PROSPECTIVE BUNDLED PAYMENTS IN A CHANGING ENVIRONMENT: THE EXPERIENCE OF A SELF-FUNDED, STATE-Sponsored PLAN

Frank H. Lawler, MD, MSPH; Frank R. Wilson, CPA; G. Keith Smith, MD; Lynn V. Mitchell, MD, MPH

BACKGROUND: Healthcare reimbursement, which has traditionally been based on the quantity of services delivered, is currently moving toward value-based reimbursement—a system that addresses the quantity, quality, and cost of services. One such arrangement has been the evolution of bundled payments for a specific procedure or for an episode of care, paid prospectively or through post-hoc reconciliation.

OBJECTIVE: To evaluate the impact of instituting bundled payments that incorporate facility charges, physician fees, and all ancillary charges by the State of Oklahoma HealthChoice public employee insurance plan.

METHOD: From January 1 through December 31, 2016, HealthChoice, a large, government-sponsored Oklahoma health plan, implemented a voluntary, prospective, bundled payment system with network facilities, called Select. The Select program allows members at the time of certification of the services to opt to use participating facilities for specified services at a bundled rate, with deductible and coinsurance covered by the health plan. That is, the program allows any plan member to choose either a participating Select facility with no out-of-pocket costs or standard benefits at a participating network facility.

RESULTS: During 2016, more than 7900 procedures were performed for 5907 patients who chose the Select arrangement (also designated as the intervention group). The most common outpatient Select procedures were for cardiology, colonoscopy, and magnetic resonance imaging scans. The most common inpatient procedures for Select-covered patients were in 6 diagnosis-related groups covering spinal fusions, joint replacement surgeries, and percutaneous coronary artery stenting. The allowable costs were similar for bundled procedures at ambulatory surgery centers and at outpatient hospital facilities; the allowable costs for patients not in the Select program (mean, $813) were lower at ambulatory surgery centers than at outpatient hospital departments (mean, $3086) because of differences in case mix. Patients in the Select system who had outpatient procedures had significantly fewer subsequent claims than those who were not in Select for hospitalization (1.7% vs 2.5%, respectively) and emergency department visits (4.4% vs 11.5%, respectively) in the 30 days postprocedure. Quality measures (eg, wound infection and reoperation) were similar for patients who were and were not in the Select group and had procedures. Surgical complication (ie, return to surgery) rates were higher for the Select group.

CONCLUSION: The Select program demonstrated promising results during its first year of operation, suggesting that prospective bundled payment arrangements can be implemented successfully. Further research on reimbursement mechanisms, that is, how to pay physicians and facilities, and quality of outcomes is needed, especially with respect to which procedures are most suitable for this payment arrangement.

KEY WORDS: bundled payments, healthcare reimbursement, reimbursement, Select program, value-based payments

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KEY POINTS

▷ As healthcare reimbursement moves from quantity-based to value-based services, bundled payments are an option for a specific procedure or episode of care.

▷ In 2016, the Oklahoma HealthChoice Select bundled payment system was analyzed, where members could choose a Select facility with no out-of-pocket costs or standard benefits at a participating network facility.

▷ Allowable costs were similar for Select procedures at ambulatory surgery centers and outpatient hospitals, but were lower at ambulatory surgery centers for non–Select plan patients.

▷ Patients with the Select plan who had outpatient hospital procedures had fewer subsequent claims than non–Select plan patients (1.7% vs 2.5%, respectively).

▷ Select plan patients also had fewer emergency department visits in the 30 days postprocedure (4.4% vs 11.5%, respectively).

▷ The Select program had promising results in its first year, which showed that prospective bundled payment arrangements can be implemented successfully.

▷ Further research on reimbursement and quality of outcomes is needed, especially with regard to which procedures are most appropriate for the use of bundled services.

Although the claim is paid after discharge and the amount paid reflects the discharge diagnoses. Ambulatory Payment Classifications have been developed by CMS to pay hospitals (not physicians) for all services associated with outpatient care to give an expected payment level.\(^7\)

The second approach is retrospective, with the usual type of reimbursement in place until reconciliation is performed after approximately 1 year, in which high-cost providers or facilities are penalized, low-cost providers or facilities are rewarded, and the large middle group receives no adjustment. A primary example of this approach is the 3M Enhanced Ambulatory Patient Grouping System.\(^8\)

Recently, the State of Oklahoma HealthChoice insurance plan developed a slightly different approach, the HealthChoice Select program, which utilizes bundled payments that incorporate facility charges, physician fees, and all ancillary charges, and which demonstrated promising results during its first year of operation. This article summarizes some key features of the program and the results of the first year of HealthChoice Select’s operation.

