



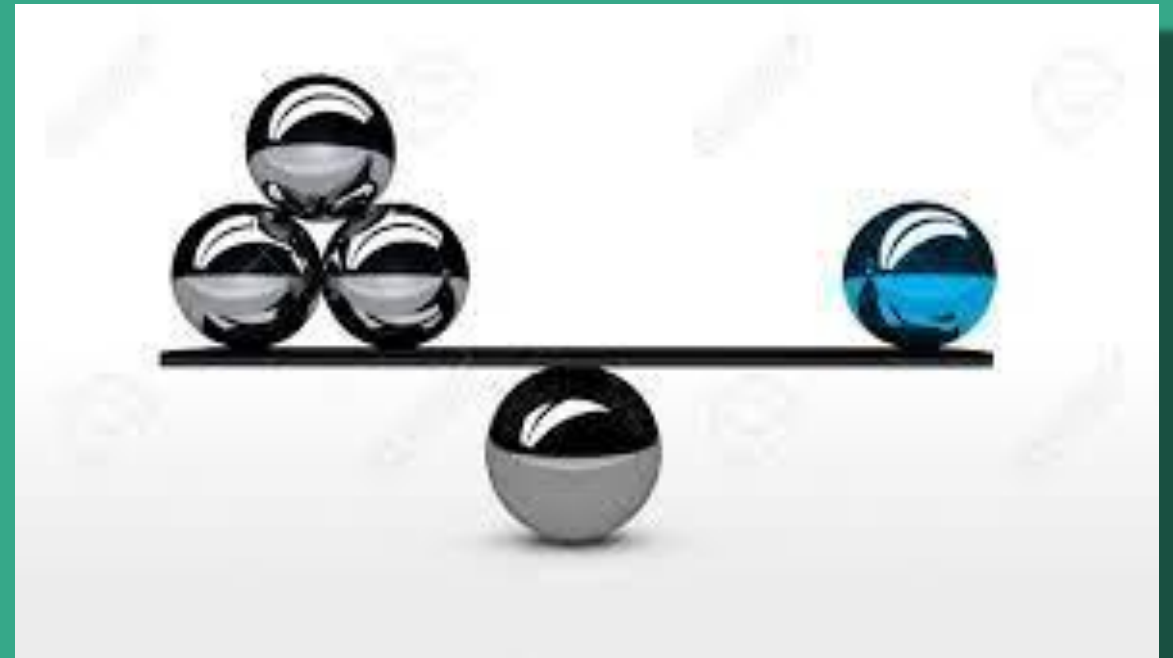
# FORTIFY

Healthcare Business Support LLC

Your Pathway to Peace of Mind

Mimi Reed, BHSA, CPC, CRC

Email: [fortifyhealthcare@outlook.com](mailto:fortifyhealthcare@outlook.com)



**RISK ADJUSTMENT:**  
The Method Behind the Madness

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## What we will cover

- ✓ Introduce the concept of *risk*
- ✓ Overview of Risk Adjustment methodology
- ✓ Overview of the Value-Based Care model



# What is *risk*?

## Let's consider this scenario...

- 18-year-old driving for just better than a year (recent high school graduate)
- Has had a couple of fender-benders and one speeding ticket
- Works full time in a fast-food restaurant
- 35-year-old married mother of 3
- Good driving record
- Professionally employed



# Risk Adjustment

What is it exactly?

## CMS – HCC Model

### Varying interpretations...

#### Per the Joint Commission:

*Risk adjustment is a **statistical process** used to identify and adjust for variation in patient outcomes that stem from differences in patient characteristics (or risk factors) across health care organizations.*

#### Per the AMA:

*Risk adjustment is a **mechanism** for adjusting payment rates, budgets or both, based on the health status and expected spending on a patient population.*

#### Per 45 CFR 153.20:

*Risk adjustment model means an **actuarial tool** used to predict health care costs based on the relative actuarial risk of enrollees in risk adjustment covered plans.*

Sources:

<https://manual.jointcommission.org/Manual/RiskAdjustment>

<https://www.ama-assn.org/system/files/2019-12/i19-cms-report3-apms.pdf>

<https://www.ecfr.gov/current/title-45/subtitle-A/subchapter-B/part-153>



# Risk Adjustment

## Definition

### CMS – HCC Model

#### Risk Adjustment is...

- A process by which health insurers are compensated based on the underlying health status of its enrollees, thereby protecting the insurers against losses due to high-risk, high-cost patients.
- Risk is calculated using actuarial tools that can predict the cost of care for patient populations, based on the reported health status of patients.



