ORIGINAL RESEARCH

Increased Organizational Stress in Primary Care: Understanding the Impact of the COVID-19 Pandemic, Medicaid Expansion, and Practice Ownership

Jacqueline B. Britz, MD, MSPH, Alison N. Huffstetler, MD, E. Marshall Brooks, PhD, Alicia Richards, BS, Roy T. Sabo, PhD, Ben K. Webel, BA, Neil McCray, PhD, MPP, and Alex H. Krist, MD, MPH

Background: **Primary care is the foundation of health care, resulting in longer lives and improved equity. Primary care was the frontline of the COVID-19 pandemic public response and essential for access to care. Yet primary care faces substantial structural and systemic challenges. As part of a longitudinal analysis to track the capacity and health of primary care, we surveyed every primary care practice in Virginia in 2018 and again in 2022.**

Methods: **Surveys were emailed or mailed up to 6 times and nonresponders received a phone call. Questions assessed organizational characteristics, scope of care, capacity, and organizational stress in the prior year. From respondents, 39 clinicians, nurses, staff, administrators, and practice managers were interviewed.**

Results: **526 out of 2296 primary care practices (23% response rate) completed the survey, with broad representation across geography, ownership, and payer mix. Compared with 2018, in 2022 there were increases in practices owned by health systems (25% vs 43%, *P* < *.0001*) and average percent of patients with Medicaid per practice (12% vs 22%, *P* < *.0001*). The percent of practices reporting any major stressor increased from 34% to 53% (*P* < *.0001*). The main increased stress was losing a clinician, with 13% of practices in 2018 versus 42% in 2022 reporting losing a clinician (*P* < *.0001*).**

Conclusions: **Primary care practices are resilient and continue to serve their communities, including a broad scope of services and care for underserved people. However, the COVID-19 pandemic caused significant stress. With an increase in clinicians leaving clinical practice, we anticipate worsening access to primary care. (J Am Board Fam Med 2023;36:892–904.)**

Keywords: **COVID-19, Health Policy, Health Services Accessibility, Family Medicine, Health Workforce, Medically Underserved Area, Medicaid, Pandemics, Practice-based Research, Primary Health Care, Surveys and Questionnaires, Virginia**

Introduction

With access to primary care, patients and populations experience longer lives and increased health equity.[1,2] Primary care, the only specialty to achieve such outcomes, is the foundation of the US healthcare system.[1,2] It is essential to promoting health and to preventing and managing chronic conditions. However, primary care in the US has been chronically underfunded and fragmented.[3]

As part of a longitudinal evaluation of primary care capacity to support Medicaid expansion in Virginia, our team surveyed every primary care practice in Virginia in 2018 with a plan to repeat the survey every 4 years.[4] Our 2018 findings indicated that primary care was severely stressed, under-resourced,

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From the Department of Family Medicine and Population Health, Virginia Commonwealth University, Richmond, VA (JBB, ANH, EMB, AR, RTS, BKW, AHK), Robert Graham Center for Policy Studies in Family Medicine and Primary Care, Washington, DC (ANH), Virginia Department of Medical Assistance Services, Richmond, VA (NMC).

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Corresponding author: Jacqueline B. Britz, MD, Virginia Commonwealth University, Suite 600, 830 East Main Street, Richmond, VA 23298 (E-mail: jacqueline.britz@vcuhealth.org).

and overburdened. Since this time, primary care has experienced additional stressors, with an increased demand for services after Medicaid Expansion, which became effective in Virginia in January 2019. In March 2020, the COVID-19 pandemic began, posing an unprecedented challenge for an already strained primary care system.[4]

Primary care served as the frontlines of the COVID-19 pandemic.[5] Primary care has been critical as a site providing testing, treatment, and vaccination, despite facing major barriers and increased stressors.[5,6] Recent literature has highlighted increasing stressors in primary care, including the rapid adoption of telemedicine, strained resources, and workforce shortages.[6–8] However, there is a lack of repeated measures completed before and during the pandemic to evaluate specific changes encountered during this time period, as well as changes brought about after the expansion of Medicaid. Repeated measurements over time may provide important insights into the adaptation and stressors of primary care.

The Commonwealth of Virginia serves as an important case example. Virginia has a diverse population and varied geography. It ranks 27 out of 50 states for number of primary care clinicians per resident.[9] Importantly, prepandemic metrics were evaluated annually beginning in 2018 and can be tracked longitudinally.[4]

This study offers insight into the changing landscape of primary care with pre and post-COVID-19 practice comparisons of stressors, strengths, and changes in patient demographics. Our analysis also addresses several factors in the National Academies of Sciences, Engineering, and Medicine (NASEM) 2021 report on Implementing High-Quality Primary Care - specifically, addressing the workforce in the Commonwealth.[3] Understanding the state of primary care, in particular postpandemic, is critical to implementing and ensuring the sustainability of high-quality primary care.

Methods

We utilized a methodology for primary care practice identification from our 2018 analysis.[4] We update this list each year by querying the 2020 National Plan and Provider Enumeration System, the 2020 Virginia Department of Health Professions (VDHP) licensure data, and the 2018 Virginia All-Payer Claims (APC) database to identify primary care physicians and primary care practices in the state; the APCD lags real-time by approximately 18 months.[10,11] Using APC data and internet searches of practices and physicians, we nested every physician into practices in health systems. We compared this to our 2018 list and included new practices to survey. The Virginia Commonwealth University Institutional Review Board deemed our study as not human subjects research.

Practice Survey

Practice survey questions were drawn from our prior survey[4] and novel questions were added concerning Medicaid Expansion in Virginia, payment programs for primary care including alternative payment models, services that the practice provides, and the impact of COVID-19 and other stressors on the practice. These questions were selected based on experiences from the Virginia Medicaid administrators, the Department of Medical Assistance Services (DMAS), and the Virginia practice-based research network - the Ambulatory Care Outcomes Research Network (ACORN).[12] Prior repeat questions were developed based on the VDHP licensure questions, the American Board of Family Medicine Graduate Survey, the American Association of Medical Colleges Physician Survey of Primary Care, and assessments of the patient-centered medical home.[12–16] New questions were adapted from the Healthy Michigan Plan's physician survey.[17] We used anticipated or experienced practice changes and competitiveness as markers for practice stress. Finally, we inquired what the practice's greatest strengths were. The survey is included in the Appendix. 20 out of 36 questions were unchanged from 2018 to 2022.

