Understanding Risk Adjustment

Children's Mercy INTEGRATED CARE SOLUTIONS

What is Risk Adjustment?

Risk adjustment is an actuarial methodology used to calibrate payments (i.e. healthcare costs) based on the relative health of the at-risk population. Risk adjustment methodologies often use a patient's age, gender, medical diagnoses, and prescription medication history to assess patient risk. Risk adjustment methodologies are used to set benchmarks, adjust payer payments, and evaluate provider/practice cost performance.[1]

Risk Adjustment Depends Exclusively on Claims Data (typically based on 1 year of data)!

Risk scores are presented as relative risk ratios based on an average patient with a risk score of 1.0. In other words, a patient with a risk score of 2.0 is expected to be twice as costly and a patient with a risk score of 0.9 is expected to be 10% less costly.

Why is Risk Adjustment Important?

Your practice and our network's cost performance is influenced by risk adjustment. Risk-adjusted costs normalize costs for medical complexity to facilitate more meaningful comparisons across practices and providers.

$$\text{Risk Adjusted Cost} = \frac{\text{Total Cost}}{\text{Risk Score}}$$

A higher risk score (i.e. more medical complexity) lowers your risk adjusted cost.

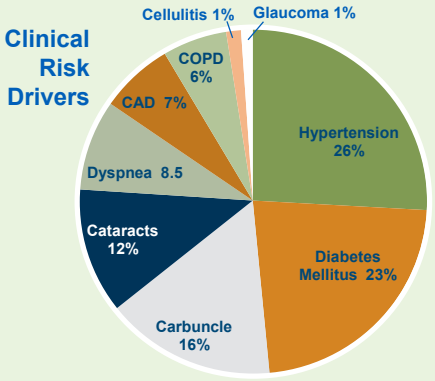
Optimize your risk adjusted cost performance by ensuring your risk score accurately reflects the level of risk of patients seen within your practice.

How Can I Influence My Risk Score to Ensure It Appropriately Reflects the Risk of My Patients?

Ensure your risk score is accurate by coding all diagnoses (at the appropriate acuity) managed during your clinic visits. Each patient's risk score is primarily dependent on what diagnostic codes are found in claims data.

Risk scores are based exclusively on diagnoses included on claims. Problem list diagnoses are not included.

Patient Risk Score Example (Male, 60 Years Old)[2]



Category Risk Drivers	MARA Risk Score
Inpatient Facility (IP)	1.45
Outpatient Facility (OP)	0.31
Professional (Phys/Other)	1.56
Medical Summary (IP+OP+Prof)	3. 32
Pharmaceutical (Rx)	1.41
Total Risk Score	4.73

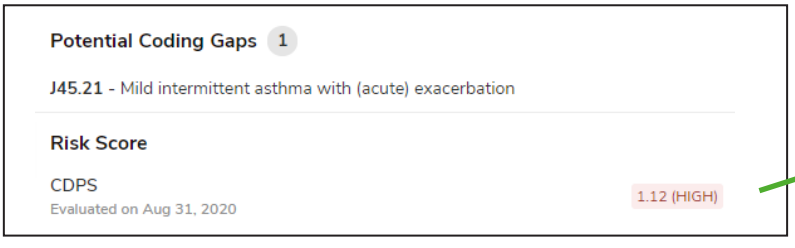
% Clinical Risk represents the expected portion of the risk in the projection period for a condition which was present in the experience, or assessment period.

The MARA risk model is driven by more than 1,000 medical conditions and disease groups designed by physicians and actuaries to estimate medical risk.

A Holistic View of Your Patient Helps Inform A More Accurate Risk Score:

Consider utilizing Innovaccer InNote and your EMR problem lists to inform your providers of conditions that may need management.

Innovaccer provides insights to conditions that may not be found in your EMR



Innovaccer Coding Gaps

InNote displays ICD-10 diagnosis codes that have been assigned to the patient during the past two years that have not yet been recorded during the current year. Use this data to inform risk coding as clinically appropriate.

Important: Conditions should only be added to claims when clinically appropriate

[1] Risk Assessment and Risk Adjustment. American Academy of Actuaries May 2010 Issue Brief. May 2010.
[2] Risk Adjustment –Tools for Health Reform. Milliman Inc. June 20, 2011.

