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POLICY FORUM: INVITED COMMENTARIES & SIDEBARS

How Rural Collaborative Practice Agreements Drive Clinical Access and Economic Resilience

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Chronic disease management, particularly in under-resourced areas, requires a team-based approach. Primary care physicians and pharmacists working in tandem through collaborative practice agreements offer a means to better address chronic disease in rural North Carolina and can also allow providers to see more patients to help address health care gaps.

Imagine a health care system in which every clinician works to their full potential. In this model, the primary care provider's (PCP's) day is dedicated to complex diagnostic cases and acute patient needs. The critical work of managing hypertension or diabetes in rural communities, where cardiovascular disease strikes too many and often in middle age, is instead expertly handled instead by the local community pharmacist when patients pick up their quarterly refills. In practices without this collaborative care model, chronic disease management is done by the primary care provider only, and much of the day is spent seeing these established care visits as opposed to addressing acute problems or seeing new patients.

In a collaborative care agreement, the pharmacist uses their deep knowledge of medication management, lifestyle and nutrition coaching, and the client's insurance plan to create a highly effective and cost-accessible care plan. The PCP's open appointment slots are immediately filled by new patients who had been waiting months to establish care. Both the physician and the pharmacist practice at the top of their licenses, and public access to both evidence-based chronic condition management and primary care expands. In rural North Carolina, where both primary care clinics and independent pharmacies face severe operational pressures, collaborative practice agreements (CPAs) provide a viable path toward this type of integrated care.

Doctors of Pharmacy (PharmDs) are well equipped to provide collaborative care with primary care providers. Since 2000, the PharmD has been the sole entry-level professional degree for students entering accredited pharmacy programs, providing advanced clinical training in pharmacotherapy, disease-state management, medication optimization, patient assessment, and monitoring. Yet much of this expertise remains underutilized in community

pharmacy practice. Particularly in rural communities, pharmacists represent an existing and accessible source of clinical capacity. When integrated into primary care teams through CPAs, pharmacists can manage defined medication-intensive aspects of care, including initiating and adjusting therapy, monitoring treatment response and safety, addressing medication-related problems, reinforcing adherence, and providing ongoing follow-up during routine patient touch points, helping to expand clinical capacity and improve patient access.

The clinical and economic evidence supporting this collaborative model is well established.[1,2] Pharmacist-physician collaborative care models (PPCCMs) consistently improve chronic disease metrics, particularly for high-prevalence, high-impact conditions like hypertension and type 2 diabetes, as well as effectively optimize outcomes in conditions such as asthma, COPD (chronic obstructive pulmonary disease), and complex anticoagulation regimens. Patients managed under collaborative protocols more often achieve their target blood pressure compared to those receiving traditional care alone. In addition, collaborative management demonstrates significant reductions in heart failure exacerbations, hospital readmissions, and all-cause mortality through structured medication titration and monitoring.[3]

North Carolina created a stronger pathway for this type of integrated care through legislative changes enacted in 2025.[4] These changes broadened the scope of practice for clinical pharmacist practitioners (CPPs) and gave physicians and pharmacists greater flexibility in determining what services could be included in a CPA. Rather than limiting these agreements to specific patients, diseases, and predetermined medication-management activities, physicians can now delegate a broader range of services related to medication therapy, disease management, and population health. In practical terms, this gives physicians and pharmacists more flexibility to decide which medication-related aspects of patient care can be safely managed by pharmacists, while the physician continues to establish the clinical parameters and overall direction of care. Responsibilities delegated to the pharmacist are jointly determined by the physician and pharmacist and defined within the CPA. The goal is not to transfer care, but to redistribute medication-intensive clinical work, improving timely access for patients while preserving physician capacity for diagnosis, complex decision-making, and higher-acuity care. Looking ahead, pharmacists are uniquely positioned to expand access as partners with primary care physicians in managing individuals receiving medication for common mental health conditions and substance use disorders.[5]

The Rural Health Landscape in North Carolina

Across the United States, integrating pharmacists into team-based primary care improves clinical outcomes, reduces health care spending, and alleviates provider burnout, yet physical access to this collaborative model remains

Table 1. Redistribution of Clinical Care Under a Collaborative Practice Agreement (CPA)

