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The Effect of Supervision Waivers on Practice

A Survey of Massachusetts Nurse Practitioners During the COVID-19 Pandemic

Monica O'Reilly-Jacob, RN, PhD, FNP-BC and Jennifer Perloff, PhD†*

Background: While optimal utilization of the nurse practitioner (NP) workforce is an increasingly popular proposal to alleviate the growing primary care shortage, federal, state, and organizational scope of practice policies inhibit NPs from practicing to the full extent of their license and training. In March of 2020, NP state-specific supervisory requirements were temporarily waived to meet the demands of the coronavirus disease 2019 (COVID-19) pandemic in Massachusetts.

Objective: The objective of this study was to examine the impact of temporarily waived state practice restrictions on NP perception of care delivery during the initial surge of the COVID-19 pandemic in Massachusetts.

Research Design: Mixed methods descriptive analysis of a web-based survey of Massachusetts NPs (N = 391), conducted in May and June 2020.

Results: The vast majority (75%) of NPs believed the temporary removal of practice restriction did not perceptibly improve clinical work. Psychiatric mental health NPs were significantly more likely than other NP specialties to believe the waiver improved clinical work (odds ratio = 6.68, $P = 0.001$). NPs that experienced an increase in working hours during the pandemic surge were also more likely to report a positive effect of the waiver (odds ratio = 2.56, $P = 0.000$).

Conclusions: Temporary removal of state-level practice barriers alone is not sufficient to achieve immediate full scope of practice for NPs. The successful implementation of modernized scope of practice laws may require a collective effort to revise organizational and payer policies accordingly.

From the *William F. Connell School of Nursing, Boston College, Chestnut Hill; and †The Heller School for Social Policy and Management, Brandeis University, Waltham, MA.

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Correspondence to: Monica O'Reilly-Jacob, RN, PhD, FNP-BC, William F. Connell School of Nursing, Boston College, 140 Commonwealth Avenue, Chestnut Hill, MA 02467. E-mail: monica.oreilly@bc.edu.

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The severity of the US primary care physician shortage is worsening. Currently, 80 million people are without adequate access to primary care with a projected physician shortfall of up to 55,000 by 2033.[1] While optimal utilization of the nurse practitioner (NP) workforce is an increasingly popular proposal to alleviate the physician shortage,[1–4] contain rising health care costs,[5–7] and promote team-based care,[8] outdated state laws inhibit NPs from practicing to the full extent of their license and training. Decades of incremental progress towards nationwide full NP scope of practice was suddenly disrupted in March of 2020 during the initial surge of coronavirus disease 2019 (COVID-19), when NP supervisory requirements were temporarily waived in 22 states. These unprecedented and abrupt policy changes are prompting state legislatures across the country to reevaluate their NP scope of practice laws. This study, focused on Massachusetts, used a web-based survey to examine the effect of the temporary waiver of supervision on NP care delivery.

The NP role originally emerged to meet the growing needs of rural and underserved communities amidst a primary care shortage in the 1960s.[9] Today, about half of NPs provide primary care[10] and disproportionately work with underserved populations.[11–14] Despite the large body of evidence that NP care is high-quality[15,16] and cost-effective,[17–22] persistent legislative efforts to modernize scope of practice laws have been unsuccessful in 27 states. Proponents of limiting NP scope assert that such laws protect the public from lower quality of care.[23–26] The evidence does not support this position, but rather shows that restrictions are associated with lower access to care, especially for vulnerable populations and are not associated with improvements in quality.[27]

In reality, NP scope of practice is not solely a product of state law, but rather is determined by a mix of payment rules, state regulations, organizational policies, and collaborative agreements between NPs and their supervising physicians. It is a complex phenomenon of interwoven policies, many of which overlap or compete. The result is a broad range of oversight, from entirely independent to highly supervised practice, that is not consistent across level of experience, institution or region.[28,29] State laws govern prescriptive authority, while payment rules and

organizational guidelines can impose additional restrictions on the ability to order certain basic treatments (eg, diabetic shoes[30]) or routine diagnostic tests.[31] Prior to March 2020, the authority to prescribe medications in Massachusetts required physician supervision and mandated: (1) the name of the supervising physician appear on all NP prescriptions; (2) a retrospective review of a subset of prescriptions; and (3) an expedited review of all initial prescriptions for controlled substances within 96 hours.[32]

