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Creating a bundled care payment model for treatment of pelvic floor disorders: introducing value into urogynecology



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Introduction

Value-based care aims to deliver high-quality healthcare outcomes at a low total cost of care by emphasizing quality, efficiency, and best practices. In contrast, the traditional fee for service (FFS) in-person payment systems incentivize high caseloads and expensive healthcare resources, all of which have resulted in poor quality and expensive healthcare in the United States.¹ In 2010, the Centers for Medicare and Medicaid Services (CMS) Innovation Center was created under the Patient Protection and Affordable Care Act to test alternative payment models (APMs) as a means of increasing value-based care.² APMs incentivize providers for delivering high-quality healthcare while simultaneously penalizing them for costs that exceed a set amount. In 2013, the CMS launched the Bundled Payments for Care Improvement initiative to implement bundled payments as an APM.³ Bundled care payment models (BCPMs) provide a single reimbursement for all services rendered to a patient for an episode of care rather than separate payments for each individual service. An episode of care is defined as the total care a patient receives for a particular condition including both in-person and telehealth clinic visits, diagnostic testing, and operative care. For example, in a BCPM, a clinic would receive 1 lump sum for all of the care surrounding the management of prolapse including the initial clinic visit, urodynamic testing, surgery, and postoperative visits. Bundled care time limits are implemented based on the estimated episode of care. For example, BCPM for acute conditions may be restricted to 90 days postoperatively, but chronic conditions may be longer such as a year. Quality is emphasized through BCPM because if the cost for the care

rendered for a specific episode is less than the bundled payment amount, providers keep the difference. However, if the cost exceeds the payment, the providers absorb the loss. Cost of care is reduced by following evidence-based guidelines that result in overall improved patient outcomes. Healthier patients have fewer visits to the emergency room, readmissions, use of ancillary testing, and prescription medications. Patient-reported outcomes are obtained to ensure improvement in medical conditions and satisfaction with care.

The effect of BCPM on healthcare cost and quality is mixed and still being investigated. BCPMs have been most effective in musculoskeletal care in which they have decreased Medicare expenditures, readmissions, emergency room visits, and length of hospital stay while maintaining patient-reported postoperative outcomes on function, health, and pain.⁴⁻⁶ The American College of Obstetricians and Gynecologists set forth a committee opinion to educate obstetrician-gynecologists on APM.⁷ The Society of Gynecologic Oncology developed the Future of Physician Payment Reform Task Force to ensure fair value-based reimbursement policies for gynecologic cancer care and has already developed the conceptual framework of an APM in low-risk endometrial cancer.⁸ In urogynecology, limited literature is available on BCPM. Our objective was to create a BCPM for women seeking care in a subspecialty clinic for pelvic floor disorders (PFDs) in partnership with our safety net insurer and to evaluate access to urogynecologic care postimplementation.

The Creation of a Bundled Care Payment Model

Austin resides in Travis County, TX, and is both ethnically and socioeconomically diverse (Table 1). Uninsured patients receive access to primary and subspecialty medical care through programs funded by Central Health, a safety net provider that receives funding from a combination of county property taxes and federal and state funds through intergovernmental transfers. Residents below the federal poverty threshold are enrolled in the Medical Access Program, and residents with incomes up to 200% of the federal poverty level are enrolled in a sliding fee scale coverage system. Patients enrolled in these Central Health programs receive care at federally qualified health centers (FQHCs) and patient-centered medical homes in Travis County.

