Evaluating the Impact of Executive Orders Lifting Restrictions on Advanced Practice Registered Nurses during the COVID-19 Pandemic

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Agenda

Background

Methodology

Results

Key Takeaways

BRACE YOURSELF

POWERPOINT SLIDES ARE COMING

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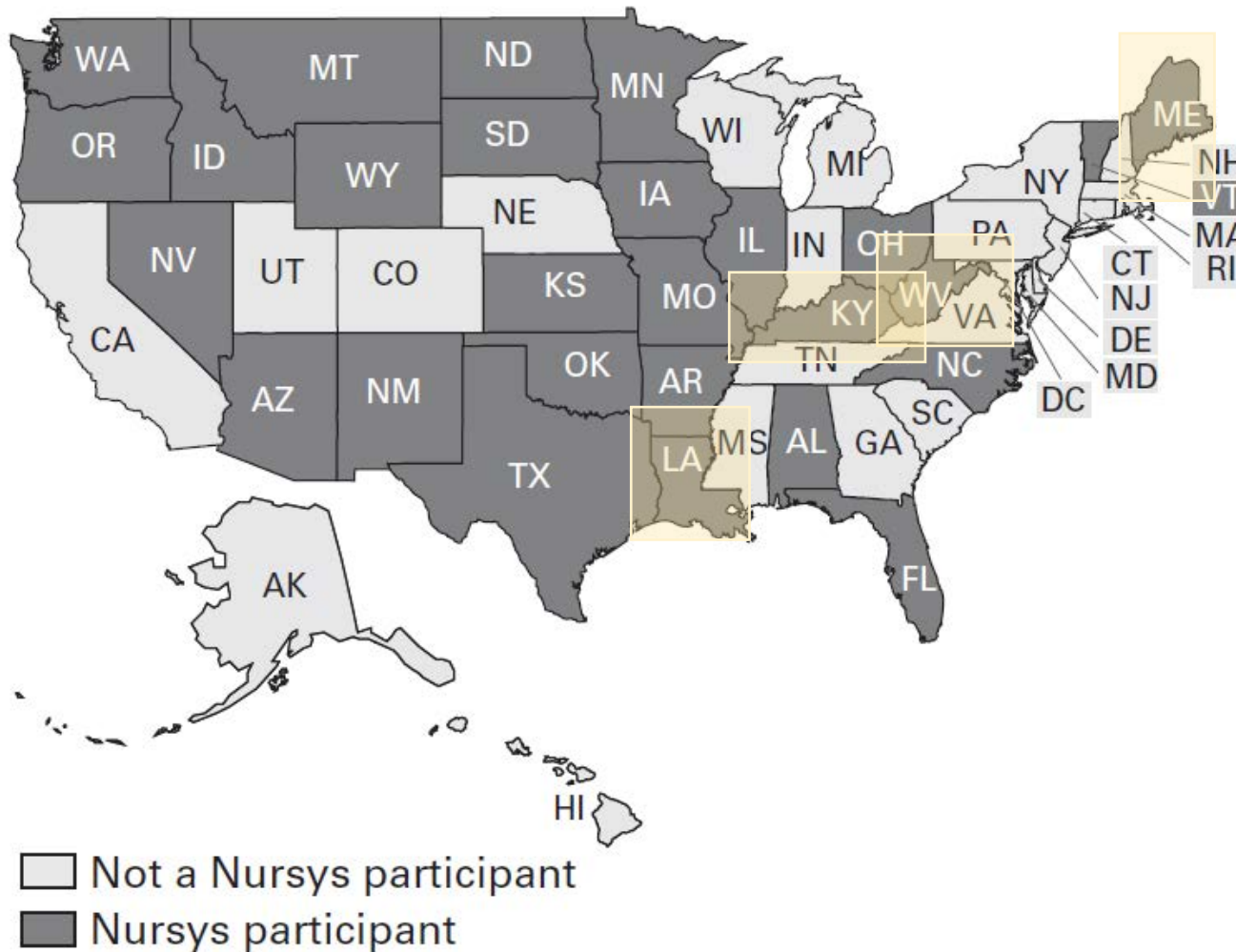# Background

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Primary Research Question

What is the impact of the executive orders lifting restrictions on Advanced Practice Registered Nurses' direct patient care during the COVID-19 pandemic?