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What is the Relative Impact of Various Chronic Condition on a Patient's Risk Score?

To better understand how various conditions impact risk score, the following tables categorize conditions in 5 severity levels (level 5 is the highest).

Conditions	Severity Level
Metastatic Cancer	5
Pancreas Transplant Status/Complications	5
Liver Transplant Status/Complications	5
End-Stage Liver Disease	5
Intestine Transplant Status/Complications	5
Peritonitis/Gastrointestinal Perforation/Necrotizing Enterocolitis	5
Respirator Dependence/Tracheostomy Status	5
Heart Assistive Device/Artificial Heart	5
Heart Transplant	5
Congestive Heart Failure	5
Hypoplastic Left Heart Syndrome and Other Severe Congenital Heart Disorders	5
Lung Transplant Status/Complications	5
Kidney Transplant Status	5
End Stage Renal Disease	5
Stem Cell, Including Bone Marrow, Transplant Status/Complications	5
Septicemia, Sepsis, Systemic Inflammatory Response Syndrome/Shock	4
Lung, Brain, and Other Severe Cancers, Including Pediatric Acute Lymphoid Leukemia	4
Mucopolysaccharidosis	4
Major Congenital Anomalies of Diaphragm, Abdominal Wall, and Esophagus, Age < 2	4
Myelodysplastic Syndromes and Myelofibrosis	4
Aplastic Anemia	4
Combined and Other Severe Immunodeficiencies	4
Traumatic Complete Lesion Cervical Spinal Cord	4
Quadriplegia	4
Amyotrophic Lateral Sclerosis and Other Anterior Horn Cell Disease	4
Quadriplegic Cerebral Palsy	4
Myasthenia Gravis/Myoneural Disorders and Guillain-Barre Syndrome/Inflammatory and Toxic Neuropathy	4
Non-Traumatic Coma, Brain Compression/Anoxic Damage	4
Respiratory Arrest	4
Cardio-Respiratory Failure and Shock, Including Respiratory Distress Syndromes	4
Acute Myocardial Infarction	4
Heart Infection/Inflammation, Except Rheumatic	4
Major Congenital Heart/Circulatory Disorders	4
Intracranial Hemorrhage	4
Ischemic or Unspecified Stroke	4
Vascular Disease with Complications	4
Pulmonary Embolism and Deep Vein Thrombosis	4
Aspiration and Specified Bacterial Pneumonias and Other Severe Lung Infections	4
Chronic Kidney Disease, Stage 5	4
Hip Fractures and Pathological Vertebral or Humerus Fractures	4
Artificial Openings for Feeding or Elimination	4
HIV/AIDS	3
Central Nervous System Infections, Except Viral Meningitis	3
Opportunistic Infections	3
Non-Hodgkin`s Lymphomas and Other Cancers and Tumors	3
Colorectal, Breast (Age < 50), Kidney and Other Cancers	3
Lipidoses and Glycogenosis	3
Adrenal, Pituitary, and Other Significant Endocrine Disorders	3
Acute Liver Failure/Disease, Including Neonatal Hepatitis	3
Intestinal Obstruction	3
Necrotizing Fasciitis	3
Bone/Joint/Muscle Infections/Necrosis	3
Osteogenesis Imperfecta and Other Osteodystrophies	3
Cleft Lip/Cleft Palate	3