The survey was fielded, using practice addresses, e-mails, and fax numbers, to all practices in Virginia in an iterative manner. The cover letter included text from the Virginia Primary Care Task Force explaining the use of the survey and its value in completion. The survey included instructions that it should be completed by an individual with detailed information about the practice, in consultation with other practice staff as needed. When we were familiar with a primary care practice, we sent the survey directly to an individual knowledgeable on all aspects of the practice, such as an office manager. Practices were contacted by survey staff via phone between 1 to 6 times as reminders to complete

the survey. The survey was distributed by several organizations in Virginia, including the Virginia Academy of Family Physicians, the Virginia Chapter of the American College of Physicians, the Medical Society of Virginia, the Virginia Chapter of the American Academy of Pediatrics, and ACORN. When completed online, only 1 form was permitted per practice. If duplicate surveys were received for a single practice, we included only the first response in our analysis. The survey was fielded between September 2021 and April 2022.

Statistical Analysis

Each practice represented 1 unit. The analysis includes descriptive statistics on practice characteristics, and Chi-square tests to compare practice responses and characteristics between 2018 and 2022. Analyses were conducted using SAS version 9.4 (Cary, NC).

Qualitative Analysis

At the conclusion of the survey, practice staff, clinicians (ie, physicians, physician assistants, nurse practitioners, and nurses), and administrators were offered the opportunity to participate in a semistructured interview to clarify and expand on their survey responses. The interviews were conducted over the phone by 2 research team members. Responses were aggregated and analyzed using an immersion-crystallization process to identify common themes and trends.

Results

526 out of 2296 practices completed the survey (23%). In 2018, 484 practices completed the survey of 1622 primary care practices identified at that time (30% response rate). Respondents had varied roles with detailed information about the practice, with 60% of surveys completed by the office manager or administrative personnel, 24% by a clinician (physician, physician assistant, nurse practitioner, or nurse), and 16% respondents listed as "other." There was broad representation of practices across geography, ownership, and payer mix (see Table 1). The distribution of primary care practice survey responses in Virginia aligns with the distribution of all primary care practices in Virginia (see Figure 1) and is consistent with the distribution from 2018 survey respondents.[4] The percent of rural survey respondents is 48%, similar to 44% of total estimated primary care practices in Virginia. In terms of ownership, 43% of practice respondents are health-system owned, which is consistent with an estimated 35% of practices that are health-system owned across the Commonwealth. Thirty-seven interviews - 36 individuals and 1 group of 3 - were completed with 39 different participants, including clinicians, office managers, administrative personnel, a social worker, and a nurse navigator.

Practice Surveys

In 2022, primary care practices provided care for diverse and often underrepresented people; 91% cared for vulnerable populations and 79% accepted new Medicaid patients (see Table 1). Primary care practices provided varied services (see Table 2), including care coordination or patient navigation (64%), care management for chronic conditions (68%), and follow-up after Emergency Department visits/hospitalizations (57%). Approximately 22% of practices had a Licensed Clinical Social Worker or Professional Counselor, 13% of practices had a Psychologist, and 32% had a case manager, care coordinator, or patient navigator. Practices broadly promoted access; 91% of practices offered telehealth, of which 75% was video and 25% was audio. Services and populations cared for did not vary significantly from 2018, with the exception of an increase in patients with Medicaid (12% vs 22%, $P<.0001$). Notably, there was an increase in practices owned by health systems from 2018 to 2022 (25% vs 43%, $P<.01$).

More than half (53%) of practices reported at least 1 major stress in 2022, up from 34% in 2018 ($P<.0001$). Practice stressors were similar between 2018 and 2022 (see Table 3), but there was a significant increase in total practices reporting losing clinicians (13% vs 42%, $P<.0001$). Of practices with at least 1 stressor, 79% reported a loss of clinicians in 2022 (39% in 2018, $P<.0001$). Of practices losing clinicians, 43% had clinicians retire early, 16% fired clinicians, and 3% reported clinicians died. Of note, 1% of all practices reported 1 or more clinicians died of COVID-19. Clinician-owned practices were less likely to report that clinicians/staff were still struggling from burnout, though proportions were still high (51% clinician-owned vs 81% hospital-owned, $P<.0001$). Hospital-owned practices were more likely to lose a clinician than clinician-owned

Table 1. Characteristics and Services of Primary Care Practices in 2022 Compared with 2018

Response Rate	2022 (N, %) 526/2296 (22.9%)	2018 (N, %) 481/1622 (29.7%)	Virginia	*P*-Value*
Characteristics				
Practice Specialty				
Family Medicine/Internal Medicine	438/526 (83.3%)	479/481 (99.6%)	1930/2,296 (84.0%)	<0.0001
OB/GYN	10/526 (1.9%)	0/481 (0%)	94/2,296 (4.1%)	0.0020
Pediatrics	78/526 (14.8%)	2/481 (0.4%)	272/2,296 (11.8%)	<0.0001
Practice location by zip code				
Rural	254/526 (48.3%)	254/479 (53.0%)	1020/2,296 (44.4%)	0.1710
Suburban	154/526 (29.3%)	140/479 (29.2%)	755/2,296 (32.9%)	<0.9999
Urban	118/526 (22.4%)	85/479 (17.8%)	513/2,296 (22.3%)	0.0714
Ownership				
Hospital/health system	216/506 (42.7%)	107/427 (25.1%)	806/2,296 (35%)	<0.0001
Clinician	196/506 (38.7%)	228/427 (53.4%)	–[±]	<0.0001
Clinician partially-owned	5/506 (1.0%)	11/427 (2.6%)	–	0.0509
Private sponsor/investor/corporation	79/506 (15.6%)	76/427 (17.8%)	–	0.4205
Insurance company	0/506 (0.0%)	0/427 (0.0%)	–	–
University	5/506 (1.0%)	5/427 (1.2%)	–	>0.9999
Government	5/506 (1.0%)	0/427 (0.0%)	–	0.0663
Role of respondent completing practice survey				
Office Manager	239/526 (45.4%)	–	–	–
Administrative Personnel	77/526 (14.6%)	–	–	–
Physician, Physician Assistant, Nurse Practitioner	118/526 (22.4%)	–	–	–
Nurse	6/526 (1.1%)	–	–	–
Other	80/526 (15.2%)	–	–	–
Not answered	6/526 (1.1%)	–	–	–
Mean estimated payer mix for practices[±±]				
Medicare	23.8%	29.4%	–	<0.0001
Medicaid	21.8%	12.1%	–	<0.0001
Commercial/private insurance	45.4%	48.4%	–	0.0879
Uninsured/self-pay	8.9%	10.1%	–	0.2625
Practices accepting new patients with:				
Medicare	399/489 (81.6%)	378/430 (87.9%)	–	0.0108
Medicaid	399/507 (78.7%)	295/430 (68.6%)	–	0.0006
Commercial/private insurance	465/507 (91.7%)	418/437 (95.6%)	–	0.0203
Uninsured	437/503 (86.9%)	382/426 (89.7%)	–	0.2260
Population Demographics				
Estimated patients by race[±±]				
White	59.5%	67.4%	–	<0.0001
Black	26.6%	23.5%	–	0.0256
Asian or Pacific Islander	6.0%	8.5%	–	0.0105
Native American or Alaska Native	1.0%	3.0%	–	0.0018
Other	6.9%	–	–	–
Estimated percentage of Hispanic patients	21.7%	11.1%		
Care for vulnerable populations				
Low income	437/512 (85.4%)	–	–	–
Group home	258/512 (50.4%)	–		–
Undocumented	156/512 (30.5%)	–	–	–
Refugee/special visa	128/512 (25.0%)	–	–	–
Transgender	274/512 (53.5%)	–	–	–
Homeless	220/512 (43.0%)	–	–	–