# Risk Adjustment

## Models

### CMS – HCC Model

#### Various Models – Medical

- Health and Human Services Hierarchical Conditions Category [HHS-HCC]
- Medicaid Chronic Illness and Disability Payment Systems (CDPS)
- **Medicare Hierarchical Condition Category, Part C [CMS-HCC]**
- Diagnosis Related Groups [DRG] – Inpatient
- Adjusted Clinical Groups [ACG] – Outpatient



# Risk Adjustment

## Models

### CMS – HCC Model

### Various Models – Pharmaceutical (Rx)

- MedicaidRx [UCSD]
- RxGroups [DxCG]
- **Medicare Hierarchical Condition Category, Part D [RxHCC]**
- Health and Human Services Hierarchical Condition Category [HHS-HCC]





# Risk Adjustment

## Key Points

### CMS – HCC Model

- Focus is on the reporting of resource-intensive chronic conditions
- Prospective model
  - Encounters and diagnoses from the *previous* year are used to calculate resource allocations for an enrollee, in the following year.
- **Diagnosis** coding is the primary source of stratifying risk (disease burden of a patient) and conveying that health status to CMS.
- Condition categories stratify risk and are additive.
- A Risk Score is a numeric value that represents the disease burden of a patient.



# Risk Adjustment

## How it works

# CMS – HCC Model

## 3 Step Process

- i. ICD-10 CM codes determined to carry risk value are filtered and placed in ***diagnosis groups***
- ii. Diagnosis groups are then placed in condition categories
- iii. Each category is assigned a “weight” that reflects the severity of illness

Hierarchical Categories in the HCC Model				
Infection	Gastrointestinal	Spinal	Vascular	Injury
Neoplasm	Musculoskeletal	Neurological	Lung	Complications
Diabetes	Blood	Arrest	Eye	Transplant
Metabolic	Substance Abuse	Heart	Kidney	Openings
Liver	Psychiatric	Cerebrovascular Disease	Skin	Amputation



# Risk Adjustment

## How it works

### CMS – HCC Model

Disease Coefficients	Description Label	
HCC1	HIV/AIDS	0.335
HCC2	Septicemia, Sepsis, Systemic Inflammatory Response Syndrome/Shock	0.352
HCC6	Opportunistic Infections	0.424
HCC8	Metastatic Cancer and Acute Leukemia	2.659
HCC9	Lung and Other Severe Cancers	1.024
HCC10	Lymphoma and Other Cancers	0.675
HCC11	Colorectal, Bladder, and Other Cancers	0.307
HCC12	Breast, Prostate, and Other Cancers and Tumors	0.150
HCC17	Diabetes with Acute Complications	0.302
HCC18	Diabetes with Chronic Complications	0.302
HCC19	Diabetes without Complication	0.105
HCC21	Protein-Calorie Malnutrition	0.455
HCC22	Morbid Obesity	0.250
HCC23	Other Significant Endocrine and Metabolic Disorders	0.194
HCC27	End-Stage Liver Disease	0.882
HCC28	Cirrhosis of Liver	0.363
HCC29	Chronic Hepatitis	0.147
HCC33	Intestinal Obstruction/Perforation	0.219

Diagnosis Code	Description	CMS-HCC Model Category V24
B180	Chronic viral hepatitis B with delta-agent	29
B181	Chronic viral hepatitis B without delta-agent	29
B182	Chronic viral hepatitis C	29
B188	Other chronic viral hepatitis	29
B189	Chronic viral hepatitis, unspecified	29
K730	Chronic persistent hepatitis, not elsewhere classified	29
K731	Chronic lobular hepatitis, not elsewhere classified	29
K732	Chronic active hepatitis, not elsewhere classified	29
K738	Other chronic hepatitis, not elsewhere classified	29
K739	Chronic hepatitis, unspecified	29
K754	Autoimmune hepatitis	29



