New Cost Measurement Software Launched in Three Centers

Time-Driven Activity-Based Costing (TDABC) has helped MD Anderson measure the true cost of cancer care delivery since 2010. The Institute has since partnered with Financial Planning and Analysis and Business Analytics to implement an enterprise Oracle Hyperion-based software solution to aid in time-driven bottom-up costing and resource capacity analysis.

Since February 2015, the implementation team, led by ICCI associate James Incalcaterra and ICCI project consultant Alexis Guzman, has successfully implemented the TDABC software tool in three Multidisciplinary Care centers. The team worked with clinical business staff and physician leaders to develop process maps and dashboards to facilitate process improvement and efficiency of care delivery. The project aims to implement the software in a total of five centers by December 2016. The team will spend the latter half of this fiscal year integrating with MD Anderson’s new electronic health record, One-Connect (MD Anderson’s implementation of the Epic OneConnect electronic health record.)

Additionally, we are proud to announce that the MD Anderson TDABC tool, which was developed in collaboration with InterRel Consulting, was recognized at this year’s Oracle Open World Conference. ICCI was also invited back to Harvard Business School’s 2nd Annual Value-Based Health Care Users Forum to provide insights about MD Anderson’s value agenda and software progress. ICCI will continue to use TDABC to drive new innovations in payment reform and cost delivery efficiency.
Bundled Payment Pilot Continues to Shed Light on Alternative Payments for Cancer Care

In November 2014, MD Anderson launched a three-year bundled payment pilot for head and neck cancer with UnitedHealthcare. In this program, UnitedHealthcare makes a single prospective payment that covers a full year of care at MD Anderson for patients with newly-diagnosed lip and oral cavity, oropharyngeal, laryngeal, or salivary gland tumors. Bundled payment is an alternative to the current fee-for-service reimbursement model, which pays for volume rather than value of care.

Eight payment bundles were developed based on the patient’s treatment plan and existing health conditions. This approach enables our physicians to continue to recommend the best care for each patient, regardless of how much we are paid.

ICCI has implemented near-real-time financial analytics and outcomes measurement for over 50 patients enrolled in the first year. Patient-reported outcomes (PRO), including functional status and quality of life, are collected via MD Anderson’s patient portal at clinically-relevant time points. Collecting PROs as a standard of care gives providers access to longitudinal data on the outcomes that matter most to patients.

This early implementation experience has informed parallel efforts to incorporate routine outcomes measurement in MD Anderson’s Epic electronic health record implementation, OneConnect, which will go live in March 2016.

The first year of the pilot demonstrated early feasibility of bundled payments in cancer care, and the multidisciplinary project team continues to identify and work through operational challenges. In September 2015, an important milestone was reached when the pilot was expanded to five MD Anderson Regional Care Centers in the Houston area. This expanded scope allows us to study how bundled payments can work outside our Main Campus location. In 2016, the team will face its biggest challenge yet—adapting the pilot processes to OneConnect, which will impact patient tracking, billing, and outcomes measurement.

The pilot would not have possible without clinical leadership from the Head and Neck Center and multidisciplinary support from more than 40 executives, faculty and staff members from financial, clinical, and operations departments within MD Anderson. ICCI associate Tracy Spinks, project consultant Alexis Guzman, and ICCI staff will continue to provide project management and analytical support throughout the pilot duration.
Expansion of MD Anderson’s Enhanced Surgical Recovery Program Continues

2015 proved very productive for MD Anderson’s Enhanced Surgical Recovery Program (ESRP). The program aims to enable delivery of safe, effective, and value-based cancer care through use of patient-centered care pathways to enhance functional recovery, minimize symptom burden, and improve outcomes after surgery. Following successes of programs in liver surgery, bladder surgery, and gynecologic surgery in 2013 and 2014, ICCI team members, under the leadership of co-leads Dr. Thomas Aloia and Dr. Vijaya Gottumukkala, began meeting monthly with Division and Institutional leadership to chart a path forward to full implementation of ESRPs at MD Anderson. Clinical teams made significant progress in initiating or strengthening ESRPs in thoracic surgery, colorectal surgery, spine surgery, and neurosurgery. Additionally, plans were approved to develop ESRPs for head and neck surgery, plastic and reconstructive surgery, and breast surgery.