Over the last 25 years, 9 bills have been filed to reduce practice barriers for NPs in Massachusetts. Incremental bills, such as those granting primary care provider status and death pronouncement authority, met fewer obstacles than more comprehensive legislation. Since 2013, four separate bills proposing full practice authority were filed, the last of which successfully passed on January 1st, 2021.[33] On March 26, 2020, an executive order in Massachusetts suspended the supervision requirement for NPs with at least 2 years of experience, essentially shifting NPs from highly restricted practice[34] to full independence overnight.[35] While little is known about how the transition to full scope affects NP practice, early research suggests it may have a positive effect on population health and NP supply.[36,37] The purpose of this study was to examine the impact of temporarily waived state practice restrictions on NP care delivery during the initial phase of the COVID-19 pandemic in Massachusetts.

METHODS

A web-based survey of NPs actively working in Massachusetts was conducted from May 8 to June 15, 2020, a period of COVID-19 surge in the state. An email survey invitation was sent to the distribution list of the Massachusetts Coalition of Nurse Practitioners (MCNP), an advocacy organization focused on continuing education, practice support, and legislative representation for NPs. The distribution list included members and nonmembers of MCNP, many of whom had a priori unknown study eligibility (ie, retired/students/academics). However, the survey invitation clearly defined eligibility as NPs who were clinically active during the beginning of the state of emergency in Massachusetts (March, 2020). After the initial email outreach, there were 3 email reminders sent over a 5-week period. There was no incentive to participate. Among the 958 receiving the invitation (~15% of all NPs in the state[7]), 413 respondents consented. Of these, 9 were ineligible and 13 were blank, resulting in a final sample of 391. Standards from the American Association for Public Opinion Research[38] were used to calculate a response rate of 41.2% (calculated as the sum of completes and partially completes divided by the number of received invitations minus ineligible).

The 10-question survey (Text, Supplemental Digital Content 1, http://links.lww.com/MLR/C161) included open and closed questions related to NP specialty, clinical setting, changes in employment, and working hours related to the pandemic, and employer-imposed supervision requirements. The effect of temporarily waived restrictions on clinical work was measured by specifically asking respondents, "Do you believe the waiver of supervision requirements has enabled you to improve your clinical work?" Survey questions were reviewed by a panel of NPs and survey experts from a range of schools of nursing, such as Boston College.

Statistical analysis included the Fisher exact tests to examine the strength of associations between the perception that the waiver improved work with other variables, among only those respondents who continued working through the pandemic. Logistic regression was used to model the impact of NP specialty, pandemic-related changes in hours working, and employer-imposed restrictions on the perceived impact of the supervision waiver. Finally, open-ended responses were independently reviewed by 2 researchers to contextualize these associations.

RESULTS

As presented in Table 1, about 75% of respondents held certifications in family care or gerontology and, overall, the breakdown of certifications appeared to be representative of NPs in Massachusetts.[6,39] Regarding the time spent working, 30% worked more hours during the pandemic compared with before, while 28% worked less and the remaining worked the same amount. In open-ended responses, many reported experiencing furloughs or low patient volume.

Overall, 25% of respondents believed their work was improved as a result of the waiver of physician supervision. Open-ended responses described the NP experience of liberalized scope. Those that believe the waiver improved work cited more efficient care delivery due to suspended requirements related to colocation, supervision fees, and additional physician signatures on orders and prescriptions. Eliminating these barriers meant that NPs could practice independently,

TABLE 1. Sample Composition

Respondent Characteristics	n (%)
Certification (N = 389)	
Family	157 (40)
Adult-gerontology	127 (33)
Acute care	28 (7)
Psychiatric care	26 (7)
Pediatric care	22 (6)
Women's health	15 (4)
Other	14 (4)
Clinical setting during pandemic (N = 382)	
Primary care/ambulatory care	186 (49)
Acute inpatient care	60 (16)
Telehealth	52 (14)
COVID-19 field hospitals or testing sites	27 (7)
Home and community-based care	25 (7)
Postacute care	20 (5)
Unemployed	8 (2)
Other	4 (1)
Time at work during pandemic (N = 383)	
Considerably more (> 8 additional hours)	68 (18)
More (< 8 additional hours)	48 (13)
About the same	160 (42)
Less (fewer hours)	107 (28)
Employer restrictions despite waiver (N = 349)	58 (17)
Waiver improved work* (N = 335)	87 (25)

*Do you believe the waiver of supervision requirements has enabled you to improve your clinical work?