# Risk Adjustment

## How it works

### CMS – HCC Model

Payment HCC Counts		
Variable	Description Label	Community, NonDual, Aged
D1	1 payment HCC	-
D2	2 payment HCCs	-
D3	3 payment HCCs	-
D4	4 payment HCCs	0.006
D5	5 payment HCCs	0.042
D6	6 payment HCCs	0.077
D7	7 payment HCCs	0.126
D8	8 payment HCCs	0.214
D9	9 payment HCCs	0.258
D10P	10 or more payment HCCs	0.505

Disease Interactions		
Variable	Description Label	Community, NonDual, Aged
HCC47_gCancer	Immune Disorders*Cancer	0.838
Diabetes_CHF	Congestive Heart Failure*Diabetes	0.121
CHF_gCOPdCF	Congestive Heart Failure*Chronic Obstructive Pulmonary Disease	0.155
HCC85_gRenal_v24	Congestive Heart Failure*Renal	0.156
gCOPdCF_CARD_RESP_FAIL	Cardiorespiratory Failure*Chronic Obstructive Pulmonary Disease	0.363
HCC85_HCC96	Congestive Heart Failure*Specified Heart Arrhythmias	0.085



# Risk Adjustment

## How it works

# CMS – HCC Model

## Categories and Subcategories

### Category of Neoplasm

- Divided into **5 subcategories** (establishing a hierarchy)

Disease Group	Description Label	Weight
HCC 8	Metastatic Cancer and Acute Leukemia	2.659
HCC 9	Lung and Other Severe Cancers	1.024
HCC 10	Lymphoma and Other Cancers	.675
HCC 11	Colorectal, Bladder and Other Cancers	.307
HCC 12	Breast, Prostate and Other Cancers and Tumors	.150



# Risk Adjustment

## How it works

# CMS HCC - Model

## Trumping Logic

*To Explain Further...*

HCCs are called hierarchical because certain conditions within a **related** category (family) may have notable severity difference; *the highest severity in the family will trump, or take precedence over, less severe conditions within that family.*<sup>1</sup>

<sup>1</sup> <https://www.aapc.com/risk-adjustment/risk-adjustment.aspx>

Here's the breakdown...



### Take Note...

- ✓ The 25 Category Conditions DO NOT 'trump' each other.
- ✓ Categories are **additive** (meaning additional diagnoses from other hierarchies can be added in), to appropriately capture the full risk burden.



# Risk Adjustment

## How it works

# CMD – HCC Model

## Trumping Chart

**Table VI-4. Disease Hierarchies for the 2020 Alternative Payment Condition Count Model**

<b>Hierarchical Condition Category (HCC)</b>	<b>If the Disease Group is Listed in this column...</b>	<b>...Then drop the Disease Group(s) listed in this column</b>
	<b>Hierarchical Condition Category (HCC) LABEL</b>	
8	Metastatic Cancer and Acute Leukemia	9, 10, 11, 12
9	Lung and Other Severe Cancers	10, 11, 12
10	Lymphoma and Other Cancers	11, 12
11	Colorectal, Bladder, and Other Cancers	12
17	Diabetes with Acute Complications	18, 19
18	Diabetes with Chronic Complications	19



# Risk Adjustment

## How it works

# CMS – HCC Model

## Risk Score

- A numeric value that reflects the disease burden (sum of all risk factors for a calendar year) of a patient.
- Recalculated annually.
- Includes 4 components:



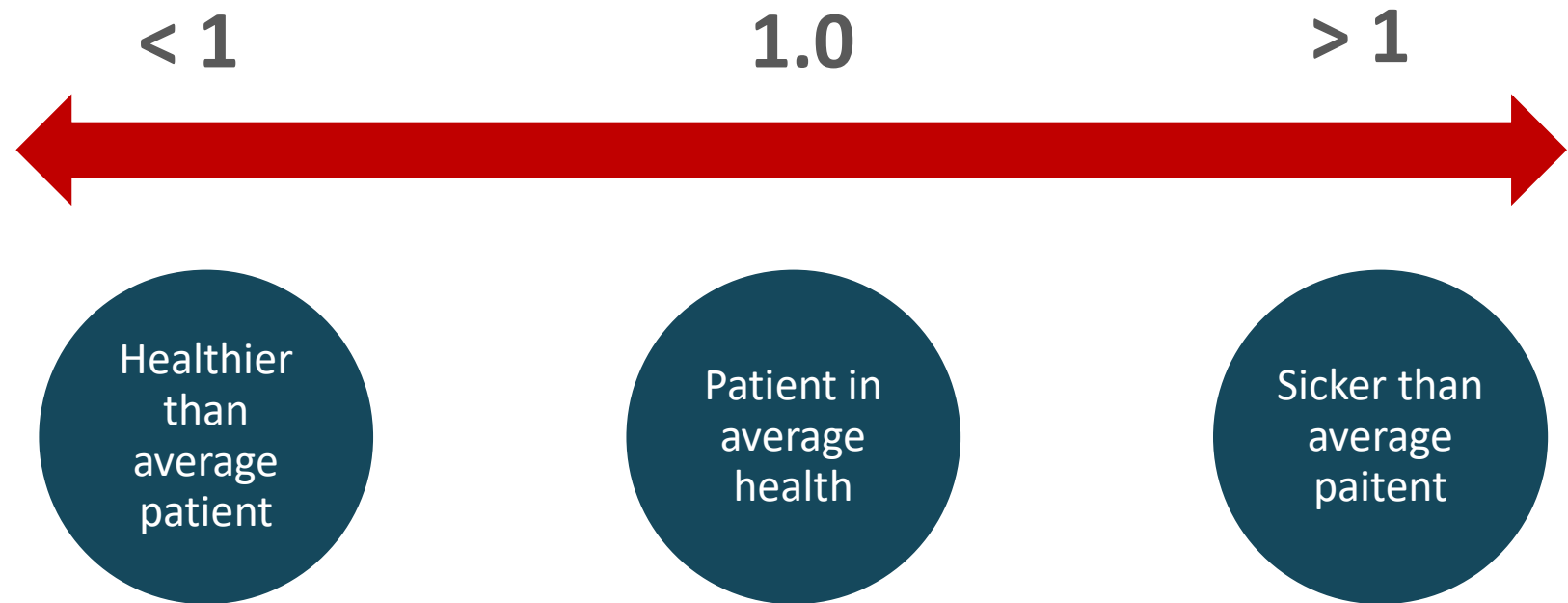


# Risk Adjustment

## How it works

# CMS – HCC Model

## Risk Score Interpretation



# Risk Adjustment

## How it works

# CMS – HCC Model

70 y/o female patient with diabetes and PAD. She is morbidly obese, with hypertension and RA with polyneuropathy. She is currently on Novolog.

Components	ICD-10 –CM	HCC Category	HCC Weight
Diabetes w PAD	E11.51	18, 108	.302, .288
Morbid obesity	E66.01	22	.250
Hypertension	I10	-	0.00
RA with polyneuropathy	M05.50	40, 75	.421, .472
LTU Insulin	Z79.4	(19)	(.105)
Demographic Adj			.386
Disease interactions	-	-	0.00
Condition Count		5	.042
		<b>Total Risk Score</b>	<b>2.161</b>
		<b>Estimated adjusted amount</b>	<b>\$1.700.00</b>



# Risk Adjustment

## How it works

# CMS – HCC Model

70 y/o female patient with diabetes and PAD. She is morbidly obese, with hypertension and chronic diastolic heart failure and RA with polyneuropathy. Her right great toe was amputated last year due to diabetic gangrene. She is currently on Novolog.