All program implementations began with a focus on incorporating six evidence-based principles into standard clinical practice; these include 1) educating the patient on how their active participation in the plan will enhance results; 2) allowing patients to eat before surgery; 3) minimizing use of narcotic drugs; 4) reducing use of surgical drains and tubes; 5) accelerating progress to normal food intake after surgery; and, 6) encouraging patient movement and exercise soon after surgery.

All programs have demonstrated improvement in patient outcomes and are directly contributing to an increase in patient value. According to faculty member Dr. Pedro Ramirez, “it’s obvious which patients are on ESRPs—they have less pain, less nausea, and less vomiting; they’re eating sooner; and they’re getting back to daily activities sooner. We are very encouraged to see the success of the program and the impact it’s having on patient care.” The sentiment is strongly supported in patient experience improvement as shown in the bladder team outcome data in the figure to the right.

Similarly, the impact on resource consumption has been positively demonstrated in: 1) an average one day decrease in length of stay for patients on ESRP pathways, and 2) a 50% decrease in narcotic use per patient.

As the program continues into 2016, lead ICCI ESRP project consultant, John Calhoun, anticipates further improvement in patient and provider outcomes as pathways are extended to other services. The team will continue to work with institutional leadership, and all clinical teams, to clearly demonstrate the positive impacts ESRPs have on center finances in the era of payment reform.

The MD Anderson Symptom Inventory (MDASI) is used for collecting and measuring multiple symptoms in patients.
Outcome Measurement in Our New Electronic Health Record

When MD Anderson’s Epic electronic health record (EHR) implementation called OneConnect goes live in March 2016, the system will be configured to systematically capture and report patient-centered outcomes. Disease-specific outcome measure sets were defined by clinical, quality, and data experts as part of the MD Anderson Patient and Provider Outcomes Development (MPPOD) project which was developed by staff from Clinical Operations and ICCI. MPPOD incorporates patient and provider perspectives and utilizes a three-tiered outcomes hierarchy developed by ICCI external advisor Professor Michael Porter. This approach prioritizes measures that are most relevant to patients, providers, and insurers and incorporates the patient’s “voice” through the routine use of validated patient-reported outcome (PRO) questionnaires. Common measures (e.g., survival) and condition-specific measures (e.g., “the ability to speak” for head and neck cancer) are included.

In preparation for the new EHR, six outcome sets were developed across nine disease sites within 4-6 months. In some cases, early implementation was achieved using simple IT solutions.

At OneConnect go-live, the system will be configured to allow faculty and staff from six Multidisciplinary Care Centers to pilot PROs as a standard of care for patients with breast, head and neck, lung, pancreatic, prostate, and thyroid cancers. A survey governance committee chaired by Dr. Charles Levenback, ICCI Faculty Associate, and Kay Swint, director, patient experience, provided implementation guidance for the pilot.

Staff from the Office of Performance Improvement worked with each center to outline future state workflows in OneConnect. The questionnaires will be administered to patients at clinically-relevant time points via the MyChart patient portal (branded myMDAnderson), and the responses will be reviewed and addressed by physicians and mid-level providers as part of the clinic visit.

During the initial pilot, the multidisciplinary project team will study PRO utilization and the impact on clinical practice in order to refine the clinical workflow and to develop automation strategies. Longer-term, the team hopes to better understand the impact on patient experience and quality of care.

Overall, twenty outcome sets across twenty-three disease sites are planned for OneConnect integration. The remaining PRO questionnaires and corresponding outcome sets will be added to OneConnect by late-2016. This effort reflects the need for real-time access to outcomes data, which was established as an early goal for the OneConnect implementation by ICCI faculty associate and Chief Medical Information Officer, Dr. John Frenzel. Moreover, it supports broader efforts to make information on MD Anderson’s outcomes more accessible to providers, patients, and payers.

