

Value-based Healthcare

Value-based Healthcare: A Novel Transitional Care Service Strives to Improve Patient Experience and Outcomes

Thomas R. Vetter MD, MPH, Lauren M. Uhler MPH, Kevin J. Bozic MD, MBA

rocess improvement efforts across the entire continuum of surgical care are accelerating due to the continued shift from traditional fee-for-service to episode-based payment. Notably for orthopaedics, the Centers for Medicare & Medicaid Services (CMS) recently implemented the Comprehensive Care for Joint Replacement (CJR) model in 67

metropolitan areas in the United States [3]. The CJR model involves reimbursement over the entire episode of care—from the decision to operate, to the acute perioperative phase, and throughout postdischarge recovery. The goal of this CMS pilot is to improve the value of care delivered (defined as outcomes that matter to patients per healthcare dollar spent) for its beneficiaries undergoing primary

interest, patent/licensing arrangements, etc) that might pose a conflict of interest in connection with the submitted article. All ICMJE Conflict of Interest Forms for authors and *Clinical Orthopaedics and Related Research* editors and board members are on file with the publication and can be viewed on request.

The opinions expressed are those of the writers, and do not reflect the opinion or policy of $CORR^{(!\!\! E)}$ or The Association of Bone and Joint Surgeons $^{(!\!\! E)}$.

T. R. Vetter MD, MPH,
L. M. Uhler MPH,
K. J. Bozic MD, MBA (☒)
Department of Surgery and Perioperative
Care, Dell Medical School at The
University of Texas at Austin, 1701
Trinity Street, Austin, TX 78712, USA
e-mail: kevin.bozic@austin.utexas.edu

L. M. Uhler MPH e-mail: lauren.uhler@austin.utexas.edu

total hip or knee replacement [8]. Hospitals participating in CJR are accountable for patient outcomes and costs over the entire episode of surgical care, starting at the time of the anchor hospital admission and ending 90 days after the initial hospital discharge.

In response to this major process improvement opportunity, we developed the Preoperative Assessment and Global Optimization (PASS-GO) [12] program, which delivers integrated and coordinated care across the entire surgical care continuum, from before surgery throughout at least the initial 90 days postdischarge. Briefly, our nascent PASS-GO program seeks to improve value by identifying and addressing patient risk factors prior to total joint replacement surgery. The PASS-GO program has evolved to include a focus on reducing complications and unplanned escalation of care after surgery and hospital discharge. We can accomplish this by implementing direct patient care touch points—occurring after hospital discharge—by a nurse navigator in our telemedicine-based Command Center (Fig. 1). As such, we have renamed the

A note from the Editor-in-Chief: We are pleased to present to readers of Clinical Orthopaedics and Related Research® the latest Value-based Healthcare column. In their previous column. Dr. Bozic and his colleagues at The University of Texas at Austin detailed their novel perioperative management system, PASS-GO (DOI: 10.1007/s11999-017-5400-z). This month, in an extension of their previous column, the authors introduce a patient management service aimed at improving coordination across the entire total joint replacement episode of care. Value-based Healthcare explores strategies to enhance the value of musculoskeletal care by improving health outcomes and reducing the overall cost of care delivery. We welcome reader feedback on all of our columns and articles; please send your comments to eic@clinorthop.org. The authors certify that they, or any members of their immediate families, have no commercial associations (such as consultancies, stock ownership, equity



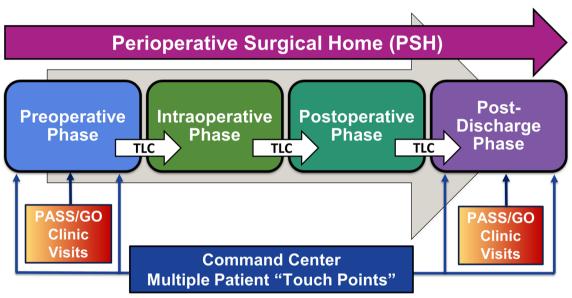


Fig. 1 The incorporation of the Perioperative Assessment and Global Optimization (PASS-GO) Clinic and Transitions across Levels of Care (TLC) Service within the perioperative surgical home model. (Published with permission from Thomas R. Vetter MD, MPH).

program Perioperative Assessment and Global Optimization.