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Objectives

1) Assess APRN discipline trends before and following the onset of the COVID-19 pandemic

2) Determine the patient care implications of the executive orders lifting restrictions on APRNs

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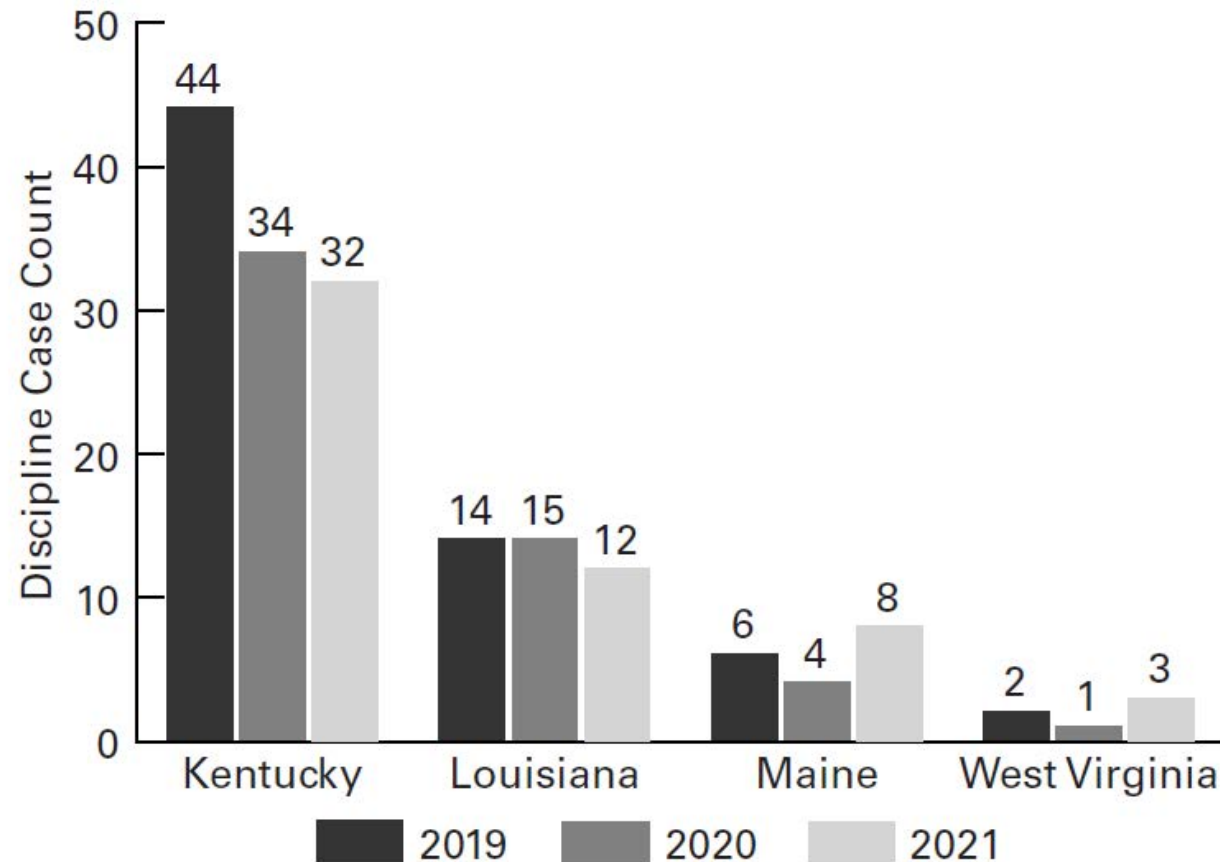
State Sampling Methodology

Analysis

- **Discipline Analysis:** Graphical depiction of summary trends

- **Survey Data Collection:** Qualtrics (Provo, UT)

- **Survey Analysis:** Detailed descriptive; univariable and multivariable binary logistic regression models

