AGENDA
Advisory Committee on Advanced Practice Registered Nursing
February 25, 2019 10:00 a.m.

Charge: The committee shall advise the Board regarding the practice and regulation of advanced practice registered nurses and may make recommendations to the Committee on Prescriptive Governance.

1. Welcome/Introductions/Announcements 10:00 a.m.-10:05 a.m.
   a. Public Participation Guideline

2. Summary: Discussions to Date 10:05 a.m.-10:15 a.m.

3. Public Comment 10:15 a.m.-10:45 a.m.

4. Sample APRN Questions Received 10:45 a.m.-11:15 a.m.

5. Guest: Joscelyn Greaves, President, OAAPN 11:15 a.m.-11:40 a.m.
   update, goals, and legislative initiative

Lunch

6. General Information/Updates 12:40 p.m.-1:00 p.m.
   a. Video AEI, Nurse Practitioners & Primary Care
   b. Legislative Report to the Board: APRN related issues
   c. 2017 National Certifications (statistics)
   d. Article National Survey APRN CBAs
   e. Updated APRN Prescribing Flowchart

7. Medical Marijuana: NCSBN published guidelines for BONs 1:00 p.m.-1:15 p.m.

8. Discussion: format of guidance document 1:15 p.m.-1:30 p.m.

9. Other Business 1:30 p.m.-1:40 p.m.
   Annual interested party meeting June 17, 2019

10. Public Comments 1:40 p.m.-2:00 p.m.

   Speakers will have no more than five minutes, and perhaps less, at the discretion of the Chair, based on the number of speakers and time available.

11. Adjourn 2:00 p.m.
MEMORANDUM

TO:        Members of the Advisory Committee on Advanced Practice Registered Nursing  
FROM:  Lisa Emrich, Program Manager  
DATE:  February 11, 2019  
RE:    Practice Unit: Sample/ Summary of APRN Questions Received

The Board’s Practice Unit responds to various questions received from licensees and the public. Below is a sample list of summarized questions received over the last two months.

1. I am a CNP with Family certification and I plan to practice in a prescription weight loss clinic. Is it within the scope of CNP practice to prescribe schedule iv Adipex, or schedule III medications for weight loss? What about providing intramuscular injections of lipolean and sermorelin? Also, please advise me of the best malpractice insurance companies and their costs.

2. I am a new CNP working within a weight loss center. I need to inform my collaborating physician as to whether I am authorized to prescribe weight loss drugs such as Lomaria, Qysmia and Belviq, and if so, does the physician need to issue the first prescription for any of these?

3. I am having difficulty navigating the OBN Prescribing and OAC websites to find the APRN formulary. I found a statement, but I have not located a list of drugs. Please help me locate the formulary.

4. I have reviewed all literature and guidelines but I am still unclear in regards to prescribing opioids to treat chronic pain and for the prescribing of benzodiazepines. Am I correct in understanding that a physician must first initiate chronic pain opioid therapy and the CNP may then continue the physician-initiated therapy with continued follow up every 90 days? For example, a geriatric patient with osteoarthritis taking a schedule II opioid daily. May I continue to offer 90 day prescriptions for the schedule II opioid if the prescriptions are filled by a mail order pharmacy? Similarly, when a physician has initiated patient prescriptions for daily doses of benzodiazepines for anxiety or insomnia, may CNPs continue these therapies with appropriate follow up and drug screening?

5. I am a CNP with certification in Psych/mental health. May I issue prescriptions to patients upon discharge that are not psych-related? For example, issuing an antihypertensive medication prescription to the patient upon discharge, when the
patient has been treated for hypertension for several years? Similarly, may I prescribe, is it legal for me to prescribe other non-psych related medications upon discharge to resume the patient’s prior to admission?

6. I am a CNP certified in Family. Can my collaborating physician be a Psychiatrist if I am working in psychiatry and can provide psychiatric diagnoses? Also, can I prescribe Schedule II stimulants such as: Adderall and Ritalin?

7. I am a CNP certified in Psych/Mental Health. Does my collaborating physician have to be a psychiatrist in all cases? Am I permitted to enter into a SCA with a Family Practice physician as long as both I and the Family Practice physician are treating patients with addictions? Specifically, may I prescribe buprenorphine if the collaborating Family Practice physician also prescribes buprenorphine?

8. I began practicing as an APRN 9/4/18 in a Pain Management office. I have worked as a pain management RN since 9/2011. Three months into working as an APRN, I no longer have a collaborating physician (not due to an issue of mine). According to House Bill 216, I have 120 days to practice without a collaborator once I notify the board. So I would be able to work at a satellite Pain Management office under the same hospital I am working for 120 days until I have a new collaborator, is this correct?

9. I am currently a CNM licensed in the state of Ohio. I provide care in an outpatient setting, and recently came across a question regarding transgender care and CNM scope. We have several transgender patients at our clinic, but I’m unsure if I am legally able to see some of these individuals. Is a CNM able to see a transgender woman, who is legally a female on her insurance, but still has male reproductive organs, but takes hormones? How about a transgender man who is legally male on insurance due to hormone use, but still has female reproductive organs, but no surgery? I have looked through the OBN site and ACNM, but what I have found is they both guide CNMs to find guidance with the other.

10. I am having a hard time finding out if as a CNP with Family certification I am allowed to prescribe Stelara to treat psoriasis? My collaborating physician is ok with it, but I need to hear directly if this is OK. I there anyplace, specifically, for me to look or do you have a simple answer for me?

    Follow up question after receipt of Board response: How do I see the list of the strictly prohibited drugs? I cannot seem to find this anywhere.

11. Is there a form to help me organize and keep track of continuing education? Some of my certificates have an ANCC provider # on them but others do not. I have a Certificate of Completion from NetCE stating accreditation by ANCC to provide continuing education however there is not a provider number. Also I have a certificate of successful completion that has ONA # in the bottom right corner.
Is that considered a valid provider number? In addition, is there a tutorial for RN/APRN's who are renewing their licenses for the first time?

12. A few questions were received reflecting that new APRN program graduates were not aware that they were to submit an APRN licensure application to the Board for their APRN license.
MEMORANDUM

To: Board Members, Ohio Board of Nursing
From: Tom Dilling, Legislative Liaison/Adjudication Coordinator
       Betsy Houchen, Executive Director
Subject: Legislation, 132nd General Assembly Update
Date: January 4, 2019

The Ohio legislature completed its lame duck session on December 31, 2018, ending the 132nd General Assembly. The 133rd General Assembly has begun. Bills will soon be introduced for consideration over the current two-year period, including the state budget. This memorandum provides legislative activity of interest to the Board at the end of the last session. Bills that were passed at the end of session and signed by the Governor will become effective on the 91st day after the Governor signed the bill, unless the summary indicates an emergency clause was added that would make the law effective immediately upon signature.

HB 119, SNAP and Medicaid Benefits
The General Assembly passed HB 119 and the Governor signed the bill on December 19, 2018. HB 119 primarily addresses eligibility and benefits under the Supplemental Nutrition Assistance program and the Medicaid program. The Board successfully sought an amendment to the bill to add the term “substance abuse disorder” in the Nurse Practice Act and to replace references to “chemical dependency” previously found in statute. The use of substance use disorder is consistent with the professional standards in the Diagnostic and Statistical Manual of Mental Disorders.