Poor coordination of care, along with inadequate communication both among providers and with patients and families, can result in provider and/or patient deviations from standardized clinical care pathways [2, 5]. These care deviations are especially likely during transitions of care, and can lead to avoidable emergency department and hospital readmissions. Improving transitional care, defined as "a set of actions designed to ensure the coordination and continuity of healthcare as patients transfer between different locations or different levels

of care within the same location" [2, 5], can reduce these potential events and improve the healthcare experience for patients and their families [11].

To improve coordination and outcomes across the entire total joint replacement episode of care, our healthcare system is also introducing a novel perioperative Transitions across Levels of Care (TLC) Service. This TLC Service expands upon our existing conventional, internal medicine-based inpatient comanagement services by promoting greater collaboration, communication, and teamwork among the surgeon, anesthesiologist, hospitalist, intensivist, and other key members of the healthcare team [13], particularly during transitions across all the elements (Fig. 2) of perioperative care.

Just like our PASS-GO Program [12], our TLC Service involves substantial process of care reengineering, demands leadership in change management, and requires additional human and operational resources. While these initiatives have worked in our setting because of a commitment to developing a learning health system model that is focused on optimizing value delivered to patients, the principles in play here are generalizable elsewhere because they have been developed and piloted in a variety of different practice settings [1, 4, 9].



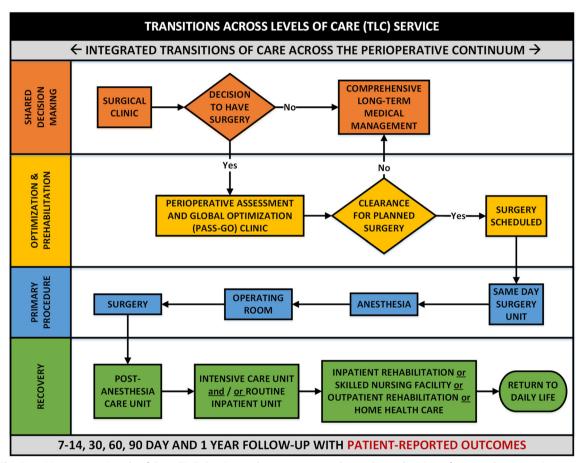


Fig. 2 The Transitions across Levels of Care (TLC) Service seeks to promote enhanced coordination of care and communication within all the elements of the entire perioperative continuum of care. (Published with permission from Thomas R. Vetter MD, MPH).

Our TLC Service focuses on our preoperatively identified sicker, frailer, higher risk, and more socioeconomically vulnerable patients. The specific goals of our TLC Service include: (1) Reducing complications by meeting the greater, complex care needs of

these higher intensity patients, (2) fewer avoidable emergency department visits and hospital readmissions, (3) more judicious, and thus cost-effective, use of postacute care facilities and services, including a skilled nursing facility, inpatient rehabilitation

facility, or long-term acute care hospital, and (4) an overall improved patient and family experience.

This novel service relies upon frequent interdisciplinary team huddles [10] to assure better communication and direct information transfer (hand-



offs) among care providers [7], and to more consistently convey patient and family member questions and concerns to the surgeon. It applies standardized criteria for discharge to each level of postacute care and a corresponding, preferred local facility; the service then reinforces and tracks this mutually agreed upon patient trajectory. It also facilitates timely access to, and consistently correct use of, prescribed acute and chronic medications before and after discharge.

Our TLC Service includes formal postdischarge transition care management, which is delivered via timely face-to-face clinic or virtual telemedicine visit(s) with an anesthesiologist or internist shortly after initial hospital discharge. This separately reimbursable transition care management is indicated with a preexisting, moderate-to-high complexity medical and/or psychosocial condition (such as patients with oxygen-dependent chronic obstructive pulmonary disease, high-dose chronic opioid use, or low socioeconomic resources) or the postoperative development of a new medical and/or psychosocial condition.

Our TLC Service plans, monitors, and maintains organizational accountability for all postoperative admissions to a skilled nursing facility, inpatient rehabilitation facility, or long-term acute care hospital, as well as strongly preferable initial home healthcare

rehabilitation. This discharge disposition is predicated on: (1) The patient's preoperative Risk Assessment Prediction Tool score [6] and (2) an assessment of the patient's home setting, including the assured presence of a copilot caregiver (family member or close friend). This postdischarge care coordination and quality assurance effort is undertaken primarily by a social worker (transitions coach) who is embedded within our PASS-GO Program and TLC Service. However, our TLC Service physician leaders also regularly communicate directly with their physician counterparts, especially in establishing and reinforcing performance expectations as well as addressing a given facility's recurrent escalations and other variances in postdischarge care.