Continued

Table 1. Continued

Response Rate	2022 (N, %) 526/2296 (22.9%)	2018 (N, %) 481/1622 (29.7%)	Virginia	*P*-Value*
Non-English speaking	339/512 (66.2%)	–	–	–
Opioid use disorder	222/512 (43.4%)	–	–	–
No vulnerable people	47/512 (9.2%)	–	–	–

**P* value comparing values for 2022 versus 2018.
±refers to data not available or not included in analysis (e.g., questions not included in the 2018 survey).
±±Two sample *t* test was used to compare means between two groups.

practices (84% vs 71%, *P* < *.001*). However, clinician-owned had fewer patient support services such as care coordinators, health plan coordinators, and registries (*P* < *.001*) and reported more difficulty finding access to mental health services (64% vs 50%, *P* < *.001*).

Access to mental health services was a major challenge. More than half (56%) reported difficulty finding and referring patients to mental health counseling. When asked how they most commonly care for patients' mental health needs, 17% regularly spoke to mental health clinicians about their patients and 18% had mental health clinicians in their office. After Medicaid expansion, 5% of practices hired mental health clinicians to improve care for patients with Medicaid, yet 21% reported they would hire more mental health clinicians if they received a net increase in payment from Medicaid through an alternative payment model. Seventy-nine percent reported that if they had better access to mental health clinicians, they would be more likely to see Medicaid patients.

Qualitative Interviews

Burnout was a key theme identified during interviews. In particular, practices highlighted burnout related to electronic health records (EHRs) and moral injury, staffing shortages, and loss of ownership/decision making control (see Table 4). Practices also highlighted concerns about a lack of investment in primary care.

EHR and Moral Injury

Practices consistently reported high levels of stress, burnout, and moral injury. The EHR tended to be a major contributor to stress and navigating systems was regarded as, "the bureaucracy of the EHR." Beyond the time and energy spent "putting things in the right places [and] checking the boxes," use of the EHR was equated to a cash register, and clinicians found that it prevented a therapeutic clinician-patient relationship. As one clinician stated, "We do not get paid for taking care of patients. We get paid for doing [things] to them." Another clinician, reflecting on the complicated documentation and administrative work required to work with insurance companies, described the situation as "a nightmare. . .instead of improving the knowledge base, instead of facilitating processes to improve the care of patients, we have this monstrous machine that has been created."

Workforce Shortages Exacerbated by COVID-19

Practices highlighted major financial and staffing stresses exacerbated by COVID-19. Most practices reported being constantly short on clinicians and support staff. Rather than temporary fluctuations in staffing levels, the shortage appeared chronic, with early retirement and turnover at unprecedented levels. As one respondent described, practices are losing the ability to manage and recuperate from these losses - "I am always struggling because I do not ever have enough people. It seems like as soon as I get just enough people to get by, someone's leaving." Others reported turnover at more than triple the rate seen in previous years, with some clinics operating down "3 to 4 to 5 nurses at all times." As 1 practice manager described, this creates intolerable levels of emotional and financial stress for practices. "That to me is the biggest thing that I am burnt out on. It is constant reonboarding, retraining, redoing the whole thing. It is costing us thousands of dollars a person."

Ownership

Practice ownership transitions were frequently cited, consistent with quantitative findings, and

Figure 1. A. 2022 Primary care practice distribution in Virginia ($n = 2,296$). B. 2022 Primary care practice survey response distribution in Virginia ($n = 526$).

linked to stress in primary care. Practice ownership influenced the types of burnout experienced and many practices in health systems saw underprioritization of primary care compared with specialties, whereas privately-owned practices struggled with the administrative burden of working with payers. Importantly, several practices stated that health system ownership allowed them to financially weather

Table 2. Primary Care Efforts to Ensure Access and Comprehensiveness of Care in 2022 versus 2018

