

Development of Systems of Care for ST-Elevation Myocardial Infarction Patients The Payer Perspective

Thomas Fenter, MD; Terry Golash, MD; Neil Jensen, MHA, MBA

Extending revascularization to all ST-elevation myocardial infarction (STEMI) patients who could benefit from it requires both the rethinking of significant aspects of what is being done now and the development of new thinking for patients for whom such care requires system innovations. Such rethinking and restructuring involves how services are purchased, how payments are made, and how accountability is met. This article focuses on the role of purchasers and payers* in providing primary percutaneous coronary intervention (PCI) for STEMI patients.

The Current System

Data

No current national data exist on the percentage of STEMI patients receiving revascularization or the percentage of STEMI patients who are transferred from the hospital where they are initially examined to another hospital that is better able to provide revascularization.

Emergency Services

Because essentially all patients with STEMI present as emergencies, commercial insurers who contract selectively with hospitals have less influence over data collection and

referrals than they have over more elective procedures or even less emergent medical admissions.

Community Structures

Community structures and networks for STEMI care are extremely variable and relatively uncommon. We are unaware of any survey of what the existing structures look like or how frequently they occur.

Payment

The complex aspect of payment is payment for transferred patients. It may be that no 2 payers have the same rules, but for Medicare,^{1,2} the preponderant payer, the following protocol is followed: (1) The initial (transferring) hospital receives (a) payment only for emergency department services if the patient is not admitted before discharge or (b) per diem payment for inpatient services at a rate of the diagnosis-related group amount divided by the geometric mean of length of stay. This rate is doubled for the first day. (2) The receiving hospital is paid the diagnosis-related group amount as if there had been no preceding care. Despite speculation that some hospitals are reluctant to transfer patients because they fear lost revenue, there is little evidence either to support or to reject this idea.

*Purchasers and payers: These terms are often used interchangeably, but they are not always the same. A purchaser is an organization, such as an employer, that provides the funds for care. Purchasers understood in this way do not pay or have contracts with providers and practitioners; however, some organizations, such as health plans, function as purchasers and as payers. A payer is an organization, such as a health plan or insurance company, that directly contracts with purchasers on one side and with providers and practitioners on the other. The payer often has strong incentives to support the purchaser in the quest for value. Typically, its contracts are selective; that is, although it may pay for services from everyone, the contracts are not the same for everyone.

The American Heart Association makes every effort to avoid any actual or potential conflicts of interest that may arise as a result of an outside relationship or a personal, professional, or business interest of a member of the writing panel. Specifically, all members of the writing group are required to complete and submit a Disclosure Questionnaire showing all such relationships that might be perceived as real or potential conflicts of interest.

The opinions expressed in this manuscript are those of the authors and should not be construed as necessarily representing an official position of the US Department of Health and Human Services, the Centers for Disease Control and Prevention, the Agency for Healthcare Research and Quality, or the US government. The opinions expressed in this manuscript should not be construed as necessarily representing an official position of Blue Cross and Blue Shield Association and its licensees. These opinions are not necessarily those of the editor or the American Heart Association.

The Executive Summary for these proceedings is available in the July 10, 2007, issue of *Circulation* (*Circulation*. 2007;116:217–230). Writing group reports are available online at <http://circ.ahajournals.org> (*Circulation*. 2007;116:e29–e32, e33–e38, e39–e42, e43–e48, e49–e54, e55–e59, e60–e63, e64–e67, e68–e72, and e73–e76).

The publication of these proceedings was approved by the American Heart Association Science Advisory and Coordinating Committee on April 18, 2007. A single reprint of the entire conference proceedings is available by calling 800-242-8721 (US only) or writing the American Heart Association, Public Information, 7272 Greenville Ave, Dallas, TX 75231-4596. Ask for reprint No. 71-0413. To purchase additional reprints, call 843-216-2533 or e-mail kelle.ramsay@wolterskluwer.com.

Expert peer review of AHA Scientific Statements is conducted at the AHA National Center. For more on AHA statements and guidelines development, visit <http://www.americanheart.org/presenter.jhtml?identifier=3023366>.

Permissions: Multiple copies, modification, alteration, enhancement, and/or distribution of this document are not permitted without the express permission of the American Heart Association. Instructions for obtaining permission are located at <http://www.americanheart.org/presenter.jhtml?identifier=4431>. A link to the "Permission Request Form" appears on the right side of the page.

