuse treatment through DHS/OHA		33.3% (n=5,347)
Child Abuse/Neglect: ICD-9, ICD-10 dx codes related used by provider	11.2% (n=1,805)	
Potential Language Barrier: Language other than English listed as primary language		3.2% (n=511)
Parent Disability: Parent is eligible for Medicaid due to a recognized disability		6.4% (n=1,032)

Page 6 of the report:
<https://www.oregon.gov/oha/HPA/dsi-tc/ChildHealthComplexityData/Douglas-2021-October.pdf>



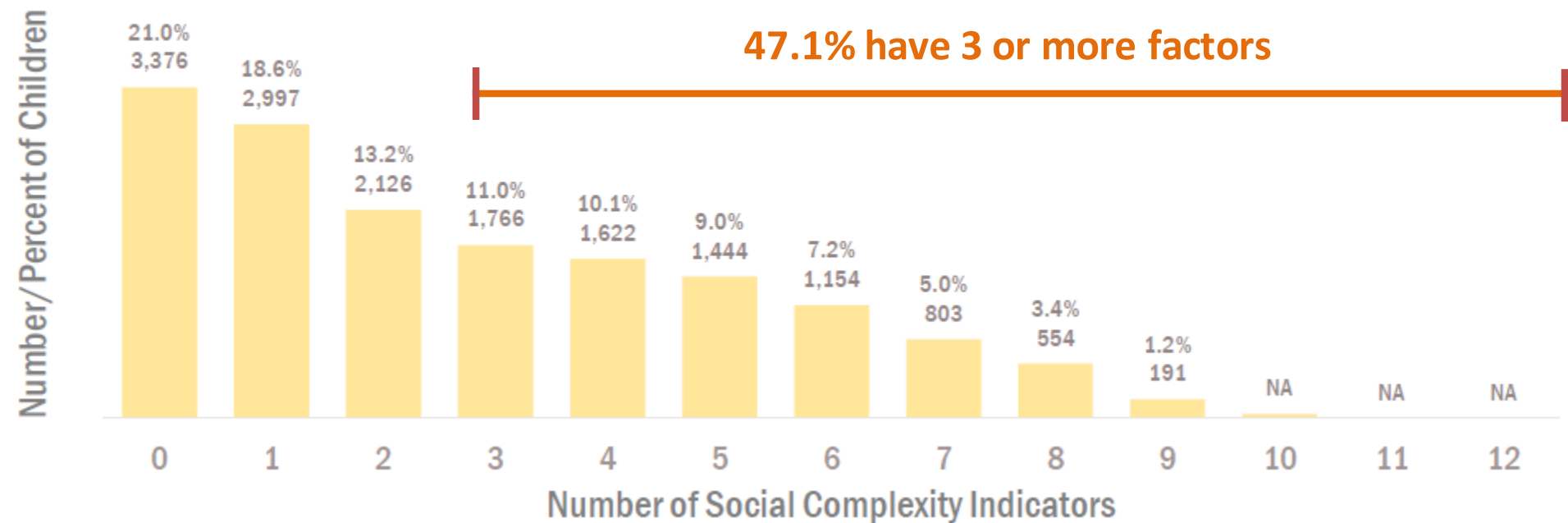
Douglas County: Distribution of Social Complexity Factors

Page 7 of the report: <https://www.oregon.gov/oha/HPA/dsi-tc/ChildHealthComplexityData/Douglas-2021-October.pdf>

Distribution of social complexity indicators: % (n)