Conditions	Severity Level
Hemophilia	3
Disorders of the Immune Mechanism	3
Coagulation Defects and Other Specified Hematological Disorders	3
Prader-Willi, Patau, Edwards, and Autosomal Deletion Syndromes	3
Traumatic Complete Lesion Dorsal Spinal Cord	3
Paraplegia	3
Spinal Cord Disorders/Injuries	3
Cerebral Palsy, Except Quadriplegic	3
Muscular Dystrophy	3
Parkinsonn's, Huntington's, and Spinocerebellar Disease, and Other Neurodegenerative Disorders	3
Hydrocephalus	3
Unstable Angina and Other Acute Ischemic Heart Disease	3
Atrial and Ventricular Septal Defects, Patent Ductus Arteriosus, and Other Congenital Heart/Circulatory Disorders	3
Specified Heart Arrhythmias	3
Cerebral Aneurysm and Arteriovenous Malformation	3
Hemiplegia/Hemiparesis	3
Cystic Fibrosis	3
Fibrosis of Lung and Other Lung Disorders	3
Pathological Fractures, Except of Vertebrae, Hip, or Humerus	3
Viral or Unspecified Meningitis	2
Thyroid, Melanoma, Neurofibromatosis, and Other Cancers and Tumors	2
Diabetes with Acute Complications	2
Diabetes with Chronic Complications	2
Diabetes without Complication	2
Protein-Calorie Malnutrition	2
Congenital Metabolic Disorders, Not Elsewhere Classified	2
Amyloidosis, Porphyria, and Other Metabolic Disorders	2
Cirrhosis of Liver	2
Chronic Pancreatitis	2
Inflammatory Bowel Disease	2
Rheumatoid Arthritis and Specified Autoimmune Disorders	2
Systemic Lupus Erythematosus and Other Autoimmune Disorders	2
Congenital/Developmental Skeletal and Connective Tissue Disorders	2
Acquired Hemolytic Anemia, Including Hemolytic Disease of Newborn	2
Sickle Cell Anemia (Hb-SS)	2
Drug Psychosis	2
Drug Dependence	2
Down Syndrome, Fragile X, Other Chromosomal Anomalies, and Congenital Malformation Syndromes	2
Spina Bifida and Other Brain/Spinal/Nervous System Congenital Anomalies	2
Seizure Disorders and Convulsions	2
Monoplegia, Other Paralytic Syndromes	2
Atherosclerosis of the Extremities with Ulceration or Gangrene	2
Chronic Obstructive Pulmonary Disease, Including Bronchiectasis	2
Chronic Ulcer of Skin, Except Pressure	2
Chronic Hepatitis	2
Acute Pancreatitis/Other Pancreatic Disorders and Intestinal Malabsorption	1
Thalassemia Major	1
Autistic Disorder	1
Pervasive Developmental Disorders, Except Autistic Disorder	1
Multiple Sclerosis	1
Asthma	1
Chronic Kidney Disease, Severe (Stage 4)	1
Amputation Status, Lower Limb/Amputation Complications	1

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How Should My Practice Use this Additional Risk Adjustment Information on Chronic Conditions?

The relative ranking of chronic conditions indicates what chronic conditions have the greatest impact on your practice's risk score. Ensure your risk score is accurate by coding all diagnoses (particularly those with high severity) managed during your clinic visits!

What is the Relative Impact of Newborn Maturity Level on a Patient's Risk Score?

The risk associated with a pre-mature baby is based on a combination of the newborn's maturity level and severity of chronic conditions. The following table provides the relative impact of newborn maturity on risk score. See previous page for relative impact of chronic conditions.

Newborn Diagnosis	Average Risk Score for CMICS Population	Maturity Category
Newborn light for gestational age, less than 500 grams	48.1	Extremely Immature
Extremely low birth weight newborn, less than 500 grams	30.5	Extremely Immature
Newborn small for gestational age, less than 500 grams	24.4	Extremely Immature
Extremely low birth weight newborn, 750-999 gram	19.2	Extremely Immature
Extremely low birth weight newborn, 500-749 grams	19.2	Extremely Immature
Other low birth weight newborn, 1000-1249 grams	12.4	Immature
Newborn light for gestational age, 1250-1499 grams	7.8	Immature
Other low birth weight newborn, 1250-1499 grams	7.1	Immature
Other low birth weight newborn, 1500-1749 grams	6.9	Immature
Newborn small for gestational age, 1250-1499 grams	6.4	Immature
Newborn light for gestational age, 1500-1749 grams	5.6	Immature
Other low birth weight newborn, 1750-1999 grams	5.5	Immature
Newborn small for gestational age, 1750-1999 grams	5.1	Immature
Newborn light for gestational age, 1750-1999 grams	5.0	Immature
Newborn small for gestational age, 1000-1249 grams	3.8	Immature
Newborn small for gestational age, 1500-1749 grams	3.3	Immature
Newborn light for gestational age, 1000-1249 grams	3.3	Immature
Other low birth weight newborn, 2000-2499 grams	7.3	Premature/Multiples
Newborn small for gestational age, 2000-2499 grams	6.1	Premature/Multiples
Newborn light for gestational age, 2000-2499 grams	4.2	Premature/Multiples