HB 541, Volunteer Health Services
The General Assembly passed HB 541 and the Governor signed the bill on December 21, 2018. The bill authorizes health professionals licensed in other states to provide volunteer health services during charitable events under certain conditions without obtaining an Ohio license. The health care provider must have a license in good standing in another state and must practice in Ohio during a charitable event that lasts not more than seven days. The Board had successfully sought an amendment to this bill to place the exemption in ORC Section 4723.32 rather than a stand-alone section, allowing the Board to maintain consistent regulation with respect to the statutory exemptions to nursing licensure.

SB 255, Occupational Licensing Boards Review
The General Assembly passed SB 255 and the Governor signed the bill on January 4, 2019. SB 255 would establish a statewide policy on occupational regulation, to allow an individual who has been convicted of a criminal offense to request a licensing authority to determine whether the individual is disqualified from receiving or holding a
professional license based on conviction, to require standing committees of the General Assembly to periodically review occupational licensing boards regarding their sunset, to require the Legislative Service Commission to issue reports of occupational licensing bills and state regulation of occupations, to require the licensure of home inspectors, to create the Ohio Home Inspector Board to regulate the licensure and performance of home inspectors, to require realtors who recommend home inspectors to provide a list of home inspectors, to make changes in various laws regarding state boards, commissions, councils, and agencies and their regulation of certain professions or activities, and to regulate the practice of makeup artistry.

**SB 119, Addiction Treatment and Prescriptions**
The General Assembly passed SB 119 and the Governor signed the bill on December 19, 2018. SB 119 increases access to life-saving treatment by granting pharmacists the authority to dispense and administer, the safe, non-controlled medication, naltrexone. An amendment to SB 119 incorporated most of HB 535 to track naltrexone administration or prescription in the Ohio Automated Rx Reporting System (OARRS); direct the Ohio Department of Public Safety to track naloxone administration by emergency medical service personnel and make monthly reports to help improve distribution; and remove provisions currently being addressed through administrative rules changes.

**SB 259, Physician Assistant Regulation**
The General Assembly passed SB 259 and the Governor signed the bill on December 19, 2018. The bill revised laws governing the regulation of physician assistant practice. Among the bill's provisions, ORC Section 4730.05 was amended to permit meetings of the Medical Board’s physician assistant policy committee to include the use of interactive videoconferencing, teleconferencing, or both if certain requirements are met.

**HB 286, Palliative Care Programs**
The General Assembly passed HB 286 and the Governor signed the bill on December 19, 2018. HB 286 creates the Palliative Care and Quality of Life Interdisciplinary Council and a related education program. The bill requires identification of patients and residents who could benefit from palliative care, authorizes hospice care programs to provide palliative care in their inpatient facilities or units to non-hospice patients, specifies that Medicaid coverage for palliative care is not being expanded, modifies the pain management clinic licensing law relative to certain palliative care patients, and authorizes the Director of Health to approve the transfer of certain nursing home beds to a facility in a contiguous county.

**HB 191, SB 275, and SB 301, Registered Nurse Anesthetists**
None of these bills became law in this General Assembly. These bills would have amended law affecting CRNA practice. We should expect legislation involving this subject matter to be introduced and considered early in the 133rd General Assembly.

**HB 726, APRN Practice-Convenience Clinics**
HB 726 was introduced on August 29, 2018. The House Health Committee heard sponsor testimony concerning the bill on December 5, 2018. The bill should be reintroduced early in this General Assembly. The bill would eliminate standard care arrangements entered into by advanced practice registered nurses and collaborating physicians or podiatrists; prohibit physician prescribing of schedule II controlled substances from convenience care clinics; and remove the statutory limitation requiring that youth sports organizations clearances by licensed health professionals of
concussed student athletes may only be authorized in accordance with physician consultation, referral, collaboration or supervision, as applicable. The bill’s sponsor described it as the “Better Access, Better Care Act.”

**HB 716 and SB 320, Temporary Licensing-Military**

HB 716, passed by the House on November 28, 2018 and passed by the Senate on December 13, 2018, was not passed into law in the 132nd General Assembly, despite a flurry of late activity. SB 320 was amended in Committee in an attempt to address certain licensure issues. The bills would have required state occupational licensing agencies, under certain circumstances, to issue temporary licenses or certificates to members of the military and spouses who are licensed in another jurisdiction and have moved to Ohio for active duty.

Current law provides for expedited processing of applications of members of the military and their spouses (see OAC Rule 4723-2-02). The Board has promoted expedited licensing of the military through rules, processes and approval of certain military nursing programs which were added to statute. The duration of the temporary license, questions related to grounds for voiding the temporary, and the need to require completion of the licensure process such as criminal background checks are issues for further consideration. In addition, cost of implementation, consistency with other licensing and public safety checks, and requirements in the Ohio eLicense platform should also be explored.

**HB 456, Overtime Requirement-Nursing**

HB 456 was passed by the House on June 7, 2018. The bill did not become law in the 132nd General Assembly. HB 456 would have prohibited a hospital from requiring a registered nurse or licensed practical nurse to work overtime as a condition of continued employment.

**HB 501 and SB 337 Veterinary Nurse Title**

HB 501 was passed by the House on December 6, 2018. SB 337 had sponsor testimony in Senate Agriculture Committee on December 4, 2018. The bills did not become law in the 132nd General Assembly. The bills would have permitted “registered veterinary technician” licensees in Ohio to practice under the title “registered veterinary nurse.”

Details of any state bill mentioned in the legislative report are at [https://www.legislature.ohio.gov/legislation/searchlegislation;jsessionid=17223f7a114e6ed96192eff21785?0](https://www.legislature.ohio.gov/legislation/searchlegislation;jsessionid=17223f7a114e6ed96192eff21785?0). This website links to LSC legislative analyses of bills that have had at least one hearing and provides a more detailed summary of each bill.
APRN Certification Executive Summary

Each year in September and October, NCSBN conducts a survey of the APRN role certification programs. Accredited exams constitute one of the elements of eligibility for APRN licensure or recognition in states and jurisdictions. The survey offers information on the number of tests administered by examination type as well as information about accreditation of the exams. Previous surveys are available on the member’s only section on NCSBN.org website/APRN Consensus. Survey data represents a previous year. This report reflects certification information for the year, 2017. NCSBN retains this data going back more than ten years.

This information presented here is a supplement to Member Board’s own criteria as they consider the suitability of certification exams for use in licensure decisions.

Certification exams have come into alignment with the requirements of The APRN Consensus Model. Exams are available for each of the four APRN roles and for most populations (the Women’s Health CNS does not have an exam). Gerontology content and wellness concepts have been incorporated into new exams, as required by the APRN Consensus Model. Certification programs maintain retired credentials through continuing education or other means.

Graduates sit for a certification examination that tests the APRN role and population of the respective program. This assures knowledge, skills, and abilities required for entry-level practice as an APRN, in a specific role and population. In the case of nurse practitioners in pediatrics, family practice, and adult/gerontology, the focus of acute or primary care is tested as a part of those programs. Please note that, to align with the Model, several exams have been retired in this and past years, and those are noted in the accompanying report. The year of 2017 marks the final alignment with the Model for some of the non-aligned exams. For example, in 2017 there were four PMHCNS candidates who completed that credential with ANCC before its final retirement. Noted in last year’s report, ANCC no longer offers a pediatric acute care CNP exam, due to small numbers of test takers. PNCB does offer that exam.