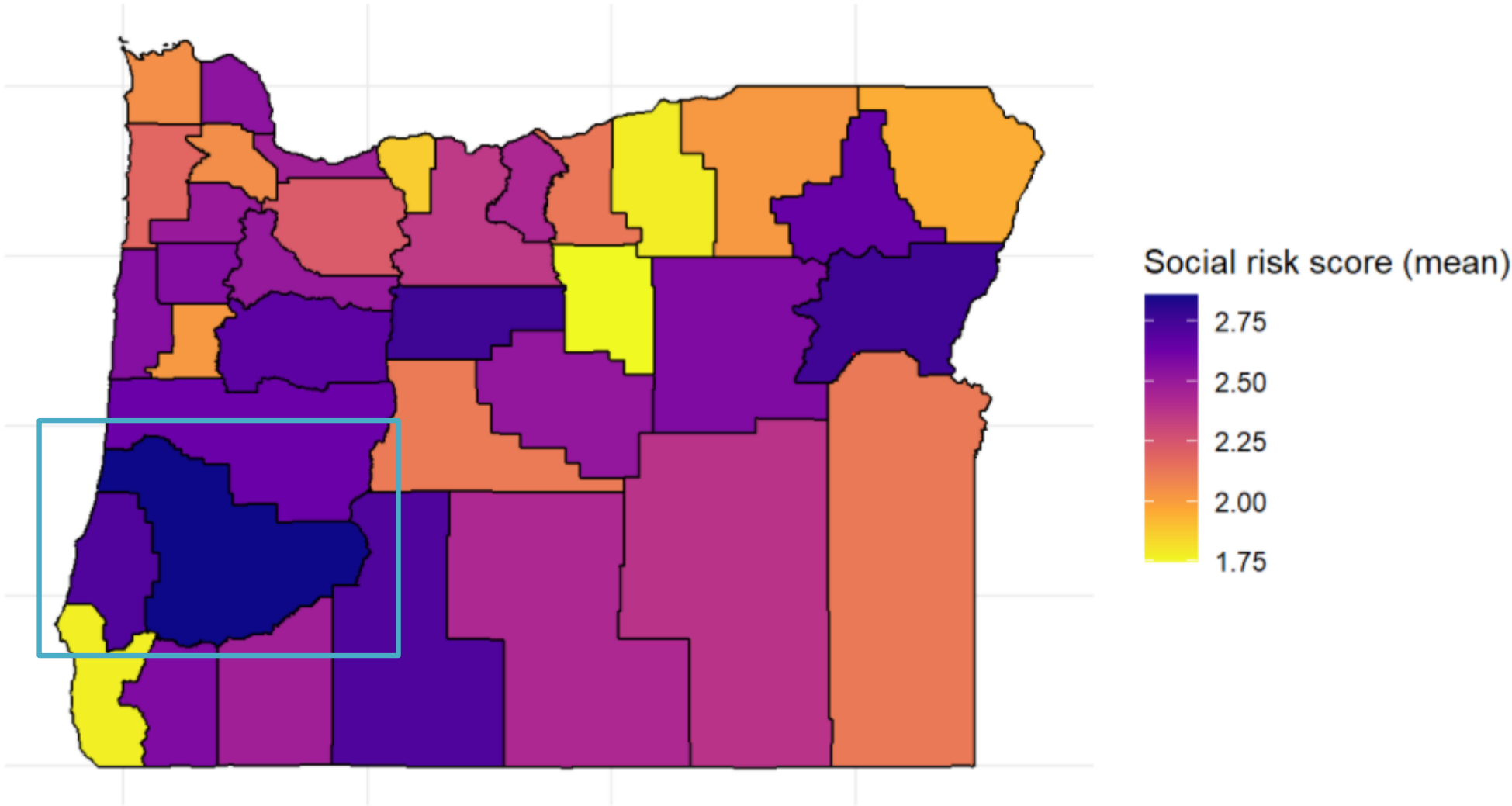
Douglas County

(n = 16,071)

