California Advancing & Innovating Medi-Cal

Population Health Risk Assessment and Risk Stratification Examples: CareOregon and Johns Hopkins HealthCare

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CareOregon: Background

- Oregon Medicaid Population Health requirements:
  - Individual health risk screens of all members
  - Share risk stratification and member characteristic data with providers in VBP arrangements
- CareOregon background:
  - Managed Care Organization serving 250,000 Medicaid and Medicare beneficiaries across urban and rural Oregon

CareOregon Health Risk Screening

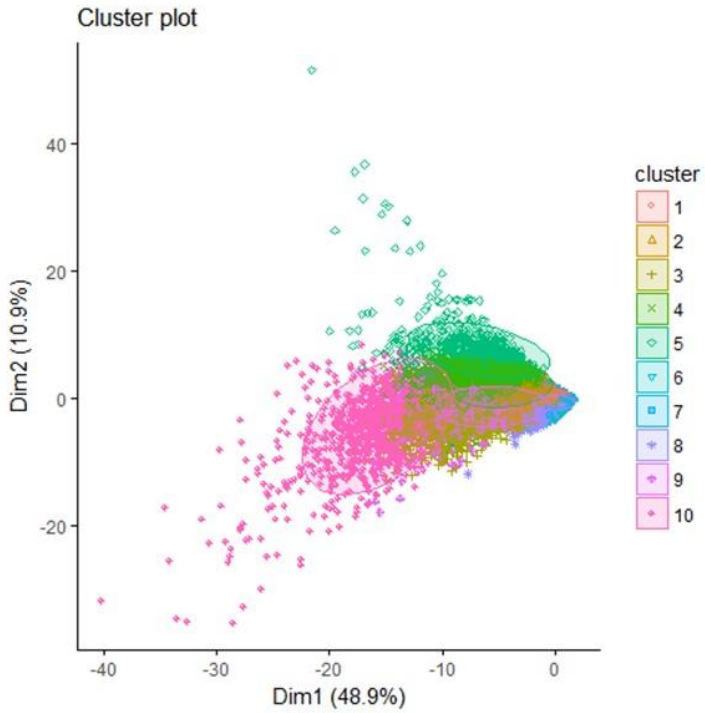
- **Approach:**
  - 10 question screening tool that focuses on physical, behavioral and oral health needs; food insecurity; ADLs; housing stability; and interest in/connections to care coordination services.
  - Administer via mail, phone, patient portal, community events, etc.
- **Successes:**
  - Appropriate number of questions
  - Driving important conversations around standardized intervention protocols.
- **Challenges:**
  - Incorrect or incomplete submissions
  - Data entry burden
  - Data architecture/interoperability barriers

CareOregon Risk Stratification Approach

Data Source	Input Variables
Medical Claims	Age, ED Visits, Inpatient Admissions, Outpatient Other Visits
Pharmacy Claims	Pharmacy Cost, Other Derived Variables
ACG	Chronic Condition Count, Hospital Dominant Count, Major ADG Count, Diagnoses Used, Active Ingredient Count, Total Providers Seen