Components	ICD-10 –CM	HCC Category	HCC Weight
Diabetes w PAD	E11.51	18, 108	.302, .288
Morbid obesity	E66.01	22	.250
HHD with heart failure	I11.0	85	.331
Chronic diastolic heart failure	I50.32	(85)	.331
RA with polyneuropathy	M05.50	40, 75	.421, .472
R great toe amputation	Z89.411	189	.519
LTU Insulin	Z79.4	(19)	(.105)
Demographic Adj			.386
Disease interactions	DM + HF	-	.121
Condition Count		7	.126
		<b>Total Risk Score</b>	<b>3.216</b>
		<b>Estimated adjusted amount</b>	<b>\$2.500</b>



## CMS – HCC Model

Reporting criteria for risk diagnosis(es) validation:

- i. Must be addressed *at least once* in a calendar year.
- ii. Must be in a face-to-face visit.
- iii. Must be a valid provider type.



# Risk Adjustment

## How it works

# CMS – HCC Model

## Documentation requirements:

- Date of service is within reporting period
- Medical record *must* be for the correct patient
- Medical record *must* be legible
- All conditions reported must be supported in documentation
- Signatures must be valid
  - **Electronic signatures** require 3 elements to be acceptable:
    - Provider name
    - Provider credential
    - Acceptable authentication statement (ex. Electronically signed by, Closed by, Authenticated by...)
    - NOTE: Unacceptable authentication statements include Dictated by not read and/or signed, Electronic signature on file (with no other indication of date/time), Administratively signed...)



# Risk Adjustment

## How it works

# CMS – HCC Model

## Valid Provider Credentials

Specialty	Credential	Specialty	Credential
Doctor of Medicine	MD	Doctor of Osteopathy	DO
Audiologist	Au.D, MA CCC-A	Occupational Therapist	OT
Certified Clinical Nurse Specialist	CNS	Optometry	OD
Certified Nurse Midwife	CNM	Oral Surgery	DDS, DMD
Certified Registered Nurse Anesthetist	CRNA	Physician Assistant	PA
Chiropractic	DC	Physical Medicine and Rehabilitation	DPM
Licensed Clinical Social Worker	LCSW	Physical Therapist	PT
Nurse Practitioner	NP, ARNP, DNP, FNP, ANP, CRNP, APN, APRN, CNS, APR-CNS, Psych CNS	Podiatry	DPM



# Risk Adjustment

## How it works

# CMS – HCC Model

## Valid Provider (Specialty) Types

### Invalid Provider Types (not an all-inclusive list)

- Medical Assistants (Registered or Certified)
- Nurses (Registered or Licensed Practical)
- Dieticians
- Pharmacists

**Acceptable Physician Specialty Types for 2021 Payment Year (2020 Dates of Service) Risk Adjustment Data Submission**

CODE	SPECIALTY	CODE	SPECIALTY	CODE	SPECIALTY
1	General Practice	29	Pulmonary Disease	81	Critical care (intensivists)
2	General Surgery	33*	Thoracic Surgery	82	Hematology
3	Allergy/Immunology	34	Urology	83	Hematology/Oncology
4	Otolaryngology	35	Chiropractic	84	Preventive Medicine
5	Anesthesiology	36	Nuclear Medicine	85	Maxillofacial Surgery
6	Cardiology	37	Pediatric Medicine	86	Neuropsychiatry
7	Dermatology	38	Geriatric Medicine	89*	Certified Clinical Nurse Specialist
8	Family Practice	39	Nephrology	90	Medical Oncology
9	Interventional Pain Management (IPM)	40	Hand Surgery	91	Surgical Oncology
10	Gastroenterology	41	Optometry	92	Radiation Oncology
11	Internal Medicine	42	Certified Nurse Midwife	93	Emergency Medicine
12	Osteopathic Manipulative Medicine	43	Certified Registered Nurse Anesthetist	94	Interventional Radiology
13	Neurology	44	Infectious Disease	97*	Physician Assistant
14	Neurosurgery	46*	Endocrinology	98	Gynecologist/Oncologist
15	Speech Language Pathologist	48*	Podiatry	99	Unknown Physician Specialty
16	Obstetrics/Gynecology	50*	Nurse Practitioner	C0	Sleep Medicine
17	Hospice And Palliative Care	62*	Psychologist	C3	Interventional Cardiology
18	Ophthalmology	64*	Audiologist	C5	Dentist
19	Oral Surgery (dentists only)	65	Physical Therapist	C6	Hospitalist
20	Orthopedic Surgery	66	Rheumatology	C7	Advanced Heart Failure And Transplant Cardiology
21	Cardiac Electrophysiology	67	Occupational Therapist	C8	Medical Toxicology
22	Pathology	68	Clinical Psychologist	C9	Hematopoietic Cell Transplantation And
23	Sports Medicine	72*	Pain Management	D3*	Medical Genetics and Genomics
24	Plastic And Reconstructive Surgery	76*	Peripheral Vascular Disease	D4	Undersea and Hyperbaric Medicine
25	Physical Medicine And Rehabilitation	77	Vascular Surgery	D5	Opioid Treatment Program
26	Psychiatry	78	Cardiac Surgery	D7*	Micrographic Dermatologic Surgery (MDS)
27	Geriatric Psychiatry	79	Addiction Medicine	D8	Adult Congenital Heart Disease (ACHD)
28	Colorectal Surgery (formerly Proctology)	80	Licensed Clinical Social Worker		