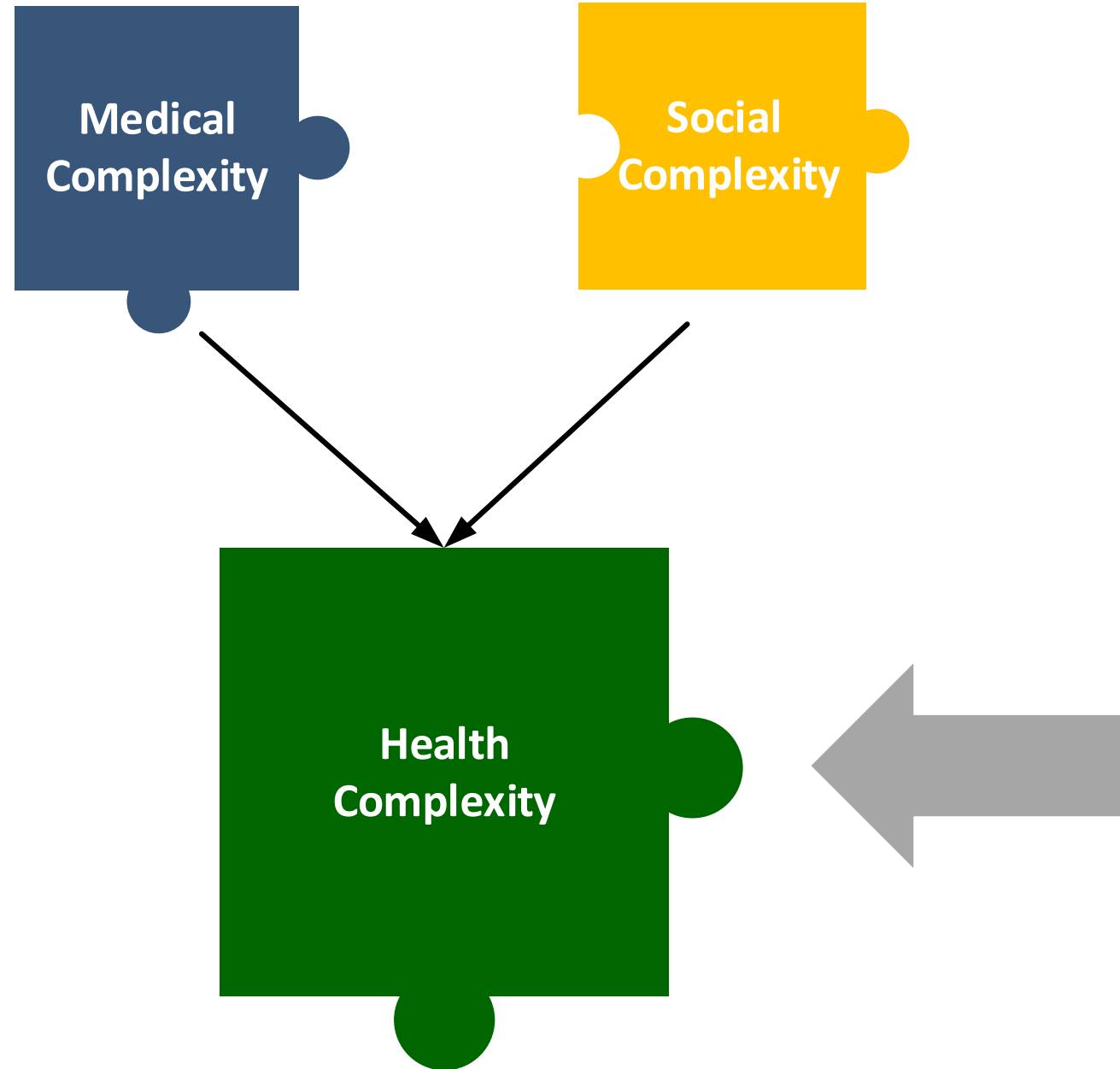


Data Source: ICS Data Warehouse and Medicaid/CHIP data sourced from All Payer All Claims (APAC). Children publically insured as of August 2021. Lookback period is lifetime of the child plus one year prior to birth (prenatal period).