Historically, patients enrolled in Central Health programs that required urogynecologic evaluations were funneled to a single hospital-based clinic that occurred 1 half day per week

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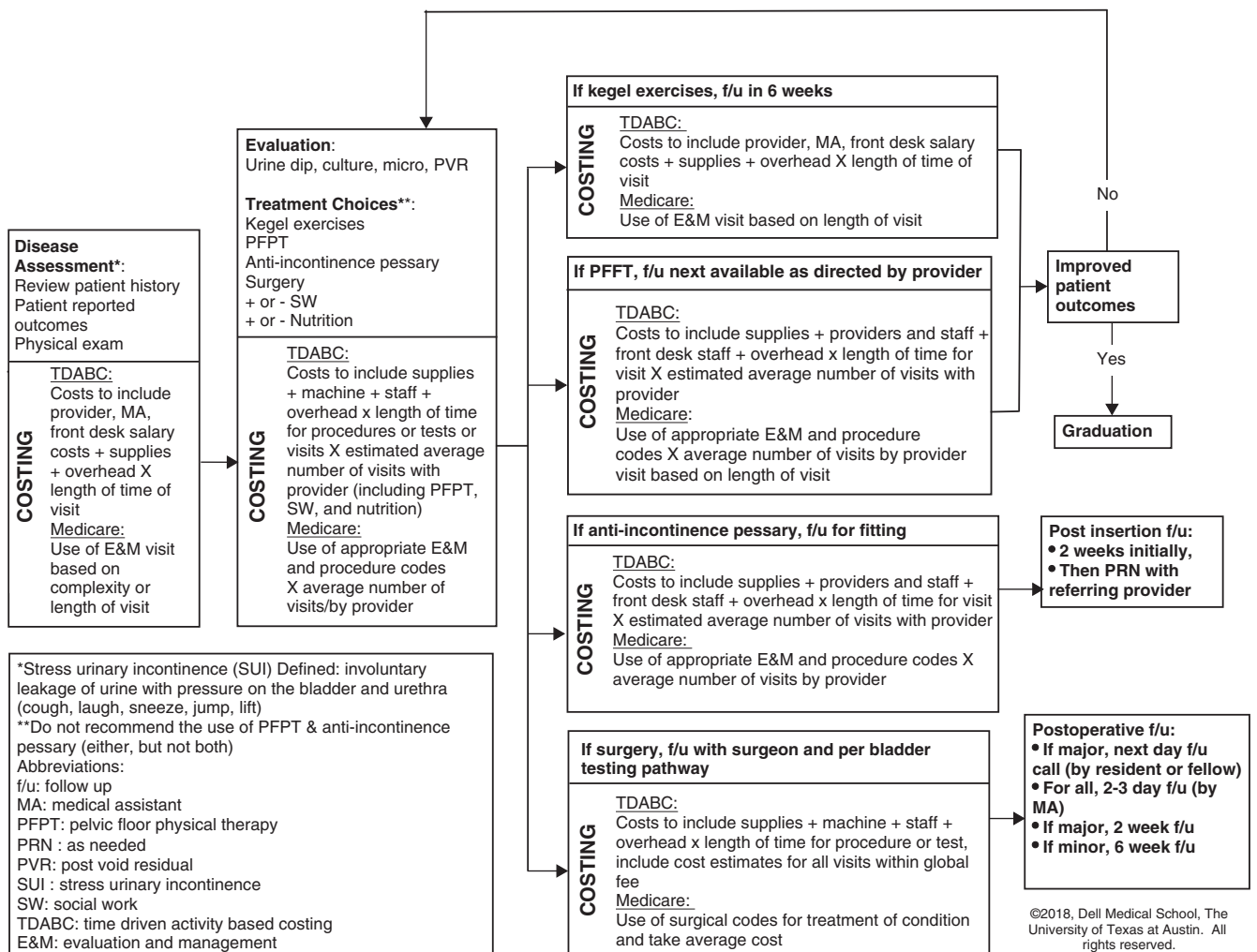
TABLE 1
Travis County statistics

Total population^a	1.2 million
Race or ethnicity^b	
White	49%
Black	8%
Asian	6%
Hispanic	34%
Residents living below the federal poverty level^b	12%
Rate of uninsured patients^b	14%

^a United States Census Bureau Quick Facts: Travis County; ^b Community Advanced Network Community Dashboard Report for 2018. June 7, 2018.

Halder. Bundled care payment model in urogynecology. Am J Obstet Gynecol 2020.

