3M Science. Applied to Life.™

EXHIBIT C

Modernizing the hospital inpatient payment system for Arkansas Medicaid

What is a Diagnosis Related Group (DRG)?

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Diagnosis Related Group (DRG)

- DRGs define "the product of a hospital" so that each DRG contains patients who are both clinically similar and require similar hospital resources
- A categorical, clinically credible approach that created a common language between clinicians and managers, thereby enabling behavioral change
- DRG-based payment methods provide balanced incentives:
  - Fixed payment rates reward hospital efficiency
  - Higher rates for sicker patients enable access
- DRGs are assigned based on readily available claims data
- ~326 DRG categories, each with 4 severity of illness levels
- After more than 35 years of Medicare DRGs and more than 25 years of APR DRGs, DRGs are widely accepted
- APR DRGs are most suitable for Medicaid population

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Why have DRGs been a success?

- DRGs define “the product of a hospital” so that each DRG contains patients who are both clinically similar and require similar hospital resources
- Example: APR DRG 139, Other Pneumonia, severities 1, 2, 3, 4
- A categorical, clinically credible approach that created a common language between clinicians and managers, thereby enabling behavioral change
- DRG-based payment methods provide balanced incentives:
    - Fixed payment rates reward hospital efficiency
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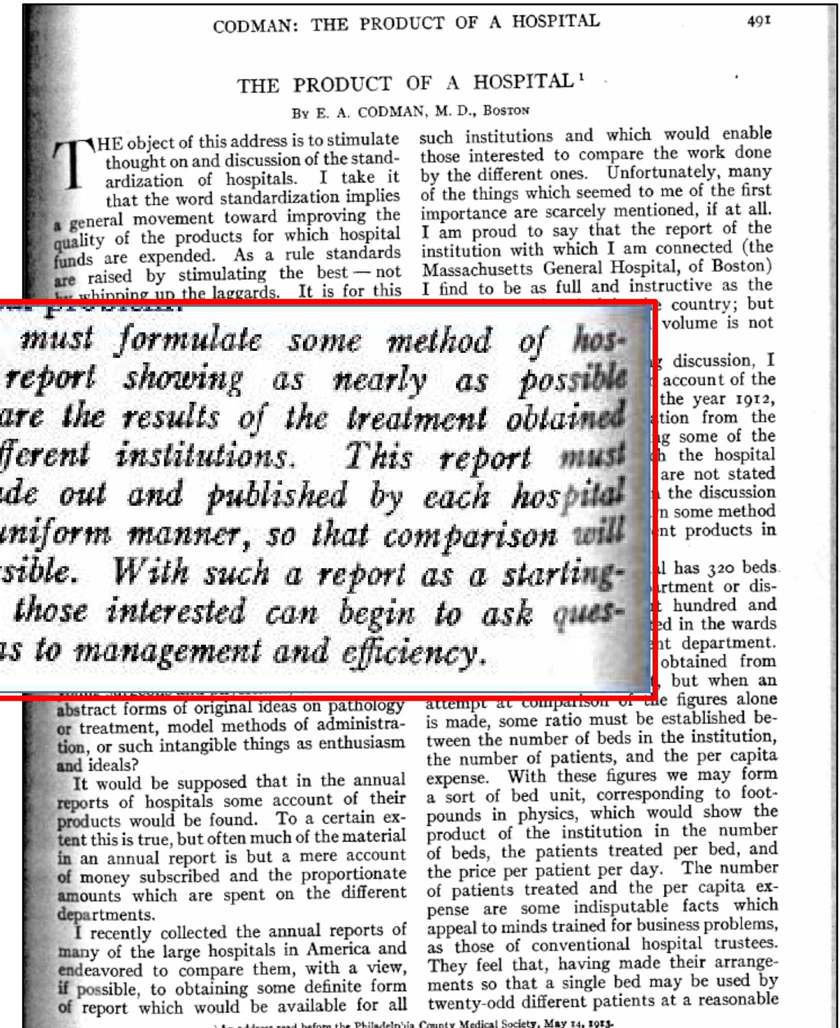
- DRGs are assigned based on readily available claims data
- After more than 35 years of Medicare DRGs and more than 25 years of APR DRGs, DRGs are widely accepted