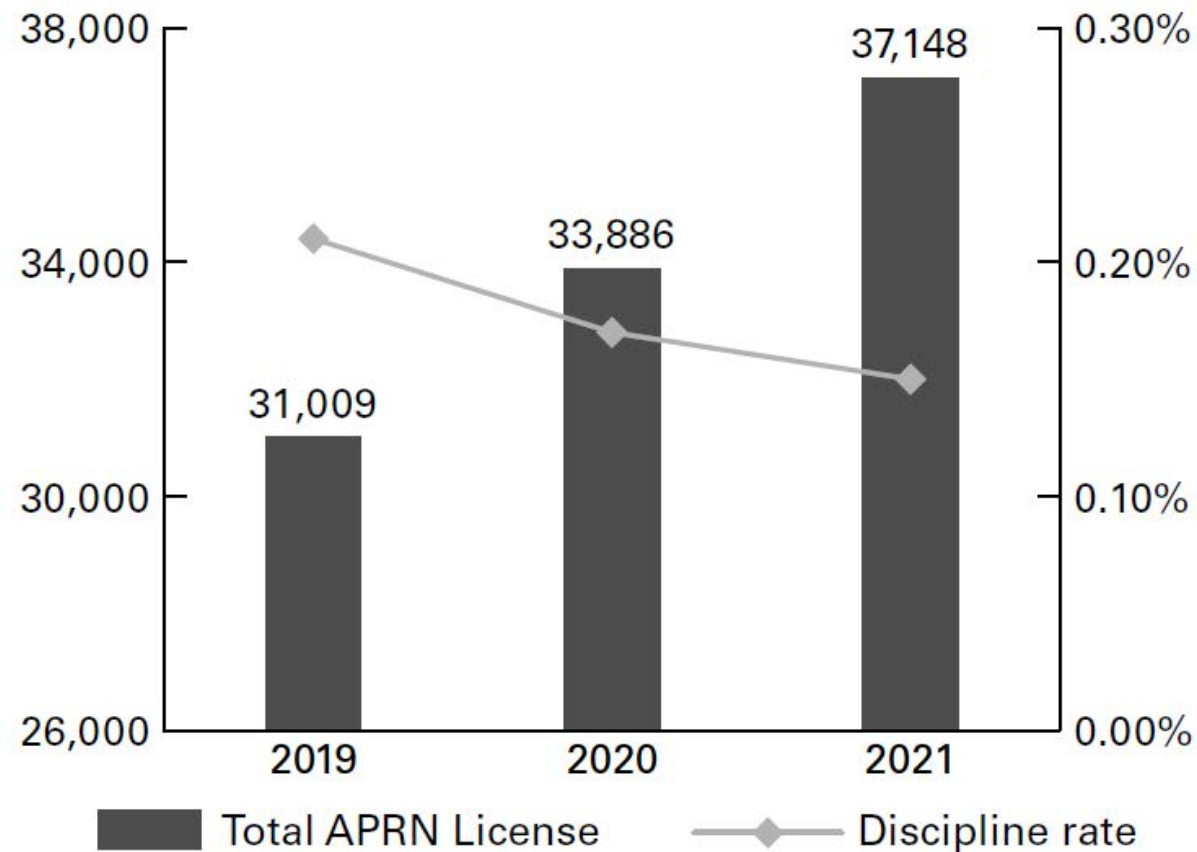NCSBN
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NURSYS Discipline Case Review

- Detailed case review to both quantify the volume and determine the nature of APRN disciplinary action

- The overall APRN discipline rate was approximately 0.1% during the analysis period (2019–2021)

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Number of APRN Discipline Cases Reported by Four BONs, 2019-2021

Discipline Rates and the Number of APRN Licenses Reported by Four BONs, 2019-2021

Survey Administration

- December 8, 2020 to January 11, 2021

- 42-item confidential survey

- Three Domains: (a) demographic and professional information, (b) practice, and (c) telehealth

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Provider Demographics

- On average, respondents were…
  - ❖ 50 years old (SD: 11.8)
  - ❖ Female (88%)
  - ❖ White (86%)
  - ❖ Non-Hispanic (96%)

- 88% direct patient care

- 68% resided in restrictive jurisdiction prior to COVID-19

Respondent Characteristics		Total
Age (n = 16,668)		50.0 (11.8)
Experience, in Years (n = 16,692)		10.6 (8.5)
Sex (n = 16,137)		
	Female	14,118 (87.5%)
	Male	2,019 (12.5%)
Race (n = 13,576)		
	White/Caucasian	11,701 (86.2%)
	Black/African American	787 (5.8%)
	Asian	426 (3.1%)
	Mixed Race	278 (2.1%)
	Native Hawaiian/Pacific Islander	29 (0.2%)
	Other	245 (1.8%)
Ethnicity (n = 13,474)		
	Not Hispanic or Latino	12,899 (95.7%)
	Hispanic or Latino	575 (4.3%)
Direct Patient Care (n = 16,572)		
	Yes	14,602 (88.1%)
	No	1,970 (11.9%)
License Type (n = 16,695)		
	Certified Nurse Practitioner	13,376 (80.1%)
	Certified Registered Nurse Anesthetist	2,147 (12.9%)
	Certified Nurse Specialist	718 (4.3%)
	Certified Nurse Midwife	454 (2.7%)
Data Notes: Valid N for each item varies based on observed non-response rates; all proportions are reported based on item-level Valid N. All continuous variables presented as means and standard deviation.		

