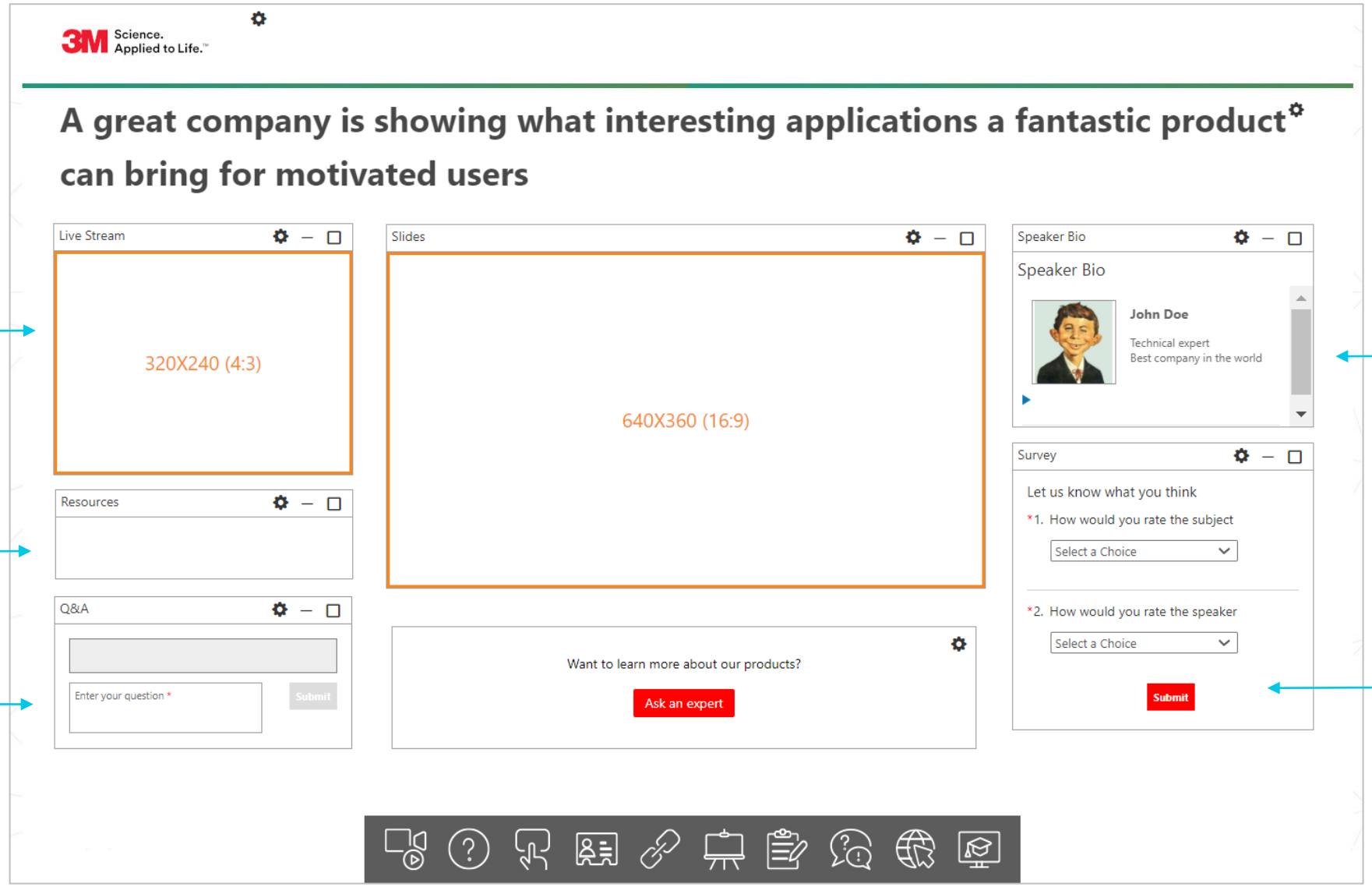
New year, new webinar platform!



Media player

Resources

Have a question? Let us know here!

Meet our speaker!

We want to hear from you survey!

Menu Bar

New year, new platform!

- On24 Webinar Platform for a better user experience!
- Use Google Chrome and close out of VPN/multiple tabs
- Check speaker settings and refresh if you are having audio issues
- Ability to move engagement sections
- Ask questions!
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- Engagement tools and CC available
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- Complete the survey

3M Science. Applied to Life.™

Understanding your population and measuring health system efficiency

July 14, 2022

Meet the speakers

Dawn Weimar
Senior Regional Director

Lisa Edstrom, MBA
Sr. Manager for Customer Engagement

Agenda and keys to...

1. Introduction & relevance
2. Understanding the Methodologies
   - Clinical Risk Groups
   - Potentially Preventable Events
3. Success stories
4. 3M rate-based efficiency measures
   - Value-based care
   - Population health
5. Risk adjustment and rate setting
6. Resources

Keys to success:

CRG & PPE characteristics

Performance measurement

Quality of care oversight

Who are we?

3M's Business Groups

Safety & Industrial

Serving the global industrial, electrical and safety markets, the Safety & Industrial Business Group consists of personal safety, adhesives and tapes, abrasives, closure and masking systems, electrical markets, automotive aftermarket, and roofing granules.

Transportation & Electronics

Focusing on global transportation and electronic original equipment manufacturer customers, the Transportation & Electronics Business Group is made up of electronics (display materials and systems, electronic materials solutions), automotive and aerospace, commercial solutions, advanced materials, and transportation safety.

Health Care

This Health Care Business Group serves the global healthcare industry and includes medical solutions, oral care, separation and purification sciences, health information systems, drug delivery systems, and food safety.

3M

Health Information Systems

Consumer

Delivering service to our global consumers, the Consumer Business Group consists of home improvement, stationery and office supplies, home care, and consumer health care.

3M

By the numbers...

54 million
covered lives impacted

1 billion
claims have 3M methodologies applied monthly

2% of GDP
with 3M methodologies

5,000+ hospitals
leverage our coding software and automation technology

3M Health Information Systems

300+
active industry partnerships

200+ payers
use our reimbursement or population methodologies to drive value

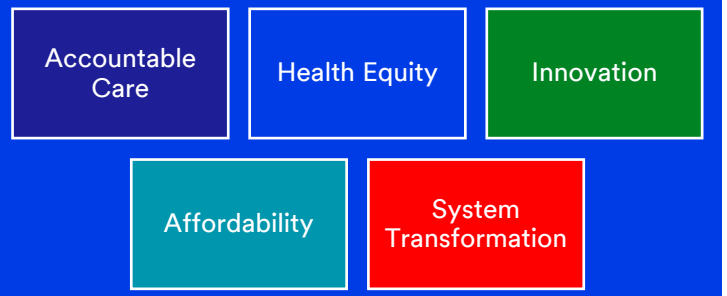
41 states
use 3M methodologies as their basis of reimbursement

30+ years
in contract with CMS and other government agencies

Framework to drive value in health care

Value-Based Care

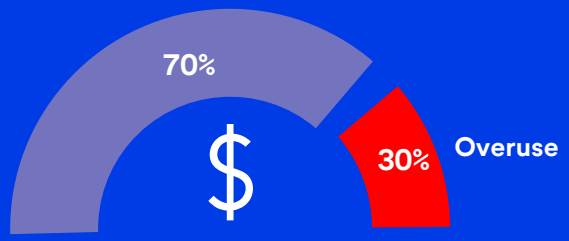
CMS expects 100% of Medicare beneficiaries to be treated within a value-based program by 2030



Scale value-based program design and innovation

Reimbursement Accuracy

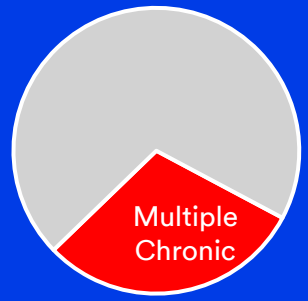
~$760B to $935B of U.S. healthcare spending may be overuse



Identify overuse, reduce variation and increase accuracy

Population Health

27% of US adults have multiple chronic conditions



Drive high quality person-centered care that improves lives

Relevance – Why this matters for quality and efficiency

Focus on quality and efficiencies requires appropriate tools

Risk adjustment can help payers and providers with several financial and population health functions including profiling populations, identifying or anticipating the health needs of patients and populations, intervening at the right time, and assessing performance, as well as rate setting, benchmarking, allocating resources, and underwriting.

Population health

The 3M methodologies and services that enable high-quality whole person care across all populations.

Person-centered

- Promote whole person care that drive quality improvement
- Enable whole person risk stratification across all populations (pediatric, maternity, adult, geriatric)
- 3M™ CRG, PFE, and PPE methodologies provide person level outcomes that drive population and episodic initiatives

Equitable outcomes

- Quantify and measure the impact on health equity and drive best practices
- 3M™ CRGs, PFEs, PPEs capture clinical risk and quality outcomes that can be adjusted by social risk information
- Integrate race, ethnicity or other demographic or social risk factors to analyze variances in health equity

Prioritize resources

- Stratify population health risk using 3M™ CRGs to prioritize clinical interventions and resources
- Identify performance variation using 3M™ PPEs to align community and health system resources across the continuum
- Scale limited health plan, provider, and community resources to focus on most vulnerable populations

Value-based care

The 3M methodologies and services that enable value-based programs across all populations.

Scalable design

- Inclusive of pediatric, maternal, adult and geriatric populations
- 3M™ CRGs, PFE, and PPE methodologies provide flexibility to support population and episodic programs
- Enable risk adjusted design that reduces complexity and supports broad provider participation

Outcomes focused

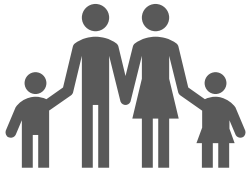
- Integrate outcomes that drive total cost of care and quality outcomes
- 3M™ PPEs enable risk adjusted outcome-based quality improvement across inpatient, outpatient, ancillary services
- Leverage simplified but flexible outcome-based benchmarks that scale across all populations

Drive innovation

- Enable alternative payment and population-based innovation that reduce administrative burden
- 3M™ CRGs, PFE, and PPE clinical methodologies scale with social risk models across all populations
- Support value-based systems that encourage lasting care delivery transformation

Risk stratification is essential

Key principles of risk adjustment are required to scale driving value in the healthcare.

Fair	Scalable	Flexible	Accurate	Efficient
				
Ensures equitable comparisons are made and allocation of resources and reimbursement are aligned without penalizing care delivery to complex patients	Enables risk adjustment that apply to population and service-based use cases, not just for a specific population cohort or service line	Benchmarks can be designed across population risk, service case-mix, and social determinants	Incentivizes accurate reimbursement and complete coding that align resource consumption and clinical complexity	Minimize administrative burden to maintain clinical updates that impact risk adjustment within program design

3M HIS' Patient Classification Methodologies

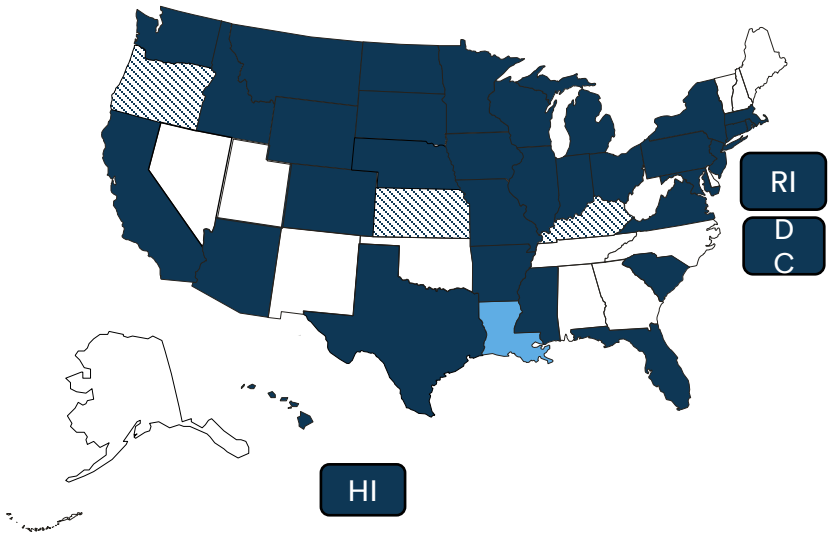
Defining and measuring value, reimbursement and quality improvement.

