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Impact of an ambulatory care pharmacist on provider relative value units in a rural clinic

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ABSTRACT

Introduction: Collaborative team-based care models have been shown to improve the quality of care provided to patients and may increase productivity along with patient access to care. Productivity is often tracked via work relative value units (wRVU). The primary objective of this project was to evaluate how a collaborative practice model affects tracked productivity.

Methods: Data regarding wRVU were retrospectively extracted from the electronic medical record from a single center. De-identified data points included total number of patients seen and level of service billed for the visit. Visits were grouped as collaborative (physician-pharmacist) or independent (physician alone). Relative value unit totals were calculated separately for individual physicians and pharmacy visits and also combined for collaborative team wRVU totals. Wilcoxon and descriptive statistics were used for analysis. All statistical analyses were performed using SAS v 9.4 (Cary, NC).

Results: A total of 624 patient visits were reviewed. Total number of patients seen by physicians working in collaboration was on average 19.25 per day versus 12.9 per day for those working independently. When evaluating only the average per encounter wRVU for each provider removing collaborative patients, the three providers who worked in the collaborative model averaged 1.45, 1.48, and 1.55 wRVU per patient respectively, compared to those who worked singularly (1.37 and 1.30). This was found to be statistically significant in the unadjusted mixed model ($P = 0.0476$), but not maintained once adjusted.

Conclusion: Physicians working in collaboration with a pharmacist were able to bill at a higher level on average suggesting more productivity.

1. Introduction

Collaborative physician-pharmacist care model teams have emerged in the published literature over the last decade demonstrating improvements in clinical metrics for chronic medical conditions following implementations of team-based care models.[1–6] Pharmacists have been able to demonstrate significant contributions to the quality improvement of chronic disease management as well as process support in transitional care type activities.[1–7] With increasing demands on health care due to an aging population there is a predicted deficit of physicians to meet the capacity of care demands according to the Association of American Medical Colleges.[8] Clinical support can come from care expanders. Clinically trained pharmacists are positioned to step immediately into roles to expand the reach of chronic disease management due to their expertise in drug management. The Centers for Medicare and Medicaid Services (CMS) published an information bulletin that reviewed the expanded role of pharmacists in direct patient care and notes that pharmacists can increase patient access to care through collaborative practice agreements and may further enhance physician productivity.[9]

Comprehensive medication management in team-based care is a practice model that positions pharmacists to impact not only clinical metrics but contribute to financial sustainability and care access.[10] Due to gaps in provider status and limited ability to bill directly, pharmacists rarely communicate patient care related outcomes in terms of financial sustainability or productivity. This gap in matched communication makes tracking the impact of increased patient access for an ambulatory based clinical pharmacist challenging to quantify in relative physician terminology. Likewise, clinical models can shift patients from a pharmacy care panel to the billing physician as part of the care flow, but this further minimizes the ability to track the pharmacy portion of the collaborative models.

A common tool used by physicians to track productivity is work relative value units (wRVU), a structured measure of clinical productivity that is

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incorporated into Current Procedural Terminology (CPT®) and Healthcare Common Procedure Coding System (HCPCS) coding.[11] Many physicians are compensated based on total wRVUs and reimbursements vary based on complexity of the visit, procedures completed, and other factors. Physician payments are determined by the resource-based relative value scale, which RVU is the basic component and determined by total RVUs, geographic practice cost indices, and a conversion factor.[12] CPT codes provide a mainstreamed process for coding medical services and provides details about medical services performed by healthcare professionals. Some common CPT codes used for established outpatient visits range from 99211–99215, with 99213 and 99214 often used for patients with multiple chronic conditions. Some facilities would refer to these as level 3 or level 4 office visits, referring to the last digit of the CPT code. CPT assigns a value of 0.67 and 1.1 for codes 99213 and 99214 respectively, which adjust in value every year.[12] For reference, CPT codes association with wRVU can range from level 1 or 99211 with an wRVU value of 0.18 to a level 5 or 99215 with an wRVU value of 2.11.[12] An example of criteria used to justify a 99213 level of service, in general, include obtaining an expanded history from the patient, performing a relevant physical exam, and investing approximately 15 min into the visit. The CPT codes used are directly related to the reimbursement expected for the visit (a variable amount of dollars per wRVU depending on the payer-provider contract), and are generally tracked by a provider's employer to ensure the provider is meeting minimum productivity goals. In collaborative models, the billing provider acquires the wRVU credit associated with the visit. This may incentivize providers to work collaboratively while simultaneously increasing patient access to care through the additional efforts contributed to the visit by collaborating non-physician providers. Often, modifications for expected reimbursement occur, and these changes are defined by Centers for Medicare and Medicaid Services (CMS) in the National Physician Fee Schedule Relative Value File. Reimbursement for a single RVU per the Medicare Conversion Factor was approximately 36 dollars between 2018 and 2020.[13]