	2022 (N, %)	2018 (N, %)	*P*-Value
Number of practices with this type of team member			
Psychologist	68/526 (12.9%)	13/484 (2.7%)	<0.0001
Licensed Clinical Social Worker or Professional Counselor	118/526 (22.4%)	45/484 (9.3%)	<0.0001
Case manager, care coordinator, or patient navigator	169/526 (32.1%)	78/484 (16.1%)	<0.0001
Pharmacist	75/526 (14.3%)	–*	–
Population health services			
Measure your quality/performance	353/499 (70.7%)	362/484 (74.8%)	0.1755
Have alerts/reminders in your EHR	356/499 (71.3%)	–	–
Provide care management for chronic conditions	338/499 (67.7%)	–	–
Provide care coordination or patient navigation	321/499 (64.3%)	299/484 (61.8%)	0.4456
Promote generic medication prescribing	316/499 (63.3%)	–	–
Follow-up after ER visit/hospitalization	286/499 (57.3%)	–	–
Follow-up with patients referred to a specialist	230/499 (46.1%)	–	–
Use a registry to identify patients in need of care	228/499 (45.7%)	263/484 (54.3%)	0.0081
Have strategies to reduce unnecessary medical care	203/499 (40.7%)	–	–
Have a patient advice line	123/499 (24.7%)	–	–
Communicate with patients' health care coordinator	120/499 (24.1%)	–	–
None of the above	24/499 (4.8%)	–	–
Services practices were able to provide during COVID-19			
Messaging/education about distancing and masks	414/487 (85.0%)	–	–
Viral testing to diagnose acute infections in our office	318/487 (65.3%)	–	–
Antibody testing to diagnose acute/past infections	206/487 (42.3%)	–	–
Hospital management for our acutely ill patients	141/487 (29.0%)	–	–
Antibody treatment-high risk patients with acute infections	95/487 (19.5%)	–	–
Home monitoring for patients with acute infections	106/487 (21.8%)	–	–
Manage Long Covid	100/487 (20.5%)	–	–
Patient education on efficacy and safety of the vaccine	395/487 (81.1%)	–	–
Give COVID-19 vaccinations to our patients	276/487 (56.7%)	–	–
Telehealth			
Visit type – average (*range*)			
In-person	90.0% (5.3, 100.0)	–	–
Telehealth	10.0% (0.0, 94.7)	–	–
Type of telehealth – average (*range*)			
Video	74.6% (0.0, 100.0)	–	–
Telephone	25.4% (0.0, 100.0)	–	–

Note. *refers to question not included in 2018 survey.
Abbreviation: EHR, electronic health record.

the impact of COVID-19, but there were consistent concerns regarding unsupported mandates and a lack of support for primary care. For example, promises from health systems about integrating new EHR functions to increase the quality and efficiency of primary care conflict with the gross lack of informaticists to configure the EHR to make full use of potential functionalities. Among independent practices, there were reports of an inability to compete against health systems when recruiting new clinicians. In addition, we heard that health systems approach independent practices for purchase and promise to provide robust support for primary care in the form of additional staffing, resources, or space, but fail to follow through on these agreements and fail to pass along any increased payments procured through a practice's participation in pay-for-performance programs or cost saving initiatives. "The hospital systems that I am employed by, they get the money, and it does not go to primary care," as one clinician described. Finally, practices perceived health

Table 3. Stresses Experienced by Primary Care Practices in 2018 versus 2022

	2022 (N, %)	2018 (N, %)	*P*-Value
Practice Stress			
Report any stress	280/526 (53.2%)	163/484 (33.7%)	<0.0001
Have a major office renovation*	44/280 (15.7%)	55/163 (33.7%)	<0.0001
Adopt a new electronic health record system	38/280 (13.6%)	43/163 (26.4%)	0.0012
Adopt a new billing system	34/280 (12.1%)	32/163 (19.6%)	0.0459
Change in practice ownership	30/280 (10.7%)	13/163 (8.0%)	0.4397
Move office to a new location	28/280 (10.0%)	29/163 (17.8%)	0.0268
Lost 1+ doctor, NP, or PA	222/280 (79.3%)	64/163 (39.3%)	<0.0001
Planned retirement[±]	70/180 (38.9%)	–[±±]	–
Early retirement	78/180 (43.3%)	–	–
Moved	103/180 (57.2%)	–	–
Changed practice	106/180 (58.9%)	–	–
Fired	28/180 (15.6%)	–	–
Died	5/180 (2.8%)	–	–
COVID-19 Impact on Practice Clinicians and Staff			
Reduced or held pay for clinicians and staff	157/461 (34.1%)	–	–
Still struggling to recover financially	183/461 (39.7%)	–	–
1+ of our clinicians or staff got COVID-19	355/461 (77.0%)	–	–
1+ of our clinicians or staff died from COVID-19	6/461 (1.3%)	–	–
Clinicians/staff are suffering from burnout or mental exhaustion	325/461 (70.5%)	–	–
State of Mental Health Care			
Difficulty referring patients to mental health services	56.20%	–	–
Have mental health providers in clinic	18.30%	–	–

Notes. *Calculated from responses of practices reporting any stress.
[±]Calculated from responses of practices who lost 1+ doctor, NP, or PA; not all practices provided reasons for losing clinicians.
[±±]refers to question not included in 2018 survey.
Abbreviations: NP, nurse practitioner; PA, physician assistant.

systems as largely indifferent to the systemic factors affecting clinician burnout. While focused on promoting greater "resilience" among beleaguered practices, one clinician explained that such priorities are incongruous with practices' real needs. "What I cannot get them to understand is how to better take care of people in the office. And to do that you have got to fix the system too."

As a result of large-scale health system buyouts, independent practices also struggle to recruit new clinicians to replace those taking early retirement. "We of course try to sell [new recruits] on the other features; more personal care, more personal involvement, maybe even the possibility of buying into the practices and owner as a partner" 1 clinician reported. However, health systems retain an intractable competitive advantage. "There's a lot more that can be offered in some regards, but not financially."

Insufficient Primary Care Reimbursement

Practices emphasized that chronic underinvestment in primary care has a deleterious effect on their ability to care for medically underserved populations, like people with Medicaid. One clinician reported "It is like death by a thousand cuts. You are basically just trying to survive." Many clinicians had concerns about low Medicaid reimbursement, especially after the influx of patients with Medicaid after the expansion in Virginia in 2019. One clinician reported, "I feel like payment for Medicaid has not kept up with the expenses of a practice." Although practices owned by larger health systems seemed relatively better equipped to care for this population, independent practices, in particular those in rural areas, reported an inability to manage the increased costs in time and resources. One clinician explained, "I could say I will not see you again because I do not accept Medicaid anymore. And if that happens, the majority of my