I have provided, in the attached PowerPoint, trending data of all first time test takers by role, from 2005 – 2017. Of note, is the continued growth of nurse practitioners in 2017. The pie chart provided show growth by population types for the nurse practitioner role. The family nurse practitioner continues to show strong growth and there is growth in neonatal, pediatric, and psychiatric mental health CNPs. The adult/gerontology primary care and acute care CNP numbers are down slightly.

Overall, the numbers of new test takers for CNM are slightly up, the new test takers for the CNS are slightly down, and the new test takers for the CRNA are steady. Repeat test takers may include some who have failed on more than one previous attempt.

Please send any questions, comments, or requests to Maureen Cahill 312-525-3646.

Maureen

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National Council of State Boards of Nursing (NCSBN) 111 E. Wacker Drive, Ste 2900, Chicago, IL 60601-4277 312.279.1032 (F) www.ncsbn.org
Our Mission – NCSBN, Leading in nursing regulation
Certification Exam 1st time writers by year and role, CNS, CRNA, CNP, and CNM

1st time test writers midwifery

CNM

Graduate education and advanced certification aligned
1st time test writers CNS

Graduate education and advanced certification have been aligned. Today only 3 states do not recognize the role.

1st time test writers CRNA

Graduate education and advanced certification aligned.
1\textsuperscript{st} time test writers CNP

Graduate education and advanced certification aligned since 2000

2016 CNP New Test Takers, Populations Comparison

2016 Populations

- Neonatal NP
- Peds NP
- PMHN
- FNP
- Adult/Gero Primary
- Adult/Gero Acute
The Economic Burden and Practice Restrictions Associated With Collaborative Practice Agreements: A National Survey of Advanced Practice Registered Nurses

Brendan Martin, PhD, and Maryann Alexander, PhD, RN, FAAN

The U.S. healthcare system is facing workforce shortages in rural and primary care settings. Despite growing demand for providers and comparable quality metrics, advanced practice registered nurses (APRNs) still face significant barriers to independent practice due to reduced scope of practice regulations. In this study, APRNs working in rural areas and APRN-managed private clinics were one and a half to six times more likely to be assessed Collaborative Practice Agreement (CPA) fees, often exceeding $6,000 and up to $50,000 annually. Similarly, APRNs subject to minimum distance requirements, fees to establish a CPA, and supervisor turnover reported a 30% to 59% uptick in restricted care. Such unnecessary regulation risks diverting health services away from and increasing costs in traditionally underserved areas, contributing to inequities in care. It is incumbent on state legislatures to address these disparities and make their constituents’ access to high-quality care a top priority.

Keywords: APRN, advanced practice registered nurse, collaborative practice agreement, supervising physician

Over the past 2 decades, numerous studies have documented a multitude of challenges facing the U.S. healthcare system. Chief among these are shortages in the provider workforce in rural areas and primary care settings (Green, Savin, & Lu, 2013; Petterson et al., 2012). These trends have been exacerbated by an aging population and recent coverage expansions under the Affordable Care Act, which preliminary evidence suggests have led to longer wait times (Ku, Jones, Shin, Bruen, & Hayes, 2011; Polsky et al., 2017). To address this projected shortfall, research examining scope of practice regulations has begun to explore the possible economic and patient safety implications of allowing advanced practice registered nurses (APRNs) to practice to the full extent of their education (Adams & Markowitz, 2018; DesRoches et al., 2013; Fairman, Rowe, Hassmiller, & Shalala, 2011; Federal Trade Commission, 2014; Institute of Medicine, 2011; APRN Consensus Work Group, 2008). According to the National Council of State Boards of Nursing (NCSBN, 2018), APRNs are granted full practice authority depending on the restrictiveness of state scope of practice regulations, which can vary considerably. Thus, the regulatory landscape and the corresponding challenges it presents APRNs and their patients differ based on geographic location (Kuo, Loresto, Rounds, & Goodwin, 2013; Reagan & Salsberry, 2013; Xue, Ye, Brewer, & Spetz, 2016). These differing regulations compound pre-existing inequities in care by erecting further barriers to access in traditionally underserved and vulnerable populations (DesRoches et al., 2013; Kuo et al., 2013; Reagan & Salsberry, 2013; Xue et al., 2016; Chapman, Phoenix, Hahn, & Strod, 2018; Loresto, Jupiter, & Kuo, 2017; Neff et al., 2018).

Currently, 21 states grant all APRN roles full practice authority, which means a written Collaborative Practice Agreement (CPA), supervision, and conditions on practice are not required (NCSBN, 2018). The remaining 29 states mandate reduced scope of practice on at least one APRN role. In these markets, a CPA specifies the scope of practice with a general or direct supervision requirement by a clinician. Similar to the state laws that mandate these formal agreements, CPA frameworks vary considerably in terms of financial and professional requirements. In many instances, physicians require APRNs to pay them for signing on to a CPA and often entail patient medical record reviews, shared billing procedures, regular in-person or electronic communication, and patient referral pathways (DesRoches et al., 2013; Reagan & Salsberry, 2013; American Academy of Family Physicians, 2018; Rudner & Kung, 2017). Nonetheless, state-mandated requirements on distance restrictions between APRNs and their supervising providers, the nature and volume of patient medical record reviews, and the fees governing such arrangements are often not uniform.
Despite inconsistencies in what scope of practice restrictions require and how they are applied, proponents of CPAs often cite patient safety concerns as justification for their perpetuation and expansion. Common themes that emerge are whether APRNs have sufficient education and whether they have the breadth of experience to provide the same level of care as their physician counterparts (American Academy of Family Physicians, 2012; American Medical Association, 2010; Federation of State Medical Boards, 2005). Survey findings suggest the answers to these questions often depend on whom you ask, with physicians’ responses and APRNs’ responses typically inversely related (Donelan, DesRoches, Dittus, & Buerhaus, 2013). Additional research has also examined physician wage loss as a potential corollary to increased APRN scope of practice (Perry, 2009; Pittman & Williams, 2012). Regardless of the motivation, controversy persists as to the appropriate amount of autonomy APRNs should be granted in their day-to-day practice.

Evidence in support of full practice authority has allayed public safety concerns. Many studies document comparable clinical outcomes (Reagan & Salsberry, 2013; Loresto et al., 2017; Dill, Pankow, Erikson, & Shipman, 2013; Fung, Chan, & Chien, 2014) and high patient satisfaction ratings for APRN-managed care (Laurent et al., 2008; Mundinger et al., 2000; Roblin, Becker, Adams, Howard, & Roberts, 2004). Furthermore, longstanding research indicates APRNs are more likely to serve traditionally underserved and minority populations (DesRoches et al., 2013; Xue et al., 2016; Neff et al., 2018; Buerhaus, DesRoches, Dittus, & Donelan, 2015; Barnes, Richards, McHugh, & Martsolf, 2018). Adding to this existing body of evidence, new lines of inquiry on the economic benefits of removing CPA restrictions have shed light on the potential cost savings states could accrue with expanded scope of practice regulation (Conover & Richards, 2015; Hooker & Muchow, 2015; Timmons, 2017). To make these findings more actionable, additional information on which CPA components place undue financial and practice restrictions on APRNs is necessary.