In a rural base collaborative care model, we aimed to compare the wRVU generated between physicians that practiced in an interdisciplinary model (physician-pharmacist collaborative management [PPCM]) versus those that did not. PPCM models typically have a collaborative practice agreement allowing for the order of laboratory tests and medications. The disease and pharmacologic management of the PPCM model focuses on complicated hypertension patients not at goal, people with diabetes, those requiring anticoagulation monitoring and management, and other chronic medication related needs. The primary objective of this study was to evaluate a difference in wRVU between the PPCM team versus physicians that worked independently. Secondary objectives included determining wRVU daily averages and patient access differences between PPCM models compared to an independent, non-collaborative practice.

2. Methods

This project was a de-identified, retrospective, single center, convenience sample design. Data collected represents information from the first and last weeks of the given month, from January 2019 until April 2019, a total of 8 weeks, and used a four-day workweek from Monday to Thursday to follow the PPCM model. The clinical setting is an academia affiliated, rural-based adult family medicine clinic with five physicians who balance time in clinic versus hospital and academic responsibilities. Assigned to this rural clinic is one faculty pharmacist and two post-graduate year two ambulatory residents that cover four clinic days. Each physician was issued an individual code (M1, M2, M3, M4, and M5). Patients were included if actively seen during the dates noted and excluded if only seen as a nurse visit. The pharmacy team was assigned their own panel of patients from physician referral due to uncontrolled chronic conditions (i.e. A1c >9%, blood pressure > 140/90 mmHg, etc.). The primary payers at this clinic are Medicare (approximately 70%) and commercial insurance plans (approximately 20%), with the approximately 10% remaining consisting of Medicaid or patients who are uninsured (self-pay) or have another arrangement with the practice. Data collected included: total number of patients seen by physician, total number of patients seen by PPCM team, total number of patients scheduled for nurse visit only, and all corresponding CPT codes with associated wRVU. The average number of patient per provider was calculated using total day patient per day divided by days included with a similar calculation for average wRVU. The PPCM model has a separate schedule from the physicians, but once the collaborative visit is completed, the encounter is “moved” to the billing physician's schedule in the EMR.

Planned analysis included evaluation for individual data points as well as differences seen in groups for the physicians M1, M2, and M3 that worked in a PPCM team versus physicians M4 and M5 that worked in an independent model separate from the pharmacy team. Additional data analysis compared total number of patients seen independently versus in collaboration with pharmacy team, and the difference in average wRVU between the two groups. Non-parametric Wilcoxon and descriptive statistics were used for analysis. All statistical analyses were performed using SAS v 9.4 (Cary, NC). This was an Institutional Review Board approved project.

3. Results

A total of 624 patient visits were reviewed over the 8 week sample time period. The PPCM team averaged a wRVU of 1.21 per encounter. All providers billing outside the team model averaged a wRVU of 1.45 per encounter, highlighting the focus on less acute medical concerns being addressed by the PPCM team. The wRVU per encounter for each provider (removing collaboratively seen patients) among the three providers who worked in the PPCM team averaged 1.45, 1.48, and 1.55 wRVU, compared to an average wRVU of 1.37 and 1.30 per encounter for those who worked independently. This was found to be statistically significant in an unadjusted mixed model ($P = 0.0476$), but after adjusting, statistical significance was not maintained ($P = 0.2125$). The average number of patients seen per day as part of the PPCM team model was on average 19.25 per day versus 12.9 per day for those working independently.