Table 4. Qualitative Interview Themes from 2022 Participant Interviews

Themes	Findings	Quotes
General burnout	• Practices report high levels of stress, burnout, and moral injury • EHR use felt to compromise person-centered care • Administrative work with insurance contributing to sense of disenchantment with the profession	• We're burnt out, we all admit to each other. Not only the clinicians, but the nurses too. Pretty much everybody is just exhausted. • So when you talk about physician burnout, they're there. Which is sad because I have amazing physicians that I work for who are phenomenal, who care deeply for their patients. And the thing that's getting in their way right now is the bureaucracy of the EMR. Are you putting the things in the right places, are you checking the boxes. • The complicated administrative work with insurance is a nightmare. . .Instead of improving the knowledge base, instead of facilitating processes to improve the care of patients, we have this monstrous machine that has been created. • We don't get paid for taking care of patients. We get paid for doing [things] to them. And the electronic medical record (EMR) is kind of like a cash register. It's not really about taking care of a patient. It's about did you click this right button?
Financial stress from COVID-19	• Practices still recovering from financial strain accrued during COVID-19 • Financial stresses due to low volume of patients and payment for COVID-19 tests and vaccines	• We had a lot of struggles getting payers to pay for COVID tests. • COVID was really tough for us. We are an independent practice and so it was difficult and we still have not fully recovered from the hit. • [The Director of Medicaid] sent a memo saying COVID vaccines will be paid $40 for Medicaid patients. But a lot of Managed Care Organizations (MCO)s did not pay that until later on, or it was rejected, like by Anthem HealthKeepers. Or was rejected first and then later on they only paid us like $15 or $20. • As a consequence of COVID we no longer have that office.
Loss of staff and clinicians	• Practices stressed with high rates of staff turnover and chronic shortage of clinicians • Practices lack capacity to meet demand for primary care	• I'm always struggling because I don't ever have enough people. And it seems like as soon as I get just enough people to get by, someone's leaving or we have a new clinical need. • That to me is the biggest thing that I'm burnt out on. It's constant re-onboarding, retraining, redoing the whole thing. It's costing us thousands of dollars a person. • We are struggling. We are very stressed. We've lost a lot of providers. Not just providers, actually, but everybody in the healthcare system. At every level people have left. • This is an organization where people tend to stay for a long time and our staff turnover was below 10% before COVID. But in the past two years, it's been like 35%. We've got 225 employees; we had to rehire 75 employees in the first year, and something close to that in the second year.
Primary care reimbursement	• Medicaid payments insufficient to adequately care for population	• Medicaid is really a challenge because it's really underpaying me. • I feel like payment for Medicaid has not kept up with the expenses of a practice. • All those added administrative burdens are really bad. . .It's just one of those things that I think Medicaid should listen to, like, I'm saving your patients from going to the emergency room, after all my clinic is right across from the ER. So there's different kinds of support that I really need to help these families. • I could say I won't see you again because I don't accept Medicaid anymore. And if that happens, the majority of my patients will probably not be seen anywhere else except in the emergency room.
Health system ownership	• Unsupported mandates from health systems • Lack of health system support for primary care • Independent practice recruitment struggles • Benefits of a health system	• One of my partners resigned last summer. . .because of partnering with [the health system], because of their insistence on things that were not necessary and weren't part of our agreement. I too nearly resigned twice within 12 months and looked at a Plan B of what else would I do? • They have this big emphasis on resilience. What I can't get them to understand is how to better take care of people in the office. And to do that you've got to fix the system too. And they are very much into telling you great things about how to be more resilient. Hell, I'm pretty resilient. I'm still here after four decades. But what we need help with is the system, improving systems of care, so that I can spend my time doing Doctor level stuff. • The hospital systems that I'm employed by, they get the money, and it doesn't go to primary care. . .Instead, it goes to the Accountable Care Organization (ACO), it goes to the hospital system, it goes to whatever group the primary care doctor is working for. It's not designated as this money is for primary care.

Continued

Table 4. Continued

Themes	Findings	Quotes
		• We have great difficulty recruiting new doctors to the organization. We are competing with hospital-based hiring that pays brand new primary care physicians high salaries and gives them a high benefit package, which they deserve. We of course try to sell [new recruits] on the other features; more personal care, more personal involvement, maybe even the possibility of buying into the practices and owner as a partner. There's a lot more that can be offered in some regards, but not financially.

patients will probably not be seen anywhere else except in the emergency department."

Discussion

Primary care practices struggle with the financial and staffing stresses accrued during the high acuity COVID-19 surges in 2020 and 2021. In 2018, primary care anticipated that the stresses they experienced would "be better the next year." They projected having sufficient capacity to care for more Virginians after Medicaid Expansion in 2019.[4] In 2022, primary care practices had 2 lived experiences: while they expanded services to Medicaid beneficiaries and maintained their quality of services, they struggled to make ends meet with significant financial burdens exacerbated by the pandemic.[7,18–21] The COVID-19 pandemic added multiple stressors to primary care – patients were sicker and had more mental health needs, practices struggled to maintain staff, and payment for care remained low compared with payment to specialists, hospitals, and the pharmaceutical industry.[22–24] Practices managed to provide a broad spectrum of care and continued to care for the diverse population of Virginia, yet their clinicians left practice and burnout remained rampant.

The vast majority of primary care clinicians and staff suffered from burnout or mental exhaustion, found both in quantitative and qualitative analysis. However, the qualitative themes provided a more complex picture than the quantitative results can describe. Practice surveys indicated similar stressors reported between 2018 and 2022, yet a notable increase in the percentage of practices in 2022 that reported losing clinicians (including unexpected loss due to early retirement, fired, or death). Qualitative interviews highlighted moral injury and burnout related to administrative burden and EHR demands, dire workforce shortages, as well as significant challenges accompanying changes in ownership and low reimbursement for primary care services. Practices underscored how impactful the loss of clinicians' time and clinicians themselves had on care and the morale of the practice at large. The complexities faced by primary care practices undermine their mission to provide person-centered, comprehensive, and continuous care. The loss of team members and consolidation of primary care by health systems will likely have an impact on workforce shortages for years to come. It is possible, though, that using all team members to the highest level of licensure would alleviate some of the increased burden of sicker patients caused by the COVID-19 pandemic and increased Medicaid enrollment. Ensuring appropriate panel size, based on patient complexity, may play an important role in providing high-quality patient care while also reducing clinician burnout.