To date, much of the research on scope of practice regulations has focused on strategies to address projected provider shortfalls and the inevitable gaps in care that result. Of particular concern are shortfalls among primary care, mental health, and midwifery providers (Chapman et al., 2018; Declercq, Paine, Simmes, & DeJoseph, 1998; Huang & Finegold, 2013). Utilization trends and broader workforce issues, such as general practice patterns and perceptions of provider care, also received much attention. By contrast, less information is available in the scientific literature on specific CPA components, including financial requirements, provisions regarding the extent and frequency of collaboration, and particularly restrictive/beneficial aspects. To augment the literature on these important topics, the NCSBN designed a cross-sectional study to identify current APRN practice trends in states that require CPAs and to ascertain the potential benefits and challenges such formal arrangements present.

### Methods

#### Sample

A stratified random sample of 8,701 APRNs practicing across 29 states that mandate reduced scope of practice on at least one APRN role comprised the final study sample (Table 1). A demographic analysis compared the breakdown of respondent sex, race, and age to the APRN characteristics identified in the 2017 National Nursing Workforce Survey to assess for potential non-response bias (Smiley et al., 2018). Table 2 confirmed the overall sample and role-specific cohorts aligned with national estimates. Participants were contacted via postcard and email between September and November 2017. An online survey was administered using Qualtrics (Provo, UT). The instrument consisted of 47 questions divided across four content areas: (a) baseline demographics, (b) CPA framework, (c) practice patterns, and (d) CPA benefits/challenges. The study was determined to be exempt by the Western Institutional Review Board.

#### Data

##### Dependent Variables

The majority of survey items in the analysis used participants’ raw response values; however, several covariates were recoded to facilitate further analysis. One of the two primary dependent variables, CPA fee requirements, is an amalgamation of APRN responses to two survey questions. The first asked respondents whether they or their facility had to pay a fee to establish their CPA, whereas the second solicited information on whether they or their facility had to pay a fee to maintain their CPA. As either arrangement represents an additional financial burden on practicing APRNs or their employers, responses to these two items were combined. The second dependent variable was assessed in its raw form as a dichotomous outcome (yes/no) asking whether APRNs experience any practice restrictions associated with their CPA.

##### Independent Variables

A “career stage” variable was derived from participants’ raw numeric responses related to years in practice. Respondents below the 25th percentile (5 years) were considered early career, whereas...
those between the 25th percentile and median were considered midcareer, and those at or above the median (13 years) were considered established. Furthermore, respondents who reported practicing in multiple states or working under two or more CPAs were re-classified into two binary predictors (i.e., one = 0, two or more = 1). CPA authorship was also dichotomized to distinguish between any level of APRN involvement versus no input. Finally, as more than 85% of respondents were reportedly “White/Caucasian,” all other racial/ethnic categories were collapsed into a single minority group.

**Statistical Analysis**
A descriptive summary of the final respondent sample included frequencies and proportions for all categorical variables. Continuous variables were expressed as means and standard deviations or medians and interquartile ranges (IQRs) based on their underlying distributions. Univariable and multivariable binary logistic regression models were used to examine CPA fee requirements and restrictive care trends (Hosmer, Lemeshow, & Sturdivant, 2013). As a measure of global fit, the composition of the final multivariable models was determined using only those parameters that best minimized Akaike’s information criterion. An alpha error rate of $p \leq .05$ was considered statistically significant.

A supplemental latent class analysis was used to further classify APRNs into more discrete groups based on their practice profiles. The final number and composition of the latent cohorts was determined based on APRN responses regarding self-payment to establish or maintain their CPA, as well as the perceived restrictions, benefits, disadvantages, and challenges associated with CPA enforcement. Facility payments were excluded from this follow-up analysis to better account for the particularly onerous nature of out-of-pocket expenses. Bayesian information criterion estimates were assessed to determine the final number of groups used in the analysis. As a measure of accuracy, the proportion of respondents expected to belong to each subgroup, known as class membership probabilities, are reported (Collins & Lanza, 2013). All analyses were conducted using SAS 9.4 (Cary, NC).

**Findings**

**Demographics**

The mean age of APRN respondents was 52 years ($SD = 11.1$), with a median of 13 years of work experience ($IQR = 5–20$) (Table 3). The majority were White ($n = 6,653, 86.7$%), female ($n = 6,926, 89.7$%), and certified nurse practitioners (CNPs) ($n = 6,218, 80.0$%). A master’s degree was the most frequent level of nursing education reported ($n = 5,860, 75.3$%), but a sizeable proportion of respondents also indicated having a doctor of nursing practice degree ($n = 1,003, 12.9$%). Most respondents worked in large health facilities/systems ($n = 4,515, 58.0$%) in urban areas ($n = 5,264, 67.9$%). Few respondents reported practicing in two or more states ($n = 295, 3.8$%), but about one-fifth did indicate they work under more than one CPA ($n = 1,894, 21.8$%). Patient populations are fairly diverse, with most APRNs reporting family/individual across lifespan ($n = 3,139, 31.4$%), followed by adult/gerontology ($n = 2,808, 28.1$%) and women’s health ($n = 1,337, 13.4$%).

APRN majorities reported discussing at least one patient case ($n = 5,866, 93.7$%) with and/or referring at least one patient case ($n = 4,923, 78.7$%) to a member of their physician team in the past month. Despite APRNs’ active role under CPAs, physician activity was less consistent. Only half of respondents ($n = 3,143, 50.2$%) indicated they communicate in person with their supervising physician at least once per month. A similar proportion ($n = 3,850, 61.5$%) also indicated they communicate with their supervising physician via phone/text/email at least once per month. Approximately half of respondents ($n = 3,551, 56.6$%) reported their supervising physician conducts medical record reviews.

**CPA Fees**

One in five respondents reported that either they or their facility had to pay a fee to a collaborating physician ($n = 1,275, 20.3$%). Of this subtotal, notable proportions of respondents reported paying directly out of pocket to establish ($n = 228, 17.9$%) or

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**TABLE 2**

<table>
<thead>
<tr>
<th>Group</th>
<th>Demographic Variable</th>
<th>2017 Workforce</th>
<th>Study Sample</th>
</tr>
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<tbody>
<tr>
<td><strong>NP</strong></td>
<td>Sex (female)</td>
<td>92%</td>
<td>91%</td>
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<tr>
<td></td>
<td>Race (White)</td>
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<td>Age (median)</td>
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<td>52</td>
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<td><strong>CNM</strong></td>
<td>Sex (female)</td>
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<td>99%</td>
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<tr>
<td></td>
<td>Race (White)</td>
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<td></td>
<td>Age (median)</td>
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<td>57</td>
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<tr>
<td><strong>CRNA</strong></td>
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<td>55%</td>
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<tr>
<td></td>
<td>Race (White)</td>
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<td></td>
<td>Age (median)</td>
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<td>53</td>
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<tr>
<td><strong>CNS</strong></td>
<td>Sex (female)</td>
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<td>95%</td>
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<td></td>
<td>Race (White)</td>
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<td><strong>Total</strong></td>
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<td>90%</td>
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<tr>
<td></td>
<td>Race (White)</td>
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<td></td>
<td>Age (median)</td>
<td>53</td>
<td>52</td>
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</table>

*Note. NP = nurse practitioner; CNM = certified nurse midwife; CRNA = certified registered nurse anesthetist; CNS = certified nurse specialist. Weighted estimates reflect population characteristics.*
maintain (n = 263, 20.6%) their CPA. This APRN cohort was largely comprised of CNPs (87%) working in primary care settings (50%). For these direct payments, the median fee to establish a CPA was $650 (n = 198, IQR = $150–$1,500). However, establishment fees ranged considerably, from $10 to $50,000. Twenty-four respondents indicated they paid in excess of $5,000 to establish their CPA, with eight of those reporting figures greater than $20,000. By comparison, the median fee to maintain a CPA was $500 per month (n = 213, IQR = $200–$1,000). Maintenance fees also ranged widely, from $4 to $4,167 per month. Ninety-six respondents indicated they paid more than $500 per month, with 40 reporting monthly figures over $1,000.