Methodology	Applicability	Notes	Value-based care	Reimbursement optimization	Population health
3M™ All Patient Refined Diagnosis Related Groups (APR-DRGs)	Inpatient admissions	Includes four severity of illness subclasses and risk of mortality		✓	
3M™ Enhanced Ambulatory Patient Groups (EAPGs)	Ambulatory visits	Hospital outpatient, ambulatory surgical center, other clinics		✓	
3M™ Clinical Risk Groups (CRG)	Population health and reimbursement	Person health, functional status and population-based reimbursement	✓	✓	✓
3M™ Patient-focused Episodes (PFE)	Event and cohort-based episodes	Includes hospital, professional, pharmacy, or other services	✓	✓	✓
3M™ Potentially Preventable Complications (PPC)*	Inpatient hospital care quality outcomes		✓	✓	✓
3M™ Potentially Preventable Readmissions (PPR)*	Inpatient hospital care, population health outcomes	Includes PPRs to the Emergency Department	✓	✓	✓
3M Potentially Preventable Admissions (PPA)*	Population health outcomes	Included as part of 3M™ Population-focused Preventables (PFP)	✓	✓	✓
3M Potentially Preventable Emergency Department Visits (PPVs)*			✓	✓	✓
3M Potentially Preventable Ancillary Services (PPSs)*			✓	✓	✓

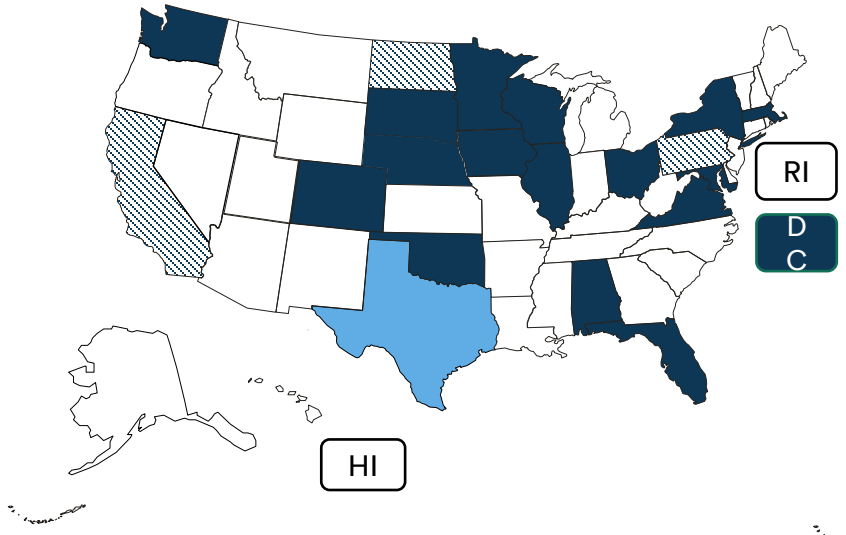
* 3M PPCs, PPRs, PPV, PPA, and PPS are the 3M Potentially Preventable Events (PPE)

3M Methodology Adoptions

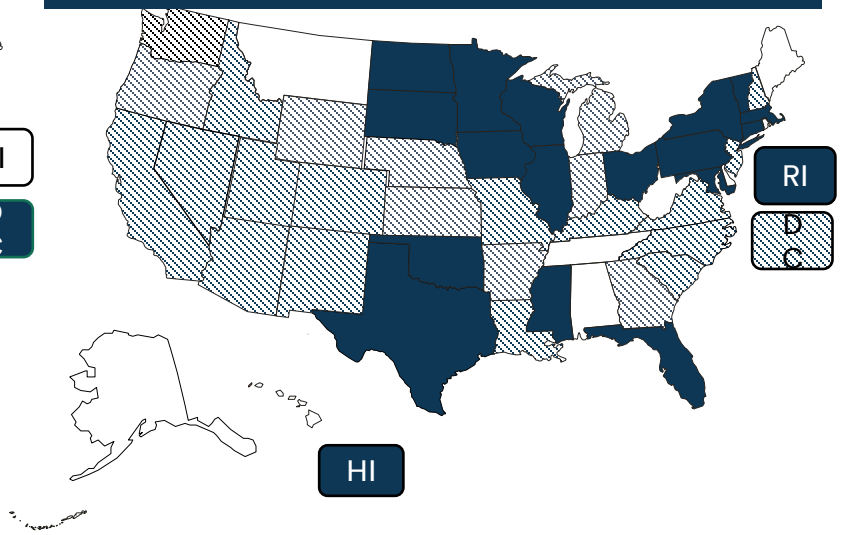
All Patient Refined DRGs



Enhanced Ambulatory Patient Group



Population Health and Risk Groupers



- State agency and managed care ad option
- State agency commitment to adopt
- Managed care adoption only

Notes:
State agencies and commercial payers can have more than one 3M methodology adopted to support reimbursement, value, or population health initiatives. Some state agencies have committed to use a 3M methodology but have not implemented yet. Population health and risk groupers include 3M™ CRG, PFP, PPR, PPC, or PFEs.

Current as of May 2022

Success stories:

Tracking & incentivizing Medicaid outcomes

All examples are from publicly available sources.

Analyses not published by 3M do not necessarily reflect 3M recommendations and have not been approved by 3M. They are listed here for the information of people interested in the various ways that 3M patient classification methodologies have been applied. As well, please note that listing these examples does not imply endorsement of 3M methodologies by individual authors, other organizations, or government agencies.

3M building blocks for patient classification

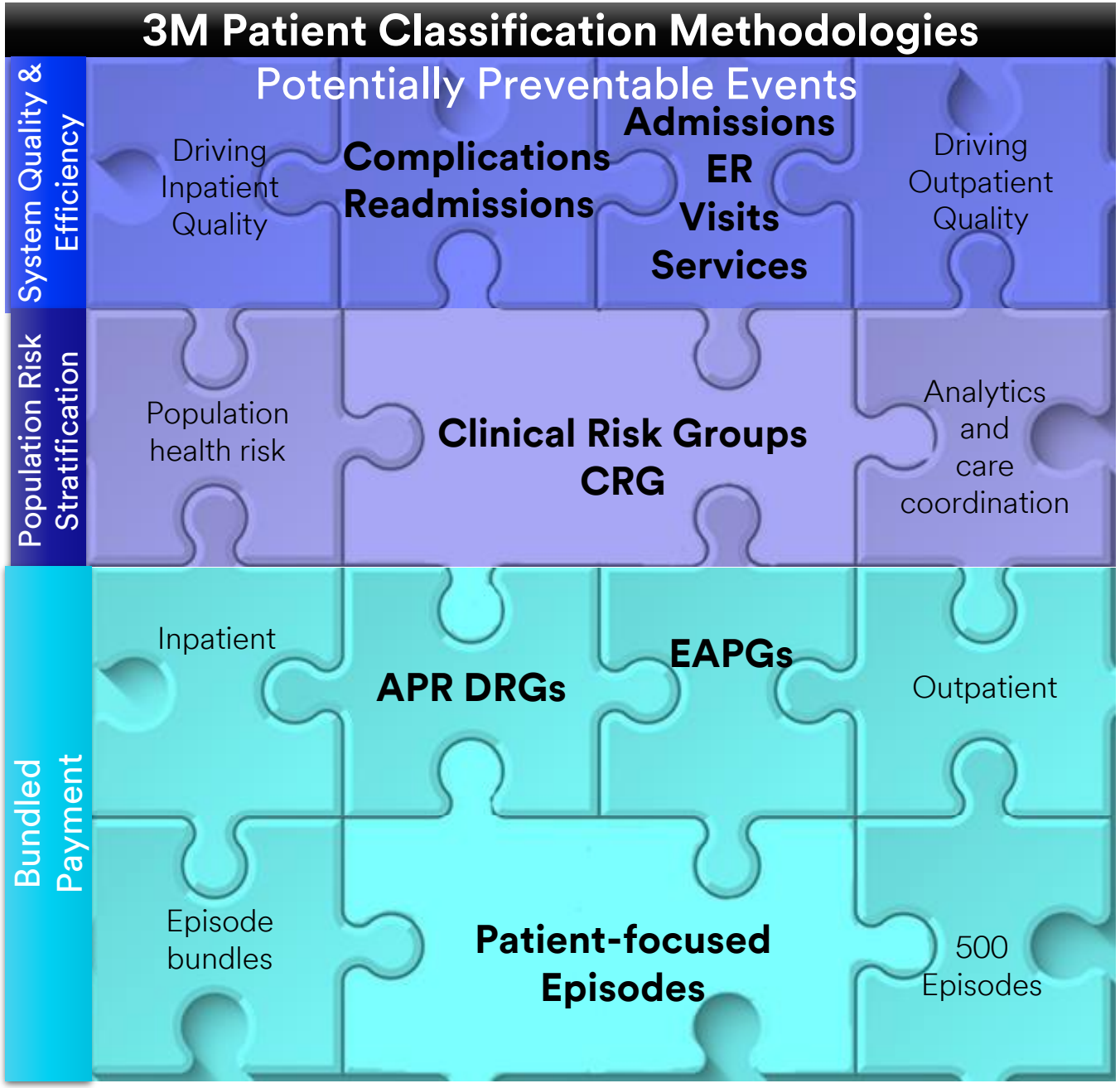
Proven savings and quality improvement in large scale deployments

- APR DRGs & EAPGs- bundled payment at point of care
- Episodes built upon per stay & per visit bundled payment
- Clinical Risk Groups- clinical cohorts for population health, including SDOH
- Potentially preventable events (PPEs) - payers publish savings and quality improvement in large scale deployments

Keys:

- Sophisticated patient classification methods
- Systemic measures of quality
- Appropriate case mix adjustment

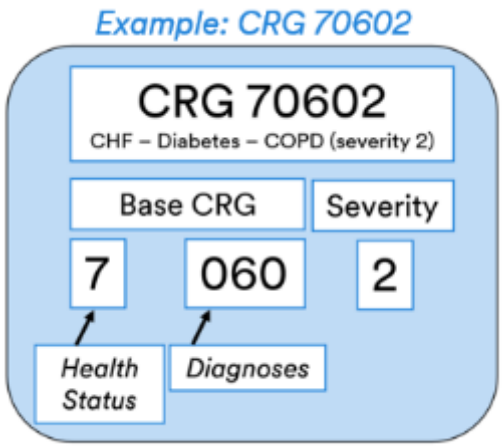
[Patient classification methodologies | 3M Health Information]



Overview of the 3M CRG assignment process

At the broadest level, the 3M CRGs are organized into ten health status groups:

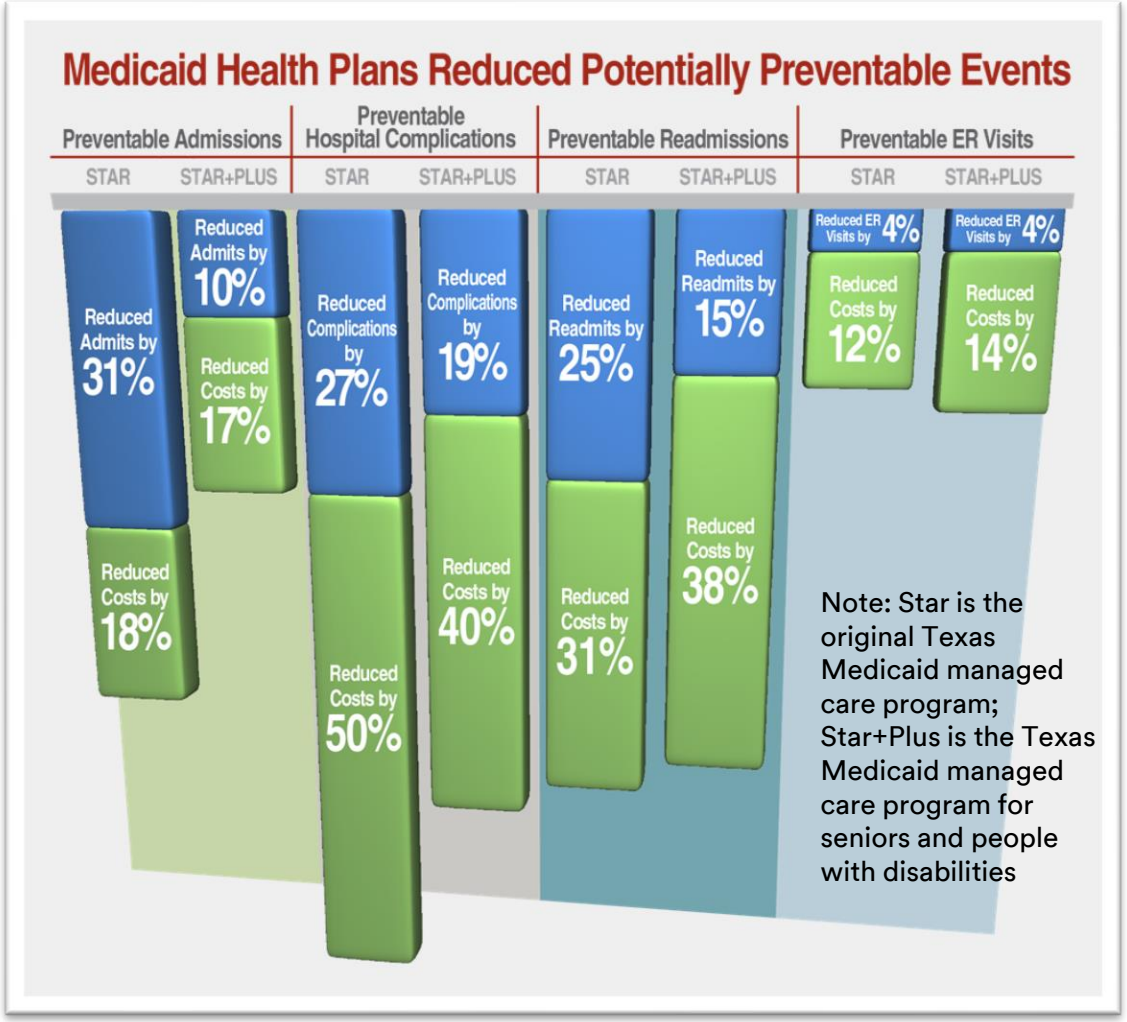
3M CRG health status group	Example(s)	Base 3M CRGs	Severity levels	Number of 3M CRGs
9 – Catastrophic Conditions	History of Major Organ Transplant	10	4	40
8 – Malignancy, Under Active Treatment	Lung malignancy + chemotherapy	19	4	76
7 – Significant Chronic Disease in Three or More Organ Systems (Triplets)	CHF + Diabetes + COPD	25	6	150
6 – Significant Chronic Disease in Multiple Organ Systems (Pairs)	CHF + Diabetes	70	6	420
5 – Single Dominant or Moderate Chronic Disease	Diabetes	115	4	460
4 – Multiple Minor Chronic	Hypertension + Migraine disease	4	4	16
3 – Single Minor Chronic Disease	Hypertension	53	2	106
2 – History of Significant Acute Disease	Pneumonia, Premature Newborns	39 (Concurrent) 33 (Prospective)	0	39 (Concurrent) 33 (Prospective)
1 – Healthy	Upper Respiratory Infections, Newborns	30 (Concurrent) 26 (Prospective)	0	30 (Concurrent) 26 (Prospective)
0 – Non-Users	Non-users	1	0	1
		Total Base CRGs 366 (Concurrent) 356 (Prospective)		**Total Number of 3M CRGs** **1,338 (Concurrent) 1,328 (Prospective)**



Texas Medicaid: results from financial incentives for MCOs
Using 3M rate-based efficiency measures

- Medicaid MCO P4Q initiative focuses on improved outcomes for VBP
- 3% of MCO premium at risk for quality using PPEs
- ~10-25% of newly enrolled individuals do not select a managed care plan
- Estimated $88 million *sustainable* annual savings
  - PPA: $48 million
  - PPC: $11 million
  - PRR: $25 million
  - PPV: $4 million

Testimony from the Texas Association of Health Plans



Dollar estimates from 3M based on data from Texas HHSC, *Combined Report on Quality-Based Payment and Delivery Reforms in Medicaid and the Children's Health Insurance Program,* Report to the Texas Legislature, Feb. 2017, and Texas Association of Health Plans, *Senate Bill 760 Public Stakeholder Forum,* June 6, 2016.
See also Millwee B, Goldfield N, Turnipseed J. Achieving improved outcomes through value-based purchasing in one state. American Journal of Medical Quality. 2017;33(2).

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Potentially Preventable Events can be reduced

Minnesota All-Payer
Potentially Preventable Readmissions

2011-2013

Sources:

Stratis Health. RARE Campaign Exceeds Goals, Prevents 7,975 Avoidable Hospital Readmissions in Minnesota, www.stratishealth.org/news/20140617.html.

McCoy KA, Bear-Pfaffendof K, Foreman JK, Daniels T, Zabel EW, Grangaard LJ, Trevis JE, Cummings KA. Reducing Avoidable Hospital Readmissions Effectively: A Statewide Campaign. Jt Comm J Qual Patient Saf. 2014

Maryland All-Payer
Potentially Preventable Complications

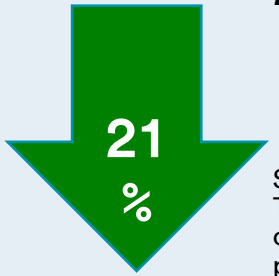
2010-2015

- 57% decrease in PPC rate
- 68% decrease in absolute number (53,494 → 17,028)

Source: Maryland Health Services Cost Review Commission. Final Recommendation for the Maryland Hospital Acquired Conditions Program for Rate Year 2018. Baltimore: HSCRC, 2016.

Texas Medicaid
Potentially Preventable Admissions

2013-2015



Source: Millwee B, Goldfield N, Turnipseed J. Achieving improved outcomes through value-based purchasing in one state. Am J Med Qual. 2018;33(2):162-171.

New York Medicaid (DSRIP)
Potentially Preventable Readmissions

2014-2018

Source: New York Department of Health. Delivery System Reform Incentive Payment (DSRIP) Amendment Request. Albany, NY: NYDOH, Sept. 17, 2019.

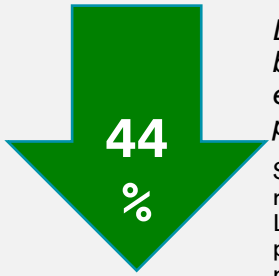
Texas Medicaid
Potentially Preventable ED Visits

2013-2015

Source: Millwee B, Goldfield N, Turnipseed J. Achieving improved outcomes through value-based purchasing in one state. Am J Med Qual. 2018;33(2):162-171.

MN High-Risk Elders
Potentially Preventable Readmissions

2013-2015



Difference in PPR reduction between high-risk seniors enrolled in care transitions program and a control group

Source: McCoy RG et al. Which readmissions may be preventable? Lessons learned from a posthospitalization care transitions program for high-risk elders. Med Care. 2018;56(8):693–700.

3M

Typical payer outcomes - HEDIS disease-specific measures

Treatment	**1.0**
Asthma	**1.5**
Asthma control Did people, ages 5 to 64, with persistent asthma have an appropriate ratio of asthma medications to help control their symptoms?	3.0
Asthma drug management Did people, ages 5 to 64, with persistent asthma take medications to control their asthma as prescribed?	NC
Diabetes	**2.0**
Blood pressure control (140/90) Did diabetic members ages 18 to 75 have their blood pressure below 140/90 at their last visit?	3.0
Eye exams Did diabetic members ages 18 to 75 have a retinal or dilated eye exam?	4.0
Glucose control Did diabetic members ages 18 to 75 maintain their blood sugar level below 8 percent?	2.0
Patients with diabetes – received statin therapy Did members ages 40 to 75 with diabetes who do not have cardiovascular disease receive a statin medication?	NC
Patients with diabetes – statin adherence 80% Did members ages 40 to 75 with diabetes who do not have cardiovascular disease stay on statin therapy as prescribed?	NC
Heart disease	**2.0**
Patients with cardiovascular disease – received statin therapy Did males 21 to 75 and females 40 to 75 with cardiovascular disease receive a high or moderate-intensity statin medication?	NC
Patients with cardiovascular disease – statin adherence 80% Did males 21 to 75 and females 40 to 75 with cardiovascular disease stay on high or moderate-intensity statin therapy as prescribed?	NC
Controlling high blood pressure Did hypertensive patients ages 18 to 85 have their blood pressure controlled (i.e., for patients 18 to 59 a BP <140/90 mm Hg, for patients 60 to 85 with a diagnosis of diabetes a BP <140/90 mm Hg or a BP <150/90 mm Hg without a diagnosis of diabetes)?	3.0
Smoking advice Were members advised by a practitioner to stop?	NA
Mental and behavioral health	**0.0**
Depression: Adhering to medication for 6 months Did adult members with a new episode of depression take a prescribed antidepressant drug for at least 6 months?	NC
Follow-up after hospitalization for mental illness Were members hospitalized with a mental illness aged six and older followed up within a week after discharge?	NC

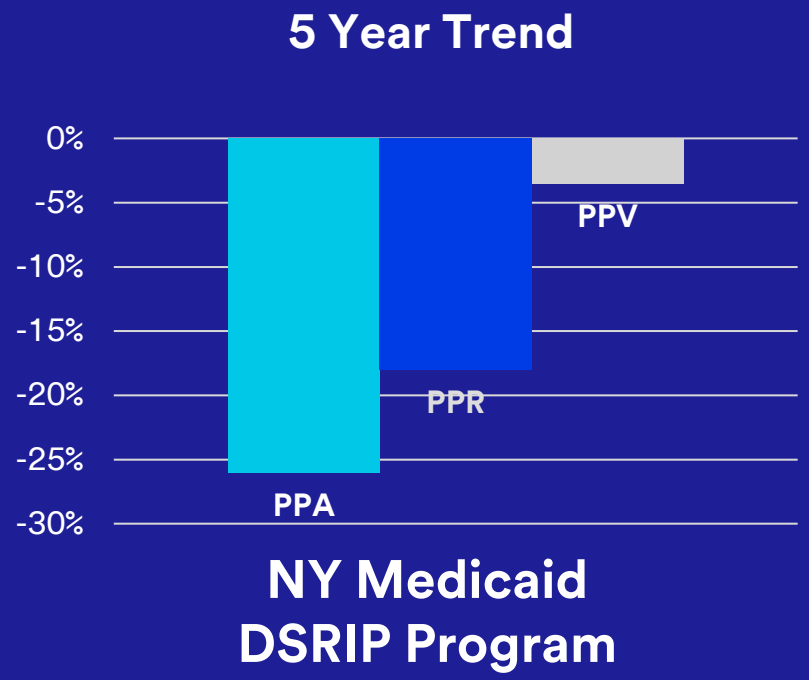
- NCQA Accreditation as of June 30, 2019.
- I = Insufficient data; **NC** = No Credit; **NA** = Not Applicable; **NP** = Not Publicly Reported
- † = Special Needs Plan (SNP), according to CMS
- * = NCQA recommends exercising caution when comparing HEDIS 2019 health plan performance on Use of Opioids at High Dosage (UOD) and Use of Opioids from Multiple Providers (UOP) due to health plan variation in denominator size and different state requirements.
- Contact us at my.ncqa.org to ask about licensing the ratings data for research or display.

