Creating “Turbo” Accountable Care Organizations for Time-Critical Diagnoses

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Accountable care organizations (ACOs) are scheduled for implementation in 2012 by the Center for Medicare and Medicaid Services (CMS), and this “standard” ACO model seeks to encourage hospitals and ambulatory care practitioners to come together as organized entities responsible clinically and financially for the health care of ≧5000 Medicare beneficiaries.1,2 However, significant barriers to implementation exist, including organizational complexity, informatics investments, legal issues, concerns about exacerbating healthcare disparities, and general uncertainty regarding the attainability of financial rewards based upon results from the CMS Physician Group Practice Demonstration.1–6 The standard-ACO model is also focused on primary care and chronic disease management in the ambulatory setting,7 thus ignoring essential emergency systems that provide sophisticated care for time-critical diagnoses that also affect overall public health. Thus, I propose that CMS considers the parallel initiation of a novel “Turbo” ACO model to promote efficient healthcare delivery systems for patients who suddenly experience an unplanned critical illness, including acute ST-elevation myocardial infarction (STEMI), stroke, or out-of-hospital cardiac arrest (OHCA). Moreover, instead of competition, the Turbo-ACO model would be designed to promote better collaboration between all hospitals and emergency medical services (EMS) providers within an organized region and improve clinical outcomes for time-critical diagnoses across entire populations.

The 3 core attributes of the standard-ACO model include organized care, performance measurement, and payment reform, all aligned to promote value-based healthcare delivery.2 The proposed Turbo-ACO model would simply adapt these 3 core attributes to consistently promote the rapid treatment of time-critical diagnoses with specialized hospital-based interventions. The Turbo-prefix provides a useful metaphor for these types of speed-oriented healthcare delivery systems because Turbo originates from engineers who modified a standard engine design to deliver more power and speed. My rationale for Turbo-ACOs within the context of the 3 core attributes is summarized next, with the goal of simultaneously optimizing intrahospital team-based care, interhospital collaboration, and prehospital systems.

First, organized systems of care for STEMI, stroke, and cardiac arrest have already been successfully created in various early-adopter regions across the nation, and their implementation has translated into significant process-of-care improvements and real reductions in morbidity/mortality across entire regions.8–11 Regionalization for acute cardiovascular emergencies has been driven by a convergence of forces,12,13 including professional society quality improvement initiatives led by the American College of Cardiology14 and the American Heart Association (AHA).15–17 In addition, EMS providers generally transport anywhere from 50% to 100% of all STEMI, stroke, and OHCA to receiving hospitals, which positions EMS authorities as powerful advocates for quality health care at the local level. When these authorities implement destination protocols to designated hospitals with special capabilities, EMS systems can actively promote “the right care for the right patient in the right place at the right time (quickly)” for a cohort of critically ill patients identified by evidence-based prehospital triage criteria (eg, electrocardiogram [ECG] findings, focused neurological examination, or return of spontaneous circulation). The designated receiving hospitals are expected to participate in a quality assurance and improvement (QA/QI) registry to maintain their status within the regional network, accept all patients in their catchment area meeting prespecified triage criteria regardless of insurance status, and maintain 24/7 accessibility to time-critical specialty care regardless of emergency department diversion or overcrowding status.12

Lastly, recent findings from the North Carolina statewide STEMI network demonstrated that significant reductions in disparities can occur in organized networks.18 Thus, in contrast to standard-ACO concerns, disparities are likely minimized in Turbo-ACOs because rapid access to quality care would be much less dependent on a patient’s home zip code or usual hospital referral region.

Second, existing registries already provide robust performance measurement nationally. Two American College of Cardiology registries (ACTION–Get With the Guidelines [GWTG] and Cath-PCI at www.ncdr.com) support QI efforts for acute coronary syndromes (with minor components for OHCA), and stroke is supported by the AHA’s GWTG Stroke registry. The primary strengths of these 3 registries include...
broad uptake by hospitals nationally, validated risk-adjustment models for in-hospital mortality and adverse events based upon clinical variables (not claims data), and ongoing analysis of multiple evidence-based process-of-care quality metrics. In addition, ACTION-GWTG is already the official registry for the AHA’s Mission:LifeLline\textsuperscript{15} initiative, a nationally organized community-based effort to consistently provide coordinated and patient-centered STEMI care across the prehospital, intrahospital, and interhospital phases. Mission:Lifeline is also releasing both geospatial information systems (GIS) mapping capability for the entire nation and regional systems reports from the ACTION-GWTG registry, thus providing standardized structure-process-outcome tools that would serve as cornerstones for the creation of Turbo-ACO STEMI networks across the United States.