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Practice Demographics

- **Top Population:** Family Across the Lifespan (42%)

- **Top Clinical Practice Area:** Primary Care (20%)

- Hospital setting (52%)
  - ➢Inpatient (30%)
  - ➢Outpatient (40%)
  - ➢Both (30%)

Respondent Characteristics	Total
Top 5 Population Foci (n = 12,813)	
Family/Across Lifespan	5,424 (42.3%)
Adult Gerontology	2,107 (16.4%)
Psychiatric Mental Health	925 (7.2%)
Pediatrics	830 (6.5%)
Women's Health/Gender Related	718 (5.6%)
Top 5 Clinical Practice Areas (n = 14,438)	
Primary Care	2,941 (20.4%)
Anesthesia	1,715 (11.9%)
Emergency/Urgent Care	1,166 (8.1%)
Women's Health/Gender Related	785 (5.4%)
Psychiatric Mental Health (Adult)	721 (5.0%)
Primary Practice Setting (n = 14,354)	
Large hospital facility/system	3,512 (24.5%)
Private practice (Physician-run)	2,406 (16.8%)
Community hospital	2,056 (14.3%)
University-affiliated hospital facility/system	1,834 (12.8%)
Private practice (APRN-run)	1,048 (7.3%)
Long-term care	560 (3.9%)
Other	2,938 (20.5%)
Practice Environment (n = 7,377)	
Inpatient	2,192 (29.7%)
Outpatient	2,914 (39.5%)
Both	2,271 (30.8%)
Geographic Setting (n = 13,700)	
Rural	3,700 (27.0%)
Suburban	4,650 (33.9%)
Urban	5,350 (39.1%)
Data Notes: Valid N for each item varies based on observed non-response rates; all proportions are reported based on item-level Valid N. All continuous variables presented as means and standard deviation.	

Collaborative Practice Agreement Restrictions

- Supervising physician signature/co-signature requirement (n = 2,144, 55%)

- Prescribing restrictions (n = 1,851, 47%)