Historical Background

HealthChoice is a self-funded health insurance plan for state, education, and local government employees and retirees in the state of Oklahoma. It covers approximately 180,000 members and their dependents, and approximately 7000 pre-Medicare retirees and their dependents. There are also approximately 35,000 participants in a separate Medicare Supplement plan. The annual total spending by HealthChoice is approximately $1 billion. It is the fourth largest insurer in the state, after Medicare, Medicaid, and Blue Cross Blue Shield.

Based on legislative and local facility interests in prospective bundling, on January 1, 2016, HealthChoice implemented a voluntary, prospective bundled payment system with network facilities, called HealthChoice Select.

The Select program allows members to use participating facilities for specified services at a bundled rate. A bundled rate is a single payment for the facility, all physician services, and ancillary services associated with a particular procedure that is significantly discounted from HealthChoice’s standard network rates. Typically, the facility and physicians are paid separately. This bundle is intended to cover all services on the day of the procedure and any standard global period services.

A member who uses a Select facility for one of the specified procedures has no out-of-pocket costs. Therefore, this arrangement results in savings to the member and to the plan. Ideally, bundling should provide improved coordination of care and equal outcomes in terms of subsequent hospitalization; emergency department use; and surgical quality measures, such as wound infec-
tions, reoperations, or surgical complication (ie, return to surgery codes).

To test the underlying arrangements and payment methodology during the first 3 months of implementation, the Select program only covered colonoscopy. Thereafter, the covered benefits quickly expanded to include outpatient and inpatient services, as well as diagnostic imaging with a broad range of services. More than 900 specific bundles were separated into a list of 43 categories of bundled services, including (among others) arthroscopies, cataract removal, lithotripsy, mastectomy, and cardiology. Facilities could choose to participate in 1 or more of the categories.

Any claim for a service in a category under which the facility has agreed to participate is treated as a Select billing. Specific bundle pricing utilized HealthChoice's historical plan payment for all services associated with a specific procedure, with additional input from a contracted fee-schedule consultant, and pricing that was available from local and national websites for facilities that provide bundled service pricing. Physicians and facilities were welcome to propose procedures and procedure combinations for consideration as bundles.

Methods

The study was conducted from January 1 through December 31, 2016. The Select plan is optional and is available to all members. The intervention group consisted of all claims from procedures that were performed under the Select plan. A control group included plan members who had the same types of procedures that were performed under the standard plan benefit with the usual deductibles and copayments.

Patient outcomes were noted, as defined by claims from an emergency department, from a hospital, an operation (any Current Procedural Terminology code between 11000 and 69999) within 30 days, diagnoses of wound infection (International Classification of Diseases, Tenth Revision [ICD-10] codes T81.4 or T89), or surgical complication (ICD-10 code T8). All data for the Select and non-Select cases were obtained from the paid claims database, with a minimum of 3-month runout. Nonparametric (using the Kruskal-Wallis test) statistics were used to compare Select categories with non-Select categories. Analyses were performed using SAS version 9.4 (SAS Institute; Cary, NC), and the statistical significance was set at $P < .01$.

Results

During calendar year 2016, 61 facilities in Oklahoma contracted with the Select program in at least 1 broad procedure category. These facilities performed more than 7900 procedures for 5907 patients under the Select program. Table 1 shows the allowed amounts for services by the site of service. The data in the Table may be misleading, because various procedures have had different uptake as bundled procedures (a phenomenon called “case mix”); the more expensive procedures have been more likely to be provided under the bundled plan, because of greater member preference and savings.

In addition, some of the Select program costs are higher for the ambulatory surgery centers for the following reasons: (1) the bundled services tend to include more secondary procedures than nonbundled services, (2) the member’s deductible and copayments are covered by the plan rather than by the member, and (3) the identification and collection of services associated with non-Select services are difficult, because of time differences in the charge submission (eg, physician vs facility).

Table 2 shows the categories and allowed costs for outpatient procedures, with the numbers of patients in the types of bundled categories and comparable services paid in the traditional manner for the day of procedure and the 30 days after the procedure.

The most common Select program procedures were for cardiology, colonoscopy, and magnetic resonance imaging scans. Under the bundled column, any differences in median costs are likely a result of case mix, because identical reimbursements were made for the same procedures, regardless of location.

The use of inpatient services numbered 251 individuals with 262 total Select program–covered admissions. The most common Select program–covered procedures were in 6 different diagnosis-related groups covering spinal fusions, joint replacement surgeries, and percutaneous coronary artery stenting. The distribution of procedures across the 6 included diagnosis-related groups was significant, with joint procedures less often performed as a bundle (11.2% of Select program procedures in that diagnosis-related group) and spinal procedures more often bundled (31.8%).