Quality measures:

- Do these few measures indicate the overall performance of a health plan or drive improvements?
- Low denominators
- Reliant on patient contact and engagement
- Labor intensive reporting, easier with EHRs, medical record checks when dollars at stake.
- What will help you achieve the Triple AIM? Can it be achieved? YES!!

Paying for high value care in New York State.

Achieve the triple aim of improved population health, quality of care, and reducing health disparities and per capita cost.



CRG = 3M Clinical Risk Groups
PPA = 3M Potentially Preventable Admissions
PPR = 3M Potentially Preventable Readmissions
PPV = 3M Potentially Preventable ED Visits

~$42 billion in managed care premiums

prospectively risk-adjusted using CRGs annually

86% of managed care expenditures

are managed under a value-based program

56% of value-based programs

share financial risk with providers and include SDOH intervention(s)

+/- 2.5% performance target

for PPA utilization and costs annually from baseline for managed care plans

NEW YORK STATE | Department of Health

Sources:
NYS Insurance Program Quality Strategy (2022),
Final NYS DISRIP Incentive Program (August 2021)[2]
NYS Office of Comptroller, fiscal year ending March 2021

3M

Better results. Fewer readmissions.

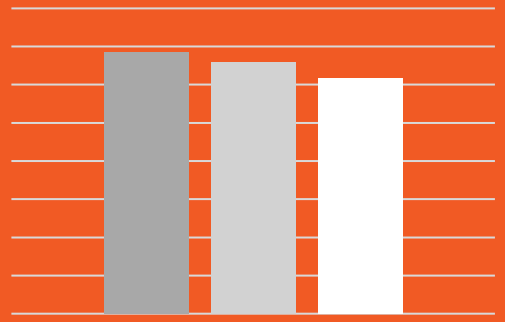
20% reduction in readmissions—or 8,800 healthy nights at home—leading to **$70 million** in savings*

*** Minnesota**
Medicaid and DOH using 3M PPRs

Source: McCoy, et. al. Reducing Avoidable Hospital Readmissions Effectively: A Statewide Campaign. Joint Commission Journal on Quality and Patient Safety. 2014

Sustainable cost savings. With better quality.

$35 million in avoided costs with better primary care, reduced ER visits and readmissions, and higher continuity of care*



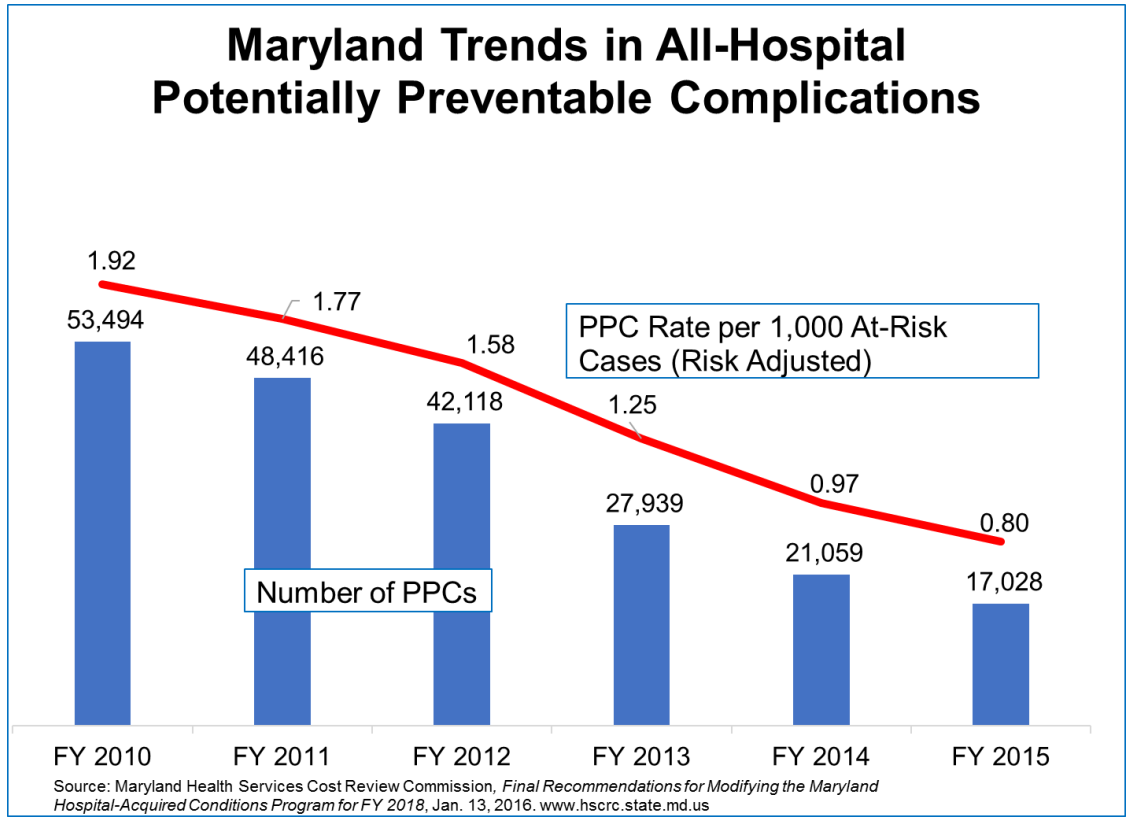
$35 million
In waste avoided

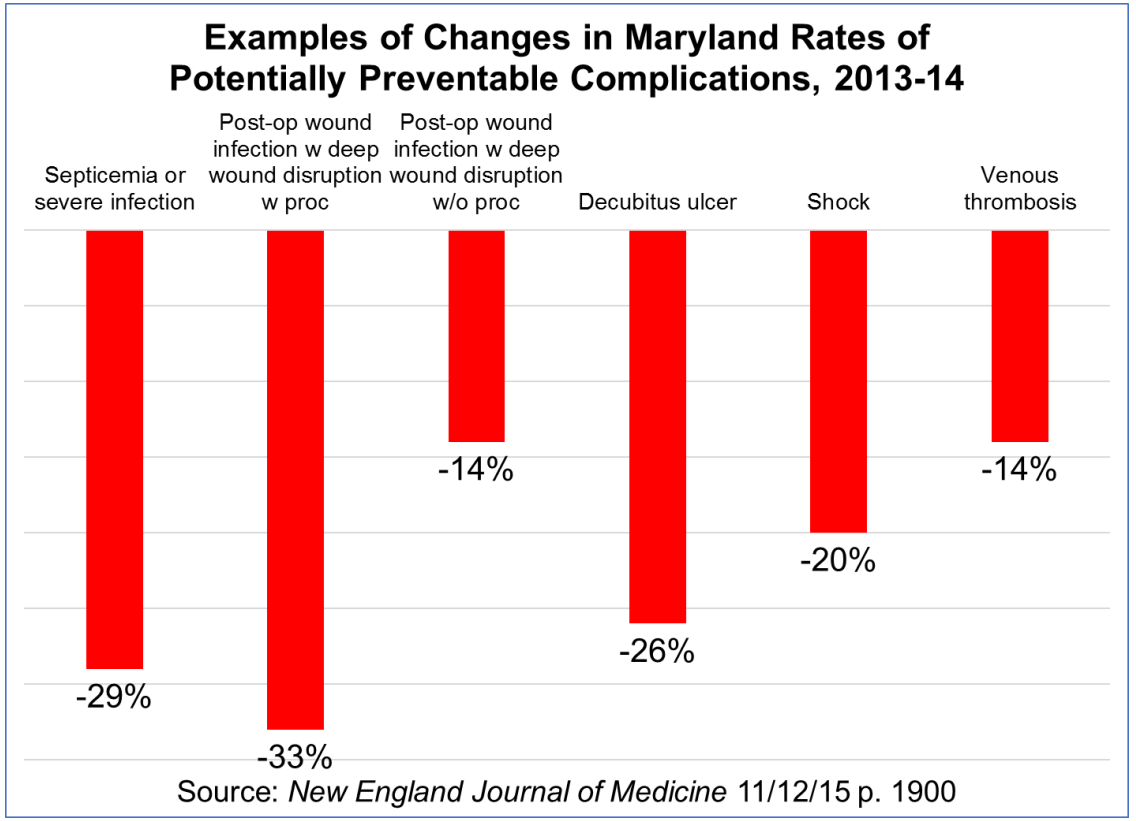
*** Wellmark**
Commercial ACOs in Iowa

Source: Wellmark, Des Moines Register, 2016

Maryland: reducing Potentially Preventable Complications

- Between FY 2010 and FY 2015:
  - 57% decrease in PPC rate per 1,000 at-risk admissions – from 1.92 to 0.80
  - Statewide PPCs reduced from 53,494 in 2010 to 17,028 in 2015





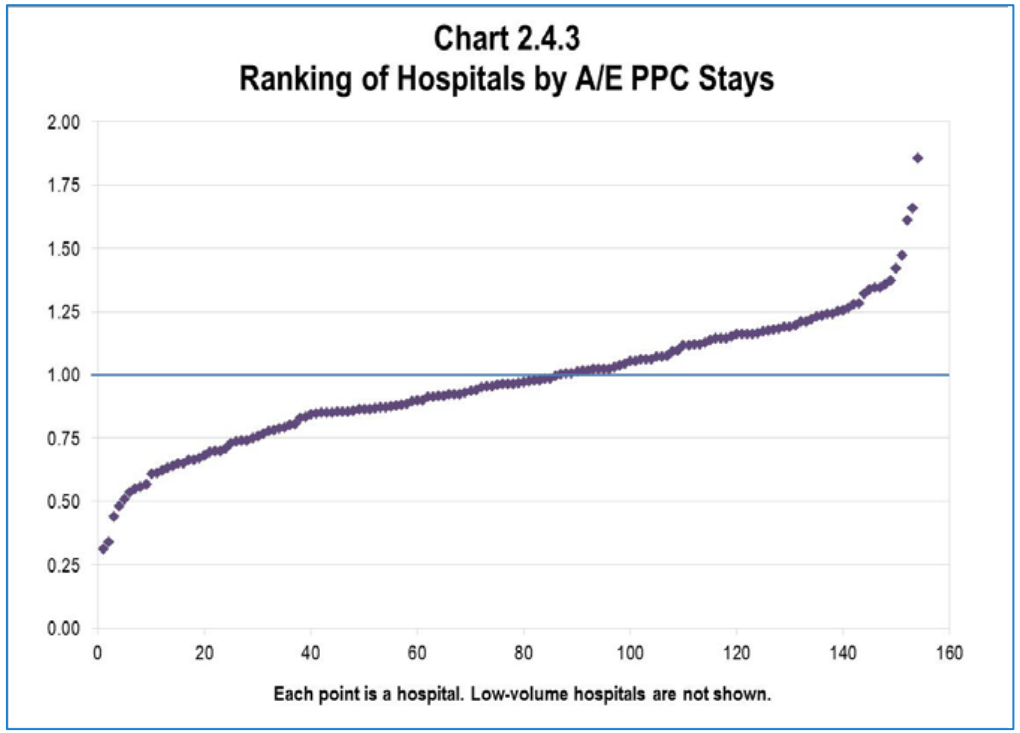
- Results are for all hospitals, all payers
- In Maryland, PPCs are called Maryland Hospital Acquired Conditions