Primary care is known to be overburdened and under-resourced.[3,25] This study provides specific insights into critical factors contributing to clinician burnout, including the COVID-19 pandemic, loss of clinicians, and changes in ownership. Our findings indicate that the widespread buy-out of independent practices by health systems seems to be quickly reshaping the landscape of primary care in Virginia. There has been a national transition of ownership to hospital-owned primary care practices, which has accelerated in recent years.[26] This transition may be a result of increased stressors facing primary care practices. Yet, our survey findings indicate that hospital-owned practices had more clinicians and staff suffering from burnout or mental exhaustion compared with clinician-owned practices. Effective strategies on the part of health systems are critical to addressing primary care burnout,

including investment in additional primary care clinicians and staff, retention of staff, adequate resources for the breadth of services provided by primary care, and reduction of administrative and EHR hurdles. Additional research is needed to better understand the broader impact of the transition of ownership (eg, in terms of overall capacity, workforce shortages, and clinician burnout).

Broader national investment is essential to recruit, train, and retain a robust primary care workforce. The number of practices that report losing a clinician doubled from 2018 to 2022, foreshadowing an impending workforce crisis. A 2022 primary care survey suggests that 1 in 4 primary care clinicians plan to leave the field within the next 3 years.[25] Although workforce shortages are critical today, primary care access will likely become more dire and could have important implications for patients and health systems (eg, patients left without primary care, increased costs for health systems, greater burden on Emergency Departments, etc.). Recruitment strategies for primary care clinicians, including training opportunities for medical students, loan repayment options, and adequate funding for primary care residency slots, are essential. Furthermore, strategies to improve the desirability and viability of primary care as a career path are critical, including reduction of administrative burden, increased investment in primary care, reduced specialty disrespect, and facilitation of interdisciplinary teams that allow clinicians to better address patients' mental health needs and social determinants of health. Advanced practice providers who enter into and stay in primary care settings, such as nurse practitioners, can bolster the primary care workforce, however, cannot replace the clinician workforce.[27]

Importantly, payment reform is critical to ensure the sustainability of primary care. Primary care plays an essential role in our health system, including providing management of acute and chronic conditions as well as preventive care.[1] Primary care helps prevent morbidity and mortality and promotes equity,[1] yet makes up just 5% of health care spending.[28] This is notably lower than other high-income countries and is associated with decreased access to primary care compared with other high-income countries.[29,30] Furthermore, Medicaid primary care spend is between 1% to 2%, which has made adapting to the influx of Medicaid beneficiaries postexpansion extremely financially challenging.[31] Clinician interviews highlighted financial concerns related to patients with Medicaid, for whom practices are paid 20 to 30% less than Medicare.[32,33] Any primary care payment reform must come with a true increased investment in primary care from private and public insurers. For independent practices serving rural populations, the need for payment parity is dire.

This study has limitations. Although our response rate was strong compared with most large-scale surveys, it remained modest at 23%. The geographic distribution and composition of the practices seems to be consistent with most practices across the state. However, a segment of primary care practices with a different experience of care may be excluded. Our analysis only includes self-reported scope, stressors, and changes. There are claims-level analyses that could be explored in the future to provide additional context to practice scope, volume of care, and payer distribution. Finally, the practice representation is skewed toward adult and family medicine - and does not include as large of a pediatric population. Pediatric practices should be further investigated.

The Virginia primary care physician shortage was projected to be 1600 individuals by 2030.[34] In a previous analysis by this team, the growth from 2010 to 2019 was only 400 physicians, with the broadest definition of those who provide primary care.[35] If left unaddressed, the shortage, stress on primary care, consolidation, and reduced scope of care will leave Virginians without a foundational element of care.

To see this article online, please go to: http://jabfm.org/content/36/6/892.full.

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Appendix.

Primary Care and Medicaid Survey 2021

Thank you for taking the time to complete this survey. It will greatly help in understanding the needs and role of primary care. Your responses will be used to improve the care of patients throughout Virginia and to guide future primary care support and payment. The survey has six sections and will take about 15 minutes to complete. Some answers are pre-populated based on what we already know about your practice.

Section 1: Contact Information

_____
Practice Name

_____
Medical group name (if applicable)

_____
Health system name (if applicable)

_____
Practice Address

_____
Practice City Practice State Practice Zip Code

Best Point of Contact

Full Name:
_____

Contact's role:
- ☐ Office Manager
- ☐ Administrative personnel
- ☐ Clinician
- ☐ Nurse
- ☐ Other, please specify:

_____

Preferred method of communication:
- ☐ Mail
- ☐ Email
- ☐ Phone

Contact's phone number:
_____

Contact's email address:
_____

Section 2: Practice Characteristics

2a. Is your practice primarily a…
- ☐ Primary care practice
- ☐ Specialty practice
- ☐ Integrated primary care and specialty practice

2b. Is your practice recognized as a Patient Centered Medical Home (PCMH)?
- ☐ Yes
- ☐ No

2c. Is your practice part of an Accountable Care Organization?

☐ Yes
☐ No

2d. Does your practice provide Direct Primary Care (DPC) or charge your patients a monthly or membership fee?

☐ Yes, for all patients
☐ Yes, for some patients
☐ No

2e. Please review and correct the name, specialty, and full time equivalent (FTE) for the clinicians in your office. **PLEASE ADD CLINICIANS IN YOUR PRACTICE NOT LISTED.**

Name	Specialty	FTE

2f. Please provide the total number and full time equivalent (FTE) for each integrated or co-located additional care team members.

	Total number of staff members	Total FTE of staff members
Psychologist		
Licensed Clinical Social Worker (LCSW) or Licensed Professional Counselor (LPC)		
Case Manager, Care Coordinator, or Patient Navigator		
Pharmacist		

2g. Please provide your **BEST ESTIMATE, ON AVERAGE**, how many patients a clinician in your practice sees in a full day of patient care (approximately 8 hours)?

_____

2h. Please provide your **BEST ESTIMATE** about what **PERCENTAGE** of your patients belong to the following racial groups. **THIS SHOULD ADD UP TO 100%.**

	Percent (%)
White	
Black	
Asian or Pacific Islander	
Native American or Alaska Native	
Other	

2i. Please provide your **BEST ESTIMATE** about what **PERCENTAGE** of your patients belong to the following ethnic groups.

	Percent (%)
Hispanic	
Non-Hispanic	

2j. Does your practice care for more than a few of any special populations of patients?