Baseline demographics, such as age, sex, race, and education level, and the number of states in which an APRN reported practicing were not meaningfully associated with mandatory fee payments (results not shown). On multivariable analysis, APRNs practicing in rural areas were 52% (adjusted odds ratio [AOR] = 1.52, 95% CI [1.32, 1.75], p < .001) more likely to report needing to pay a fee to establish or maintain their CPA (Table 4). Those working in a private practice setting established and managed by APRNs reported similar trends. APRNs who worked in large health facilities/systems (AOR = 0.31, 95% CI [0.24, 0.39], p < .001), who worked in private practices run by physicians (AOR = 0.16, 95% CI [0.12, 0.22], p < .001), or who were self-employed (AOR = 0.63, 95% CI [0.41, 0.97], p = .04) were all 37% to 84% less likely to pay CPA fees compared to those who worked in a private practice managed by APRNs.

APRNs working remotely from their supervising physician were also 2.68 times (95% CI [2.23, 3.23], p < .001) more likely to report a required fee to establish or maintain their CPA compared to those located in the same office/clinic. Similarly, APRNs working under two or more CPAs were 27% (AOR = 1.27, 95% CI [1.10, 1.47], p = .001) more likely to pay CPA fees compared to those who only reported one. CPA fees varied by patient population but often aligned with facility setting. Respondents who work in family/individual lifespan (AOR = 1.64, 95% CI [1.41, 1.90], p < .001) or psychiatric mental health (AOR = 1.47, 95% CI [1.18, 1.82], p < .001) areas were more likely to report paying fees. Both services were offered more frequently in private APRN practices (both p < .001). Conversely, APRNs in pediatric (AOR = 0.76, 95% CI [0.60, 0.96], p = .02) and neonatal (AOR = 0.59, 95% CI [0.35, 0.98], p = .04) specialties were less likely to pay CPA fees. These services were disproportionately offered at large health facilities/systems (both p < .001).

**Care Restrictions**

Approximately one-third of respondents (n = 1,947, 32.5%) reported that certain terms of their CPA significantly restricted their care of patients. When asked to specify the nature of these restrictions, a majority (n = 1,216, 62.5%) reported a range of restrictions specific to prescribing authority, permitted procedures, patient profiles, and distant/setting requirements. On

<table>
<thead>
<tr>
<th>TABLE 3</th>
<th>Respondent Demographics and Health Facility Characteristics (N = 8,701)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Respondent Characteristics</strong></td>
<td><strong>Valid N</strong></td>
</tr>
<tr>
<td><strong>Age (Mean, SD)</strong></td>
<td>7,588</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td>7,673</td>
</tr>
<tr>
<td>Minority</td>
<td>1,020 (13.3)</td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>6,653 (86.7)</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td>7,721</td>
</tr>
<tr>
<td>Female</td>
<td>6,926 (89.7)</td>
</tr>
<tr>
<td>Male</td>
<td>795 (10.3)</td>
</tr>
<tr>
<td><strong>Professional Role</strong></td>
<td>7,771</td>
</tr>
<tr>
<td>Certified nurse practitioner</td>
<td>6,218 (80.0)</td>
</tr>
<tr>
<td>Clinical nurse specialist</td>
<td>558 (72)</td>
</tr>
<tr>
<td>Certified nurse-midwife</td>
<td>514 (6.6)</td>
</tr>
<tr>
<td>Certified registered nurse anesthetist</td>
<td>481 (6.2)</td>
</tr>
<tr>
<td><strong>Highest Level of Nursing Education</strong></td>
<td>7,783</td>
</tr>
<tr>
<td>Master’s degree</td>
<td>5,860 (75.3)</td>
</tr>
<tr>
<td>Doctor of nursing practice</td>
<td>1,003 (12.9)</td>
</tr>
<tr>
<td>Doctor of philosophy (PhD)</td>
<td>349 (4.5)</td>
</tr>
<tr>
<td>Baccalaureate degree</td>
<td>137 (1.8)</td>
</tr>
<tr>
<td>Other</td>
<td>434 (5.6)</td>
</tr>
<tr>
<td><strong>Geographic Setting</strong></td>
<td>7,748</td>
</tr>
<tr>
<td>Urban</td>
<td>5,264 (67.9)</td>
</tr>
<tr>
<td>Rural</td>
<td>2,484 (32.1)</td>
</tr>
<tr>
<td><strong>Type of Healthcare Facility</strong></td>
<td>7,783</td>
</tr>
<tr>
<td>Health facility/health system</td>
<td>4,515 (58.0)</td>
</tr>
<tr>
<td>Private practice physician (MD)</td>
<td>1,283 (16.5)</td>
</tr>
<tr>
<td>Private practice (APRN)</td>
<td>442 (5.7)</td>
</tr>
<tr>
<td>Private practice other</td>
<td>247 (3.2)</td>
</tr>
<tr>
<td>Self-employed</td>
<td>224 (2.9)</td>
</tr>
<tr>
<td>Other</td>
<td>1,072 (13.8)</td>
</tr>
<tr>
<td><strong>Patient Population</strong></td>
<td>7,781</td>
</tr>
<tr>
<td>Family/individual across lifespan</td>
<td>3,139 (31.4)</td>
</tr>
<tr>
<td>Adult gerontology</td>
<td>2,808 (28.1)</td>
</tr>
<tr>
<td>Women’s health</td>
<td>1,337 (13.4)</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>982 (9.8)</td>
</tr>
<tr>
<td>Psychiatric mental health</td>
<td>716 (7.2)</td>
</tr>
<tr>
<td>Neonatal</td>
<td>260 (2.6)</td>
</tr>
<tr>
<td>Other</td>
<td>768 (7.7)</td>
</tr>
<tr>
<td><strong>Number of CPAs</strong></td>
<td>8,701</td>
</tr>
<tr>
<td>None</td>
<td>2,430 (27.9)</td>
</tr>
<tr>
<td>One</td>
<td>4,377 (50.3)</td>
</tr>
<tr>
<td>Two or more</td>
<td>1,894 (21.8)</td>
</tr>
<tr>
<td><strong>Practicing in Multiple States</strong></td>
<td>7,771</td>
</tr>
<tr>
<td>No</td>
<td>7,476 (96.2)</td>
</tr>
<tr>
<td>Yes</td>
<td>295 (3.8)</td>
</tr>
<tr>
<td><strong>Years in Practice (Median, IQR)</strong></td>
<td>7,776</td>
</tr>
<tr>
<td>13 (5–20)</td>
<td></td>
</tr>
</tbody>
</table>

Note. APRN = advanced practice registered nurse; CPA = Collaborative Practice Agreement; IQR = interquartile range.
univariable analysis, age, race, education level, career stage, geographic setting, and facility setting were not meaningfully associated with restricted care trends, so they were omitted from the follow-up analyses (results not shown). On multivariable analysis, APRNs working in states that mandated medical record reviews (AOR = 1.40, 95% CI [1.22, 1.60], p < .001) or imposed minimum distance requirements (AOR = 1.59, 95% CI [1.38, 1.84], p < .001) were 40% and 59% more likely to report restrictions, respectively (Table 5). Respondents who reported paying out-of-pocket fees to establish their CPA were 57% (AOR = 1.57, 95% CI [1.03, 2.39], p = .04) more likely to report restrictions compared to those who paid no fees. Additionally, APRNs whose facility paid similar fees were 41% (AOR = 1.41, 95% CI [1.08, 1.85], p = .01) more likely to report restrictions.

