Aligning Payment Reform and Delivery Innovation in Emergency Care

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Hospital-based emergency departments (EDs) play a central role in US healthcare delivery, with 136 million visits in 2011.[1] For decades, increases in ED visit rates have outpaced population growth, and led to overcrowding, when coupled with rising intensity of care and more ED-based imaging, laboratory tests, and treatments.[2,3] ED care is often fragmented and more costly than other settings; as a result, EDs are a target for reforms.[4]

The Affordable Care Act and, more recently, the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA), both promote the adoption of alternative payment models (APMs) to improve patient outcomes and reduce costs.[5] Yet, how APMs will apply to EDs is unclear.[6,7] Accountable care organizations and other risk-bearing entities primarily focus on reducing ED visits rather than engaging with EDs to improve care delivery across settings.

However, implementing APMs in EDs will have several challenges: 1) EDs do not control the demand for ED care; rather, care demands come from surrounding community needs[8,9]; 2) most of today's EDs are not designed to follow patients longitudinally, making it difficult to track overall patient costs; 3) EDs must comply with the Emergency Medical Treatment and Labor Act (EMTALA) and treat patients regardless of their ability to pay, and as a result, EDs serve as the safety net; 4) EDs are indispensable resources during public health emergencies; therefore, if APMs impact ED viability, additional resources will be necessary to provide a safety net and respond to disasters, and 5) because ED standards of care often involve liberal diagnostic testing and admission to rule out life-threatening conditions,[10-12] changing care patterns via payment reform may increase misdiagnoses.[13,14]

Potential Alternative Payment and Delivery Models for EDs

Despite these challenges, several APMs are potentially applicable to EDs. In **Table 1**,[15] descriptions of APMs from categories 1 through 4 are presented in the new HHS payment taxonomy framework.[7]

Category 1. Category 1 starts with traditional fee-for-service (FFS), and each higher-level category shifts to person- or population-level payments, increasing financial risk and accountability, and aggregating payments across providers.

Category 2. Category 2 links FFS payments with quality. In practice, FFS would continue, but EDs could receive additional payments for reaching benchmarks (ie, better patient experience, improved care); or for value-creating activities, such as care coordination and preventing admissions; or for specific services, such as patient call-backs. Paying directly for ED care coordination can improve care and reduce costs. For example, the ED physicians at Upper Chesapeake Hospital in Maryland call back certain patients after ED discharge to ensure care plans are executed properly. The program successfully identifies short-term problems, improves patient experience, and pushes the ED to think beyond episodic care to a more longitudinal approach. ED physicians receive $20 per patient for this service.[16]

Category 3. Category 3 consists of shared savings and risk models, where groups of providers and facilities would receive FFS payments, but also share in the upside and downside relative to a pre-specified budget. With target costs in mind, ED providers can establish frequent-user programs, which reduce costs through personalized care plans for patients with complex and psychosocial needs. For example, the home visit program at the University of Colorado, called Bridges to Care, enrolls high-cost ED patients in a health-coaching program facilitated by local federally qualified health centers. Patients are connected to a nurse practitioner, who makes home visits to identify care barriers and designs individualized interventions. In this model, the ED has an incentive to connect patients to value-producing activities that reduce costs and result in shared savings.[17] However, because ED investments are required to implement these programs, it is important to ensure ED providers benefit from shared savings.

Bundled payments for episodic illness are another model in category 3. For example, ED providers can be paid a fixed amount for minor conditions, where monitoring for short-term relapses and complications are important (eg, asthma exacerbations, cellulitis). EDs can focus on bringing these cases to a close by scheduling ED

TAKE-AWAY POINTS

Emergency care is a vital part of the US health system, providing a safety net, care in public health emergencies, and convenient around-the-clock care. Many reforms attempt to reduce the demand of acute services, but few attempt to improve the efficiency of the acute care system through payment reform and delivery innovation. This paper:

- Provides a path to transition acute care away from fee-for-service.
- Describes how payment reform can support specific acute care delivery innovations.
- Details practical next steps for acute care physicians, policy makers, and hospitals.

or clinic follow-up for reevaluation. For higher-acuity conditions, where extended observation may be needed (eg, transient ischemic attack, chest pain), ED-based observation care improves care efficiency by reducing avoidable hospital admissions.[18] For example, Arkansas's Health Care Payment Improvement Initiative established acute care–specific retrospective bundles across Medicaid and its 3 largest commercial payers. The asthma bundle is triggered by a hospital visit (ED or inpatient) and includes all related facility services, inpatient professional services, ED visits, observations, labs and diagnostics, outpatient costs (eg. counseling), medications, and select costs for relevant care for 30 days.[19]

Category 4. At the end of the spectrum, category 4 includes population-based payments, such as capitation and global budgets. Here, ED providers, or their facilities, would receive a fixed payment based on prior utilization, the local population, or total expected costs for a period of time. Population-based payments provide the greatest incentive to build systems to reduce inefficient care and to prevent acute care visits entirely through disruptive innovations (ie, telemedicine), as well as to shift low-acuity care into other settings (ie, urgent care centers). The Kaiser On-Call program provides members with 24/7 access to nurses and physicians to facilitate decisions regarding care setting.[20] Through Kaiser Permanente California's unique integrated structure and contractual relationships, ED physicians are paid a market-competitive base salary with incentives based on quality and patient experience measures. There are no financial incentives for providing unneeded services and no financial gain for withholding clinically necessary care.