☐ Low income
☐ Group home residents
☐ Undocumented
☐ Refugees or Special Visa Holders
☐ Transgender
☐ People experiencing homelessness
☐ Non-English speaking
☐ Patients with opioid use disorder
☐ None of the above

2k. What is your **PRIMARY** outpatient electronic health record?

- ☐ Allscripts
- ☐ Athenahealth
- ☐ Cerner
- ☐ eClinical Works
- ☐ e MDs
- ☐ Epic
- ☐ Modernizing Medicine
- ☐ NextGen
- ☐ Practice Fusion
- ☐ Greenway
- ☐ We don't have anEMR
- ☐ Other

_____

2l. Which external care coordination tools are integrated into your **PRIMARY** EMR?

- ☐ Virginia's vaccine registry
- ☐ Virginia's PrescribingMonitoring Program (PMP)
- ☐ Virginia's Emergency Department Care Coordination Program (EDCCP)
- ☐ we are not integrated with any external care coordination tools
- ☐ Other

_____

Section 3: Medicaid Expansion Implementation

Since Jan 2019, Medicaid expanded coverage to adults with a family income at or below 138% of the poverty line, enrolling over 540,000 new members. This section will ask about how your practice was affected by expansion.

3a. How has Medicaid Expansion impacted your practice? **CHECK ALL THAT APPLY**

- ☐ We see more patients with Medicaid
- ☐ We see fewer uninsured patients
- ☐ We are doing better financially
- ☐ Our patients are less likely to delay care
- ☐ It is easier to refer patients to specialists
- ☐ It is easier to get patients the tests and procedures they need
- ☐ It is easier to get patients the medications they need
- ☐ Our practice has lost patients to other practices
- ☐ There are more primary care clinics in direct competition with us
- ☐ Medicaid expansion has not impacted our practice
- ☐ Medicaid expansion has hurt our practice (say how)

_____

3b. As a result of Medicaid Expansion, has your practice made any changes to improve care for patients with Medicaid? **CHECK ALL THAT APPLY**

- ☐ Hired more clinicians
- ☐ Hired more support staff
- ☐ Hired mental health providers
- ☐ Hired staff to address social needs
- ☐ Extended hours
- ☐ Made no changes
- ☐ Other

_____

Section 4: Practice Operations

4a. Practice ownership:

- ☐ Hospital/Health System
- ☐ Clinician Owner
- ☐ Clinician Partially Owned
- ☐ Private Sponsor/Investor/Corporation
- ☐ Insurance Company
- ☐ University Owned
- ☐ Government Owned

4b. Please provide your **BEST ESTIMATE** for your practice's **CURRENT** payer mix? **PLEASE MAKE SURE THE TOTAL ADDS UP TO 100%.**

	Percent (%)
Commercial or Private	
Medicaid	
Medicare	
Uninsured or self-pay	

4c. Is your practice currently accepting **NEW** patients with the following insurance types?

	Yes	No
Commercial or Private		
Medicaid		
Medicare		
Uninsured		

4d. Does your practice **CURRENTLY** participate in any of the following alternative payment models (i.e., payments that are not based on fee-for-service) with **ANY** payer? **CHECK ALL THAT APPLY**

- ☐ Per-member per-month payments (i.e., capitation)
- ☐ Shared savings payments
- ☐ Quality, value based, or pay for performance payments
- ☐ At risk payments (bonuses or penalties based on savings or quality)
- ☐ None of the above

4e. What percent of your **CURRENT** total office revenue is fee for service versus alternative payment? **PLEASE MAKE SURE THE TOTAL ADDS UP TO 100%.**

	Percent (%)
Fee for service	
Alternative payment (question 4d)	

4f. If there was a shift from **MULTIPLE PAYERS** to more alternative payments as opposed to fee-for-service payments, would your practice make any significant changes to staffing or how you deliver care?

☐ Yes ☐ No

4g. If your practice received a net increase in payment from **MEDICAID ONLY** through an alternative payment model to make Medicaid payment on par with Medicare payment, would your practice make any significant changes to staffing, your practice, or how you deliver care?

☐ Yes ☐ No

4h. Would your practice be interested in participating in an alternative payment model in Medicaid?

☐ Yes ☐ No

4i. If your practice received a net increase in payment from **MEDICAID ONLY** through an alternative payment model, would your practice change the number of Medicaid patients you accept?

- ☐ No change
- ☐ Accept more Medicaid patients
- ☐ Accept fewer Medicaid patients
- ☐ Begin accepting Medicaid patients

4j. If your practice received a net increase in payment from **MEDICAID ONLY** through an alternative payment model, which new clinicians or staff would you hire…. **CHECK ALL THAT APPLY**

- ☐ Physicians, nurse practitioners, or physician assistants
- ☐ Nurses or medical assistants
- ☐ Phone center or medical records staff
- ☐ Social workers
- ☐ Mental health providers
- ☐ Dieticians
- ☐ Care Coordinators, Care Managers, patient navigators
- ☐ Would not hire new clinicians or staff
- ☐ More likely to hire new clinicians or staff if **MULTIPLE PAYERS** increased payments
- ☐ Other

_____

4k. If your practice received a net increase in payment from **MEDICAID ONLY** through an alternative payment model, would your practice change your practice office hours? **CHECK ALL THAT APPLY**

- ☐ No change
- ☐ Expand hours during workday
- ☐ Work more patients in during workday
- ☐ Add evening hours
- ☐ Add weekend hours
- ☐ Decrease hours
- ☐ More likely to change if **MULTIPLE PAYERS** increased payments

4l. If your practice received a net increase in payment from **MEDICAID ONLY** through an alternative payment model, would your practice make any additional changes? **CHECK ALL THAT APPLY**

- ☐ Increase clinician salary or bonuses
- ☐ Increase support staff salary or bonuses
- ☐ Invest in technology (e.g., telehealth, electronic health record, patient portal)
- ☐ Building and Office Improvements
- ☐ Have longer office visits to spend more time with patients
- ☐ Reserve clinician time to respond to messages
- ☐ More care management activities (e.g., outreach to overdue patients)
- ☐ No additional changes
- ☐ More likely to change if **MULTIPLE PAYERS** increased payments
- ☐ Other

_____

4m. Based on the changes selected above, what are the goals your practice would hope to accomplish? **CHECK ALL THAT APPLY**

- ☐ Not applicable, made no changes
- ☐ Reduce clinician and/or staff turnover or burn out
- ☐ Care for more patients
- ☐ Improve access to care

☐ Reduce negative care events (e.g., emergency room visits, hospitalizations, readmissions)
☐ Ensure patients get recommended care
☐ Improve patient satisfaction
☐ Improve practice financial viability
☐ Other
_____

4n. What other changes would encourage your practice to see more Medicaid patients? **CHECK ALL THAT APPLY**

☐ Access to a local social health worker
☐ Access to a local community health worker or patient navigator
☐ Access to a local nutritionist
☐ Better access to mental health providers
☐ Better access to specialists

Section 5: Services Your Practice Provides

5a. How would you describe how your practice **MOST COMMONLY** cares for your patients' mental health needs?