| TABLE 4 | Univariable and Multivariable Binary Logistic Regression Results Examining CPA Fee Requirements |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| **Respondent and CPA Factors** | **Valid n** | **% Fees** | **OR (95% CI)** | **AOR (95% CI)** |
| **Geographic Setting** | | | | |
| Rural | 2,068 | 27.3 | 1.86 (1.64, 2.10)* | 1.52 (1.32, 1.75)* |
| Urban (Ref) | 4,172 | 16.9 | - | - |
| **Career Stage** | | | | |
| Early (Ref) | 1,769 | 22.1 | - | - |
| Mid | 1,377 | 22.4 | 1.02 (0.86, 1.21) | 1.07 (0.89, 1.28) |
| Established | 2,956 | 18.3 | 0.79 (0.68, 0.91)* | 0.88 (0.75, 1.04) |
| **Type of Healthcare Facility** | | | | |
| Health facility/health system | 3,651 | 17.6 | 0.18 (0.15, 0.23)* | 0.31 (0.24, 0.39)* |
| Private practice physician (MD) | 1,091 | 10.1 | 0.10 (0.07, 0.13)* | 0.16 (0.12, 0.22)* |
| Private practice (APRN) (Ref) | 351 | 53.9 | - | - |
| Private practice other | 200 | 35.5 | 0.47 (0.33, 0.68)* | 0.60 (0.41, 0.88)** |
| Self-employed | 135 | 38.5 | 0.54 (0.36, 0.81)* | 0.63 (0.41, 0.97)** |
| Other | 836 | 24.9 | 0.28 (0.22, 0.37)* | 0.34 (0.25, 0.45)* |
| **Physician Practice Location** | | | | |
| Same office/clinic (Ref) | 2,214 | 12.6 | - | - |
| Same facility | 1,543 | 10.8 | 0.84 (0.68, 1.03) | 0.86 (0.69, 1.07) |
| Same city/town | 1,287 | 31.3 | 3.16 (2.66, 3.76)* | 2.68 (2.23, 3.23)* |
| Other | 1,227 | 34.8 | 3.70 (3.12, 4.40)* | 2.66 (2.20, 3.21)* |
| **Number of CPAs** | | | | |
| One (Ref) | 4,377 | 18.6 | - | - |
| Two or more | 1,894 | 24.4 | 1.41 (1.24, 1.61)* | 1.27 (1.10, 1.47)* |
| **CPA Author** | | | | |
| No (Ref) | 4,627 | 18.9 | - | - |
| Yes | 1,627 | 24.3 | 1.38 (1.20, 1.57)* | 1.16 (0.98, 1.36) |
| **Patient Population** | | | | |
| Family/across lifespan | 2,576 | 26.9 | 1.96 (1.73, 2.20)* | 1.64 (1.41, 1.90)* |
| Adult gerontology | 2,223 | 16.6 | 0.69 (0.60, 0.79)* | 0.87 (0.74, 1.01) |
| Women's health | 1,013 | 15.8 | 0.70 (0.58, 0.84)* | 0.86 (0.71, 1.06) |
| Pediatrics | 767 | 14.7 | 0.65 (0.52, 0.80)* | 0.76 (0.60, 0.96)** |
| Psychiatric mental health | 595 | 28.2 | 1.62 (1.34, 1.96)* | 1.47 (1.18, 1.82)** |
| Neonatal | 182 | 11.5 | 0.50 (0.32, 0.80)* | 0.59 (0.35, 0.98)** |

* p < .01.
** p < .05.

* Each patient population was assessed as an independent binary predictor with a general referent of “no” indicating any other patient subgroup.
APRNs who reported losing or needing to change supervising providers were 30% (AOR = 1.30, 95% CI [1.15, 1.46], p < .001) more likely to report restrictions. Among this APRN subset, those who reported taking a few weeks/months (vs. one week; OR = 1.39, 95% CI [1.14, 1.71], p = .001) or even over a half year (vs. one week; OR = 1.73, 95% CI [1.05, 2.86], p = .03) to replace their supervisor were also significantly more likely to report restrictions. By contrast, those APRNs who either independently authored their CPA or substantively contributed to it were 20% (AOR = 0.80, 95% CI [0.70, 0.92], p < .001) less likely to report restrictions compared to those whose facility or supervising provider constructed it without their input. Respondents who provide women’s health services were 46% (AOR = 1.46, 95% CI [1.25, 1.69], p < .001) more likely to report restrictions. As with select fee trends, women’s health services were typically offered at APRN-managed private clinics (p < .001).

Supplemental latent class analysis identified three primary APRN cohorts. The most restricted group, representing 5.3% of the sample, reported high probabilities of paying to establish and maintain their CPA out of pocket, as well as higher likelihoods of encountering restrictions, disadvantages, and challenges. The second most restricted group, 28.4% of the sample, often had CPA fees covered by their facility but still reported significant restrictions, disadvantages, and challenges. The remaining two-thirds of the sample (66.3%) noted no CPA fees and comparatively fewer restrictions, disadvantages, and challenges. The probability a respondent was classified into a category, if assigned, was 96% (most restrictive), 89% (restrictive), and 83% (least restrictive).

Compared to the least restrictive group, the most restricted cohort tended to be older (53 vs. 51 years, p = .01), more experienced nurses (76.6% vs. 69.9% mid/established, p = .03) who disproportionately serve rural communities (47.3% vs. 32.4%, p < .001) through private APRN-managed clinics (42.5% vs. 3.8%, p < .001). Demographically, the second most restrictive group was more similar to the least restricted group. The two groups differed predominantly on reported practice restrictions. The restricted group was more likely to report state-mandated medical record reviews (58.6% vs. 49.3%, p < .001), minimum distance requirements (29.1% vs. 18.9%, p < .001), facility-paid CPA fees (20.0% vs. 10.5%, p < .001), needing to change a supervising physician (38.5% vs. 28.6%, p < .001), and working under multiple CPAs (34.2% vs. 28.0%, p = .03). Overall, larger proportions of the least restricted group tended to be early career (30.1%) APRNs working in large facilities (59.5%) located in urban areas (67.6%).

Discussion

In light of projected healthcare workforce shortages in rural areas and primary care settings, identifying strategies to maintain consumer access to high-quality care should be a national priority. One strategy is to allow APRNs to practice to the full extent of their education and training (Adams & Markowitz, 2018; DesRoches et al., 2013; Fairman et al., 2011; Federal Trade Commission, 2014; Institute of Medicine, 2011; APRN Consensus Work Group, 2008). In support of this position, numerous studies document outcomes comparable to physicians (Reagan & Salsberry, 2013; Loresto et al., 2017; Dill et al., 2013; Fung et al., 2014), high patient satisfaction ratings (Laurant et al., 2008; Mundinger et al., 2000; Roblin et al., 2004), and increased access for residents of traditionally underserved and minority communities (DesRoches et al., 2013; Xue et al., 2016; Neff et al., 2018; Buerhaus et al., 2015; Barnes et al., 2018). The current patchwork of overly restrictive regulation contributes to significant market inequities. The results of this study provide new and specific evidence on continued barriers to independent practice.