FIGURE 1
Stress urinary incontinence pathway and costing methodology



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and was staffed by private physicians with academic affiliations. Providers saw approximately 550 patient visits per year. Care was provided under an FFS model with a fixed budget and charity care write-offs by a community hospital. In addition to outpatient appointment availability, urogynecologic care was limited by lack of access to supportive services and constrained inpatient resources. Women had limited access to less invasive yet effective treatments which limited treatment plans and increased costs.

The Dell Medical School at the University of Texas at Austin addressed disparities in access to urogynecologic care for women in Travis County in partnership with the safety net insurer Central Health through the creation of a PFD integrated practice unit (IPU) with care pathways and a BCPM through its clinical enterprise, University of Texas Health Austin (UTHA).

In an IPU, care is multidisciplinary, colocated, team-based, and patient-centered, and provides the full scope of care for a condition. Patients are able to receive supportive services (such as social work and psychiatry), conservative therapies (such as nutrition and pelvic floor physical therapy), and, if needed, surgical planning for their condition in the same clinical setting.⁹ The PFD IPU is located in a new clinical space allowing all multidisciplinary services to be colocated.¹⁰ Healthcare coordination across services and providers in most traditional FFS clinics is poor and not incentivized; often patients are left coordinating their own care across multiple institutions. The IPU addresses this by providing care as a team. A key concept in the creation of the IPU is the “graduation” of patients back to their primary care provider once their subspecialty care

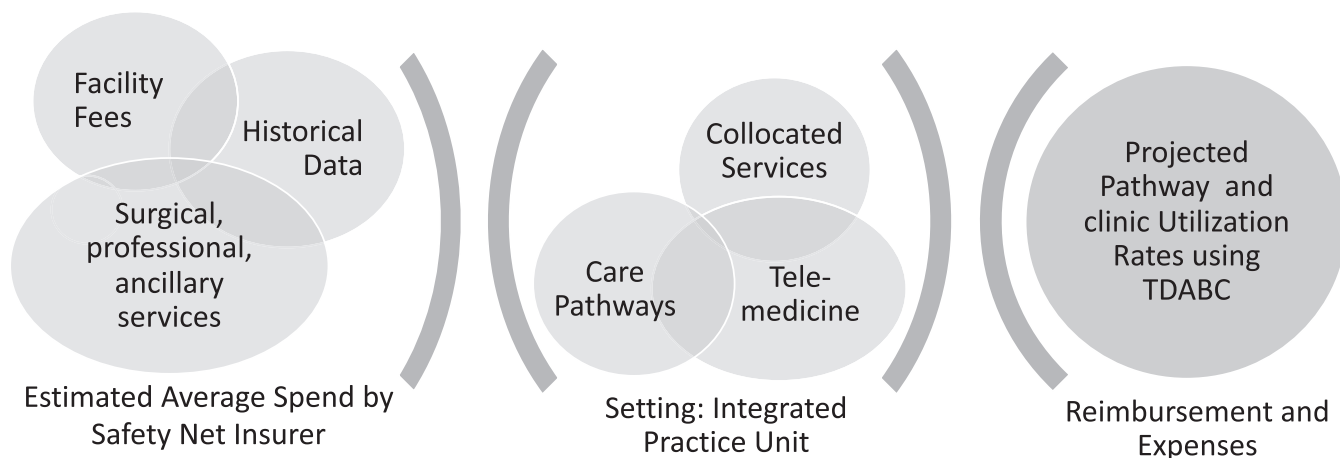
is complete, which ensures that access to urogynecologic care is maintained.