☐ We have difficulty finding and referring patients to counseling
☐ We tell patients to call their insurance company for mental health care
☐ We regularly talk to mental health providers about our patients
☐ We have mental health providers in our office

5b. What strategies are ROUTINELY USED by your office to care for patients? **CHECK ALL THAT APPLY**

☐ Provide care coordination or patient navigation
☐ Communicate with your patients' health plan care coordinator
☐ Provide complex care management for chronic conditions
☐ Use a list or registry to identify patients in need of care
☐ Have alerts or reminders in your electronic medical record
☐ Measure your quality or performance
☐ Have a patient advice line
☐ Have strategies to reduce overuse or unnecessary medical care
☐ Follow-up within 24 hours after an emergency room visit or hospitalization
☐ Follow-up with patients after a referral to a specialist
☐ Promote generic medication prescribing
☐ None of the above

5c. Describe how your practice **MOST COMMONLY** cares for your patients' social needs (e.g., housing or food insecurity)? **CHECK ALL THAT APPLY**

☐ We have difficulty finding and referring patients to help for social needs
☐ We regularly screen our patients for social needs
☐ We have a social worker and other staff to help patients with social needs
☐ We have or are planning to add Unite Us to our medical record
☐ We coordinate transportation for patients
☐ We provide or refer patients to food pantry resources
☐ We provide or refer patients to coordinate housing for patients with housing instability
☐ We do not have capacity to address social needs

5d. What is your **BEST ESTIMATE** for how often your **CURRENT** visits are in person versus telehealth? **PLEASE MAKE SURE THE TOTAL ADDS UP TO 100%.**

	Percent (%)
In person visits	
Telehealth visits	

5e. What is your **BEST ESTIMATE** for how often your **CURRENT** virtual visits are video versus telephone? **PLEASE MAKE SURE THE TOTAL ADDS UP TO 100%.**

	Percent (%)
Video visits	
Telephone visits	

5f. Describe your practice's experience with video visits? **CHECK ALL THAT APPLY.**

- ☐ Patients like video visits
- ☐ Clinicians like video visits
- ☐ Patients have difficulty accessing video visits
- ☐ Patients' internet connections limit their use of video visits
- ☐ Patients don't want video visits
- ☐ We can see more patients with video visits
- ☐ We have fewer missed appointments with video visits
- ☐ We can provide the same level of care through video visits for most services
- ☐ We are worried that adequate reimbursement for video visits will be discontinued
- ☐ Our office plans to continue to promote video visits

5g. What services has your practice been able to provide during the COVID-19 pandemic? **CHECK ALL THAT APPLY**

- ☐ Messaging and education about social distancing and mask wearing
- ☐ Viral testing to diagnose acute infections in our office
- ☐ Antibody testing to diagnose acute or past infections in our office
- ☐ Hospital management for our acutely ill patients
- ☐ Antibody treatment for higher risk patients with acute infections
- ☐ Home monitoring for patients with acute infections
- ☐ Manage LongCovid
- ☐ Patient education on efficacy and safety of vaccine
- ☐ Give COVID-19 vaccinations to our patients
  Date of first vaccine given by your clinic_____
  About how many vaccines has your practice given_____

5h. Did your local health department, state health department, or other public health agency work with you in some capacity during the pandemic?

- ☐ Yes
- ☐ No

Section 6: Practice Challenges and Opportunities

6a. What major changes has your office experienced the past year? **CHECK ALL THAT APPLY**

- ☐ Moved to a new office
- ☐ Changed our electronic medical record
- ☐ Changed our billing system
- ☐ Changed ownership
- ☐ Had an office renovation
- ☐ Lost one or more doctor, nurse practitioner, or physician assistant
  How many_____
  Why: ☐ Planned retirement ☐ Early retirement ☐ Moved
  ☐ Changed practices ☐ Fired ☐ Died

6b. How did the COVID-19 pandemic impact your practice's clinicians and staff? **CHECK ALL THAT APPLY**

- ☐ We reduced or held pay for clinicians and staff
- ☐ We are still struggling to recover financially
- ☐ We let clinicians or staff go
- ☐ One or more of our clinicians or staff got COVID
- ☐ One or more of our clinicians or staff died from COVID
- ☐ Our clinicians or staff are still suffering from significant burnout or mental exhaustion

6c. During the COVID-19 pandemic, which groups helped your practice (e.g., got you PPE, helped with testing, helped coordinate care, got you needed information, helped you financially)? **CHECK ALL THAT APPLY**

- ☐ Other practices
- ☐ Health system
- ☐ Employers
- ☐ Commercial payers
- ☐ Medicare payers
- ☐ Medicaid payers
- ☐ State government
- ☐ Federal government
- ☐ Pharmacies
- ☐ Community organizations
- ☐ Local or state health department
- ☐ Other _____
- ☐ We did not get any help

6d. Did your office get the financial help it needed during the COVID-19 pandemic?

☐ Yes ☐ No ☐ We did not need financial help

6e. Where did your office get financial help? **CHECK ALL THAT APPLY**

- ☐ Paycheck Protection Program (PPP) loan
- ☐ Health system
- ☐ Local or state government
- ☐ Businesses or employers
- ☐ Insurers or payers
- ☐ We did not get any financial help

6f. What is something that your practice does really well?

_____
_____
_____

Thank you for taking the time to answer this survey. Your information will help to make sure we continue to provide the best care for Virginians possible.