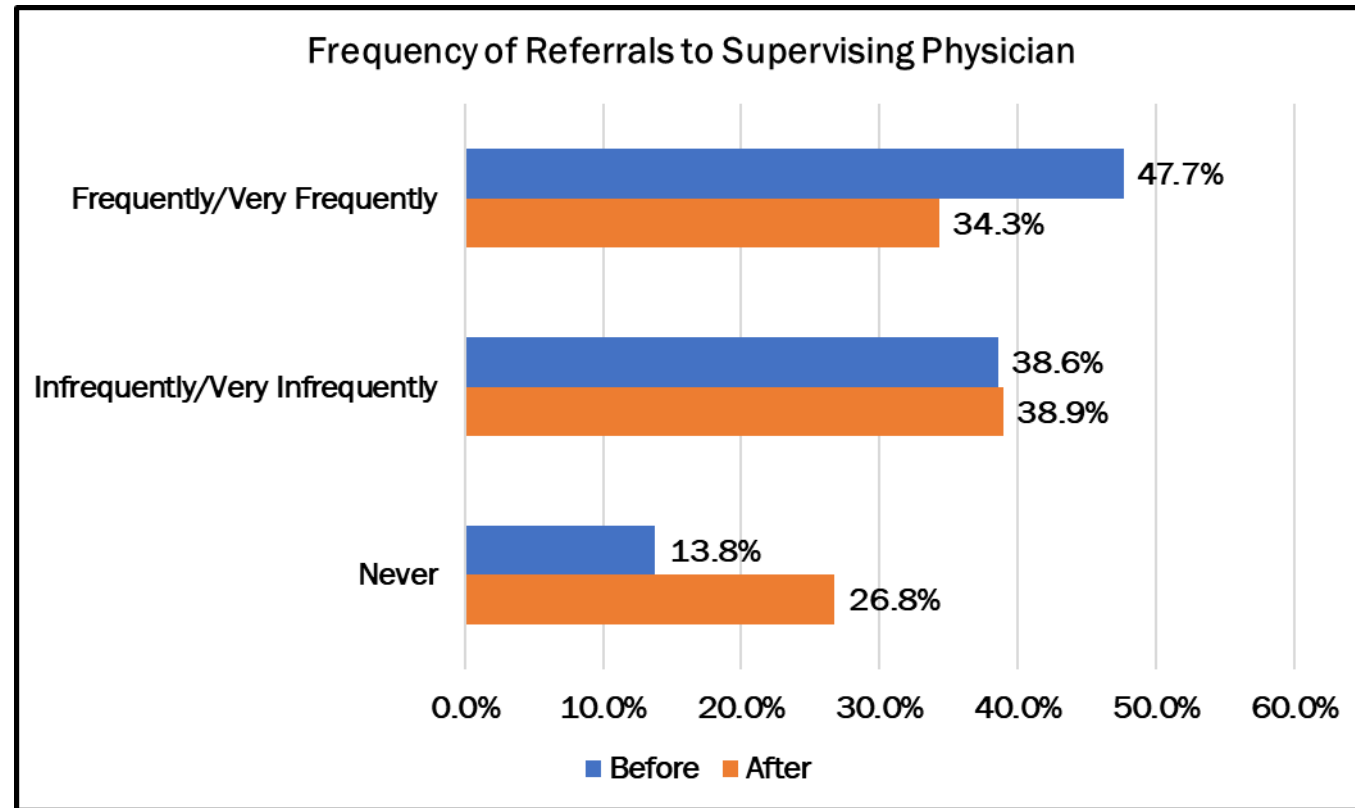- Mandated chart reviews (n = 1,700, 43%)

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Collaborative Practice Agreement Fees

- **Establish** – Median: $150; IQR: $100 – $1,000

- **Maintain** – Median: $175; IQR: $100 – $3,000

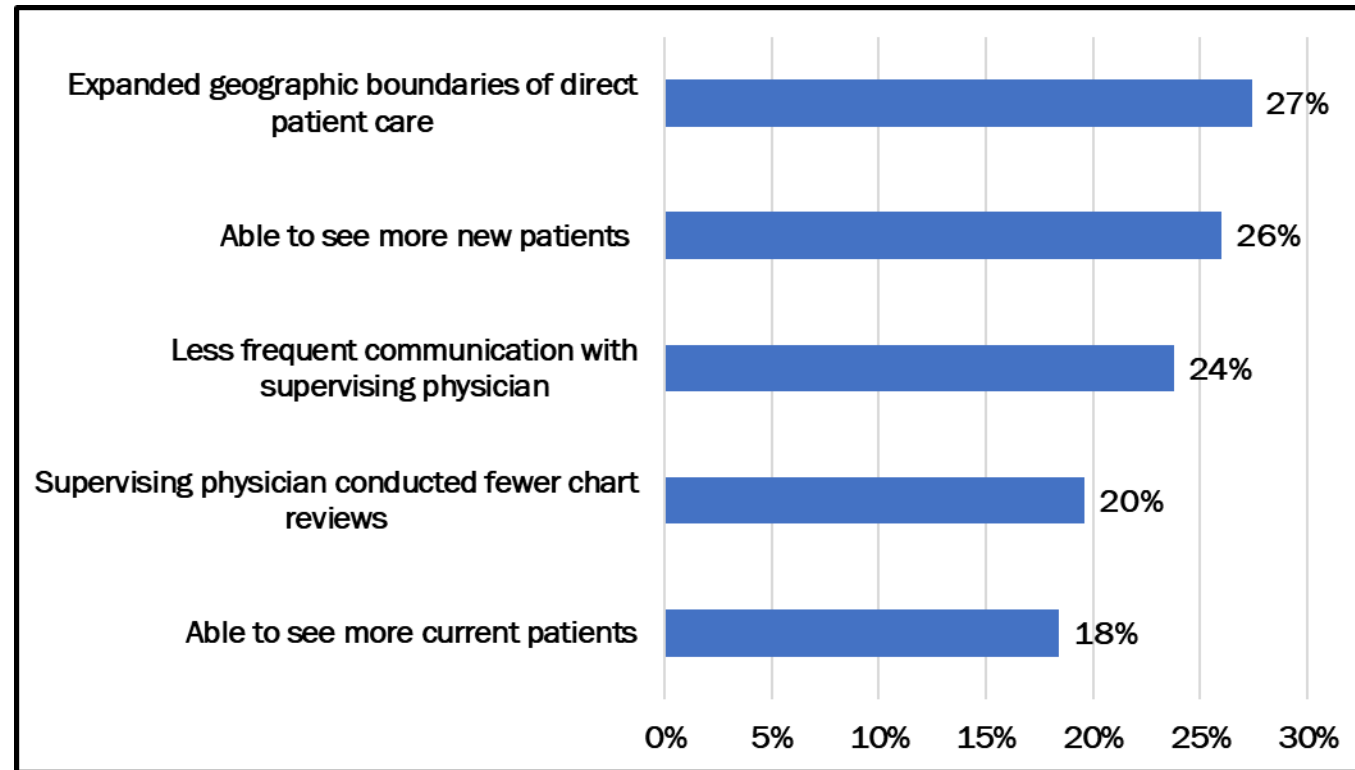NCSBN
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COVID-19 Impact