Required CPA fees, whether offset by a facility or not, emerged as particularly strong barriers to independent practice and, thereby, possible impediments to access in this analysis. In line with market research on provider compensation, out-of-pocket expenses to establish and maintain CPAs often exceeded $6,000 annually, with numerous respondents reporting fees more than $10,000 and up to a maximum of $50,000 per year (American Medical Group Association, 2016). Although these payments are meant to compensate physicians for the time they invest in supervising APRN caseloads, these fees can significantly increase the cost of care despite scant evidence that meaningful supervision occurs (Reagan & Salsberry, 2013). In this survey, approximately 40% to 50% of respondents reported irregular contact with their supervising physician and no formal review of their medical records. Furthermore, whereas those working in APRN-managed private clinics (p < .001), often in underserved rural areas (p < .001), reported required fees, there were no significant differences in the fees charged to early versus mid- and established career providers. Rather than being a form of regular supervision for less experienced APRNs to address patient safety concerns, these fees may function as barriers for consumers in medically-underserved communities and for the experienced entrepreneurial APRNs this partnership is purported to benefit.

In addition to fees, specific CPA supervising requirements are common impediments to independent practice (Reagan & Salsberry, 2013; Rigolosi & Salmon, 2014). In this study, minimum distance requirements (p < .001), mandated medical record reviews (p < .001), losing or needing to change a supervising physician (p < .001), and practice location (p < .001) all significantly restricted APRN care. Stringent practice requirements not only minimize the professional and psychological benefits APRNs accrue through independent practice (Kazer, O’Sullivan, & Leonard, 2018), but they also reinforce barriers to broad consumer access. Longstanding research shows divergent care patterns between physicians and APRNs, both in terms of the populations they serve and the locations in which they establish clinics (Reagan & Salsberry, 2013; Xue et al., 2016). The results of this study highlight how this misalignment can exacerbate...
### TABLE 5

**Univariable and Multivariable Binary Logistic Regression Results Examining Restricted Care Patterns**

<table>
<thead>
<tr>
<th>Respondent and CPA Factors</th>
<th>Valid n</th>
<th>% Restricted</th>
<th>OR (95% CI)</th>
<th>AOR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female <em>(Ref)</em></td>
<td>5,379</td>
<td>31.6</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Male</td>
<td>562</td>
<td>40.4</td>
<td>1.46 (1.23, 1.75)*</td>
<td>1.50 (1.24, 1.80)*</td>
</tr>
<tr>
<td><strong>Mandated Medical Record Reviews</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>No <em>(Ref)</em></td>
<td>1,871</td>
<td>27.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Yes</td>
<td>3,096</td>
<td>36.4</td>
<td>1.55 (1.37, 1.76)*</td>
<td>1.40 (1.22, 1.60)*</td>
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<tr>
<td><strong>Mandated Minimum Distance</strong></td>
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<td></td>
</tr>
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<td>No <em>(Ref)</em></td>
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<td>-</td>
<td>-</td>
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<tr>
<td>Yes</td>
<td>1,312</td>
<td>43.0</td>
<td>1.75 (1.52, 2.00)*</td>
<td>1.59 (1.38, 1.84)*</td>
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<td><strong>Pay Fee to Establish CPA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No <em>(Ref)</em></td>
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<td>-</td>
<td>-</td>
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<tr>
<td>Yes, and I paid it</td>
<td>224</td>
<td>38.0</td>
<td>1.48 (1.12, 1.96)**</td>
<td>1.57 (1.03, 2.39)**</td>
</tr>
<tr>
<td>Yes, and my facility paid it</td>
<td>759</td>
<td>42.7</td>
<td>1.81 (1.54, 2.11)*</td>
<td>1.41 (1.08, 1.85)**</td>
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<td><strong>Pay Fee to Maintain CPA</strong></td>
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<td></td>
<td></td>
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</tr>
<tr>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Yes, and I paid it</td>
<td>256</td>
<td>34.8</td>
<td>1.29 (0.99, 1.68)</td>
<td>0.88 (0.59, 1.33)</td>
</tr>
<tr>
<td>Yes, and my facility paid it</td>
<td>775</td>
<td>41.4</td>
<td>1.71 (1.46, 2.00)*</td>
<td>1.15 (0.88, 1.50)</td>
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<tr>
<td><strong>Lost Supervising Provider</strong></td>
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<td>30.1</td>
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</tr>
<tr>
<td>Yes</td>
<td>1,929</td>
<td>37.4</td>
<td>1.39 (1.24, 1.56)*</td>
<td>1.30 (1.15, 1.46)*</td>
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<tr>
<td><strong>Physician Practice Location</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Same office/clinic <em>(Ref)</em></td>
<td>2,134</td>
<td>29.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Same facility</td>
<td>1,464</td>
<td>32.2</td>
<td>1.17 (1.01, 1.35)**</td>
<td>1.10 (0.95, 1.28)</td>
</tr>
<tr>
<td>Same city/town</td>
<td>1,228</td>
<td>33.7</td>
<td>1.25 (1.07, 1.45)*</td>
<td>1.10 (0.94, 1.29)</td>
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<tr>
<td>Other</td>
<td>1,174</td>
<td>37.7</td>
<td>1.48 (1.27, 1.72)*</td>
<td>1.22 (1.03, 1.45)*</td>
</tr>
<tr>
<td><strong>Number of CPAs</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One <em>(Ref)</em></td>
<td>4,187</td>
<td>31.0</td>
<td>-</td>
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<tr>
<td>Two or more</td>
<td>1,813</td>
<td>35.9</td>
<td>1.25 (1.11, 1.40)*</td>
<td>1.13 (1.00, 1.28)**</td>
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<tr>
<td><strong>CPA Author</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No <em>(Ref)</em></td>
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<td>34.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Yes</td>
<td>1,599</td>
<td>28.3</td>
<td>0.77 (0.68, 0.87)*</td>
<td>0.80 (0.70, 0.92)*</td>
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<td><strong>Patient Population</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Family/ across lifespan</td>
<td>2,462</td>
<td>33.2</td>
<td>1.06 (0.95, 1.19)</td>
<td></td>
</tr>
<tr>
<td>Adult gerontology</td>
<td>2,122</td>
<td>31.6</td>
<td>0.94 (0.84, 1.06)</td>
<td></td>
</tr>
<tr>
<td>Women's health</td>
<td>979</td>
<td>37.1</td>
<td>1.28 (1.11, 1.48)*</td>
<td>1.46 (1.25, 1.69)*</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>728</td>
<td>31.5</td>
<td>0.95 (0.80, 1.12)</td>
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<tr>
<td>Psychiatric mental health</td>
<td>571</td>
<td>33.1</td>
<td>1.03 (0.86, 1.24)</td>
<td></td>
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<tr>
<td>Neonatal</td>
<td>172</td>
<td>39.0</td>
<td>1.34 (0.98, 1.83)</td>
<td>1.34 (0.97, 1.86)</td>
</tr>
</tbody>
</table>

**Note.** CPA = Collaborative Practice Agreement; OR = odds ratio; AOR = adjusted odds ratio; CI = confidence interval.

* p < .01.