There was some initial confusion among the facilities and claims processor as to whether surgical implants were to be included in the bundled rate or paid separate-
Table 2

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Bundled payments</th>
<th>Nonbundled payments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ambulatory surgery center</td>
<td>Outpatient hospital</td>
</tr>
<tr>
<td>Arthroscopy, N</td>
<td>128</td>
<td>87</td>
</tr>
<tr>
<td>Cardiology procedures, N</td>
<td>$4294</td>
<td>$4366</td>
</tr>
<tr>
<td>Median allowed amount, $</td>
<td>32</td>
<td>72</td>
</tr>
<tr>
<td>Colonoscopy/sigmoidoscopy, N</td>
<td>1596</td>
<td>80</td>
</tr>
<tr>
<td>Median allowed amount, $</td>
<td>1708</td>
<td></td>
</tr>
<tr>
<td>MRI scans, N</td>
<td>226</td>
<td>72</td>
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<tr>
<td>Median allowed amount, $</td>
<td>863</td>
<td>890</td>
</tr>
<tr>
<td>Eye procedures, N</td>
<td>173</td>
<td>12</td>
</tr>
<tr>
<td>Median allowed amount, $</td>
<td>1415</td>
<td>4208</td>
</tr>
<tr>
<td>Pain therapy procedures, N</td>
<td>174</td>
<td>174</td>
</tr>
<tr>
<td>Median allowed amount, $</td>
<td>344</td>
<td>196</td>
</tr>
<tr>
<td>Ultrasonography</td>
<td>759</td>
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</tr>
<tr>
<td>Median allowed amount, $</td>
<td>1045</td>
<td>1200</td>
</tr>
<tr>
<td>Other procedures, N</td>
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<td>150</td>
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<tr>
<td>Median allowed amount, $</td>
<td>29</td>
<td>159</td>
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<td>Median allowed amount, $</td>
<td>1339</td>
<td>1222</td>
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<tr>
<td>Other procedures, N</td>
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<td>241</td>
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<tr>
<td>Median allowed amount, $</td>
<td>3041</td>
<td>3100</td>
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</tbody>
</table>

MRI indicates magnetic resonance imaging.

Table 3

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Non-Select claims, %</th>
<th>Select claims, %</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitalization</td>
<td>2.5</td>
<td>1.7</td>
<td>.0006</td>
</tr>
<tr>
<td>Emergency department</td>
<td>11.5</td>
<td>4.4</td>
<td>.0001</td>
</tr>
<tr>
<td>Reoperation</td>
<td>7.7</td>
<td>11.8</td>
<td>.0001</td>
</tr>
<tr>
<td>Wound infection</td>
<td>0.07</td>
<td>0.04</td>
<td>.36</td>
</tr>
<tr>
<td>Surgical complication</td>
<td>0.63</td>
<td>0.61</td>
<td>.81</td>
</tr>
</tbody>
</table>

*Outcomes are based on information in paid claims, with minimum 3-month runout.

Discussion

Bundling surgical services has emerged as a potential cornerstone of value-based reimbursement. The most common approach has been to establish 2 separate reimbursement thresholds for a given procedure, one above which penalties ensue and one below which rewards are given. There is a post-hoc reconciliation based on previous reimbursement after a defined period of time, which is usually 1 year. CMS initially moved aggressively in this area, but has since tempered its enthusiasm by delaying or canceling aspects of bundling payments.6

The second type of bundling is prospective, with facilities and physicians receiving payment at the time of the procedure or shortly thereafter. There are advantages and disadvantages to each type of arrangement. The post-hoc reconciliation separates the risks from the rewards, but most facilities and physicians receive the usual allowable reimbursement. The prospective arrangement directly links the risks and the rewards, but the participating entities may receive lower reimbursement in exchange for the rapid payment. There is also a concern that, because the reimbursement is specified before the procedure, quality may be compromised as a result of a possible perceived need to economize. We endeavored to assess quality through the measurement of complications, return to surgery, and wound infections, but we received no complaints specific to care rendered under the Select program rubric.

The categories in which the Select program bundle has higher costs may reflect a difficulty in capturing all charges associated with a procedure, whereas the Select program pays all participants on the date of service. An example of outpatient Select program experienced more favorable results than patients who were not in the Select program in hospitalization (1.7% vs 2.5%, respectively; P = .0006) and in emergency department use (4.4% vs 11.5%, respectively; P < .0001) in the 30 days after the index procedure. The bundled group had significantly higher rates of reoperation. This may be a result of case mix (ie, more complex procedures in the bundled group), or it may not be related to the initial procedure. This finding requires additional investigation.