A Call to Action—in 1914



CODMAN: THE PRODUCT OF A HOSPITAL 491

THE PRODUCT OF A HOSPITAL[1]

By E. A. CODMAN, M. D., Boston

THE object of this address is to stimulate thought on and discussion of the standardization of hospitals. I take it that the word standardization implies a general movement toward improving the quality of the products for which hospital funds are expended. As a rule standards are raised by stimulating the best — not by whipping up the laggards. It is for this

We must formulate some method of hospital report showing as nearly as possible what are the results of the treatment obtained at different institutions. This report must be made out and published by each hospital in a uniform manner, so that comparison will be possible. With such a report as a starting-point, those interested can begin to ask questions as to management and efficiency.

abstract forms of original ideas on pathology or treatment, model methods of administration, or such intangible things as enthusiasm and ideals?

It would be supposed that in the annual reports of hospitals some account of their products would be found. To a certain extent this is true, but often much of the material in an annual report is but a mere account of money subscribed and the proportionate amounts which are spent on the different departments.

I recently collected the annual reports of many of the large hospitals in America and endeavored to compare them, with a view, if possible, to obtaining some definite form of report which would be available for all such institutions and which would enable those interested to compare the work done by the different ones. Unfortunately, many of the things which seemed to me of the first importance are scarcely mentioned, if at all. I am proud to say that the report of the institution with which I am connected (the Massachusetts General Hospital, of Boston) I find to be as full and instructive as the

... attempt at comparison of the figures alone is made, some ratio must be established between the number of beds in the institution, the number of patients, and the per capita expense. With these figures we may form a sort of bed unit, corresponding to foot-pounds in physics, which would show the product of the institution in the number of beds, the patients treated per bed, and the price per patient per day. The number of patients treated and the per capita expense are some indisputable facts which appeal to minds trained for business problems, as those of conventional hospital trustees. They feel that, having made their arrangements so that a single bed may be used by twenty-odd different patients at a reasonable

[1] An address read before the Philadelphia County Medical Society, May 14, 1913.