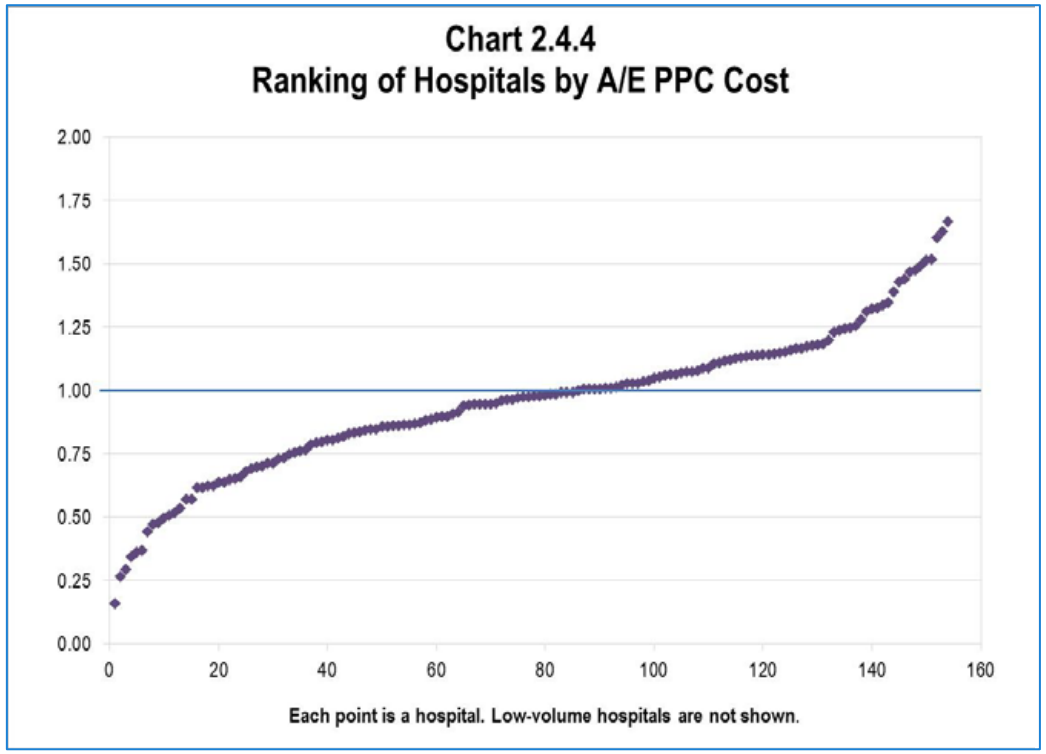
3M rate-based efficiency measures:

- Strategy, benchmarks and patient actionability
- Value-based care
- Population health

Where there is variation, there is opportunity

- The charts show A/E ratios for 154 Texas hospitals (excluding low-volume hospitals)
- Variation in case mix-adjusted performance indicates room for hospitals to learn from each other



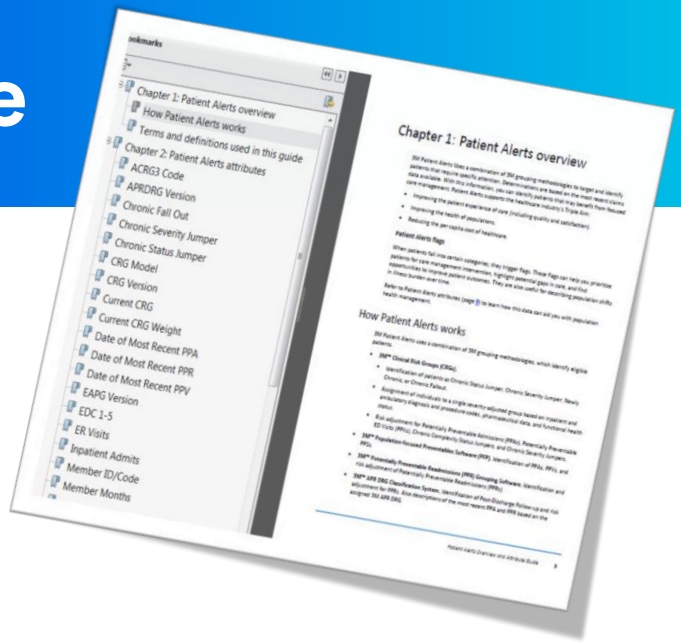


Worse than expected

Better than expected

Source: Texas Health and Human Services Commission. *Potentially Preventable Complications in the Texas Medicaid Population, SFY 2012.* Austin, TX: HHSC, 2013.

New York: Patient alerts at the point of care



- NY Medicaid provides monthly data feeds to 25 performing provider systems serving almost 6M people. Clinicians can see on-screen "patient alerts" during the patient visit

Member ID	Previous CRG	Current CRG	ACRG3	Number of PPRs	Date of Most Recent PPR	Most Recent PPR Visit APRDRG	Chronic Severity Jumper	Chronic Status Jumper	Chronic Fall Out	Newly Chronic	Number of PPAs	Date of Most Recent PPA	Most Recent PPA Visit APRDRG	Number of PPVs	Date of Most Recent PPV	Most Recent PPV Visit EAPG	PHN	5 Highest Ranked EDCs	5 Highest Ranked Previous EDCs
60 yr Female	1 70206	1 70205	74	0	0	0	N	N	N	N	1	2 9/30/2017	198	9	3 8/26/2017	656	4 Y	001,182, 133,424, 743	001,182, 133,424, 743

1 CRG 70206 = Health Status 7, CHF/Diabetes/Dominant Chronic Mental Health, severity 6.

2 Most recent PP Admission = APR DRG 198 Angina Pectoris & Coronary Atherosclerosis.

3 Most recent PP ED Visit = EAPG 656 Back & Neck Diagnoses Exc Lumbar Disc Diagnoses.

4 This patient was identified as "persistent high needs" relative to people in the same CRG.

Applying CRG status and PPRs for post discharge targeting

Rate of PPRs per 1000 per year							
	CRG severity of illness						
CRG health status desc	0	1	2	3	4	5	6
1. Healthy	0.7						
2. Hx significant acute disease	12.7						
3. Single minor chronic disease		0.1	4.0				
4. Minor chronic disease in mult organ systems		0.3	0.0	1.3	24.4		
5. Single dominant or mod chronic dz		1.4	6.2	46.2	207.8		
6. Dominant of mod chronic dz in mult organ sys		1.1	6.4	25.6	89.8	304.7	959.8
7. Dominant chronic dz in >= 3 organ systems		12.8	111.2	335.6	846.9	1445.5	2865.7
8. Dominant & metastatic malig, active tx		4.5	19.5	33.7	118.5		
9. Catastrophic conditions		10.0	71.2	207.6	1403.9		

Medicaid sample data ~2 million people

Follow up visit within
Red = 3 days of discharge
Blue = 7 days of discharge
Green = 14 days of discharge

Why “diabetes” is an unhelpful description of health status

Percentage Frequency by ACRG3 of 738,452 Medicare Enrollees with Diabetes

	Severity Level						
Health Status Group	**1**	**2**	**3**	**4**	**5**	**6**	**Total**
1 Healthy							**0%**
2 Significant Acute Disease							**0%**
3 Single Minor Chronic							**0%**
4 Multiple Minor Chronic Disease							**0%**
5 Single Dominant or Moderate Chronic	5%	3%	2%	2%			**13%**
6 Significant Chronic Disease in Multiple Systems	19%	10%	9%	8%	6%	4%	**55%**
7 Dominant Chronic Disease in 3+ Systems	7%	6%	4%	3%	3%	5%	**28%**
8 Malignancy, Under Active Treatment							**1%**
9 Catastrophic Conditions					1%	2%	**4%**
Total							**100%**

Source: 3M analysis of a Medicare database

Note: Cells are blank when the share of people with diabetes in that cell rounds to zero or there is no corresponding severity level for that Health Status Group.

- In a large database of Medicare enrollees, 738,452 people had diabetes (EDC 424)
- Individual enrollees ranged from diabetes, severity 1, as their only chronic disease to people with diabetes along with a catastrophic condition, severity 6

For people with diabetes, average cost varies widely

Average Relative Weight by ACRG3 for Medicare Enrollees with Diabetes

	Severity Level						
	1	2	3	4	5	6	Total
1 Healthy							
2 Significant Acute Disease							
3 Single Minor Chronic							
4 Multiple Minor Chronic Disease							
5 Single Dominant or Moderate Chronic	0.64	1.35	2.20	4.22			**1.60**
6 Significant Chronic Disease in Multiple Systems	1.40	2.99	4.75	6.51	9.99	16.32	**4.91**
7 Dominant Chronic Disease in 3+ Systems	4.11	8.70	12.78	15.39	20.23	31.48	**13.92**
8 Malignancy, Under Active Treatment							
9 Catastrophic Conditions					33.42	52.89	**38.75**
Total							**8.63**

Source: 3M analysis of a Medicare database. Weights are CRG v2.1 concurrent without drugs.
Note: Cells are blank when the share of people with diabetes in that cell rounds to zero or there is no corresponding severity level for that Health Status Group.