(*Circulation*. 2007;116:e60–e63.)

© 2007 American Heart Association, Inc.

Circulation is available at <http://www.circulationaha.org>

Quality-of-Care Measurement

Although there are 9 standard measures of quality of care for patients with acute myocardial infarction, there is no standard measure of the appropriateness of the decision to perform or not perform revascularization or even a standard measure of the rate at which revascularization is done, even when all care is provided in 1 hospital. Quality measurement is actually applied less often to STEMI patients who are transferred than to those who are not. Admission measures are applicable (aspirin, β -blockers) in the initial hospital if the patient is admitted but not if they are transferred from the emergency department, and discharge measures are applicable in the receiving hospital. Although door-to-needle time and door-to-balloon time are standard performance measures for patients definitively treated in the hospital to which they were initially admitted, there is not a standard measurement process for transferred patients.

“Pay-for-Performance”

The Centers for Medicare and Medicaid Services (CMS) has just completed a demonstration with Premier (an organization owned by not-for-profit hospitals) of a “pay-for-results” model in which startlingly high performance was achieved on acute myocardial infarction measures, but neither time from symptom onset to revascularization nor appropriateness of revascularization decisions was included in the measures.³

The Ideal System

In an ideal system, care is patient-centered and coordinated from the moment 9-1-1 is called throughout the follow-up care that is given after discharge from the hospital that provided definitive treatment. An ideal system should be informed by evidence-based guidelines developed by expert physician organizations. Well-defined standards for hospital care at transferring and receiving facilities should be integrated into existing accreditation programs, such as the Joint Commission on Accreditation of Healthcare Organizations and CMS. Communities should develop a clear road map for implementing an ideal system for their region. Once these elements have been established, local payers can apply appropriate financial incentives and disincentives that would reimburse the right amount for the right care at the right time in the right setting.⁴ Many communities have attempted to create such an ideal care system, with varying degrees of success, but to the best of our knowledge, no payers other than fully integrated health plans have an integrated payment system. An ideal system should avoid monopolistic pricing and contracting practices.

Community-Level Organization

A system for the care of patients with STEMI should be community-wide, and development should involve all stakeholders (including payers). Communities should evaluate local need and capacity and design an integrated system appropriate for that region. Such a system may have a clearly defined relationship to the trauma system and should be fully coordinated with the emergency medical services system. It should have an explicit plan regarding the need, if any, for adjustment of community capacity.

Transfer Agreements

Every hospital would have a formal structure for transfers to revascularization centers for patients who need revascularization that the hospital cannot provide. Such a structure could probably be required under the existing accreditation guidelines of the Joint Commission on Accreditation of Healthcare Organizations and the “conditions of participation” of CMS, although both would require some development of specifications, which could probably be achieved effectively in a combined American College of Cardiology/American Heart Association statement. The real goal is to ensure that there is a clear protocol for transfer from any hospital with an emergency room or department that does not have revascularization capability to a hospital that has that capability. Such protocols have proven vital to ensuring that patients arrive at the receiving hospital with all necessary information and with adequate notice.

Internal Protocols

Most STEMI patients will continue to receive definitive care in the hospital to which they are admitted. A clear protocol for making the revascularization decision and moving the patient through the system is probably necessary to reduce door-to-balloon/needle time to the target range. Again, requiring that these processes are defined and efficient is an appropriate focus for both payers and accrediting agencies, with the accrediting agencies using standards largely developed by clinical experts and payers supporting the accreditors in their requirements.

Transparency

All payer performance data should be available and public for all hospitals that see STEMI patients. These data should be standardized, and there should be no duplicative or inconsistent reporting requirements.

Paying for Results

Purchasers would like to get value for their money and are deeply skeptical that they can do so without measuring performance. It is likely that the 2 most important performance measures in revascularization for STEMI will prove to be the time from onset of symptoms or entry into the medical system to needle/balloon and the appropriateness of revascularization. Neither endorsed specifications nor data are currently available for either measure. In the interim, door-to-balloon/needle time is useful and would be even more useful if it were applied to transfer patients (some technical specification development would be needed).