Recent Additions

Minh Hue Mosley joined the ICCI team in May 2015. She brings over 10 years of experience from various industries including computer software, oil & gas, and health care. She manages the administrative and financial functions of ICCI.

Lizzet Vasquez joined as an administrative assistant in ICCI in July 2015. With an extensive administrative background including experience in health care, she supports Dr. Thomas Feeley and assists with ICCI’s administrative responsibilities.

Delrose Jones received a BS from The Univ. of Houston and an MBA from Texas Women’s University. Joining ICCI as a program coordinator in September 2015, she supports various value initiatives, the enhanced recovery program, as well as the trainee program.

Yao Li joined ICCI as our senior data analyst in January 2016. She holds a Masters in Statistics from The Univ. of Utah School of Medicine along with many years of experience as a statistician from Intermountain Medical Center and The Univ. of Utah.
Value-Based Health Care—A Resident’s Perspective

As a resident in radiation oncology at MD Anderson, I have learned about the importance of a multi-disciplinary approach to the delivery of high-quality, evidence-based cancer care. But despite our ability to deliver this world-class care, I also started to learn that our current health care system can, at times, lack the basic infrastructure to deliver efficient and timely care to a wider population of patients or at a competitive cost. I wanted to learn more about what I could do as a clinician to help improve the quality, safety, and, importantly, the value of cancer care delivery. I saw these areas as complementary to my clinical education. Through collaboration with one of my mentors, Dr. Steven Frank, I wanted to identify new ways to define the outcomes that mattered most to patients and the true cost of care delivery with advanced technologies, like radiation therapy.

I began working with Dr. Thomas Feeley and ICCI during my second year of residency, where I quickly began to learn the basics of outcome measurement. Utilizing the standard set developed by the International Consortium for Health Outcomes Measurement (ICHOM) for early-stage prostate cancer, I began to apply these metrics to our own databases at MD Anderson, identifying the benefits and pitfalls of this standardized approach. This work helped me focus on the patient outcomes that mattered most to patients, rather than focusing on the metrics that were easiest to collect. I also worked with colleagues at the Harvard Business School (HBS) to learn more about cost accounting in cancer care – an area that has not been well-explored. Costs in radiation oncology, in particular, are quite complex, given the large upfront capital investment that’s needed to purchase and set-up a linear accelerator or synchrotron to deliver care. Through close collaborations with HBS Professor Bob Kaplan, I learned the basics of time-driven activity-based costing, which proved to be a unique and accurate methodology to measure the full cycle costs for my patients. Towards the end of residency, I had the opportunity to finally pull together both outcome metrics and costs for prostate and head and neck cancer patients by creating a new value framework.

My work with the ICCI has fundamentally changed the way in which I now view both our health care system as a whole and my own radiation oncology clinic. I continuously look for ways to improve the outcomes that matter most to patients, to improve the efficiency and access to care, and to lower the costs of care delivery that do not add value. As I look to make the transition to becoming an attending within our evolving health care system, I hope to continue to make a positive impact on my patients through the lessons I have learned with the ICCI.

Nikhil Thaker, M.D.—Resident, Radiation Oncology

Guest Speaker: Professor Amitabh Chandra
Presenting: BioPharma Dilemma

Malcolm Wiener Professor of Public Policy
Director of Health Policy Research
Harvard Kennedy School of Government

Thursday, April 14
5 p.m.-6 p.m.
Main Building, Floor 11, Elevator J
Hickey Auditorium (R11.1400)

Co-Sponsored by the Department of Health Services Research and Rice University’s Baker Institute for Public Policy
Executive Education Leadership Program

ICCI’s partnership with the Institute for Strategy and Competitiveness at Harvard Business School led by Professor Michael Porter continues to provide educational programs developed to teach value-based health care.