COVID-19 indicates coronavirus disease 2019.

which was critical when physicians were emergently deployed to provide COVID-related care. This perspective is illustrated by a respondent who wrote: *My efficiency during COVID-19 has improved because I no longer have to keep track of these burdensome administrative chart logs and sending notes for co-signature while the state of emergency lasts.*

The majority, however, believed that waiver did not improve their work. Approximately 17% of respondents practiced under employer-imposed restrictions that did not change despite the waiver of state requirements. Some respondents expressed their individual choice to continue meaningful collaboration with physician colleagues, even though it was not required or regulated. Others described prior supervision as infrequent, delayed, and brief, the absence of which did not materially impact practice. This viewpoint was typified by another respondent: *[My work] is essentially the same. I practice independently without the need for physician supervision, but always with the opportunity for collegial collaboration.*

Table 2 describes those who believed the waiver improved their clinical work. Of the NPs who worked considerably more hours, 42% believed the waiver improved their work as compared with only 20% those who worked about the same amount ($P = 0.000$). Although the sample is small, psychiatric mental health NPs were substantially more likely than other specialties to work more (50%, $P = 0.01$). Furthermore, compared with other NP specialties, psychiatric mental health NPs were most likely to believe the waiver improved their work (52%, $P = 0.008$). These results were confirmed by logistic regression (Table 3), which showed that psychiatric mental health NPs were 6.6 times ($P = 0.001$) more likely to report improved clinical work than other NP specialties, holding all else constant. Similarly, those who worked more ($P = 0.000$) or were family NPs ($P = 0.026$) were both 2.56 times more likely to report improvement.

TABLE 2. Belief That Waiver Improved Practice, by Certification, Setting, Time, and Employer Restrictions

Respondent Characteristics	Waiver Improved Work* (N = 87) [n (%)]
Certification	
Family	38 (27)
Adult-gerontology	28 (24)
Acute care	4 (15)
Psychiatric care	13 (52)
Pediatric care	2 (11)
Women's health	1 (8)
Other	1 (3)
P	0.008
Clinical setting during pandemic	
Primary/ambulatory care	40 (23)
Acute inpatient care	11 (20)
Telehealth	16 (33)
COVID-19 triage	6 (25)
Home/community-based care	7 (30)
Postacute care	5 (28)
Unemployed	0
Other	0
P	NS
Time at work during pandemic	
Considerably more (> 8 additional hours)	27 (42)
More (< 8 additional hours)	15 (34)
About the same	29 (20)
Less (fewer hours)	16 (16)
P	0.000
Employer restrictions despite waiver	
No	72 (26)
Yes	11 (21)
P	NS

*Do you believe the waiver of supervision requirements has enabled you to improve your clinical work?

Significance testing was done with the Fisher test.

COVID-19 indicates coronavirus disease 2019; NS, nonsignificant.

DISCUSSION

The survey results suggest that, 2 months after a temporary waiver of supervision requirements, a quarter of NPs believed the waiver improved their work. The more time NPs spent working, the more likely they were to believe that this was true. Three quarters of respondents believed the temporary waiver had no perceptible impact on their work, which may reflect how workflow was unchanged, possibly due to continued employer restrictions, preestablished workarounds or minimal supervision before the waiver. This study finding is consistent with prior research demonstrating that mandated physician supervision significantly limits NP practice,[29] is not consistent across organizations[28,39] and is often of little value, especially for NPs with extensive experience.[40]

The finding that psychiatric mental health NPs are the most likely to believe that the waiver improved work (odds ratio = 6.68, $P = 0.001$), possibly reflects the higher demand for mental health care during the pandemic or the disproportionate effect of mandated physician supervision on psychiatric care, which often involves prescribing. While research is not as robust for psychiatric mental health NPs, recent studies suggest that full scope of practice increases access to behavioral care[41] and improves the mental health of populations.[42,43] Our finding highlights that practice barriers may be more significant for psychiatric mental health NPs, which is a growing concern amidst a decreasing supply of psychiatrists[44] and an increasing demand for mental health care.[45]

The finding that working more is associated with a positive impact of the waiver (odds ratio = 2.56, $P = 0.000$) should be contextualized within the complex environment of the initial surge of the coronavirus pandemic in Massachusetts. During this time, the demand for NPs was high in some settings, but lower in others as the need for in-person care plummeted. The effect might be stronger if more NPs were working full-time with more normal patient volume and workload.