Care pathways are treatment algorithms created using evidence-based guidelines for the diagnosis and treatment of specific conditions. The care pathway for stress urinary incontinence (SUI) is presented in Figure 1. Pathway creation and maintenance is an iterative process and influenced by new evidence as it emerges. Care pathways define the scope of practice for the clinic and are reflective of care through an IPU model. Patients enter care through advanced care providers (APs) rather than a surgeon. Limited evidence from primary care indicates patients prefer a physician holding an MD degree.¹¹ However, data from a Cochrane review suggest possibly improved patient-reported outcomes and patient satisfaction with care from associate providers.¹²

Follow-up visits that could be achieved through telemedicine are scheduled to reduce the burden of care for both patients and providers. Traditional in-person visits such as medication checks and review of laboratory results are all achieved through either a patient portal or through telehealth. The breadth of visits scheduled through the telemedicine platform is broad and includes new patient visits, follow-up care, and postoperative visits for uncomplicated cases. Patients necessitating a pelvic exam are scheduled for an in-person visit in the clinic because examinations are not performed through the virtual platform. For complex patients, care is coordinated among physicians, APs, and allied health providers through weekly conferences.

The process of creating a BCPM is presented in Figure 2. The first step in creating our BCPM was estimation of prior spend. The yearly average spend by our safety net insurer

FIGURE 2
Creating a BCPM in urogynecology



Our methods for creating a BCPM in urogynecology involved **A**, estimating the past spend on urogynecologic care using historical claims data on surgical, professional, and ancillary services, **B**, creating a PFD IPU, and **C**, estimating reimbursement and expenses by determined pathway and clinic utilization rates through TDABC.

BCPM, bundled care payment model; IPU, integrated practice unit; PFD, pelvic floor disorders; TDABC, time-driven activity-based costing.

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TABLE 2

Cost measurement process used in time-driven activity-based costing

Step 1	Select a medical condition <ul style="list-style-type: none"> Specify a medical condition and patient population affected. Identify criteria that define the beginning and end of a care cycle Determine possible complications (urinary retention, wound infections, return to the operating room). Specify resources used for the specific medical condition and possible complications.
Step 2	Define the care delivery chain <ul style="list-style-type: none"> Map the principal activities involved in the care of the medical condition and their delivery location (office, operating room, telehealth).
Step 3	Develop process maps of each activity in patient care delivery <ul style="list-style-type: none"> Process maps detail patients' movement along the care delivery pathway such as the use of capacity-supplying resources (personnel, facilities, and equipment) and consumable supplies (Foleys, syringes, and medications).
Step 4	Obtain time estimates for each process <ul style="list-style-type: none"> Estimate the amount of time each provider or resource spends within each step of the process map.
Step 5	Estimate the cost of supplying patient care resources <ul style="list-style-type: none"> Estimate the direct cost of each resource within each step of the process map such as physician salaries and support resources (office furnishing, employee development, stocking consumable supplies).
Step 6	Estimate the capacity of each resource and calculate the capacity cost rate <ul style="list-style-type: none"> The clinical availability for each employee is determined by calculating the number of days per year and number of hours per day and employee is available for clinical work (excludes breaks and administrative time). The same is performed for equipment, considering the use capacity of the equipment itself (amount of UDS tests the machine can perform), and the capacity of use by the clinic (amount of UDS tests the clinic orders). Resource capacity cost rate: resources total cost (step 5) or practical capacity (step 6).
Step 7	Calculate the total cost of patient care <ul style="list-style-type: none"> Multiply the capacity cost rate for each resource used in each patient process by the amount of time spent with the resource (step 4).

TDABC measures the costs of all the resources used to treat a patient's medical condition over a complete cycle of care.

Adapted from Kaplan et al.¹³

TDABC, time-driven activity-based costing; UDS, urodynamic studies.

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for women with PFD was estimated using historical claims data from an FFS environment. These rates were inclusive of surgical, professional, and ancillary services and facility fees.

Time-driven activity-based costing was used to estimate the amount of time and level of provider needed for each pathway was estimated¹³ (Table 2). Care pathways were deconstructed to units of activity. For example, units of activity in the prolapse pathway included physical therapy, pessary fitting, urodynamics, and surgery. Cost estimation for our SUI pathway is presented in Figure 1. The projected utilization rates for each unit of activity along each pathway were estimated using a combination of prevalence data for that specific disorder, trends in claims data, information from local clinics, and expert opinion.