\* Indicates that a number has been skipped.



# Risk Adjustment

## How it works

# CMS – HCC Model

Valid Visit Types and Places of Service:

### Hospital inpatient service

- Service is one provided by a hospital during which a patient is admitted to the facility for at least one overnight stay.

Acceptable Facilities	Unacceptable Facilities
Short-term (general and specialty)	Skilled nursing facilities (SNF)
Hospitals	Hospital inpatient swing bed
Religious Health Care Institutions	Components
Long-term Hospitals	Intermediate care facilities
Rehabilitation Hospitals	Respite care
Children’s Hospitals	Hospice
Psychiatric Hospitals	
Medical Assistance Facilities	
Critical Access Hospitals	





# Risk Adjustment

## How it works

# CMS – HCC Model

Valid Visit Types and Places of Service:

### Hospital outpatient service

- Therapeutic and rehabilitative services provided for sick or injured persons who do not require inpatient hospitalization or institutionalization.

Acceptable Facilities	Unacceptable Facilities
Short-term (general and specialty)	Free-standing Ambulatory Surgical Centers (ASCs)
Hospitals	Home Health Care
Community Mental Health Centers	Free-standing Renal Dialysis Facilities
Federally Qualified Health Centers	
Religious Health Care Institutions	
Long-term Hospitals	
Rehabilitation Hospitals	
Children's Hospitals	
Psychiatric Hospitals	
Rural Health Clinic	
Critical Access Hospitals	



# CMS – HCC Model

## Risk Adjustment Toolkit

- ICD-10-CM Official Guidelines for Coding and Reporting  
<https://www.cms.gov/files/document/fy-2023-icd-10-cm-coding-guidelines.pdf>
- Medical Record Reviewer Guidance  
<https://www.cms.gov/files/document/medical-record-reviewer-guidance-january-2020.pdf-0>
- CMS Risk Adjustment Data Validation (RADV) Medical Record Checklist and Guidance  
<https://www.cms.gov/Research-Statistics-Data-and-Systems/Monitoring-Programs/recovery-audit-program-parts-c-and-d/Other-Content-Types/RADV-Docs/RADV-Checklist.pdf>
- Acceptable Physician Specialty  
[https://www.csscooperations.com/internet/csscw3\\_files.nsf/F/CSSCAcc%20Phy%20Specialty%20Types%20PY2021.pdf/\\$FILE/Acc%20Phy%20Specialty%20Types%20PY2021.pdf](https://www.csscooperations.com/internet/csscw3_files.nsf/F/CSSCAcc%20Phy%20Specialty%20Types%20PY2021.pdf/$FILE/Acc%20Phy%20Specialty%20Types%20PY2021.pdf)