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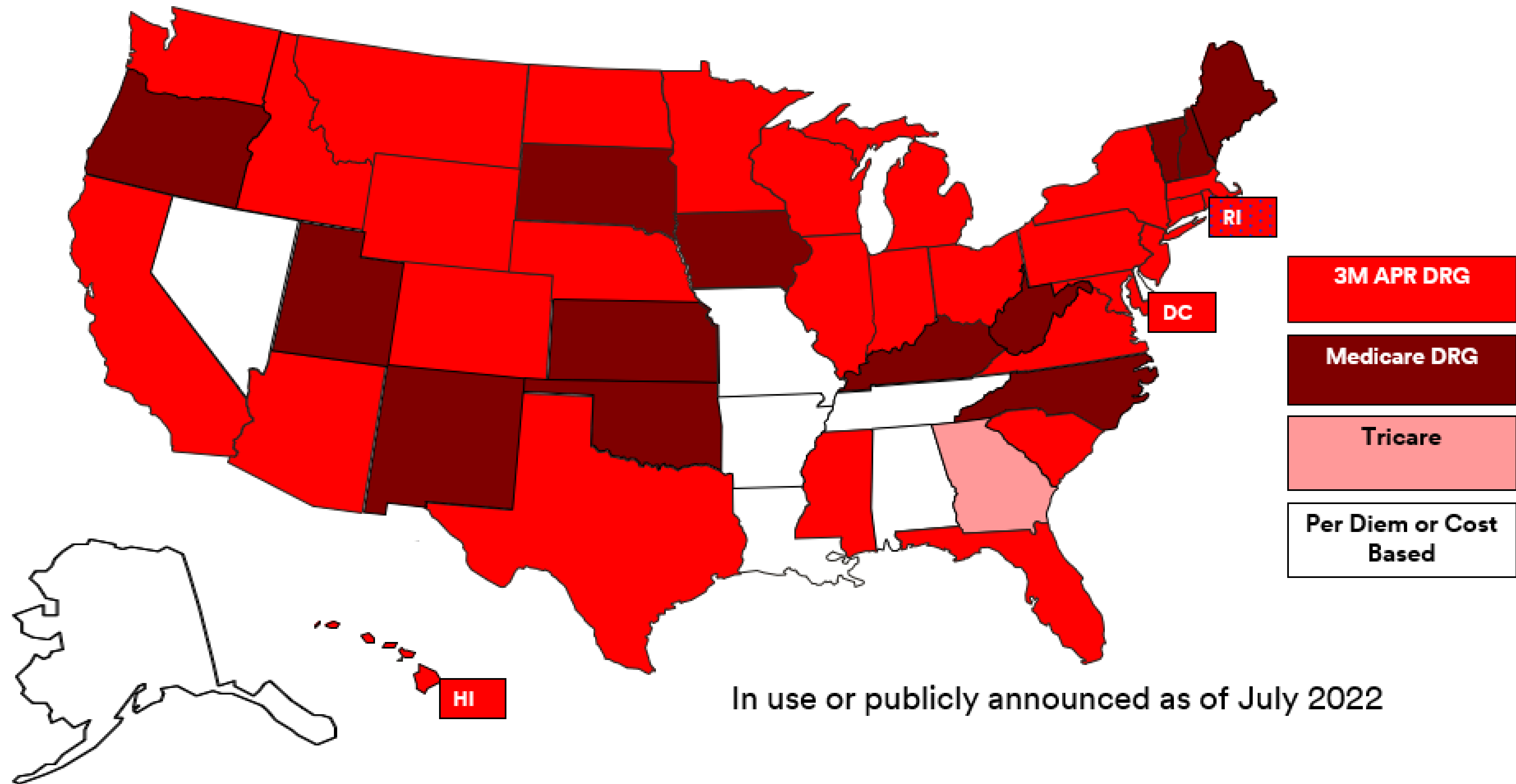
APR DRGs are the Hospital Inpatient Payment Method Most Widely Used by Medicaid Programs



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DRG vs. Per Diem or Cost Based Features

Incentivizes Value, More Transparency in what is being purchased

- ✓ **3M APR DRG:** Bundled payment per inpatient stay designed for all payers, based on patient's diagnosis related grouping. Designed for Medicaid Population.
- ✓ **Medicare DRG:** Bundled payment per inpatient stay designed for Medicare, based on patient's diagnosis related grouping. Designed for Medicare Population
- ✓ **Tricare DRG**: Bundled payment per inpatient stay designed by DoD, based on patient's diagnosis related grouping.

Incentivizes Volume, Less Transparency in what is being purchased

- **Per Diem:** Payment of inpatient stay based on **per day** basis.

- **Cost Based:** Payment of inpatient stay based on hospital **costs**.

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Example of APR DRG Payment Calculation: Transparency and Fairness

Example: APR DRG 139-3 (Other Pneumonia, Severity level 3)

A	B	C	D	E
$10,000	0.8655	1.00	1.00	$8,655.00
Hospital Base Rate Set by Agency	**Relative Weight of DRG** Severity adjustment so providers are paid more for sicker patients (weights updated annually by 3M; 1=average; greater than 1=higher resources needed; <1=lower resources needed	**Policy Adjustor **** Used by agency to boost payment based on state priorities (i.e., Obstetrics, Pediatrics, Mental Health).	**Peer Group Adjustor**** Used by agency to account for hospital type (Rural, Children's High DSH, Critical Access, Government Owned, etc.)	**Hospital Payment** A X B X C X D

NOTES

- Policy and Peer Group Adjustors: increasing adjustor >1 increases the multiplier, and overall payment
- Outlier Payments based on lengthy stay or high-cost stay are calculated on top of calculation above
- In addition to policy and peer group adjustors shown above, additional adjustors can be incorporated based on quality performance of hospital