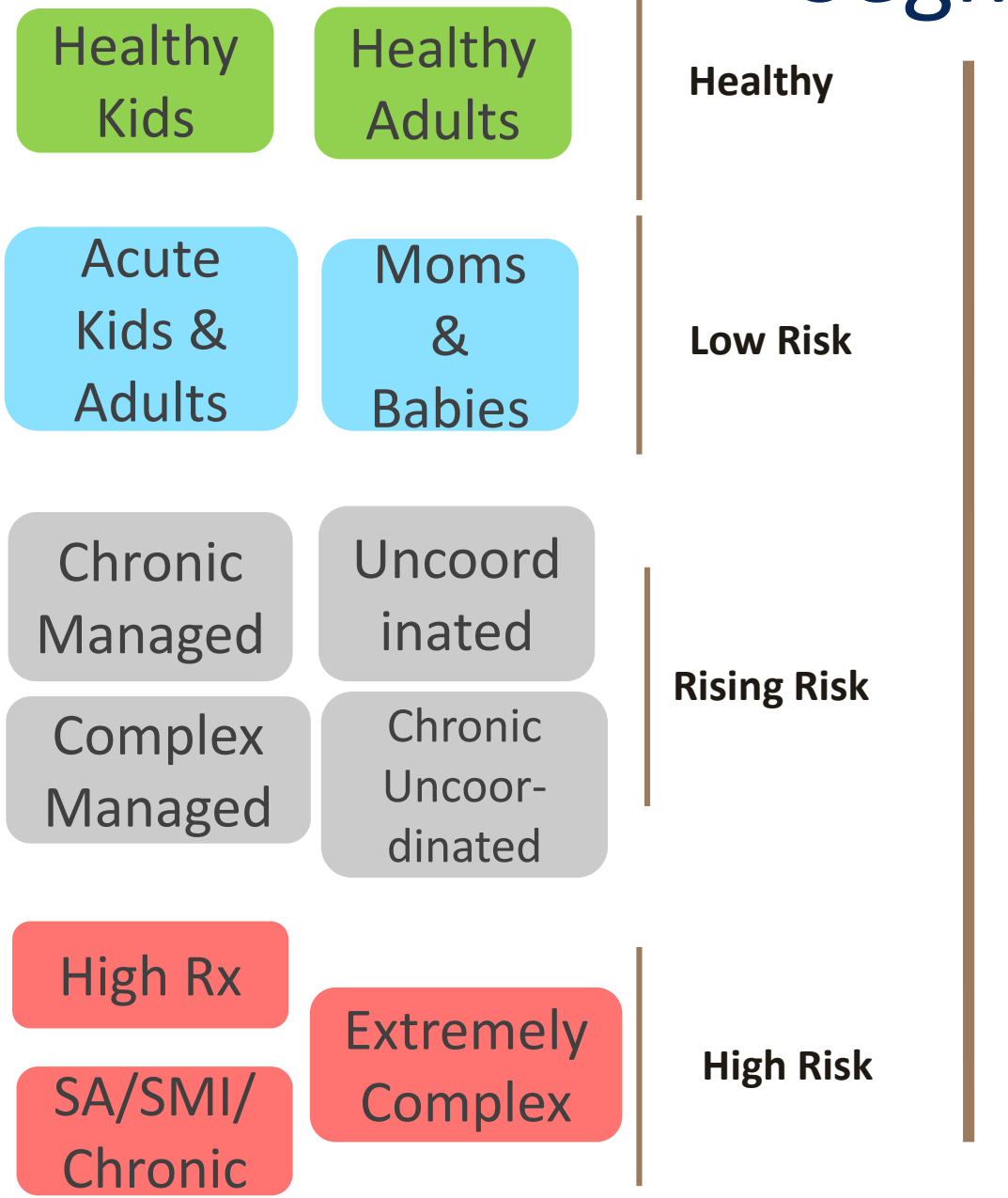
Cluster Analysis

Algorithm Output 4



Human assigned Labels

Segments



Total CareOregon Population

***Utilization patterns of members/patients**

***Provides framework for how to communicate and match the correct intervention with the need**

Johns Hopkins HealthCare: Background

- Maryland Medicaid Population Health requirements:
  - No requirements around conducting health risk screenings
  - Requirements to identify special needs populations and populations who require care management

- Johns Hopkins HealthCare background:
  - Managed care organization with Medicaid, Medicare Advantage, and commercial lines
  - 300,000 beneficiaries across Maryland
  - NCQA accredited

Johns Hopkins Screening and Risk Stratification Approach

- **Screening:**
  - Administered for certain health education programs and specific populations (e.g. pregnant women)
- **Risk Stratification Approach:**
  - Used to identify patients for Complex Care Management and disease management programs
  - Id'd based on ACGs, authorizations, lab data, pharmacy data, and EHR data
  - Also look to state-wide health exchange and disease registries for additional information

ACG Fields Used for Risk Stratification

ACG field	Definition
Probability of High Total Cost	Predicted probability (from 0 to 1) that the patient will be high cost in the following year, based on risk factors (i.e., age, gender, disease burden, disease markers, resource use, medication patterns, and special population markers)
Probability of Inpatient Admission	Predicted probability (from 0 to 1) that the patient will be hospitalized in the following year, based on risk factors (i.e., age, gender, disease burden, disease markers, resource use, medication patterns, and special population markers)
Resource Utilization Band (RUB)	Concurrent relative resource use categorized from 0 to 5, where 0 = non-user and 5 = high resource user
Coordination Risk	Indicates whether a person has an unlikely (U), possible (P), or likely (L) coordination issue (CI). Based on 5 coordination markers, including number of management visits, level of provider participation in care, and provider, specialist, and generalist counts. LCI indicates 7+ unique providers, and PCI includes 2-6 unique providers plus other coordination risk markers.
Medication Possession Ratio (MPR)	MPR represents the average supply days over the prescribing period. An MPR < .80 indicates low medication adherence for any of the following conditions: asthma, diabetes, CHF, HTN, IHD, disorders of lipid metabolism, depression, bipolar, schizophrenia
Frailty	Yes/No field indicating whether a patient has a diagnosis representing a medical problem associated with frailty (i.e., dementia, malnutrition, incontinence, vision impairment, fall risk, difficulty walking, decubitus ulcer, social support needs)

Johns Hopkins Risk Stratification

- **Successes:**
  - NCQA requirements
  - Using ACG system as backbone
  - Focusing risk assessment efforts on specific subpopulations in need of care management and/or with high needs
- **Challenges:**
  - Lack of BH data
  - Difficult to risk stratify if don't have claims data

Questions?