- 81% indicated COVID-19 affected their patient care

- 34% were reassigned or changed positions

- Approximately **1 in 5** expanded the geographic boundaries of their practice

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COVID-19 Waiver Impact on Referrals

How the COVID-19 Waivers had an Impact

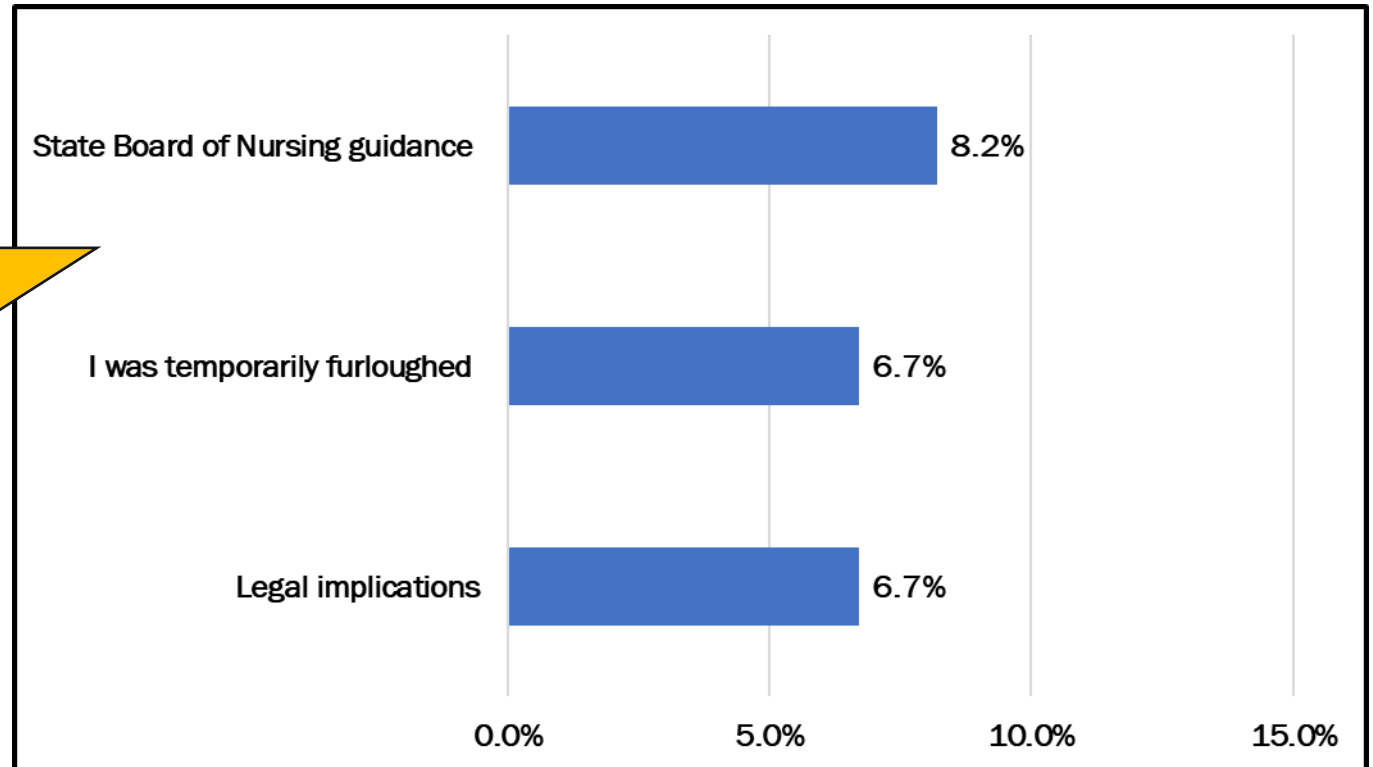| Category	Percentage
Expanded geographic boundaries of direct patient care	27%
Able to see more new patients	26%
Less frequent communication with supervising physician	24%
Supervising physician conducted fewer chart reviews	20%
Able to see more current patients	18%