4. Discussion

Our analysis shows that providers working as part of a PPCM team have higher productivity, in terms of number of total patients seen, compared to those who work outside the PPCM model in this particular clinic. While the PPCM model allows for focus on more stable, chronic conditions that are billed at a lower wRVU level typically, physicians are able to increase focus on more acute health needs extending beyond chronic management. This was potentially demonstrated in the data as providers working within a PPCM model billed at higher levels of service (measured by wRVU) for their non-collaborative visits (average 1.45) compared to the providers who did not collaborate in the PPCM team model (average 1.21). While the difference in the PPCM team model and the independent model for average wRVU is not extreme for a single patient encounter (average difference 0.24 wRVU) this small difference when extrapolated over 12 months accounts to a sizable difference in both productivity and revenue generation.

Pharmacists have been positioned to aid healthcare patient access for over two decades as noted in a 1996 article with similar focus on extending patient access in a rural population.[14] In our analysis, providers working as part of the PPCM team saw more patients per day (19.25) on average compared to those who worked independently (12.9 average patients per day). While total visits increased is likely related to the collaborative ability of multiple providers to see patients at the same time, this difference underscores the value of adding additional members to the care team in an effort to increase overall patient access to care. In fact, a 2011 report reviewed over 200 studies focusing on the integration of pharmacists into clinical practice and determined that pharmacists with larger roles in a patient's therapy both increased level of care delivered to patients and allowed more time for physicians to focus on more acutely ill patients in need of higher level care.[15] We hypothesize the ability of the physicians in the PPCM team to bill at higher wRVUs was related to the ability of the physician to delegate chronic care management issues to the pharmacist (which often are less complex and therefore generate less wRVUs per encounter)

and shift their focus to more acute-care needs (more complex generating higher wRVUs per encounter). Alternatively, the physicians working independently would be required to complete both acute-care and chronic-care type visits and the increased contribution of the chronic-care type visits would lower their overall wRVU-measured productivity.

Limitations were mainly due to the small size of the rural clinic which results in a smaller provider sample size. This is unable to be changed and limited the statistical analysis while introducing potential bias due to the inability to adjust for different physician billing styles. All of the physicians in the PPCM team and one of the independent model providers had similar work characteristics for time in practice, time at the clinic, and target wRVU. The outlier had significantly more years in practice, years in the clinic, and a much lower wRVU target due to other academic responsibilities. When these characteristics were considered in an adjusted mixed model, the difference was no longer significant ($p = 0.21$).

As it stands currently, all wRVUs must be billed through a billing provider such as a physician or an advanced practice provider. The billing provider, in this case, would receive the wRVU credit for the visit, further encouraging interprofessional collaboration. Contractual agreements may need to be considered to structure the pharmacist role for financial recognition and creating a sustainable ambulatory practice model.[16] Lacking the ability to bill at a similar scale for complex decision levels, pharmacists face challenges to demonstrate their productivity and create a financially sustainable model. Although reimbursement models are transitioning to focus on quality versus simple volume, the reimbursement model currently in use is based on the wRVU. With pharmacists contributing to clinical practice, advancing and evolving, determining pharmacist productivity is crucial to negotiate and to justify costs and expansion of services. Our study shows measuring pharmacist productivity is possible, and may be imperative for the future of the profession to demonstrate its importance and contribution to healthcare.

5. Conclusion

Ambulatory pharmacists are vital to PPCM team models as contributors increasing the overall clinic and provider productivity and expanding care access for patients. Continued efforts from interdisciplinary sources are essential to moving the pharmacy profession forward as recognized billable healthcare providers. Until this level of recognition is obtained, functioning within PPCM team models is an avenue for contribution to associated improved clinical outcomes, increased healthcare access for patients, and sustainable clinic models.

Disclosures

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Declaration of Competing Interest

All other authors have no conflicts of interest.

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