Full and partially capitated models create incentives for longitudinal and episodic ED providers to collaborate and reduce costs across the continuum. However, prospective attribution remains a

TABLE 1. HHS Payment Taxonomy Framework[15]

	Category 1 (FFS with no link to quality)	Category 2 (FFS with link to quality)	Category 3 (APMs built on FFS architecture)	Category 4 (population-based payment)
Description	• Payments are based on volume of services and not linked to quality or efficiency	• At least a portion of payments vary based on the quality of efficiency of healthcare delivery	• Some payment is linked to the effective management of a population or an episode of care; payments are still triggered by delivery of service, but there are opportunities for shared savings or 2-sided risk	• Payment is not directly triggered by service delivery, so volume is not linked to payment; clinicians and organizations are paid and responsible for the care of a beneficiary for a long period
Examples in Medicare	• Traditional Medicare FFS	• Hospital value-based purchasing • Hospital Readmissions Reduction Program • Add-on payments	• Bundled payments • ACOs • Shared savings	• Eligible Pioneer ACOs in years 3 to 5, and some Next Generation ACO payment models • Capitation and global budgets contracting
Examples in private payers	• FFS	• ED physicians at Upper Chesapeake Hospital receive add-on payments for call-backs, where ED patients are contacted shortly after discharge by their ED physician to ensure that care plans are executed successfully and there are no unexpected clinical complications	• Arkansas's Health Care Payment Improvement Initiative established an asthma bundle triggered by a visit to the hospital (ED or inpatient) and includes all related facility services, inpatient professional services, ED visits, observation, labs and diagnostics, outpatient costs, medications, and select costs for relevant postacute care for 30 days	• Maryland, through a unique Medicare waiver that established an all-payer hospital rate-setting system, uses a global budget revenue model such that each hospital's total annual revenue is known the year before and is independent of volume

ACO indicates accountable care organization; APM, alternative payment model; ED, emergency department; FFS, fee-for-service.
Source: Better care. smarter spending. healthier people: paying providers for value, not volume. CMS website. https://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-sheets/2015-Fact-sheets-items/2015-01-26-3.html. Published January 26, 2015. Accessed February 24, 2016.

TABLE 2. Examples of the HHS Framework Applied to Support Integration and Innovation in ED Care

	Category 1 (FFS with no link to quality)	Category 2 (FFS with link to quality)	Category 3 (APMs built on FFS architecture[a])	Category 4 (population-based payment[b])
Incentives/ desired system change	• Incentive for higher volume services	• Incentive for high volume remains • Focus on conditions with quality metrics	• Target high volume and cost services, with opportunity for shared savings for reducing inefficient/duplicative care for high utilizers	• Provide preventive services and high-quality, high-value services to help triage the acutely ill and injured • Focus on enhancing population health
Demand management	• None	• None	• Focus on populations that may use services inefficiently (ie, high-cost users)	• Comprehensive demand management with 24/7 access • Patient-centered tools to aid in decision making
Care coordination	• No incentive to coordinate care; as a result, limited care coordination	• Expanded care coordination with focus on high-risk populations or other explicitly rewarded activities, such as social work and case management	• Further increased coordination with better integration across settings and more robust postacute pathways	• Fully integrated care coordination across the continuum with seamless postacute care coordination
Information system requirements	• EHRs or paper charts	• EHRs with specific features that focus efforts on measured activity or clinical pathways	• EHRs with some expanded interoperability across settings and providers	• EHRs with full interoperability and connection with longitudinal care
Role of ED care providers	• ED care only	• ED care with enhanced services linked to additional payments, such as increased use of clinical pathways or sharing information	• ED with enhanced team-based care • Online and offline management of high-risk populations • Clinical pathways	• Horizontally integrated care with central role in demand management • High focus on value in acute care settings • Integration with longitudinal care team
Examples of interventions	• None	• Call-back programs • Frequent-user care plans • Medication management • Example: UnitedHealthcare's High-Risk Case Management Program	• Enhanced patient education • Clinical pathways • ED-follow up visit • Example: HonorHealth ACO's Transition Services uses veteran medics to provide in-home follow-up care and education	• Telemedicine availability to help triage symptoms • Example: Kaiser On-Call for demand management
Barriers to new payment model implementation	• N/A	• Creation of additional quality metrics • Testing metrics to ensure safety	• Creation of communication pathways and business relationships across providers • Payment distribution	• Payment distribution across providers and physician compensation • Establishing an integrated governance/contracting structure
Barriers to new program implementation	• N/A	• Costs related to new programs and initialization	• Costs related to new programs • New roles for ED providers will require training • Establishing interoperable health information networks	• Costs related to new programs and IT infrastructure • New roles for ED providers will require training • Creation of additional quality metrics • Testing metrics to ensure safety