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Previous Efforts in Arkansas

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Stephen Group, Health Care Reform Task Force, Act 517

- The Stephen Group Recommendation:
  - Create Arkansas Health Reform Task Force: Review impact of move to DRG system
- Recommendation from Arkansas Health Care Reform Task force-2016: Move from current per diem system to DRG payment system

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Act 517, 2017

- To the extent possible, the Department of Human Services shall convert the hospital reimbursement systems under the Arkansas Medicaid Program to a diagnosis-related group methodology to allow more accurate classification of patient populations and description of mortality risks and severity of patient illness. Department shall promulgate rules:
  - How supplemental payments to hospitals shall be considered;
  - Whether funding for the transition from per diem reimbursement to diagnosis-related group methodology shall be provided to hospitals; and
  - Whether certain types of hospital providers shall be exempt from the diagnosis-related group methodology
- The department, in coordination with the Arkansas Hospital Association, shall develop a plan for the conversion of the hospital reimbursement systems under the Arkansas Medicaid Program as described in subsection (b) of this section.
  - Conversion plan shall-
    - *Include estimates of the impact of the conversion on all state and federal funds used for hospital payment, including without limitation any impact on critical-access hospitals; and*
    - *Be submitted to the Legislative Council for review on or before January 1, 2018.*

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Arkansas legislative study- DRG conversion plan

- Prepared for Arkansas DHS by Navigant (now Guidehouse)-delivered to legislature Dec 2017. Key points:
  - How supplemental payments to hospitals will be considered
  - Whether funding for the transition to APR DRGs will be provided to hospitals
  - Whether certain hospitals will be exempt from APR DRGs
  - Estimated impacts of conversion for both general acute hospitals and critical access hospitals
- Key point of study–in addition to above
  - Developed payment impacts on hospitals-*preliminary*-
    - ***"It is important to note that payment simulation modeling, rates and other analysis conducted for this report are for the purposes of evaluating the feasibility of converting to a DRG system, and do not represent final rates, recommendations or decisions made by DHS."***
- The granularity and focus on newborn, maternity and pediatric services in the APR DRG grouper makes it the best option for use in Medicaid inpatient claims reimbursement
- Conversion issues
  - Potential hospitals to be excluded-Arkansas Children's, critical access hospitals, etc.
  - Transition funding

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Study Simulations: Impacts on Payments to Hospitals

- Budget neutral process-simulations simply redistributed inpatient dollars that were historically paid to hospitals based on their simulated APR DRG "case mix"
- 3 pre and post simulations of: 1) impacts to each hospital's overall inpatient payments, and 2) impacts to each hospital's payment to cost ratio
- In general, the simulations created groups of hospitals that would fare better under APR DRG, and some groups of hospitals that would not
- One of the simulations incorporated hospital supplemental payments in the simulation of payment impact-this mitigated the adverse impacts to many hospitals' overall reimbursement, but still created winners and losers based on overall payments:
  - ➢ 57 hospitals experienced a negative impact; 56 hospitals experienced a positive impact
  - ➢ 87% of hospitals experienced a pay to cost ratio=>100%; 13% of hospitals experienced a pay to cost ratio <100%

❖ ***It is important to note that the simulations and subsequent stakeholder discussions did not fully examine the full array of additional policy adjustors that could be incorporated to mitigate negative impacts to some hospitals, or hospital types***

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Source: 3M

Summary

- State Medicaid Programs are all trying to develop programs to drive high quality, effective and efficient healthcare
- Much of what is being done in this space is designed to keep people out of hospitals by providing high quality, outpatient care
- However, hospital care will always be needed. But it is expensive, and therefore should also be financed in the most effective and efficient manner
- APR DRGs enable states to achieve this goal:
  - Improves transparency and fairness-similar pay for similar care
  - Fixed payment based on patient diagnosis/acuity-promotes efficiency
  - Protections for high-cost hospital stays and/or lengthy hospital stays-outlier payments
  - Incentives for volume are removed (i.e., more days beyond what are needed
  - 3M Quality tools, such as readmissions and/or complications of an inpatient stay are built off APR DRG, which allows for effective quality monitoring and value-based payments
  - Supplemental payments can be incorporated in APR DRG payment structure in a straightforward manner