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Why the COVID-19 Waivers Didn't have an Impact

Employer Requirements Did Not Change, 79.3%

State Board of Nursing guidance — 8.2%

I was temporarily furloughed — 6.7%

Legal implications — 6.7%

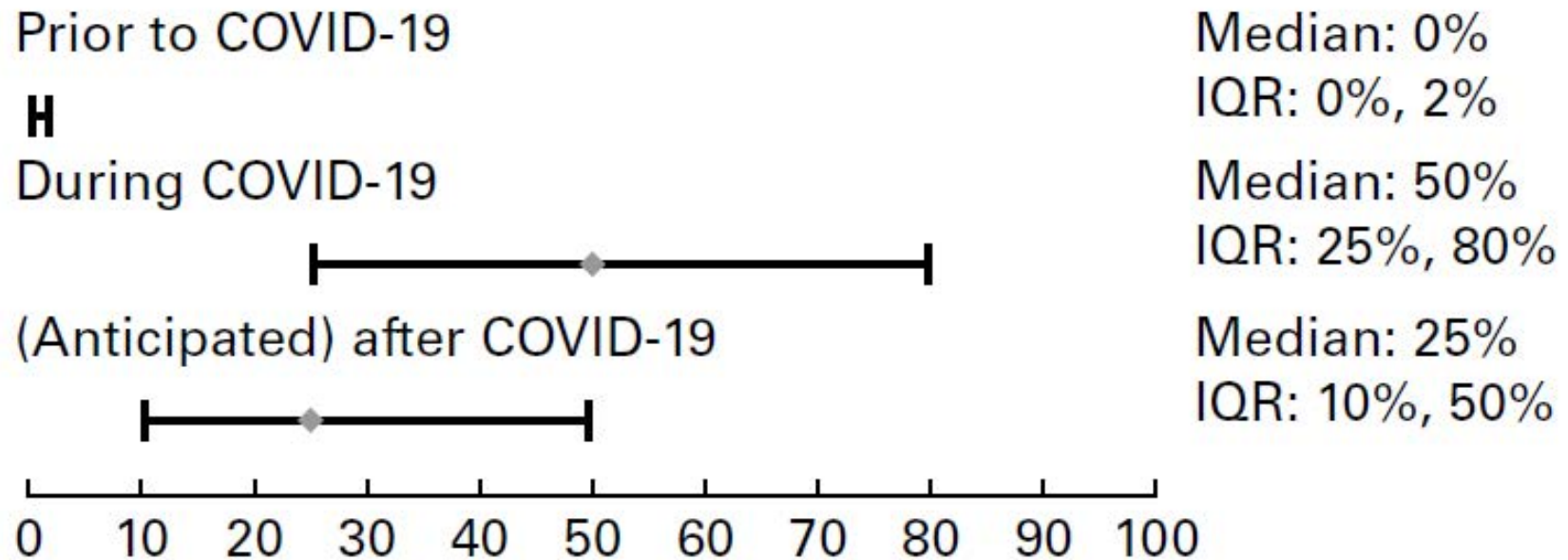0.0%   5.0%   10.0%   15.0%

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Telehealth

- 60% currently practice telehealth

- 26% experienced restrictions prior to COVID-19

- 73% reported restrictions were waived

  - ➢ 62% saw more of their current patients

  - ➢ 43% added new patients

  - ➢ 42% expanded geographic boundaries

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Current and Anticipated APRN Telehealth Usage

Prior to COVID-19 — Median: 0% IQR: 0%, 2%

During COVID-19 — Median: 50% IQR: 25%, 80%

(Anticipated) after COVID-19 — Median: 25% IQR: 10%, 50%

Note. IQR = interquartile range.