Average Social Complexity Count by County



Data Source: ICS Data Warehouse and Medicaid/CHIP data sourced from All Payer All Claims (APAC). Children publicly insured as of August 2021. Lookback period is lifetime of the child plus one year prior to birth (prenatal period).



Douglas County **Health Complexity** Categorical: Source Variables Related to **Medical** and **Social** Complexity

Page 8 of the report: <https://www.oregon.gov/oha/HPA/dsi-tc/ChildHealthComplexityData/Douglas-2021-October.pdf>

MEDICAL COMPLEXITY (3 Categories)	SOCIAL COMPLEXITY (Total Factors Possible in Preliminary Data Shown Here N=12)		
	3 or More Indicators	1-2 Indicators	None in System-Level Data
HIGH Medical Complexity (Chronic, Complex PMCA=1)	6.0% (967)	3.1% (498)	0.8% (122)
MODERATE Medical Complexity (Non-Complex, Chronic PMCA=2)	11.0% (1,775)	6.4% (1,022)	1.9% (304)
NO MEDICAL COMPLEXITY (PMCA=3)	30.1% (4,830)	22.4% (3,603)	18.4% (2,950) Neither Medically or Socially Complex

Data Source: ICS Data Warehouse and Medicaid/CHIP data sourced from All Payer All Claims (APAC). Children publicly insured as of August 2021. Lookback period is lifetime of the child plus one year prior to birth (prenatal period).

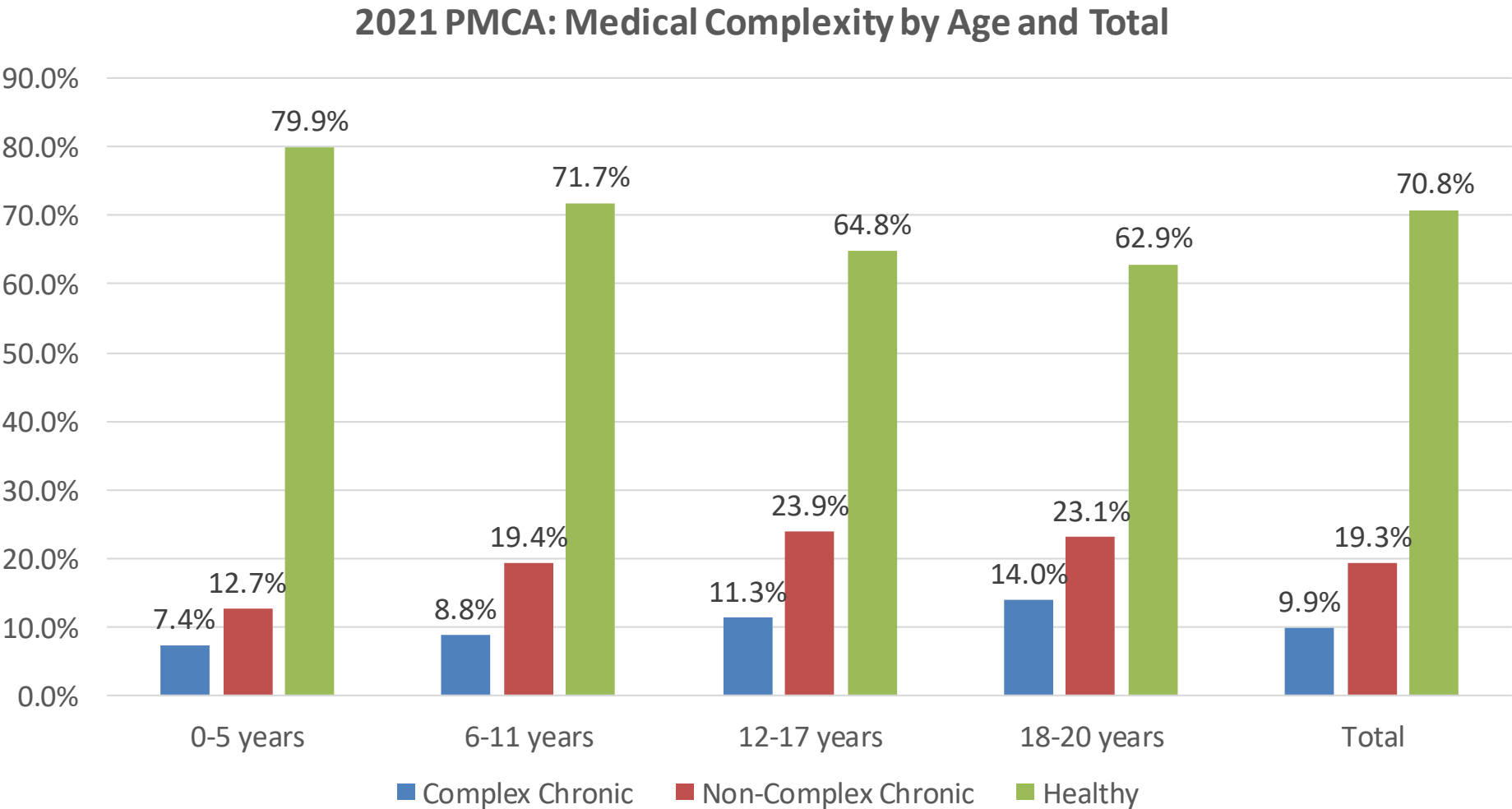
Appendix A of the report shows the medical, social and health complexity findings by AGE of the child:

- Birth to Five**
- 6-11 years old**
- 12-17 years old**
- 18-20 years old**

PMCA Medical Complexity:

Douglas County Findings by Age of Child

Page 11 of the report: <https://www.oregon.gov/oha/HPA/dsi-tc/ChildHealthComplexityData/Douglas-2021-October.pdf>



Data Source: ICS Data Warehouse and Medicaid/CHIP data sourced from All Payer All Claims (APAC). Children publically insured as of August 2021. Lookback period is lifetime of the child plus one year prior to birth (prenatal period).

Social Complexity Counts:

Douglas County Findings by Age of Child

Page 13 of the report: <https://www.oregon.gov/oha/HPA/dsi-tc/ChildHealthComplexityData/Douglas-2021-October.pdf>

NUMBER OF INDICATORS (SOCIAL RISK FACTORS)	CHILDREN AGES 0-5 N= 4,591	CHILDREN AGES 6-11 N= 4,676	CHILDREN AGES 12-17 N= 4,376	CHILDREN AGES 18-20 N= 2,428
0	27.9% (1,282)	18.8% (878)	16.8% (733)	19.9% (483)
1	20.4% (936)	17.8% (834)	17.7% (776)	18.6% (451)
2	13.5% (622)	12.3% (577)	13.5% (590)	13.9% (337)
3 or More	38.1% (1,751)	51.0% (2,387)	52.0% (2,277)	47.7% (1,157)

Social Complexity: Douglas County Findings by Age of Child

Page 12 of the report: <https://www.oregon.gov/oha/HPA/dsi-tc/ChildHealthComplexityData/Douglas-2021-October.pdf>

***Due to reporting rules from DHS Integrated Client Services, populations with low counts (<10 people) are masked and reported as NA.*