Focused on value of care for patients, these programs aim to demonstrate the value model through in-depth examination of case studies, focused topic lectures, and interactive classroom discussions. Following the courses, ICCI sponsored attendees are provided support and guidance on an advisory basis to improve care in their area. With support from MD Anderson’s Provost and Physician-in-Chief, Dr. Ethan Dmitrovsky, approximately 100 MD Anderson team members have attended one or more of HBS health courses over the past several years.

Several distinguished MD Anderson members have taught in many past HBS value courses as well, including Anita Ying, M.D., M.B.A.; Ehab Hanna, M.D.; Robert Brigham, M.B.A; Randal Weber, M.D.; Thomas Burke, M.D.; and Ronald Walters, M.D., M.H.A., M.B.A., M.S.

In collaboration with Janis Yadiny, Associate Vice President of Faculty Development, ICCI looks to integrate internal executive education programs with external partners at Harvard, Rice, and The University of Texas School of Public Health to provide further health care business training. We hope that through these efforts, MD Anderson will be equipped to face changes to the health care landscape and stand as a model for progress in the cancer care community.

Value-Based Health Care Course Returns to Texas

The Harvard and MD Anderson-taught Value-Based Health Care Delivery Course is returning to the Texas Medical Center on May 3rd and 4th at The Houston Branch of the Federal Reserve Bank. Check our website for updates and information.

ICCI Leadership

ICCI is a multidisciplinary collaborative effort at The University of Texas MD Anderson Cancer Center, led by: Thomas Feeley, M.D., as head of the institute; Ethan Dmitrovsky, M.D., Thomas Buchholtz, M.D., Leon J. Leach, Ph.D., M.B.A., M.A., Robert Brigham, M.B.A., Weldon Gage, M.B.A, Wenonah B. Ecung, Ph.D as the Executive Steering Committee at MD Anderson; and, Michael E. Porter, Ph.D., M.B.A., as key external advisor.

ICCI faculty associates are: Steven J. Frank, M.D., proton center medical director, deputy department chair of strategic programs, and associate professor in radiation oncology; John C. Frenzel, M.D., M.S., chief medical information officer, professor in anesthesiology and preoperative medicine, and adjunct associate professor at school of health information sciences; Sharon H. Giordano, M.D., M.P.H., chair of department of health services research, cancer prevention and population sciences, chair ad interim of department of health disparities research, and professor of breast medical oncology; Charles F. Levenback, M.D., chief quality officer, office of executive vice president and physician in chief, and professor in gynecologic oncology; Benjamin D. Smith, M.D., research director of breast radiation oncology section in radiation oncology and associate professor in radiation oncology and health services research; Ya-Chen Tina Shih, Ph.D., professor in health services research, section of cancer economics policy; Saroj Vadhan-Raj, M.D., chief of section of cytokines and supportive oncology and professor in sarcoma medical oncology; Ronald S. Walters, M.D., M.H.A., M.B.A., M.S., associate vice president of medical operations and informatics and professor in breast medical oncology; and Anita K. Ying, M.D., M.B.A., endocrine center medical director, executive medical director of ambulatory operations, and associate professor in endocrinology.
We've Moved!

In November 2015, ICCI’s offices relocated from Mendelsohn Faculty Center to the 18th floor of Pickens Academic Tower. Our new address is:

1400 Pressler St.,
Unit 1415
Houston, TX 77030

For inquiries regarding the Institute for Cancer Care Innovation or ICCI Sponsored Executive Education Programs please contact Minh Mosley (713-792-6915; mtmosley@mdanderson.org).

For inquiries about ICCI’s projects and consultations please contact Alexis Guzman (713-792-5095; abarboza@mdanderson.org).

For inquiries about the Enhanced Surgical Recovery Program please contact John Calhoun (713-745-3967; jdcalhoun@mdanderson.org).

Visit ICCI online at www.mdanderson.org/innovation