# Risk Adjustment

## How it works

# CMS – HCC Model

## Risk Adjustment Toolkit

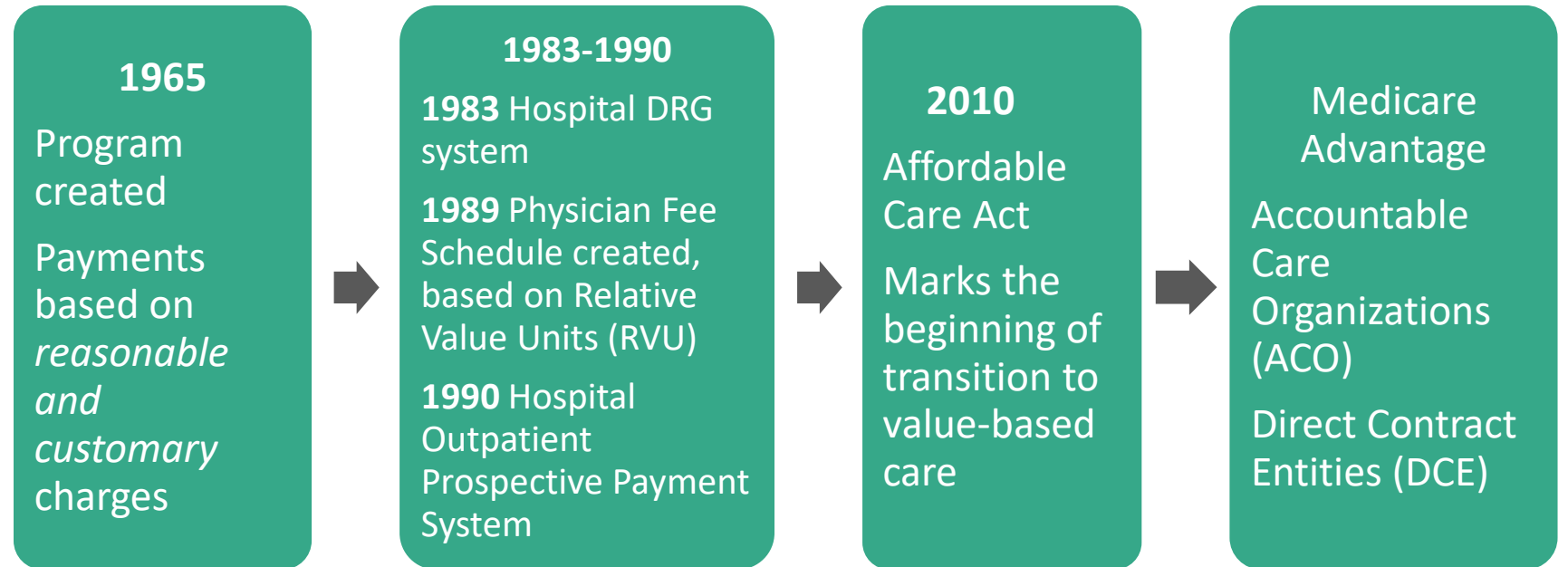
- Announcement 2020 (V24) [pg 74ff coefficient references]  
<https://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Downloads/Announcement2020.pdf>
- Risk Adjustment - Medicare Risk Adjustment Eligible CPT/HCPCS Codes; ICD-10-CM to HCC Mappings; Diagnoses from Telehealth Services for Risk Adjustment)  
<https://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Risk-Adjustors>
- Chapter 7 – Medicare Managed Care Manual (great definitions and explanations)  
<https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/mc86c07.pdf>
- CSSC Operations – Encounter and Risk Adjustment Program (Part C)  
[https://www.csscooperations.com/internet/csscw3.nsf/T/Encounter%20and%20Risk%20Adjustment%20Program%20\(Part%20C\)](https://www.csscooperations.com/internet/csscw3.nsf/T/Encounter%20and%20Risk%20Adjustment%20Program%20(Part%20C))



# Value Based Care Model

## How we got here

# Value Based Care



# Value Based Care Model

## How it's different

# Value Based Care

## Key components

- Integrated approach
- Care is proactive and preventative
- Data analytics are leveraged to identify health risks, which allow for more efficient coordination of care
- Compensation is focused on *outcomes* and quality of care



Congratulations!

You made it!

Thank you for your attention and participation!

Time for a **Jeopardy!** Knowledge Check