Indicator	Children 0-5 N=4,591		Children 6-11 N=4,676	
	Child Factor	Family Factor	Child Factor	Family Factor
Poverty – TANF (for Child and by Parent)	32.0% (1,467)	42.0% (1,929)	50.5% (2,360)	48.1% (2,247)
Foster Care – Child receiving foster care services DHS ORKids	12.4% (570)		17.8% (832)	
Parent Death – Death of parent/primary caregiver in OR		1.1% (52)		2.6% (121)
Parental Incarceration – Parent incarcerated or supervised by the Dept. of Corrections in Oregon		19.5% (896)		25.4% (1,186)
Mental Health: Child – Received mental health services through DHS/OHA	15.2% (698)		37.3% (1,743)	
Mental Health: Parent – Received mental health services through DHS/OHA		52.6% (2,414)		55.5% (2,597)
Substance Abuse: Child – Substance abuse treatment through DHS/OHA	0.0% (0)		0.4% (21)	
Substance Abuse: Parent – Substance abuse treatment through DHS/OHA		25.9% (1,187)		34.5% (1,615)
Child Abuse/Neglect: ICD-9, ICD-10 dx codes related used by provider	9.6% (442)		11.9% (556)	
Potential Language Barrier: Language other than English listed as primary language		2.9% (133)		3.3% (155)
Parent Disability: Parent is eligible for Medicaid due to a recognized disability		5.5% (254)		6.3% (294)

Data Source: ICS Data Warehouse and Medicaid/CHIP data sourced from All Payer All Claims (APAC). Children publicly insured as of August 2021. Lookback period is lifetime of the child plus one year prior to birth (prenatal period).

Social Complexity: Douglas County Findings by Age of Child

Page 12 of the report: <https://www.oregon.gov/oha/HPA/dsi-tc/ChildHealthComplexityData/Douglas-2021-October.pdf>

***Due to reporting rules from DHS Integrated Client Services, populations with low counts (<10 people) are masked and reported as NA.*

Indicator	Children 12-17 N=4,376		Children 18-20 N=2,428	
	Child Factor	Family Factor	Child Factor	Family Factor
Poverty – TANF (for Child and by Parent)	53.2% (2,326)	45.4% (1,988)	48.3% (1,172)	38.1% (926)
Foster Care – Child receiving foster care services DHS ORKids	20.3% (888)		17.6% (428)	
Parent Death – Death of parent/primary caregiver in OR		4.1% (181)		4.6% (112)
Parental Incarceration – Parent incarcerated or supervised by the Dept. of Corrections in Oregon		29.2% (1,278)		23.8% (577)
Mental Health: Child – Received mental health services through DHS/OHA	52.0% (2,274)		58.7% (1,425)	
Mental Health: Parent – Received mental health services through DHS/OHA		52.1% (2,281)		43.9% (1,065)
Substance Abuse: Child – Substance abuse treatment through DHS/OHA	5.0% (217)		15.1% (366)	
Substance Abuse: Parent – Substance abuse treatment through DHS/OHA		38.8% (1,700)		34.8% (845)
Child Abuse/Neglect: ICD-9, ICD-10 dx codes related used by provider	13.2% (578)		9.4% (229)	
Potential Language Barrier: Language other than English listed as primary language		3.2% (141)		3.4% (82)
Parent Disability: Parent is eligible for Medicaid due to a recognized disability		7.0% (307)		7.3% (177)

Data Source: ICS Data Warehouse and Medicaid/CHIP data sourced from All Payer All Claims (APAC). Children publicly insured as of August 2021. Lookback period is lifetime of the child plus one year prior to birth (prenatal period).

Douglas County **Health Complexity** Categorical: Source Variables Related to **Medical** and **Social** Complexity for Children Birth-5

Page 14 of the report: <https://www.oregon.gov/oha/HPA/dsi-tc/ChildHealthComplexityData/Douglas-2021-October.pdf>

MEDICAL COMPLEXITY (3 Categories)	SOCIAL COMPLEXITY (Total Factors Possible in Preliminary Data Shown Here N=12)		
	3 or More Indicators	1-2 Indicators	None in System-Level Data
HIGH Medical Complexity (Chronic, Complex PMCA=1)	3.9% (177)	2.7% (124)	0.8% (39)
MODERATE Medical Complexity (Non-Complex, Chronic PMCA=2)	5.7% (261)	4.6% (211)	2.4% (112)
NO MEDICAL COMPLEXITY (PMCA=3)	28.6% (1,313)	26.6% (1,223)	24.6% (1,131) Neither Medically or Socially Complex

Data Source: ICS Data Warehouse and Medicaid/CHIP data sourced from All Payer All Claims (APAC). Children publically insured as of August 2021. Lookback period is lifetime of the child plus one year prior to birth (prenatal period).