We recognize that a new service like ours will have its share of limitations. Three potential major pitfalls of our TLC Service include: (1) Setting unrealistic goals and metrics—then initially over-promising and under-delivering to all our key stakeholders, (2) inadvertently confusing patients as to the important role played by the surgeon; and (3) unintentionally disenfranchising and alienating our communitybased primary care physicians.

We are in the midst of a proof-ofconcept, clinical pilot of our PASS-GO Program and TLC Service. Our initargeted subset of lower extremity joint replacement surgeons,

practicing at three distinct hospitals within our affiliated health system, have readily embraced this new approach to patient care. Of 163 scheduled total hip and knee arthroplasty patients, 100% have been successfully comanaged across the perioperative continuum from a standardized preoperative telephonic risk screening and selective medical optimization through individualized postdischarge disposition planning, implementation and monitoring. We plan to roll these programs out at two other hospitals and engage an increasing number of largely communitybased orthopaedic surgeons.

We will rigorously evaluate whether this new approach, which incorporates not only individualized risk assessment and corresponding medical optimization, but also enhanced coordination across transitions of care, can successfully increase standardization of care for patients, leading to improved safety, higher quality care, greater patient and provider satisfaction, lower costs, and thus greater value of care delivered to our patients.

References

1. Berian JR, Rosenthal RA, Baker TL, Coleman J, Finlayson E, Katlic MR, Lagoo-Deenadayalan SA, Tang VL, Robinson TN, Ko CY, Russell MM. Hospital standards to promote



- optimal surgical care of the older adult: A report from the Coalition for Quality in Geriatric Surgery. *Ann Surg*. [Published online ahead of print March 8, 2017]. doi:10.1097/SLA.00000000000002185.
- Bowman EH, Flood KL. Care transitions intervention and other non-nursing home transitions Models. In:
 Malone ML, Capezuti EA, Palmer RM,
 eds. Geriatrics Models of Care:
 Bringing 'Best Practice' to an Aging
 America. Cham, Switzerland: Springer
 International Publishing; 2015:97–114.
- 3. Center for Medicare & Medicaid Services. Medicare program; Comprehensive care for joint replacement payment model for acute care hospitals furnishing lower extremity joint replacement services. Final rule. *Fed Regist*. 2015;80:73273–554.
- Coleman EA, Boult C; American Geriatrics Society Health Care Systems Committee. Improving the quality of transitional care for persons with complex care needs. J Am Geriatr Soc. 2003;51:556–557.

- Cyriac J, Garson L, Schwarzkopf R, Ahn K, Rinehart J, Vakharia S, Cannesson M, Kain Z. Total joint replacement perioperative surgical home program: 2-year follow-up. *Anesth Analg*. 2016;123:51–62.
- Hansen VJ, Gromov K, Lebrun LM, Rubash HE, Malchau H, Freiberg AA. Does the Risk Assessment and Prediction Tool predict discharge disposition after joint replacement? Clin Orthop Relat Res. 2015;473: 597–601.
- Nagpal K, Vats A, Lamb B, Ashrafian H, Sevdalis N, Vincent C, Moorthy K. Information transfer and communication in surgery: A systematic review. *Ann Surg*. 2010;252: 225–239.
- Porter ME. What is value in health care? N Engl J Med. 2010;363:2477– 2481.
- Powers JS, Cox Z, Young J, Howell M, DiSalvo T. Critical pathways: Implementation of the Coleman Care Transitions Program in individuals hospitalized with congestive heart

- failure. *J Am Geriatr Soc.* 2014;62: 2442–2444.
- 10. Provost SM, Lanham HJ, Leykum LK, McDaniel RR Jr, Pugh J. Health care huddles: Managing complexity to achieve high reliability. *Health Care Manage Rev.* 2015;40:2–12.
- Sevin C, Evdokimoff M, Sobolewski S, Taylor J, Rutherford P, Coleman EA. How-to Guide: Improving Transitions from the Hospital to Home Health Care to Reduce Avoidable Rehospitalizations. Cambridge, MA: Institute for Healthcare Improvement; 2013.
- 12. Vetter TR, Uhler LM, Bozic KJ. Value-based healthcare: Preoperative assessment and global optimization (PASS-GO): Improving value in total joint replacement care. *Clin Orthop Relat Res.* 2017;475: 1958–1962.
- 13. Weller J, Boyd M, Cumin D. Teams, tribes and patient safety: Overcoming barriers to effective teamwork in healthcare. *Postgrad Med J.* 2014;90: 149–154.