Reimbursements were determined by applying Medicare-equivalent values to each unit of activity along each pathway. Expenses were calculated by estimating supplies needed (percentage of patients who would need those materials) and personnel time required for each unit of activity along each pathway. Provider salaries were estimated based on the time needed to staff the clinic instead of relative value units. Surgical costs were estimated based on anticipated

needs and professional fees for that surgery and did not include hospital charges.

Using the abovementioned methodology, population-based resource utilizations were estimated; these estimates may not be applicable to other populations. The estimated clinic utilization was 3 visits per patient in 1 year. Surgical rates and use of pelvic floor physical therapy were estimated at 10% and 60%, respectively. Notably, 40% of patients were estimated to require diagnostic procedures (such as cystoscopy and urodynamics) and durable medical equipment (such as pessaries and catheters). Physician staffing was estimated to be 1.5 full-time equivalent (FTE) for APs, 0.3 FTE for a urogynecologist, and 0.05 FTE for a colorectal surgeon. Because care is team-based, surgeons spend time in clinic evaluating patients who have chosen surgery for their PFD or complicated patients beyond the scope of care for an AP. This innovation was key to decrease costs in the model, by having all clinicians work at the top of their license.

Implementation of a BCPM resulted an overall 19% reduction in healthcare spend, 50% reduction in surgical rate, and a 54% increase in patient access to ancillary services during the first full year of service compared with the historical data. Reduction in spend was accomplished through a multifaceted approach including the use of advanced practice

providers and following evidence-based guidelines resulting in a more conservative approach in the management of PFDs. For example, urodynamic testing was limited to use as supported by the literature.

Future Steps in Value-Based Care

Several challenges with implementation of a BCPM have emerged. Our model was created in partnership with our safety net insurer in which a reduction in surgical volume resulted in direct cost savings. Cost benefits of a BCPM in an insured population require a global view. Although hospitals may undergo decreased revenues owing to a decrease in surgical volume, patients would benefit from avoiding morbidity from unnecessary surgery and insurance companies would not have to provide reimbursement for unnecessary procedures and their possible complications. Patient-reported outcomes and satisfaction before and after implementation of a BCPM were unavailable because patients were previously seen in private clinics outside of the UTHA system and were not administered the measures to facilitate that comparison. We implemented our BCPM in an IPU setting, but the IPU is not necessarily a feature of this payment model. Using performance measures that focus on improved patient-reported outcomes and decreased health-care costs can change the priority of doctors to observe best practice if they want to join a practice that has adopted these models. Returning women back to their medical home for continued surveillance is a key feature of our model and requires the development of expertise in our FQHCs for managing stable patients. For women having complicated conditions, an additional year of care is being renegotiated.

In conclusion, BCPMs are a promising method of delivering value-based care in urogynecology. As our healthcare system rapidly adjusts to the sweeping changes brought about by the coronavirus epidemic, BCPM offers a systematic way to introduce streamlined, effective care. Although the care model presented here was created in an IPU setting, it can be implemented in any gynecologic setting without colocated services and care pathways. ■

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ABSTRACT

Creating a bundled care payment model for treatment of pelvic floor disorders: introducing value into urogynecology

Ineffective healthcare delivery and expenditures associated with the traditional fee for service in-person models have turned attention toward alternative payment models as a means of enhancing healthcare quality in the United States. Bundled care payment models are a form of alternate payment models that provide a single reimbursement for all services rendered for an episode of care and have been developed extensively in primary care settings with limited literature in urogynecology. We describe the process used to create a bundled care payment model for women seeking care in a

subspecialty clinic for pelvic floor disorders in partnership with our safety net insurer. The process included estimation of prior average spend, the design of an integrated practice unit, creation of pelvic floor pathways, approximation of utilization rates, and estimation of reimbursement and expenses.

Key words: bundled care, payment models, urogynecology, value-based care