ACO indicates accountable care organization; APM, alternative payment model; ED, emergency department; EHR, electronic health record; FFS, fee-for-service; IT, information technology; N/A, not applicable.
[a]Bundled payments, shared savings, and risk.
[b]Partial/full capitation and global budgets.

challenge for EDs because they fall under EMTALA and do not directly control much of their demand. Therefore, EDs should ideally be a component of a capitated payment rather than the risk-bearing entity.

The Reform Roadmap to Delivering Integrated Acute Care

MACRA has provided opportunities through the Physician-Focused Payment Model Technical Advisory Committee for the de-

velopment of specialty APMs. As such, ED physicians are a critical stakeholder to enable successful implementation of ED APMs and provide guidance to CMS on how APMs should be applied to acute care. One key area of need is related to the major gaps in ED quality measures. Most focus on discrete care processes for limited conditions or measure only 1 domain of quality, such as care timeliness (eg, ED boarding time).[21] With ED physician input, valid and reliable quality measures can be developed to ensure desired outcomes are achieved and care is not stinted.

Measures should be developed with 3 key principles in mind. First, guidelines and pathways for specific complaints should be adhered to.[22] Second, resource utilization should be balanced with measures of misdiagnoses and diagnostic yield.[22-24] Third, information sharing is a necessary component to cost-effective ED care (ie, interoperability of information across settings). Through the American College of Emergency Physician's Clinical Emergency Data Registry, an expanding list of quality metrics developed by ED physicians will be useful to monitor quality or for use in APMs.[25] ED payment and delivery models should also be tested, prior to scaling, for safety and unintended consequences. The goal is for patients to continue to receive high-quality acute and emergency care, and that access is not reduced by implicit incentives in APMs. **Table 2** provides a roadmap to integrate acute care super-imposed on the HHS payment taxonomy framework. This illustrates how EDs can move from category 2 to 4 through payment and delivery reforms, and describes potential barriers and specific information-sharing requirements.

CONCLUSIONS

Ultimately, the goal of payment and delivery reforms in emergency care is about collaborating with the ED to improve population health across the continuum of care. Transitioning from FFS to APMs needs to occur gradually; ideally, it should be disruptive, but not destructive, to the fundamental functions of EDs. FFS with links to quality may be the most viable short-term model to help EDs prepare for APMs. As this transition progresses across care settings, EDs, health systems, and the government will also need to monitor how potential volume reductions in ED visits impact the long-term financial sustainability of EDs, given high fixed costs.

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REFERENCES

1. National Hospital Ambulatory Medical Care Survey: 2011 emergency department summary tables. CDC website. http://www.cdc.gov/nchs/data/ahcd/nhamcs_emergency/2011_ed_web_tables.pdf. Accessed July 27, 2016.

2. Pitts SR, Pines JM, Handrigan MT, Kellermann AL. National trends in emergency department occupancy, 2001 to 2008: effect of inpatient admissions versus emergency department practice intensity. *Ann Emerg Med.* 2012;60(6):679-686.e3. doi: 10.1016/j.annemergmed.2012.05.014.

3. Wiler JL, Gentle C, Halfpenny JM, et al. Optimizing emergency department front-end operations. *Ann Emerg Med.* 2010;55(2):142-160.e1. doi: 10.1016/j.annemergmed.2009.05.021.

4. Pines JM, Newman D, Pilgrim R, Schuur JD. Strategies for integrating cost-consciousness into acute care should focus on rewarding high-value care. *Health Aff (Millwood).* 2013;32(12):2157-2165. doi: 10.1377/hlthaff.2013.0685.

5. Lands of opportunity: bringing telecommunications services to rural communities. FCC website. https://transition.fcc.gov/indians/opportunity.pdf. Published July 2006. Accessed July 27, 2016

6. Adler-Milstein J, Kvedar J, Bates DW. Telehealth among US hospitals: several factors, including state reimbursement and licensure policies, influence adoption. *Health Aff (Millwood).* 2014;33(2):207-215. doi: 10.1377/hlthaff.2013.1054.