- People with diabetes in ACRG3 51 had average costs 36% *below* the average enrollee in the entire database, while people with diabetes in ACRG3 96 had average costs >50 times *higher*
- Knowing someone has diabetes tells us very little about cost; we must look at the whole person

3M

10% of people with diabetes account for 41% of total cost

Percent of Total Casemix (= Average Relative Weight x Enrollees) by ACRG3

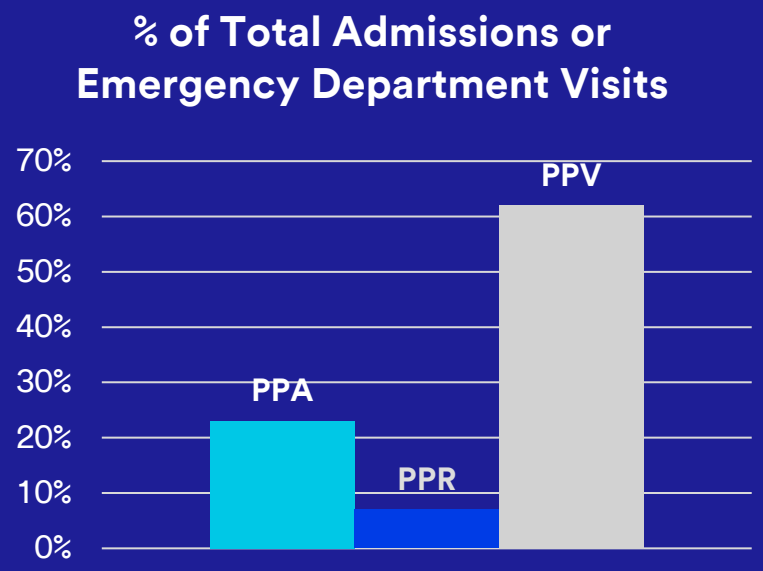
	Severity Level						
	1	2	3	4	5	6	Total
1 Healthy							
2 Significant Acute Disease							
3 Single Minor Chronic							
4 Multiple Minor Chronic Disease							
5 Single Dominant or Moderate Chronic	0%	1%	1%	1%			2%
6 Significant Chronic Disease in Multiple Systems	3%	4%	5%	6%	6%	8%	31%
7 Dominant Chronic Disease in 3+ Systems	3%	6%	5%	5%	7%	17%	44%
8 Malignancy, Under Active Treatment							4%
9 Catastrophic Conditions					5%	11%	18%
Total							100%

Source: 3M analysis of a Medicare database. Weights are CRG v2.1 concurrent without drugs.
Note: Cells are blank when the share of people with diabetes in that cell rounds to zero or there is no corresponding severity level for that Health Status Group.

- Of all people with diabetes in the database, the most costly 10% accounted for 41% of total cost
- The highlighted ACRGs contributed the most to total cost. The 41% figure was calculated using more detailed data

Promoting better health care in Florida.

Drive improvements in health outcomes and equity, efficiency, and innovation that result in high quality and lower cost of care for Medicaid enrollees.



PPA = 3M Potentially Preventable Admissions
PPR = 3M Potentially Preventable Readmissions
PPV = 3M Potentially Preventable Emergency Department Visits

3 key goals

- Reduce potentially preventable events (PPA, PPR, PPV)
- Improve birth outcomes
- Improve access to in home long-term care and preventative dental services

Regional quality targets

For managed care organization performance tied to capitation rates

Performance improvement projects

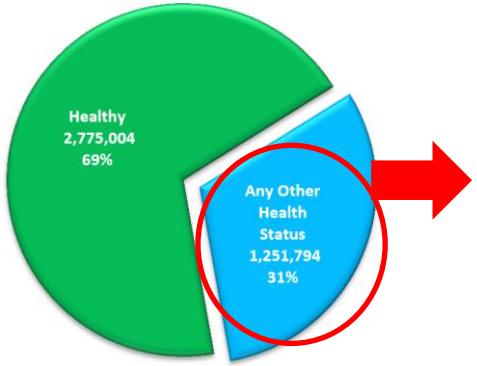
Statewide with payer and provider collaboration to share best practices on impacting program goals

Source: Agency for Healthcare Administration Comprehensive Quality Strategy Report (2020)

Understanding population health: Florida example

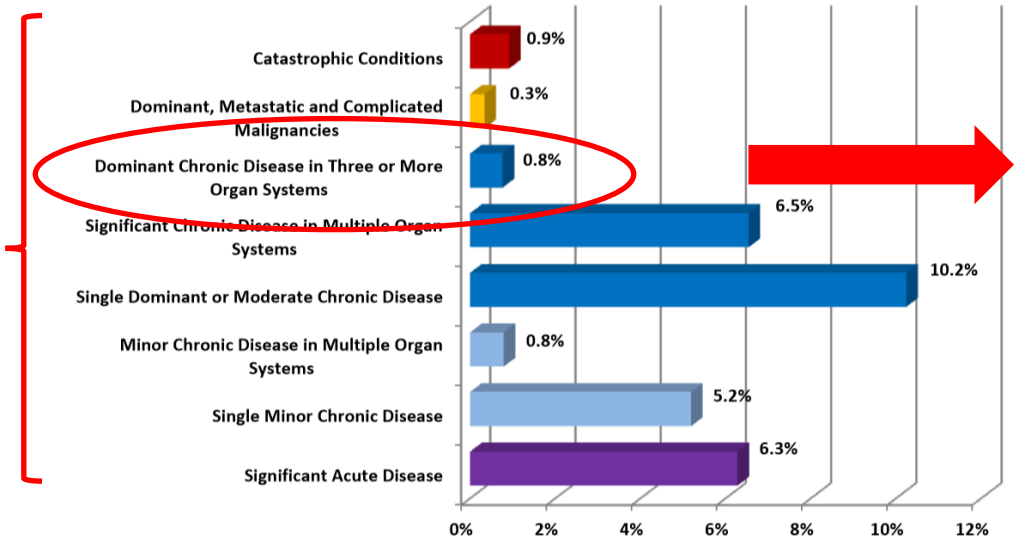
Of 4 million Medicaid enrollees, 31% have a CRG Health Status other than Healthy…

Figure 1: Percentage of Medicaid Recipients Categorized as Healthy Compared to Any of the Other Eight Health Statuses, August 2014-July 2015



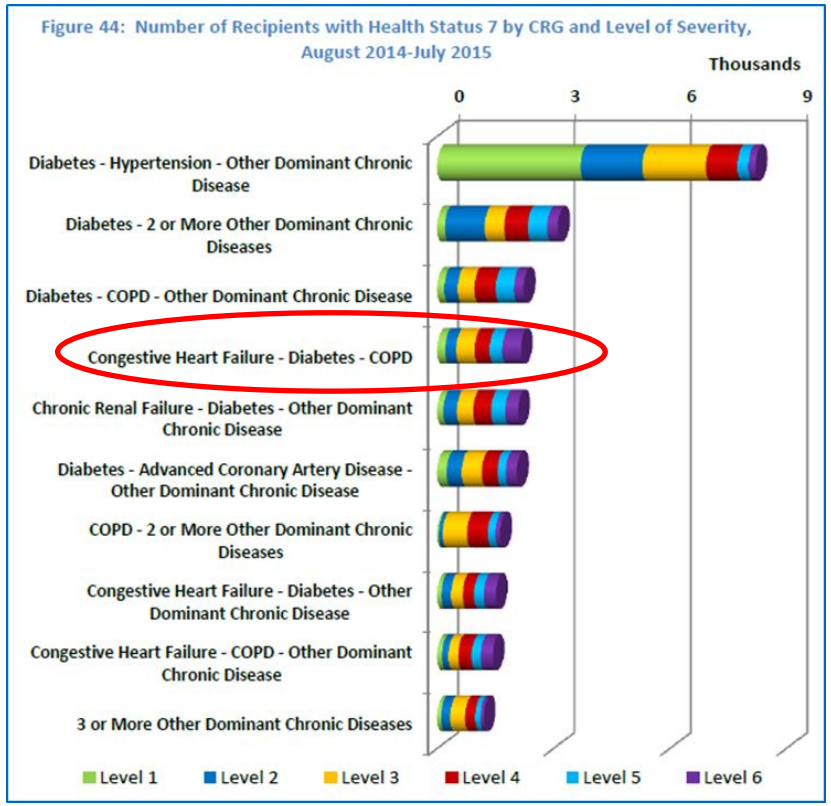
Of the 4.0 million enrollees, 32,000 are in CRG Health Status Group 7, Chronic Disease in Three or More Organ Systems

Figure 2: Percentage of Medicaid Population Classified in a Non-Healthy Status by Health Status, August 2014-July 2015



Of the 32,000 people in Health Status Group 7, approximately 2,000 have heart failure, diabetes, and COPD, split roughly equally in severity levels 1 to 6

Figure 44: Number of Recipients with Health Status 7 by CRG and Level of Severity, August 2014-July 2015



Source: Florida Agency for Health Care Administration, *Analyzing the Disease Burden of Florida Medicaid Enrollees Using Clinical Risk Groups*, www.fdhc.state.fl.us/medicaid/Finance/data_analytics/BI/docs/Quarterly_SMMC_Report_Winter_2016.pdf

Clinical insight: Defining medically complex children

- Researchers used CRGs to conclude that the greatest growth in inpatient growth at 28 children's hospitals was in the cohort of children with chronic conditions in two or more body systems

  -- Berry et al., *JAMA Pediatrics*, 2012

- "The CRG grouper is a powerful tool for identifying and tracking patients over time."

  -- Children's Hospital Association, *Coordinating All Resources Effectively for Children with Medical Complexity*, 2016

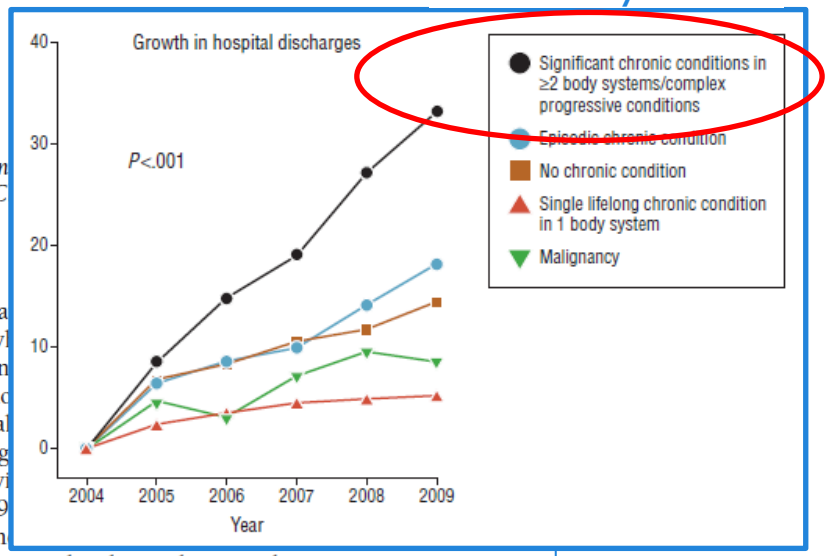
ARTICLE

Inpatient Growth and Resource Use in 28 Children's Hospitals

A Longitudinal, Multi-institutional Study

Jay G. Berry, MD, MPH; Matt Hall, PhD; David E. Hall, MD; Den
Rishi Agrawal, MD, MPH; Kenneth D. Mandl, MD, MPH; Holly C

Defined by CRG



Objective: To compare inpatient resource use trends for healthy children and children with chronic health conditions of varying degrees of medical complexity.

Design: Retrospective cohort analysis.

Setting: Twenty-eight US children's hospitals.

Patients: A total of 1 526 051 unique patients hospitalized from January 1, 2004, through December 31, 2009, who were assigned to 1 of 5 chronic condition groups using 3M's Clinical Risk Group software.

Intervention: None.

Main Outcome Measures: Trends in the number of patients, hospitalizations, hospital days, and charges analyzed with linear regression.

Results: Between 2004 and 2009, hospitals experienced a greater increase in the number of children hospitalized with vs without a chronic condition (19.2% vs 13.7% cumulative increase, $P<.001$). The greatest cumulative increase (32.5%) was attributable to children with a signifi-

spectively, observed among these patients.

Conclusions: Patients with a chronic condition increasingly used more resources in a group of children's hospitals than patients without a chronic condition. The greatest growth was observed in hospitalized children with chronic conditions affecting 2 or more body systems. Children's hospitals must ensure that their inpatient care systems and payment structures are equipped to meet the protean needs of this important population of children.