Integration of Payment

A single payment that is shared among the referring, transporting, and receiving providers has several theoretical advantages:

1. A system that fragments payments encourages fragmented care. The current payment strategy does nothing to encourage coordination or integration of care across providers or to encourage collaboration between providers and practitioners. This is an issue for transfer from home to hospital

and from hospital to follow-up care even when there is no transfer between hospitals.

2. In treatment of STEMI, when time is life, efficiency across interfaces translates into lives saved, but there is no structure of joint accountability for the total time the system takes to provide care to the patient.
3. As presentations elsewhere in this conference have made clear, the seamless efficiency of a well-developed transfer system requires careful planning and investment in building a system. Fragmented payments discourage such investment even if, totaled across settings, they reduce total resource use.
4. From an efficiency perspective, a single, prospectively determined payment for transferred patients allows the 2 hospitals and the transfer system to share gains from removing inefficiencies in the transfer process.
5. Finally, as the healthcare system increasingly recognizes that it must take care of patients rather than providers, a single payment becomes the outward and visible sign of this focus on the patient.

However, the organizational structures to make such payments rarely exist, and the creation of such a structure would require rigorous accommodation because of prohibitions on paying for referrals (including the Stark rules and other issues). For the moment, because these structures do not yet exist, we should regard integrated payment as an option for demonstrations rather than as a strategy that can be implemented on a large scale today.

Gaps and Barriers

Resistance From Patients

Patients are often reluctant, for various reasons, to be transferred to another facility. This can result both from their fear of being separated from their family or community and from a sense that transfer means that they are terribly sick. Considerable study is needed concerning how to present transfer as a desirable tailoring of care to the individual patient's needs.

Competition Among Hospitals

To the extent that transfer becomes another element in the ongoing competition between community hospitals and referral centers, there will be general resistance. In addition, unless words are chosen carefully and messages well shaped, hospitals that are not PCI-capable may fear that transferring patients labels them as "low quality." Certainly, compliance with anti-trust issues will need to be considered.

Competition Among Physicians

There are 3 significant issues for physicians: (1) fear of losing a patient to another provider; (2) a system that deliberately or unintentionally does not include or consider the primary physician (for example, by failing to provide information or coordinate follow-up plans with the primary physician); and (3) fear of being publicly identified as an "inferior" doctor.

Treating the Patient as a "Case" Rather Than a Person

Particularly under the pressure of time and emergency care, it is too easy to disregard the patient's individuality and right to be consulted about concerns and questions.

Possible Financial Burden on the Patient

Local payer contract arrangements (ie, participating versus nonparticipating providers) may result in financial penalties to patients if they are transferred to nonparticipating providers. For example, a patient might receive care from a nonparticipating physician (eg, an interventional cardiologist) at significant personal out-of-pocket cost. Provider and payer contracting approaches would ideally address these issues to minimize financial penalties on the patient.

Recommendations

Payers should urgently develop a definition of our goals and rough data on the magnitude of the problem, the benefits of fixing it, and the costs of fixing it.

Measures

Payers should play a leading role in making measures consistent across payers and others who require reporting. Payers should also take a leading role in promoting consistent and accurate data collection and public availability of all payer data. This does not mean that every community must collect the same measures; it does mean that there should be a core measure set and that the definition of any measure used should be standardized.

Community Networks

Payers should take a role with other stakeholders in convening community meetings to make clinically appropriate referrals occur reliably. The American Heart Association should invest in the development of resource kits for convening such meetings; kits should include, among other things, what kinds of data should be assembled in advance, who should be invited, and how meetings can be most effective. Involvement of the Alliance for Cardiac Care Excellence and its many members should be considered.

Efficient Payments

Payments for cardiovascular procedures should be prompt and based on efficient costs, not on historical patterns of high-margin payments.

Patient-Centered Care

Payers should assume a leading role in promoting patient-centered care. Patients, and patient reports of experience, should be included in all planning efforts. Payers should help in the effort to make the possibility of referral to a PCI hospital understandable and acceptable to the patient. Payers should strive for a uniform and understandable definition of emergency that will not cause a delay in calling 9-1-1.

Protocols

Professionally developed transfer protocols and internal protocols should be used, and it may be useful to reference them in contracts between payers and providers.