7. Connecting America: the national broadband Plan. FCC website. https://transition.fcc.gov/national-broadband-plan/national-broadband-plan.pdf. Published March 17, 2010. Accessed July 27, 2016.

8. Ragin DF, Hwang U, Cydulka RK, et al; Emergency Medicine Patients' Access To Healthcare (EMPATH) Study Investigators. Reasons for using the emergency department: results of the EMPATH Study. *Acad Emerg Med.* 2005;12(12):1158-1166.

9. Pines JM, Lotrecchiano GR, Zocchi MS, et al. Conceptual model for episodes of acute, unscheduled care. *Ann Emerg Med*. 2016. pii: S0196-0644(16)30209-8. doi: 10.1016/j.annemergmed.

10. Pang PS, Schuur JD. Emergency departments, acute heart failure, and admissions: one size does not fit all. *JACC Heart Fail.* 2014;2(3):278-280. doi: 10.1016/j.jchf.2014.03.003.

11. Sabbatini AK, Nallamothu BK, Kocher KE. Reducing variation in hospital admissions from the emergency department for low-mortality conditions may produce savings. *Health Aff (Millwood).* 2014;33(9):1655-1663. doi: 10.1377/hlthaff.2013.1318.

12. Swap CJ, Nagurney JT. Value and limitations of chest pain history in the evaluation of patients with suspected acute coronary syndromes. *JAMA.* 2005;294(20):2623-2629.

13. Pope JH, Aufderheide TP, Ruthazer R, et al. Missed diagnoses of acute cardiac ischemia in the emergency department. *N Engl J Med.* 2000;342(16):1163-1170.

14. Powell ES, Khare RK, Courtney DM, Feinglass J. Volume of emergency department admissions for sepsis is related to inpatient mortality: results of a nationwide cross-sectional analysis. *Crit Care Med.* 2010;38(11):2161-2168. doi: 10.1097/CCM.0b013e3181f3e09c.

15. Better care. smarter spending. healthier people: paying providers for value, not volume. CMS website. https://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-sheets/2015-Fact-sheets-items/2015-01-26-3.html. Published January 26, 2015. Accessed July 27, 2016.

16. Wang T, Srebotnjak T, Brownell J, Hsia RY. Emergency department charges for asthma-related outpatient visits by insurance status. *J Health Care Poor Underserved.* 2014;25(1):396-405. doi: 10.1353/hpu.2014.0051.

17. Kane CK, Emmons DW; American Medical Association. New data on physician practice arrangements: private practice remains strong despite shifts toward hospital employment. New Mexico Medical Society website. http://www.nmms.org/sites/default/files/images/2013_9_23_ama_survey_prp-physician-practice-arrangements.pdf. Published September 2013. Accessed July 27, 2016.

18. Baugh CW, Venkatesh AK, Hilton JA, Samuel PA, Schuur JD, Bohan JS. Making greater use of dedicated hospital observation units for many short-stay patients could save $3.1 billion a year. *Health Aff (Millwood).* 2012;31(10):2314-2323. doi: 10.1377/hlthaff.2011.0926.

19. Casalino LP, Pesko MF, Ryan AM, et al. Small primary care physician practices have low rates of preventable hospital admissions. *Health Aff (Millwood).* 2014;33(9):1680-1688. doi: 10.1377/hlthaff.2014.0434.

20. Selevan J, Kindermann D, Pines JM, Fields WW. What accountable care organizations can learn from Kaiser Permanente California's acute care strategy. *Popul Health Manag.* 2015;18(4):233-236. doi: 10.1089/pop.2014.0157.

21. Schuur JD, Hsia RY, Burstin H, Schull MJ, Pines JM. Quality measurement in the emergency department: past and future. *Health Aff (Millwood).* 2013;32(12):2129-2138. doi: 10.1377/hlthaff.2013.0730.

22. Griffey RT, Pines JM, Farley HL, et al. Chief complaint-based performance measures: a new focus for acute care quality measurement. *Ann Emerg Med*. 2015;65(4):387-395. doi: 10.1016/j.annemergmed.2014.07.453.

23. Raja AS, Ip IK, Prevedello LM, et al. Effect of computerized clinical decision support on the use and yield of CT pulmonary angiography in the emergency department. *Radiology.* 2012;262(2):468-474. doi: 10.1148/radiol.11110951.

24. Kindermann DR, McCarthy ML, Ding R, et al. Emergency department variation in utilization and diagnostic yield of advanced radiography in diagnosis of pulmonary embolus. *J Emerg Med*. 2014;46(6):791-799. doi: 10.1016/j.jemermed.2013.12.002.

25. CEDR—Clinical Emergency Data Registry. American College of Emergency Physicians website. http://www.acep.org/cedr/. Accessed July 27, 2016. ■

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