For the inpatient bundled services, there were no readmissions or emergency department claims in the Select program group in the 30 days after discharge. There were no reported wound infections, but 11 patients had subsequent procedures (not necessarily related to the Select program procedure), and 7 patients reported having had a surgical complication. Neither of these complication proportions was statistically different from the comparable proportions in the non-Select group (P = .19 and P = .82, respectively).

this problem would be a radiologist or pathologist submitting a bill for reading services that may be performed weeks after the index procedure. The Select program bundles may also incorporate a broader range of services than the procedures in the control group. An example would be that a Select cardiology bundle may include an electrocardiogram, an echocardiogram, and a nuclear medicine scan, whereas these may be done on different dates in the routine course of patient care. In addition, a simple electrocardiogram in a primary care office would trigger a categorical comparison with the aforementioned Select bundle, which has a much higher allowable charge. Future analyses will need to focus on specific procedure codes and move away from the broad categories with numerous procedures and procedure combinations.

The broad categories with a limited number of well-defined procedures, such as colonoscopy and eye procedures, have little variation. The bundled price for colonoscopies is actually higher than for nonbundled services, but the bundled price is only 66% of the median hospital outpatient price. The price for Select program eye procedures may have been set slightly too high, because the program’s allowed charges are higher than the non-Select program allowed charges for ambulatory surgery centers, but appreciably lower than charges in the hospital outpatient setting. As the program matures, additional savings may be realized, but the introduction of the plan and the conservative nature of the setting of the bundled fees resulted in modest savings over traditional care in the first year.

Network care facilities have expressed concern about the quality of care delivered in the bundled program. By and large, physicians and facilities have been providing non-Select services to the same plan members in similar settings for years for standard network reimbursement. The intent of the Select program has been to maintain quality of care, while reducing costs to the member and the plan. Thus far, the care quality appears to have been maintained when comparing the outcomes within specific categories between the Select group and the non-Select group.

Other payment and reimbursement considerations are associated with prospective bundled payments. Much of the savings to be realized will be driven by the site of care rather than by the intensity of services. A few facilities have cited administrative difficulties in providing payments to nonemployed physicians. There is also the issue of the “float,” when the facility is paying the physician before receiving reimbursement from the health plan. One other concern is that bundled contracts were executed with facilities, not with physicians, a concern recently expressed by de Brantes. Physicians may be more entrepreneurial than a facility with a large overhead and other fixed costs, which could potentially pit care facilities against each other to gain market share.

A number of factors have contributed to the success of the prospective bundled arrangement in the Select program reported in this article. Foremost among these is the strong commitment of all participating parties to a successful implementation. The facilities, the physicians, and the health plan have all committed to working together.

Another significant positive aspect is the voluntary nature of this arrangement. Facilities have the option to participate for each of the approximately 40 categories of bundled services and procedures. Plan members can choose to have these services provided under the standard arrangement of deductibles and copayments at nonparticipating facilities, but the lessened financial burden (ie, deductibles, copayments, and coinsurance are waived under the Select plan) has received considerable attention from the plan membership.

Extensive educational and marketing efforts have been made to physicians and plan members with mailings, website communications, and a dedicated telephone number to detail the covered services and the benefits of participation. Benefits accrue to each of the parties under this specific arrangement, including that members have no out-of-pocket cost; physicians receive payment very quickly, if not on the day of service; and facilities are paid promptly with 1 payment. Neither facilities nor physicians have to “chase” patients for balances due for deductibles and coinsurance.

Effective January 1, 2017, HealthChoice instituted a process called “active redirection” for a limited number of surgical procedures to encourage members to use the Select plan. This effort involves calling the member to provide a choice between traditional benefits at a nonparticipating facility or no-cost-to-the-member benefits at a Select facility.

Redirection is expected to increase member uptake for Select program procedures from approximately 20% to approximately 70%. Approximately 50% of the services covered by HealthChoice are available under the Select program. Nevertheless, plan savings will more likely be achieved by moving members to the lower-cost site of service (ambulatory surgery centers versus hospital outpatient department) rather than from a nonbundled plan to a bundled plan at the same site of service. Also, specific feedback from actual participants needs to be solicited to provide for additional improvements.

Limitations

This study has several potential shortcomings. The bundled payment system was implemented in 1 health plan in 1 state and may not be generalizable to other settings. All involved parties were committed to its suc-
cessful implementation. However, because facilities, physicians, and members chose to participate in the Select program, there is an inherent selection bias in the results. Ambulatory surgery centers were much more likely to participate in the program than large, established hospitals. Physicians who chose to participate were either more entrepreneurial or were directly employed by a participating facility.