Telehealth Barriers

- Patient focused

  - ➢ Patient lacked access to needed technology (63%)

  - ➢ Patient lacked sufficient technology support (57%)

  - ➢ Patient apprehension (36%)

Model Results

- Positive waiver effects reported by...
  - ➢ Ethnicity (Hispanic providers)
  - ➢ License type (CNP*)
  - ➢ Primary Care providers
  - ➢ Outpatient practice environments
  - ➢ APRN private practice
  - ➢ Rural geographic location
  - ➢ HPSA designation
  - ➢ Telehealth usage

*v. CRNA

Case Characteristics	Impact of Temporary Practice Waiver			
	OR (95 CI)	p	AOR (95 CI)	p
Age (*Unit = 1*)	1.00 (0.99 – 1.01)	.98		
Ethnicity (*Ref* = 'Not Hispanic or Latino')	1.55 (1.05 – 2.28)	.03	1.58 (1.05 – 2.37)	.03
Race		.22		
White/Caucasian (*Ref*)	-			
Black/African American	1.12 (0.85 – 1.48)	.42		
Asian	1.45 (0.91 – 2.32)	.12		
Mixed Race	1.47 (0.88 – 2.46)	.15		
Native Hawaiian/Pacific Islander	1.22 (0.27 – 5.46)	.80		
Other	0.71 (0.38 – 1.34)	.29		
Experience (*Unit = 1*)	0.99 (0.98 – 1.00)	.21		
License Type		.047		.81
CNP (*Ref*)	-		-	
CRNA	0.72 (0.55 – 0.94)	.01	0.93 (0.47 – 1.84)	.84
CNS	0.89 (0.56 – 1.41)	.61	0.79 (0.48 – 1.28)	.34
CNM	0.68 (0.40 – 1.16)	.15	1.05 (0.54 – 2.03)	.90
Top 5 Clinical Practice Areas		<.001		.004
Primary Care	1.51 (1.27 – 1.79)	<.001	1.19 (0.98 – 1.44)	.08
Anesthesia	0.79 (0.60 – 1.05)	.11	1.38 (0.69 – 2.76)	.36
Emergency/Urgent Care	0.64 (0.47 – 0.86)	.003	0.71 (0.51 – 0.97)	.03
Women's Health/Gender Related	0.59 (0.40 – 0.85)	.004	0.55 (0.35 – 0.88)	.01
Psychiatric Mental Health (Adult)	1.20 (0.86 – 1.69)	.29	1.03 (0.72 – 1.47)	.86
Other (*Ref*)	-			
Practice Environment		<.001		
Inpatient (*Ref*)	-			
Outpatient	1.81 (1.39 – 2.35)	<.001		
Both	1.38 (1.03 – 1.85)	.03		
Provider Shortage Area (*Ref* = 'No')	1.33 (1.00 – 1.77)	.05		
APRN Private Practice (*Ref* = 'No')	1.74 (1.33 – 2.28)	<.001	1.45 (1.09 – 1.93)	.01
Geographic Setting		<.001		.01
Rural	1.45 (1.21 – 1.73)	<.001	1.31 (1.08 – 1.59)	.01
Suburban	1.10 (0.93 – 1.30)	.27	1.04 (0.87 – 1.25)	.65
Urban (*Ref*)	-		-	
Telehealth Practice (*Ref* = 'No')	2.26 (1.91 – 2.68)	<.001	2.22 (1.82 – 2.71)	<.001
Cross Border Telehealth Practice (*Ref* = 'No')	1.47 (1.20 – 1.80)	<.001		
Restricted Telehealth Practice (*Ref* = 'No')	2.19 (1.82 – 2.64)	<.001		

Data Notes: Several independent variables that were significantly correlated with a positive waiver impact on univariable analysis were not employed in the multivariable analysis due to multicollinearity. The final composition of the multivariable model was determined to achieve the parsimonious and informative combination of available characteristics across all domains.

Abbreviations: OR = Odds Ratio, AOR = Adjusted Odds Ratio, CI = Confidence Interval

Key Takeaways

1) COVID-19 significantly reshaped APRN practice

2) Pandemic waivers did not have the impact they likely could have

3) Telehealth emerged and seems here to stay

4) APRN discipline rates remained consistently low from 2019 to 2021

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Questions

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