Douglas County **Health Complexity** Categorical: Source Variables Related to **Medical** and **Social** Complexity for Children 6-11

Page 14 of the report: <https://www.oregon.gov/oha/HPA/dsi-tc/ChildHealthComplexityData/Douglas-2021-October.pdf>

MEDICAL COMPLEXITY (3 Categories)	SOCIAL COMPLEXITY (Total Factors Possible in Preliminary Data Shown Here N=12)		
	3 or More Indicators	1-2 Indicators	None in System-Level Data
HIGH Medical Complexity (Chronic, Complex PMCA=1)	5.8% (271)	2.4% (112)	0.6% (30)
MODERATE Medical Complexity (Non-Complex, Chronic PMCA=2)	11.7% (574)	5.6% (264)	2.1% (98)
NO MEDICAL COMPLEXITY (PMCA=3)	33.6% (1,569)	22.1% (1,035)	16.0 (750) Neither Medically or Socially Complex

Data Source: ICS Data Warehouse and Medicaid/CHIP data sourced from All Payer All Claims (APAC). Children publically insured as of August 2021. Lookback period is lifetime of the child plus one year prior to birth (prenatal period).



Douglas County **Health Complexity** Categorical: Source Variables Related to **Medical** and **Social** Complexity for Children 12-17

Page 14 of the report: <https://www.oregon.gov/oha/HPA/dsi-tc/ChildHealthComplexityData/Douglas-2021-October.pdf>

MEDICAL COMPLEXITY (3 Categories)	SOCIAL COMPLEXITY (Total Factors Possible in Preliminary Data Shown Here N=12)		
	3 or More Indicators	1-2 Indicators	None in System-Level Data
HIGH Medical Complexity (Chronic, Complex PMCA=1)	7.2% (317)	3.4% (147)	0.7% (29)
MODERATE Medical Complexity (Non-Complex, Chronic PMCA=2)	14.9% (653)	7.6% (334)	1.4% (60)
NO MEDICAL COMPLEXITY (PMCA=3)	29.9% (1,307)	20.2% (885)	14.7% (644) Neither Medically or Socially Complex

Data Source: ICS Data Warehouse and Medicaid/CHIP data sourced from All Payer All Claims (APAC). Children publically insured as of August 2021. Lookback period is lifetime of the child plus one year prior to birth (prenatal period).

Douglas County **Health Complexity** Categorical: Source Variables Related to **Medical** and **Social** Complexity for Children 18-20

Page 14 of the report: <https://www.oregon.gov/oha/HPA/dsi-tc/ChildHealthComplexityData/Douglas-2021-October.pdf>

MEDICAL COMPLEXITY (3 Categories)	SOCIAL COMPLEXITY (Total Factors Possible in Preliminary Data Shown Here N=12)		
	3 or More Indicators	1-2 Indicators	None in System-Level Data
HIGH Medical Complexity (Chronic, Complex PMCA=1)	8.3% (202)	4.7% (115)	1.0% (24)
MODERATE Medical Complexity (Non-Complex, Chronic PMCA=2)	12.9% (314)	8.8% (213)	1.4% (34)
NO MEDICAL COMPLEXITY (PMCA=3)	26.4% (641)	18.9% (460)	17.5% (425) Neither Medically or Socially Complex

Data Source: ICS Data Warehouse and Medicaid/CHIP data sourced from All Payer All Claims (APAC). Children publicly insured as of August 2021. Lookback period is lifetime of the child plus one year prior to birth (prenatal period).