There may also be selection bias in this study. Members who were informed and took advantage of this arrangement may be fundamentally different from members who did not participate in that they may look for ways to maximize their plan benefit, read mailers, and visit websites. Plan members were notified repeatedly about the program by newsletter, mailings, and e-mails. Members were incentivized to seek out facilities where deductibles and coinsurance would be waived. During the study period, members had to direct themselves to a participating facility.

Conclusion

Although modestly successful during the inaugural period, future improvements of the Select program include the addition of benefits, perhaps with an emphasis on inpatient services, such as obstetric and newborn bundles. The elimination of bundles that are infrequently used or that do not save money may be contemplated. The direct assessment of satisfaction and perceived outcomes by participant is necessary. The simplification of some processes, such as billing and referral, would be welcomed enhancements. A move away from facility-based reimbursement and toward physician or other third-party bundle coordination may be necessary. Target- or reference-based reimbursement is an area of interest. Future research should address more category-specific quality outcomes and member satisfaction with the Select plan and the redirection process.

Acknowledgments

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Author Disclosure Statement

Dr Lawler, Mr Wilson, Dr Smith, and Dr Mitchell reported no conflicts of interest.

References

Oklahoma Benefits Program Setting an Example: A Cost-Effective Bundled Payments Option for State Employees

By James T. Kenney, RPh, MBA
Manager, Specialty and Pharmacy Contracts, Harvard Pilgrim Health Care, Boston, MA

The concept of moving from volume to value is prevalent in all aspects of our healthcare delivery system today. We see state and federal programs promoting risk contracts, bundled payments, and all forms of capitated arrangements as a potential “holy grail” to help bend the cost curve and reduce the significant upward trend in medical and pharmacy costs. This premise is designed to encourage more accountability in the delivery of goods and services and promote the use of more cost-effective treatment options.

PAYERS: A bundled payment option can be beneficial from the health plan perspective, because it provides an all-inclusive cost structure to a basket of services and avoids traditional line-item billing, which can encourage the unbundling of services to increase the number of line items that can be added to the total charges. In addition, a bundled payment can be structured to encourage appropriate use and cost-effective care and to reduce waste and excessive charges for healthcare services.

The State of Oklahoma HealthChoice public employee insurance plan should be credited for its efforts to establish a bundled payment program, HealthChoice Select, as described by Lawler and colleagues in their article in this issue. The number of services covered by the program provides insight into some of the benefits and challenges of implementing these types of payment options.

PATIENTS: The waiving of copays or coinsurance for the employee provides a good incentive for all members to investigate the treatment options available in the network. The most often chosen procedures were 3 outpatient procedures in different areas of medical resources—an intervention in cardiology, a preventive service related to colonoscopy, and a diagnostic ancillary service for magnetic resonance imaging scans. Additional analysis would be interesting to detect potential differences in the success and member response, by the type of service.

The results of this outpatient group of patients demonstrated fewer claims for hospital procedures and emergency department visits 30 days postprocedure in the Select group than in the non-Select group. The results in these subgroups offer real savings to the State of Oklahoma and encourage the expansion of the program to additional services.

EMPLOYERS/PROVIDERS: A prospective or retrospective approach can achieve the same objectives of encouraging the efficient use of resources and reducing costs for at-risk employers or health plans. There is often concern that providers will not deliver needed services to patients in an effort to save money or to make more profit on the bundle, which does not make sense if the risk for follow-up is included in the bundle. This is similar to the Centers for Medicare & Medicaid Services’ “never events” that are not reimbursed to providers; these providers remain on the hook for the costs and have every incentive to avoid these events and provide the best care up front for all patients. Providers also need to be wary of accreditation, patient satisfaction surveys, and other measures of the quality and professionalism of a particular physician, group practice, or care facility.

A bundled payment program promotes care coordination and patient engagement to drive the best patient outcomes, with the opportunity to reduce the risk for disease complications. Some results from the Oklahoma program were mixed, because of differences in the services tied to a bundle, and because the system was voluntary for providers and facilities, which may have led members to some selection bias. Regardless, the program demonstrated that the quality of care was comparable in both groups, and the inpatient results were similar in the HealthChoice Select group and the traditional group of members.

It will be interesting to see if the new “active redirection” program in 2017 yields different results from the initial program in 2016. The State of Oklahoma employee benefits program should be commended for its efforts to make a difference in the delivery and cost of healthcare for state employees. Expansion of the program to include other procedures and the potential for mandatory participation will provide valuable real-world experience to others looking to implement alternative payment options in various healthcare settings.