JAMA Pediatr. 2013;167(2):170-177.
Published online December 24, 2012.
doi:10.1001/jamapediatrics.2013.432

Risk adjustment and rate setting

Health status group distribution by LOB

CRG health status	Medicaid	Commercial	Medicare
9 – Catastrophic	0.20%	0.28%	**1.91%**
8 – Malignancy in active treatment	0.19%	0.59%	**1.62%**
7 – Triples - Multiple dominant chronic	0.38%	0.85%	**5.75%**
6 – Pairs - Multiple dominant and/or moderate chronic	3.70%	7.11%	**30.42%**
5 – Single dominant or moderate chronic	11.28%	14.02%	**25.24%**
4 – Multiple minor chronic	3.82%	7.43%	**13.88%**
3 – Single minor chronic	8.22%	**12.75%**	6.83%
2 – Significant acute	6.49%	9.15%	2.51%
1 – Healthy **formerly Healthy/Non-users*	**43.93%**	**35.97%**	6.06%
0 – Non-users **new status in v2.2*	**21.80%**	11.8%	5.67%

Note:
Status 2 includes deliveries, newborns and other DXes with significant acute DXes.
Status 1 includes deliveries, newborns and other DXes without significant acute DXes.

Reducing expenditures and improving quality for children

Integrated Care for Kids – Illinois - Egyptian Health Department

Goals: Support and deliver value-based care to children in rural counties:

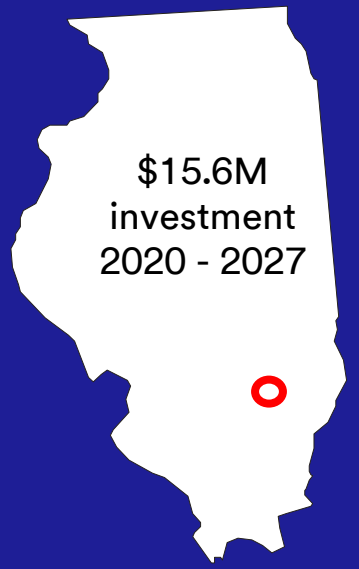
- Increase early identification and treatment of children that with higher levels of physical, behavioral, or other health-related needs for 80% of the population
- Leverage integrated care coordination hubs to deliver enhanced community, social, and clinical and community support
- Alternative payment model to reduce costs for emergency department visits, inpatient psychiatric care, residential substance abuse
- Design shared savings model with incentives for provider, care team, and community support leveraging 3M™ Clinical Risk Groups

https://innovation.cms.gov/media/document/il-ehd-inck-profile
https://innovation.cms.gov/innovation-models/integrated-care-for-kids-model

Wayne, Hamilton, White, Saline, and Gallatin counties

County population exceeds national average poverty rate

7,900 Medicaid beneficiaries under 21



Risk adjustment in shared savings program: Ohio example

- Ohio adjusts PMPM based upon CRG score.

Ohio | Department of Medicaid

Ohio Comprehensive Primary Care (CPC) per member per month (PMPM) payment calculation

The PMPM payment for a given CPC practice is calculated by multiplying the **PMPM for each risk tier** by the **number of members attributed to the practice in each risk tier**

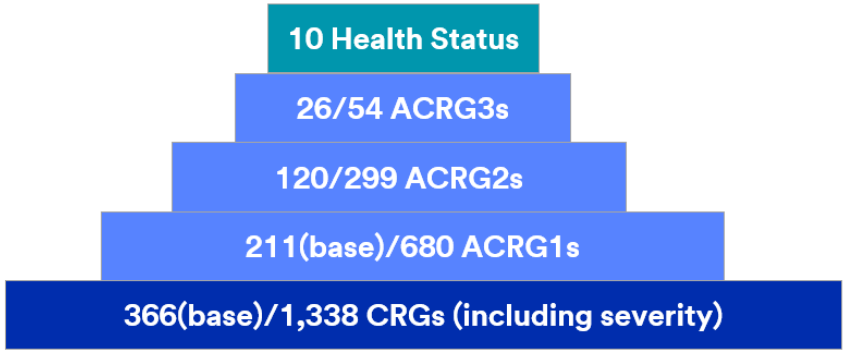
	Health statuses	Example	CPC PMPM
CPC PMPM Tier 1	▪ Healthy	▪ Healthy (no chronic health problems)	$1.80
	▪ History of significant acute disease	▪ Chest pains	
	▪ Single minor chronic disease	▪ Migraine	
CPC PMPM Tier 2	▪ Minor chronic diseases in multiple organ systems	▪ Migraine and benign prostatic hyperplasia (BPH)	$8.55
	▪ Significant chronic disease	▪ Diabetes mellitus	
	▪ Significant chronic diseases in multiple organ systems	▪ Diabetes mellitus and CHF	
CPC PMPM Tier 3	▪ Dominant chronic disease in 3 or more organ systems	▪ Diabetes mellitus, CHF, and COPD	$22.00
	▪ Dominant/metastatic malignancy	▪ Metastatic colon malignancy	
	▪ Catastrophic	▪ History of major organ transplant	

- Practices and MCPs receive payments **prospectively and quarterly**
- Risk tiers are **updated quarterly**, based on 24 months of claims history with 3 months of claims run-out
- Quarterly PMPM payments are meant to support practices in conducting the activities required by the CPC program

Detailed requirement definitions are available on the Ohio Medicaid website:
http://medicaid.ohio.gov/provider/PaymentInnovation/CPC#1657108-cpc-payments

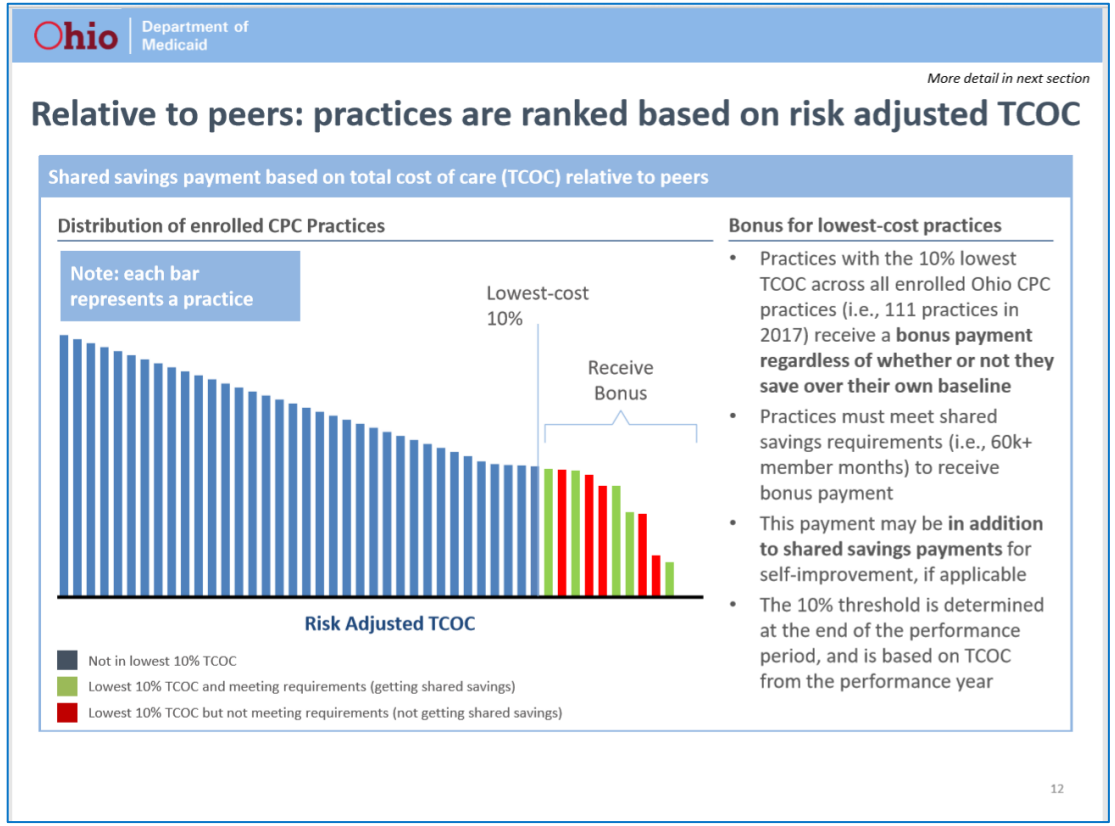
Source: http://medicaid.ohio.gov/provider/PaymentInnovation/CPC#1657108-cpc-payments

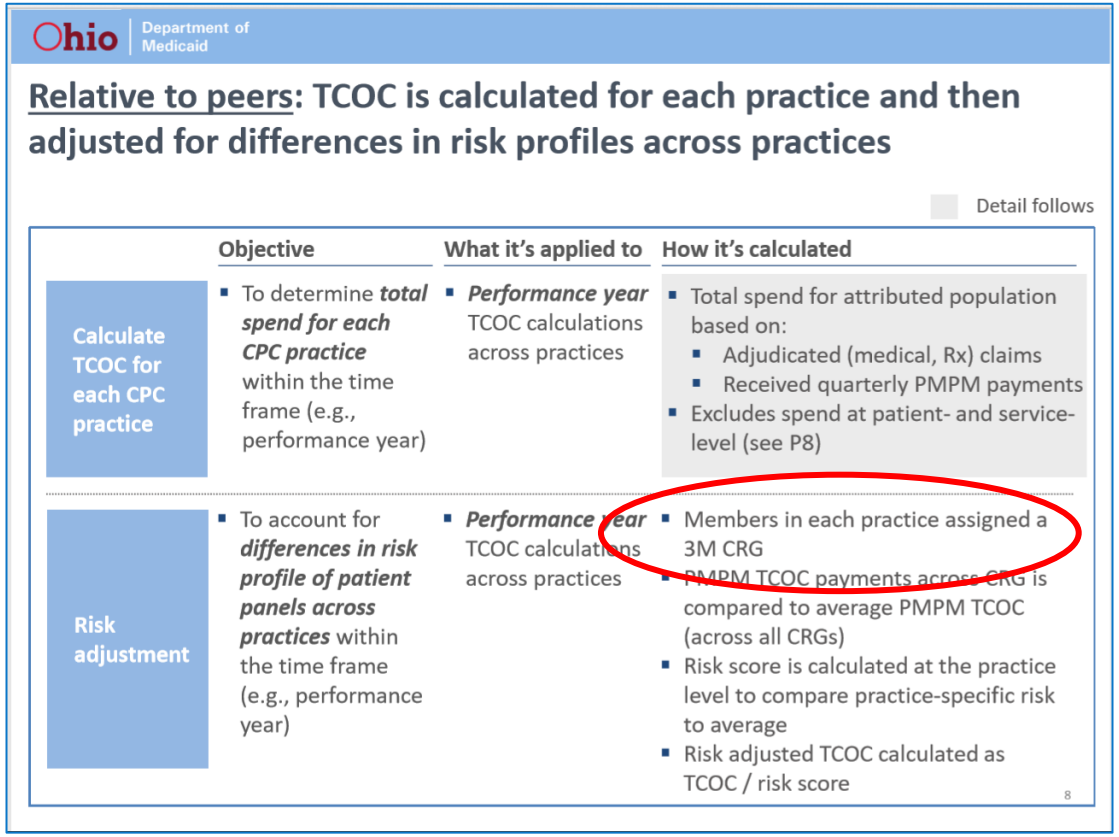
CRG Aggregations
v2.2 Concurrent



Risk adjustment in shared savings program: Ohio example

- Ohio rewards comprehensive primary care practices for managing total cost of care (TCOC) relative to their peers and to their own past performance
- CRG risk adjustment balances incentives for efficiency and access