Third, payment reform is the final core attribute of an ACO model, and early data indicate that significant financial savings are achievable for certain time-critical diagnoses. For example, regional STEMI system efforts in Minnesota\textsuperscript{19,20} have demonstrated lower rates of hospital readmission, reinfarction, revascularization, need for implantable cardiac defibrillators, and a more dramatic decline in cardiac mortality for regions in the state with integrated systems. From Indiana, a recent pre/postimplementation cost-effectiveness analysis by a tertiary hospital that succeeded in reducing its STEMI door-to-balloon times demonstrated a reduced length of stay and a reduced frequency of outliers (hospital charges $>$100,000 for patients with complications). Payers saved \$10,000 per index admission during the more efficient postintervention period, with an additional savings at 1 year that totaled \$14,000 per patient.\textsuperscript{21} Similarly, a Leapfrog analysis projected annual savings exceeding \$5.5 billion nationally if all acute MI hospitals provided the same level of quality and efficiency as the nation’s top quartile.\textsuperscript{22}

Accountability is often described as performance measurement with consequences. Hence, new payment approaches by CMS could significantly accelerate existing efforts aimed at creating efficient and cost-effective regional networks for time-critical diagnoses. Suggested parameters for the creation of Turbo-ACOs include the following:

1. Turbo-ACOs would be either an entire state or self-described regions with at least 1 million residents (not just Medicare beneficiaries), thus providing “collateral benefit” or “positive spillover effect” to entire populations.
2. The designation of large Turbo-ACO regions also provides administrative simplicity for CMS and easier attribution of patients to a specific Turbo-ACO based on each Medicare beneficiary’s home address. Akin to standard-ACOs, Turbo-ACOs would not be “closed” and, inevitably, a small percentage of patients will receive care outside their designated region.
3. Via a Shared Savings Plan, financial rewards would include meaningfully increased CMS payments for each episode of care for Medicare beneficiaries and would simply continue going directly to hospitals and EMS providers via existing mechanisms. Thus, in contrast to the current plan of CMS paying shared savings to the administrators of each standard-ACO, direct payments avoid conflicts on how to fairly divide bonus earnings within a Turbo-ACO.
4. Shared accountability and collaboration by all hospitals and EMS providers within each region would be encouraged by CMS bonus payments only when the entire Turbo-ACO collectively succeeds.
5. By using the previously mentioned registries, regional “success” is evaluated biannually by a predetermined combination of process and outcome benchmarks unique to each time-critical diagnosis. Alternatively, regions that are initially performing far below national benchmarks could also be rewarded during the first 3 years for significant incremental improvement of process and outcome measures.
6. Turbo-ACOs could develop separately for STEMI, stroke, and OHCA, but additional rewards could motivate regions to ultimately organize systems for all 3 acute cardiovascular emergencies.
7. The large sample size of regional QA/QI registries (validated by strategic audits) should be less susceptible to stochastic variation, gaming, or risk-averse provider behavior than traditional hospital-focused QA/QI or publicly reported physician report cards.
8. Integrated secondary prevention (eg, antiplatelet therapy and statins) after an acute cardiovascular emergency would be encouraged by evaluation of long-term clinical outcomes for each treated patient in a disease-specific manner within each Turbo-ACO at 30 days and 1 year.
9. For conditions with a generally high expected mortality rate (eg, OHCA or devastating stroke), safeguards should exist to avoid the creation of perverse QA/QI incentives that promote overly aggressive care that is medically futile. Instead, the option to promote dignified palliative care\textsuperscript{23} when clinically and ethically indicated should be preserved within each Turbo-ACO.
10. If successful, future expansion of the Turbo-ACO concept may include major trauma, less common cardiovascular emergencies (eg, acute aortic dissection\textsuperscript{24} or ruptured aortic aneurysm), or other time-critical diagnoses.

Federal policy makers hopefully understand that hyperacute healthcare delivery for time-critical diagnoses is fundamentally different from primary or long-term care. Thus, analogous to the structure of our nation’s parcel delivery system (eg, FedEx is focused on lower volumes at faster speeds, and US Postal is focused on higher volumes at slower speeds), current reform efforts should foster the synergistic efforts of both Turbo-ACOs and standard-ACOs. The current CMS director, Donald M. Berwick, MD recently stated “[standard] ACOs are not a panacea but rather one of a number of complementary initiatives chartered by the Affordable Care Act to help achieve the three-part goal of lower costs, improved care, and better health.”\textsuperscript{25} He also described the important role of the CMS Innovations Center, which is “now exploring ways to test alternative models of ACOs.”\textsuperscript{25}

In summary, the Turbo-ACO model represents a near implementation-ready proposal that patients, providers, and payers are all likely to embrace. Furthermore, by initiating the Turbo-ACO model, CMS could reduce spending in an im-
portant healthcare sector while simultaneously accelerating comprehensive regional network coverage across the nation to consistently provide timely access to high-quality care for all patients with an unplanned critical illness.

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Disclosures

None.

References


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