Clinical Service	Physician / Care Team Role	CPP Functions Under CPA	Intended Clinical & Access Benefit	Potential Clinical & Value Metrics
Hypertension	Diagnose; establish blood pressure (BP) goals and overall treatment plan.	• BP assessment & remote monitoring • Initiate & titrate antihypertensive therapy • Order/review laboratory monitoring • Medication safety review & comprehensive medication management (CMM) • Lifestyle counseling • Education & routine follow-up	More frequent BP management without requiring additional PCP visits; earlier medication optimization.	• BP control rate • Change in systolic blood pressure (SBP) / diastolic blood pressure (DBP) • Time to BP goal • Medication adherence • Appropriate lab monitoring • Resolved medication-related problems
Diabetes	Diagnose; establish glycemic goals and overall treatment strategy.	• Monitor glycemic control • Initiate & adjust antidiabetic therapy • Review self-monitoring glucose data • Address adherence & medication safety • Lifestyle & self-management education • Routine follow-up	More frequent disease management and fewer delays in optimizing therapy between physician visits.	• Glycated hemoglobin (HbA1c) control & change • Concomitant BP control • Guideline-directed medication use • Medication adherence • Completion of annual monitoring • Reduced acute-care utilization
Glucagon-like peptide-1 (GLP-1) weight management	Assess & diagnose; establish weight goals and therapeutic strategy.	• Determine & initiate therapy • Escalate & de-escalate dosing • Monitor response & tolerability • Manage common adverse effects • Reinforce adherence & lifestyle changes • Patient education & progress checks	Moves high-touch medication titration and frequent follow-up into the pharmacy while preserving physician capacity for higher-acuity needs.	• % total body weight change • Treatment persistence • Time to maintenance dose • Medication adherence • Adverse-effect resolution • HbA1c/BP improvement • Avoided PCP visits / clinician time saved
Long-acting injectable-buprenorphine (LAI-B) / opioid use disorder (OUD)	Diagnose OUD; establish treatment goals and overall care plan.	• Administer & modify LAI-B within CPA parameters • Assess withdrawal, cravings & treatment response • Initiate/adjust	Expands local access to OUD treatment, supports continuity between provider visits, and addresses emerging medication needs before treatment disruption.	• Treatment retention rate • Injection continuity • Medication adherence • Validated withdrawal/ craving scores • Patient

		short-term transmucosal buprenorphine when appropriate • Manage withdrawal symptoms with adjunctive medications • Monitor, support, & refer/ escalate		treatment engagement • Opioid-use negative screens • Patient satisfaction & reduced access barriers

uneven (Hawes). The urgency for integrated collaborative care is underscored by deep rural health disparities across our state, which this collaboration could address. At least 38 of the 100 counties in North Carolina fail to meet the recommended benchmark of one primary care clinician per 1500 residents, and these counties are rural ones.[6] While this shortage is due to a multitude of reasons, CPAs help address the 'available slot' bottleneck: high-acuity patients can be seen by primary care clinicians while stable chronic disease patients receive convenient care delivered by the pharmacist.

In contrast to the shortage of primary care providers in rural counties, all 100 North Carolina counties have at least one community pharmacy.[7] Rural patients interact with their community pharmacy team approximately 10 to 12 times more frequently than their primary care physician, with some patient populations visiting up to 35 times annually.[7,8] Because of proximity, walk-in convenience, and established trust, the local pharmacy frequently serves as the primary—and sometimes only—accessible front door to the health care delivery system in rural communities.

This infrastructure cannot be taken for granted. According to a report submitted to the North Carolina General Assembly, there were 274 retail pharmacy closures over a recent five-year period compared with only 161 openings—a net loss of 113 pharmacies, representing approximately 1.7 closures for every new opening.[9] This is especially concerning in rural communities, where the local pharmacy may be one of the most accessible and frequently used sources of health care.

Real-World Rural Models and Commercial Payer Alignment

Collaborative models in North Carolina are already demonstrating meaningful clinical feasibility and attracting major payer investment. In fact, these models have a proven track record. The Roanoke Chowan Community Health Center and University of North Carolina (UNC) Rural Pharmacy Health Initiative have established a system in which Federally Qualified Health Centers (FQHCs) across Eastern North Carolina partner with local

community pharmacies to establish integrated 'rural hubs.' These models embed CPPs into multidisciplinary teams to manage complex diabetes, hypertension, and rural chronic care delivery.[10]

Another initiative is Carolina Across 100, led by UNC. This initiative actively expands community-based, pharmacy-led chronic care models in medically underserved and economically distressed counties to reduce mortality and improve care coordination.[11]

Commercial payers are aligning financial incentives with these care models as well. Blue Cross and Blue Shield of North Carolina's "More Than a Script" initiative directly reimburses community pharmacies for delivering enhanced clinical services—such as blood pressure optimization and glycemic management—recognizing that pharmacist-led chronic care lowers the total cost of care and reduces avoidable hospitalizations.[12]

Economic Sustainability & Rural Economic Development

By pairing CPAs with community-based pharmacies and local primary care providers, health systems preserve critical rural health care infrastructure while directing investment into proven clinical delivery channels. Independent pharmacies not only provide essential clinical collaboration but also generate professional jobs that anchor local economies.

CPAs also open value-based reimbursement pathways, enabling independent pharmacies to diversify revenue streams beyond traditional dispensing margins.[13] Sustaining community pharmacies keeps health care expenditures, clinical revenue, and skilled jobs within rural communities. Simultaneously, effective chronic disease stabilization curbs high-cost emergency department visits and preventable hospitalizations that place severe financial strain on rural health systems.[14]

Conclusion

Collaboration between primary care providers and pharmacists delivers tangible value across clinical, operational, and economic domains—from expanding rural primary care capacity to reinforcing local health care infrastructure. With the clinical and economic rationale for CPAs firmly established, the priority shifts to implementation: fostering provider-pharmacy relationships, establishing shared workflows, and deploying the health-IT infrastructure necessary to scale collaborative care across North Carolina for years to come.

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