"Pay-for-Results"

Payers should consider adjusting payments to reward the reporting of data and effective participation in performance improvement alliances. Payers should carefully review payment policies to remove areas where the payment system

inadvertently penalizes better care by, for example, creating disincentives for clinically appropriate transfers for STEMI. Finally, payers should consider developing and piloting ways to pay that support good or improved results.

Transferring Hospitals and Transport Systems

Payers should develop and implement mechanisms to pay transferring hospitals and transport systems fairly for the costs of evaluating the patient, arranging the transfer, and providing any needed care.

Certification

The payer group believes that certification of PCI-capable (STEMI receiving) hospitals may be helpful for factors such as volume, 24-hours-per-day/7-days-per-week availability, and practitioner credentialing.

Gain-Sharing

The sharing between payers and providers of the gains that result from improved efficiency is a promising emerging strategy for encouraging efficiency; however, this strategy may have risks that are not yet fully understood, such as aggravating imbalances in the payment system by increasing rewards for services for which payment is already very attractive.⁵ Another risk is that asymmetrical situations may be created in which gain sharing encourages disproportionate acceptance of or avoidance of risk. The payer group urges careful consideration of gain-sharing models with an understanding that there is no single appropriate model, that legal prohibitions such as Stark rules and other issues must be considered carefully, and that for many situations, no model has yet been tested.

Payer Image

All parties should make a concerted effort to understand what payers do and to convey that role to patients.

Acknowledgment

The payer writing group and the conference participants gratefully acknowledge Dr Stephen Jencks' participation and thoughtful and insightful comments during the conference, his review of this manuscript, and his commitment to this American Heart Association initiative.

Disclosures

Potential conflicts of interest for members of the writing groups for all sections of these conference proceedings are provided in a disclosure table included with the Executive Summary.

References

1. Medicare program: hospital inpatient prospective payment systems and fiscal year 2007 rates. 71 *Federal Register* 59886 (2006). Available at: <http://a257.g.akamaitech.net/7/257/2422/01jan20061800/edocket.access.gpo.gov/2006/pdf/06-8471.pdf>. Accessed May 20, 2007.
2. Medicare Payment Advisory Commission. Hospital acute inpatient services payment system. Revised October, 2006. Available at: http://www.medpac.gov/publications/other_reports/Sept06_MedPAC_Payment_Basics_hospital.pdf. Accessed March 28, 2007.
3. US Department of Health and Human Services, Centers for Medicare and Medicaid Services. The premier hospital quality incentive demonstration: clinical conditions and measures for reporting. Available at: <http://www.cms.hhs.gov/HospitalQualityInits/downloads/HospitalPremierMeasures.pdf>. Accessed March 28, 2007.
4. Agency for Healthcare Research and Quality. *Your Guide to Choosing Quality Health Care*. Washington, DC: Agency for Health Research and Quality, US Office of Personnel Management; December 1998. AHCPR publication No. 99-0012. Available at: <http://www.opm.gov/insure/health/quality/qualguid.pdf>. Accessed March 28, 2007.
5. US Congress. House Ways and Means Committee. "Hearing on Gain-sharing." (Date: 10/7/05). Available at: <http://waysandmeans.house.gov/hearings.asp?formmode=view&id=4671>. Accessed March 28, 2007.

KEY WORDS: AHA Conference Proceedings ■ myocardial infarction ■ point-of-care systems ■ angioplasty ■ reperfusion

Development of Systems of Care for ST-Elevation Myocardial Infarction Patients: The Payer Perspective

Thomas Fenter, Terry Golash and Neil Jensen

Circulation. 2007;116:e60-e63; originally published online May 30, 2007;

doi: 10.1161/CIRCULATIONAHA.107.184050

Circulation is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231

Copyright © 2007 American Heart Association, Inc. All rights reserved.

Print ISSN: 0009-7322. Online ISSN: 1524-4539

The online version of this article, along with updated information and services, is located on the World Wide Web at:

<http://circ.ahajournals.org/content/116/2/e60>

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in *Circulation* can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office. Once the online version of the published article for which permission is being requested is located, click Request Permissions in the middle column of the Web page under Services. Further information about this process is available in the [Permissions and Rights Question and Answer](#) document.

Reprints: Information about reprints can be found online at:
<http://www.lww.com/reprints>

Subscriptions: Information about subscribing to *Circulation* is online at:
<http://circ.ahajournals.org/subscriptions/>