Source: https://medicaid.ohio.gov/Portals/0/Providers/PaymentInnovation/CPC/SharedSavingsMethodology.pdf?ver=2017-12-12-101215-823

Risk adjustment for Potentially Preventable Events

- The 3M quality philosophy is not “this should never happen” but rather “this has happened too often.”
- How often is too often? It depends on the patient’s health status.
- For a commercial insurer, for example, cost of potentially preventable admissions was $0.33 PMPM for people in Health Status 1, but $111.86 for people in Health Status 9.
- We measure performance as actual vs expected, where “expected” depends on health status as measured by CRG

Table 1

TYPES OF PATIENTS WITH DIFFERENT TYPES OF PPES –*pmpm% Commercial Plans*

Type of Patient	PPIA	PPR	PPV	PPS	Total PPE Enrollees	Total PM/PM
“Healthy” (only “minor problems such as broken arm or cold)	0.33	0.01	2.91	13.55	16.79	55.70
Evidence of significant Chronic or Acute Diagnosis without Other Significant Illness	2.19	0.24	10.65	51.51	64.59	218.45
History Of Significant Acute Disease	2.29	0.06	7.95	49.11	59.41	143.66
Evidence of Significant Chronic or Acute Diagnosis with History of Significant Acute Illness	6.91	0.78	18.03	106.06	131.78	373.74
Single Minor Chronic(eg, Migraine)	1.76	0.26	6.19	75.41	83.61	202.01
Multiple Minor Chronic	4.03	0.83	9.83	138.12	152.81	357.93
Single Dominant or Moderate Chronic(eg, Asthma)	5.64	1.66	8.81	103.55	119.66	308.00
Pairs - Multiple Dominant and/or Moderate Chronic	23.69	12.33	17.66	224.49	278.17	814.93
TripletsDominant Chronics	133.38	113.33	38.22	438.13	723.06	2,554.94
Metastatic Malignancy	71.76	46.63	29.79	1060.87	1209.05	5,374.89
Catastrophic (eg, Dialysis or Quadriplegia)	111.86	168.21	25.04	662.54	967.65	4,577.74

Note: The 11 rows shown include subdivision of the nine CRG health status levels
Source: Goldfield N, Kelly W, Patel K. “Potentially Preventable Events: An Actionable Set of Measures for Linking Quality Improvement and Cost Savings,” *Q Manage Health Care*, 2012

The PPA, PPV and PPS methodologies are covered in more detail in a separate training

Case mix-adjusted payment: New York example

$28B in Payment for 4.4M Members

- Since 2008, NY Medicaid has used CRGs to calculate case mix-adjusted MCO capitation rates
- PMPM base rate x risk score = PMPM payment
  - FY 2018 base rate reflects historical average cost by region and eligibility group, trended forward with adjustments
  - FY 2018 risk score is the historical average CRG case mix
- Example: TANF children in Mid-Hudson region
  - Plan A: $198.54 x 0.9452 = $187.66
  - Plan B: $198.54 x 1.0732 = $213.08
  - Each plan may also receive plan-specific add-ons, e.g., quality incentives
- Creates strong incentive to economize while paying more to plans that serve sicker members

Why Pay by CRG?

- More fairly reimburse plans with a more severe case mix of members
- Variation in reimbursement from plan to plan is based on member health status rather than inefficiencies

-- NY Department of Health submission to CMS, 3/31/2009

3M Source: 3M

SDoH affects reimbursement

Enable better resource alignment across the healthcare system that account for clinical and social risk for the most vulnerable populations.

Base condition – Asthma				
Primary ICD 10-Dx	**SDOH ICD 10-Dx**	**Final CRG**	**Weight (TANF Child)**	**PMPM (NYC)**
J45.30 Mild persistent asthma, uncomplicated	None reported	51381 – Asthma Level 1	1.476	$263.47
J45.30 Mild persistent asthma, uncomplicated	Z62.21 Child in Welfare Custody	62801 – Foster Care/Child Abuse and Other Moderate Chronic Disease Level 1	3.122	$557.28

Base condition – Schizophrenia				
Primary ICD 10-Dx	**SDOH ICD 10-Dx**	**Final CRG**	**Weight (TANF Adult)**	**PMPM (NYC)**
F20.9 Schizophrenia, unspecified	None reported	57431 – Schizophrenia Level 1	1.449	$694.71
F20.9 Schizophrenia, unspecified	Z59.0 Homelessness	57433 – Schizophrenia Level 3	3.824	$1,833.38

Per member per month (PMPM) based on estimated New York Medicaid CRG based payment

Integrate whole person risk into reimbursement to drive health equity.

3M

Case mix adjustment in value based purchasing

- Health plans in 11 states uses CRGs in risk-adjusting measurement and payment to provider entities such as ACOs and group practices

Provider Groups/ PPS/Region	Members	Member Months	CRG Weight	Total Paid PMPM $	Total Expected Paid PMPM $	Total %Diff.
Provider 1	66,322	708,580	1.204	$483.31	$457.73	5.6%
Provider 2	12,139	130,494	1.285	$477.08	$489.87	-2.6%
Provider 3	17,040	182,377	0.817	$315.43	$297.60	6.0%
Provider 4	4,297	45,719	1.139	$477.18	$424.24	12.5%
Provider 5	43,832	472,835	1.270	$483.70	$481.63	0.4%
Provider 6	19,916	211,067	1.546	$607.64	$599.99	1.3%
Provider 7	121	1,328	2.202	$667.45	$813.87	-18.0%
Provider 8	278,236	2,458,729	0.689	$239.66	$261.82	-8.5%
Provider 9	4,535	47,959	1.516	$634.48	$562.56	12.8%
Provider 10	14,398	154,927	1.245	$474.01	$466.27	1.7%
Provider 11	176,414	1,896,994	1.160	$449.68	$436.20	3.1%
Aggregate	**637,250**	**6,311,009**	**1.000**	**$378.48**	**$378.48**	**0.0%**

Apples to apples *performance comparison measuring the distance from the risk adjusted expected value*

Source: 3M Intelligent Data Asset

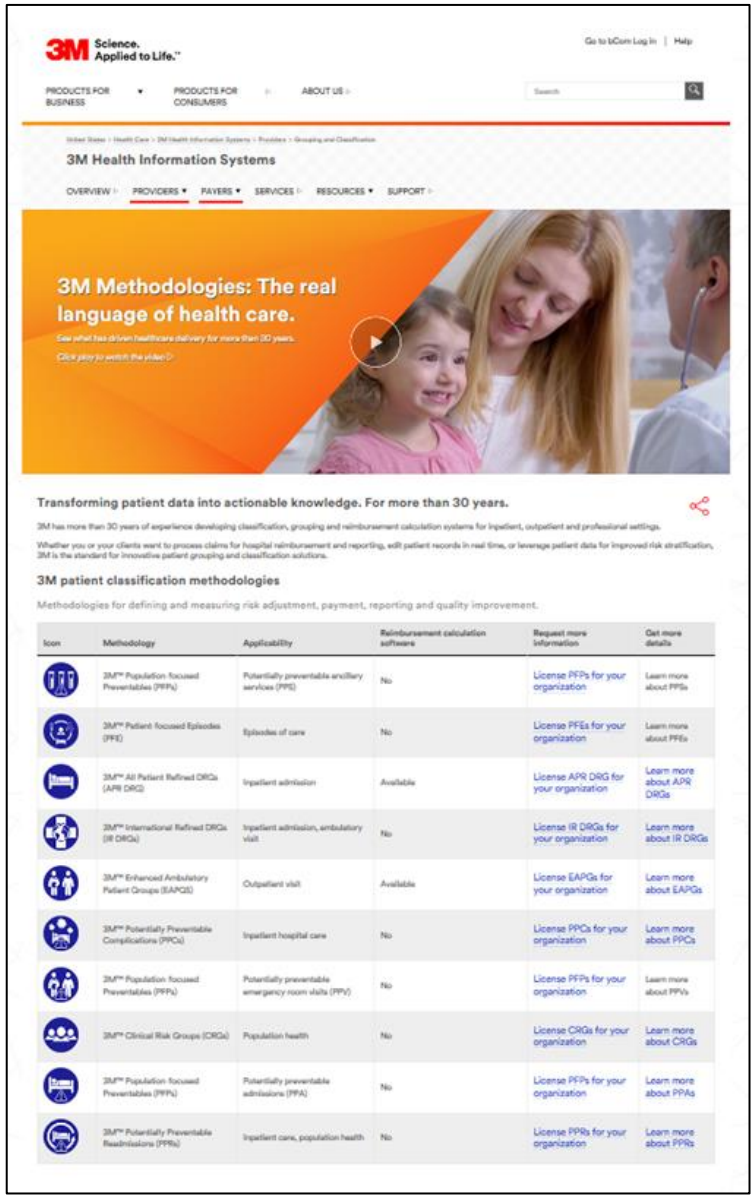
Resources

3M – How we can help

Workstream	Methodology Content Services (MCS) [1]	Additional Consulting Services [1,2]		
		Value Based Programs	Reimbursement	Quality
Project management	✓	✓	✓	✓
3M subject matter experts	✓	✓	✓	✓
Methodology training and education	✓	✓	✓	✓
Grouper output optimization	✓			
Grouper version transition	✓	✓	✓	✓
Payment services	✓	✓	✓	
Benchmarks and norms	✓	✓	✓	✓
Reporting best practices	✓	✓	✓	✓
Program design and documentation		✓	✓	✓
Program policy documentation		✓	✓	✓
Metrics design		✓	✓	✓
External stakeholder education		✓	✓	✓
Clinical documentation, coding, audit			✓	✓
Supported 3M Methodologies	CRG, PPE[3], PFE[4] APR-DRG, EAPG	CRG, PPE[3], PFE[4]	CRG, APR-DRG, EAPG	PPE[3]
Supported Methodologies	HCC, MS-DRG, APC	HCC	HCC, MS-DRG, APC	HAC, All-Cause Readmissions, AHRQ PSI

[1] Requires license with 3M for supported methodologies
[2] Additional consulting services can be integrated with MCS or purchased separately
[3] PPE includes PFP, PPR, PPC groupers
[4] PFE includes event and cohort episodes

3M methodologies supporting materials



Methodology	Fact Sheets, White Papers, and E-Guides
3M Methodology Content Services (MCS)	Link – coming soon
3M™ All Patient Refined Diagnosis Related Groups (APR-DRGs)	Link
3M™ Enhanced Ambulatory Patient Groups (EAPGs)	Link
3M™ Clinical Risk Groups (CRG)	Link
3M™ Patient-focused Episodes (PFE)	Link
3M™ Potentially Preventable Events (PPE)	Link
3M™ Population-focused (PPC)*	Link
3M™ Potentially Preventable Readmissions (PPR)	Link
3M Potentially Preventable Admissions (PPA)	Link
3M Potentially Preventable Emergency Department Visits (PPVs)	Link
3M Potentially Preventable Ancillary Services (PPSs)*	Link

* 3M PPCs, PPRs, PPV, PPA, and PPS are the 3M Potentially Preventable Events (PPE). 3M PPV, PPA, and PPS included as part of 3M™ Population-focused Preventables (PFP) grouper.

Questions?

That’s a wrap.

For More Information

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https://insideangle.3m.com/his/topic/clinical-economic-research/	Clinical and economic research

Thank you!