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List of 3M Quality and Payment Tools and Applications

3M Tool w/ Web-Link	Risk Adjustment	Applicability	Uses
All Patient Refined Diagnosis Related Groups (APR DRG)	APR DRG and Severity of Illness (SOI)	Hospital (inpatient)	Classifies inpatient hospital stays for communication purposes and is used for inpatient hospital payment; can also be used for public reporting
Enhanced Ambulatory Payment Groups (EAPG)	EAPG Category	Hospital (outpatient), Ambulatory Surgical Centers (ASC), other clinics	Classifies outpatient hospital, ASC or other clinic visits for communication purposes and is used for outpatient hospital payment; can be used for public reporting
Clinical Risk Groups	Relates the historical clinical and demographic characteristics of individuals to the amount and type of health care they have used recently and would be expected to use in the future.	Managed Care Organizations (MCO), Health Systems, Accountable Care Organizations (ACO), Outpatient Providers	• Risk-adjust base capitation rates paid to MCOs based on a categorical approach rather than regression approach • Identify outliers/address variation in utilization/costs at different aggregations: • Manage care, identify and track progression of disease over time • Develop value-based payment models; evaluation of models for effectiveness
Potentially Preventable ED Visits (PPV)	Clinical Risk Groups (CRGs), EAPG	Managed Care Organizations (MCO), Health Systems, Accountable Care Organizations (ACO), Outpatient Providers	Detects types of emergency department visits that are potentially avoidable; Risk adjusted, rate-based approach provides signals related to access to and/or effectiveness of outpatient care; can be used for public reporting and/or to make quality-based payments to MCOs, ACOs Health Systems or providers.
Potentially Preventable Hospital Admissions (PPA)	Clinical Risk Groups (CRGs), APR DRG		Detects inpatient admissions that are potentially avoidable; Risk adjusted, rate-based approach provides signals related to access to and/or effectiveness of outpatient care; can be used for public reporting and/or to make quality-based payments to MCOs, ACOs, Health Systems or providers.
Potentially Preventable Services (PPS)	Clinical Risk Groups (CRGs), EAPG		Detects ancillary services that are potentially unnecessary. Risk adjusted, rate-based approach provides signals of under and overutilization of certain ancillary services or tests; can be used for public reporting and/or to make quality-based payments to MCOs, ACOs, Health Systems or providers.
Potentially Preventable Readmissions/Emergency Department Visits (PPR/PPRED)	Discharge APR DRG, Age, Mental Health/Substance Use Disorder diagnosis (es)	Hospitals, Managed Care Organizations (MCOs), Accountable Care Organizations (ACO)	Detects potentially avoidable re-admissions to inpatient or emergency department post discharge. Risk adjusted, rate-based approach provides signals of failures in discharge planning, care coordination or quality of care post-hospitalization; can be used for public reporting and/or to make quality-based payments to MCOs, ACOs, Health Systems or providers.
Potentially Preventable Complications (PPC)	Admission APR DRG	Hospitals, Managed Care Organizations (MCOs)	Detects potentially avoidable complications during an inpatient stay; Risk adjusted, rate-based approach provides signals of hospital quality and patient safety; can be used for public reporting and/or to make quality-based payments to hospitals or MCOs. **Outpatient PPC Tool to be in production in 2022**
Patient Focused Episodes	Clinical Risk Groups (CRGs); risk adjusted for patient's chronic disease burden at the time of admission	Managed Care Organizations (MCOs), Accountable Care Organizations (ACO), Providers	Defines an episode based on a patient's healthcare encounters and claims during a specified period; can be used for public reporting and/or to make quality-based payments to MCOs, ACOs, Health Systems or providers.

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