Furthermore, the timing of the survey and the temporary nature of the policy change also impacts these findings. The survey was administered 2 months after the abrupt scope of practice change and likely captured NP perceptions during a transition period, rather than after complete implementation of full scope of practice. If the scope of practice change was permanent, employers and clinicians may have been encouraged to update internal policies without concern for a potential state policy reversal. These factors likely diluted the perceptible impact of the supervision waiver.

TABLE 3. Logistic Regression of Perception That Waiver Improved Work* (N = 389)

Independent Variables	Parameter Estimate	Odds Ratio	*P*	95% CI, Lower Bound	95% CI, Upper Bound
Constant	−2.24		0.000	−3.11	−1.59
Family	0.94	2.56	0.026	0.11	1.76
Adult-gerontology	0.72	2.05	0.099	−0.13	1.58
Psychiatric care	1.90	6.68	0.001	0.81	2.9
More time at work during pandemic	0.94	2.56	0.000	0.42	1.45
Employer restrictions	−0.21	1.23	0.569	−0.95	0.52
Log likelihood	−191				

*Estimated using logistic regression.
CI indicates confidence interval.

The study was limited by a truncated field period and abbreviated survey, which were purposeful to avoid creating undue burden on respondents, many of whom were working on the frontlines during the pandemic surge. The brevity of the survey did not allow for the collection of several important factors that may impact a NP's perception of the effect of temporarily removed practice restrictions. These factors include, and are not limited to, practice size, and provider composition, colocation of supervising physician, region, rurality, complexity of care, level of NP experience, degree type (doctorate vs. master's), specific practice barriers (both state and employer based), affiliation with an academic medical center, location in a health provider shortage area, specific clinical responsibilities (eg, routine ordering of controlled substances), and local norms around interprofessional health care. These are important contextual factors to consider in future research.

Despite the limitations, this study provides a glimpse into the immediate effects of an unprecedented policy change during a complex time. This initial snapshot warrants further research to track changes in the effect of the supervision waiver over time. In addition, a more focused analysis on the potentially high sensitivity of psychiatric mental health NPs to practice barriers is necessary, especially in light of the growing mental health provider shortage. Last, additional research on the effect of liberalized scope on patient satisfaction and access to care is essential to understanding the full impact of practice barriers on the experience of both providing and receiving NP care.

The complicated web of regulations that restrict NP scope of practice creates a situation where NPs are not clearly able to distinguish state policies from federal regulations and institutional policies. Eliminating practice barriers at one level is not sufficient to achieve the full scope of NP practice and will prolong suboptimal utilization of the NP workforce. These study findings raise questions around effective transition to full scope of practice. A deeper and broader analysis of the barriers and facilitators of successful implementation of liberalized scope will be necessary, especially as states consider lifting restrictions and organizations respond by contracting or expanding their own NP scope of practice policies. The results of this study may or may not be generalizable to the other 21 states where NP practice barriers were temporarily removed, but these results are relevant to any state transitioning to liberalized NP scope of practice.

This moment of disruption brings opportunities to modernize scope of practice across the health care system and federal and state governments. The federal government set a precedent by authorizing NPs to order home care in the Medicare program, [46] adopting full scope of NP practice in the Veterans Health Administration[47] and requesting a review of NP reimbursement and regulatory policies.[48] State policymakers could follow their lead by permanently eliminating practice barriers rather than reverting back to pre-pandemic restrictive laws.

These results highlight, however, that successful implementation of liberalized scope of practice may not occur automatically. It may require the concerted and collective efforts of clinicians, employers, payers, and researchers to ensure that institutions fully understand the opportunity and benefits of full scope of NP practice and revise workflow and protocols accordingly. In this way, the delivery system will maximize the capacity of the workforce to meet the ever-changing demands of patient care both during and after the pandemic. Embracing the opportunity to effectively implement modernized scope of practice laws now, will optimize the capacity of the NP workforce to strengthen team-based care, contain health care costs and alleviate the primary care shortage well into the future.

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