** p < .05.

* Each patient population was assessed as an independent binary predictor with a general referent of “no” indicating any other patient subgroup.
existing gaps in provider care. Specifically, the inverse relationship between limited care and supervisor proximity, based on practice location and total distance, suggest that related CPA requirements likely perpetuate the limited flow of services to traditionally underserved populations.

There is ample evidence that truly collaborative advanced provider networks can improve access to and quality of care, as well as the timeliness of rendered services (Green et al., 2013; Donelan et al., 2013; Buerhaus et al., 2015; Barnes et al., 2018; Deshefy-Longhi, Swartz, & Grey, 2008). Further, given the complexities of the U.S. healthcare delivery system, coupled with recent expansions in coverage and an aging patient population, such integrated teams are likely necessary to address evolving consumer demand (Barnes et al., 2018). In its current format, a CPA is not the mechanism for achieving this end. The findings of this analysis suggest CPAs do little to institutionalize potentially important checks on early career professionals, including regular communication and medical record reviews. Instead, they often inhibit access to care in regions that need it the most and can place significant financial and practice restrictions on midcareer and established APRNs, who are well positioned to address these shortfalls. Although progress continues toward removing these regulations, it is incumbent on state legislatures to make their constituents’ access to high-quality care a top priority (Brom, Salsberry, & Graham, 2018).

Limitations
To avoid overinterpretation of the results, there are several limitations to this study that require careful consideration. First, due to the retrospective design of this study, associations identified during this analysis are correlative rather than causal. Second, despite consultation with the four major APRN associations, the scope of the survey instrument is by nature not exhaustive; thus, there are likely topics that were not queried as part of this study that may warrant further research. Finally, because of our focus on APRN practice patterns, this study does not include physician or physician assistant feedback related to how CPAs impact the broader professional landscape or are perceived among other affected professional classes.

Conclusion
Given the numerous challenges facing the U.S. healthcare system, state laws should facilitate APRNs practicing to the full extent of their education and training. The findings of this study underscore that CPAs, far from implementing checks and balances that augment patient safety, do little to generate a truly collaborative environment. Rather, they ultimately divert care away from traditionally underserved areas, curtail consumer choice, and place unnecessary restrictions and financial burdens on an entire class of advanced providers. In light of these results, states should redouble their efforts to ensure critical healthcare services tailored to the needs of their residents remain widely accessible.

References


APRN PRESCRIBING Rule 4723-9-10 OAC

For MAT Prescribing see Rule 4723-9-13

Is the drug a controlled substance?

Yes:

May prescribe

*But note: Gabapentin products require days' supply

No:

DEA number unless excepted by 4729-17-13 OAC?

Yes:

Does patient have a terminal condition as defined in Section 2133.01 ORC, and has a physician previously issued C-II to patient?

No:

May issue up to 72 hour supply of C-II

No:

STOP do Not Prescribe

Is drug C-II?

Yes:

Will C-II be issued from allowed location or through a hospice program (Section 4723.481 ORC)?

No:

Is the drug for acute, chronic or sub-acute pain as defined in 4723-9-10(A)?

No:

Is prescription for inpatient use, or is patient: (a) in hospice program; or (b) in a terminal condition as defined in 2133.01 ORC? Or, for acute pain only, is receiving palliative care, or is being treated for cancer or associated condition?

Yes:

No:

If non-opioid treatment options have been ruled out, may prescribe for pain that is Acute: presumption is 3-day or less supply is sufficient, but may prescribe up to 7 days (adults), 5 days (minors) with no refills and not more than an average of 30 MED per day. 30 MED may be exceeded only if Rule 4723-9-10(J)(3)(c) requirements are met. Chronic or Sub-Acute: Only if requirements of Rule 4723-9-10(M) are met.
The following article is reprinted with permission from the Journal of Nursing Regulation, Volume 9, Issue 2 – July 2018 Supplement, “The NCSBN National Nursing Guidelines for Medical Marijuana”.

The NCSBN National Nursing Guidelines for Medical Marijuana

Prior to 1936, cannabis was sold over the counter and used commonly for a variety of illnesses in the United States (Marijuana Policy Project, 2014). By 1936, every state had passed a law to restrict possession of cannabis, thus eliminating its availability as an over-the-counter drug. Then in 1970, the Comprehensive Drug Abuse Prevention and Control Act (1970) provided a classification of controlled substances; cannabis was included in the list of Schedule I Controlled Substances, thereby continuing the prohibition of the use of cannabis by prohibiting health care practitioners from prescribing cannabis.

Use of cannabis remained restricted until the first legalization of medical marijuana was approved by voters in California in 1996. Even after the voters’ approval, the federal government opposed the proposition and threatened to revoke the prescription-writing abilities of doctors who recommended or prescribed marijuana. It was not until 2000 that a group of physicians challenged this policy and prevailed in court, and a decision was made to allow physicians to recommend—but not prescribe—medical marijuana (Marijuana Policy Project, 2014).

Since then, an increasing cultural acceptance of cannabis has prompted 31 jurisdictions (including the District of Columbia, Guam, Puerto Rico (National Conference of State Legislatures [NCSL], 2017), and all provinces/territories of Canada (Government of Canada, 2016) to pass legislation legalizing medical cannabis. In these laws, the jurisdiction has adopted exemptions legalizing the use of cannabis for medical purposes. An increasing proportion of jurisdictions have also decriminalized and legalized recreational cannabis use.

The use of either medical or recreational cannabis raises evolving public health, nursing practice, science, legal, education, ethical, and social issues. Of significance, there is a contradiction between the federal law classifying cannabis as a Schedule I Controlled Substance and various states legalizing its use medically, recreationally, or both. This federal classification has prevented open and unlimited research on cannabis. As a result, research on the efficacy of cannabis for treatment of certain medical conditions is limited and lacking. Specifically, the research has not definitively specified indications, dosage, route, safety, adverse effects, and long-term effects of cannabis.

Without evidence that is scientifically rigorous, statistically reportable, and based on patient populations, nurses will face increasing challenges concerning medical cannabis. To address the lack of guidelines for nurses when caring for individuals utilizing cannabis, the National Council of State Boards of Nursing Board of Directors appointed members to the Medical Marijuana Nursing Guidelines Committee (see Appendix A). In order to create the requested guidelines and recommendations for education and care, a review of the relevant statistics, current legislation, scientific literature, and clinical research on cannabis as a therapeutic agent was required. The Committee also consulted known experts in the area of medical marijuana, its use, safety, and legislation. This report documents the results of this work and presents this important information in two parts. Part I presents the results of these reviews and consultations; Part II presents the specific Guidelines created by the Committee: nursing care of the patient using medical marijuana, medical marijuana education in pre-licensure nursing programs, medical marijuana education in APRN nursing programs, and APRNs certifying a medical marijuana qualifying condition.
Nursing Care of the Patient Using Medical Marijuana

Purpose of the Guidelines
Over 31 US jurisdictions (including the District of Columbia), Guam, and Puerto Rico passed legislation legalizing cannabis for medical use. Several other jurisdictions also have legalized cannabis for medical use.* Each medical marijuana program has unique characteristics. In the United States, cannabis is a Schedule I Controlled Substance. Therefore, medical cannabis is unlike most other therapeutics in that providers cannot prescribe cannabis, nor can pharmacies dispense cannabis. However, applicable jurisdiction statutes and rules provide for the manufacture, distribution, and use of cannabis for medical purposes.

These guidelines provide nurses with principles of safe and knowledgeable practice to promote patient safety when caring for patients using medical marijuana.

Definitions
Cannabis. Any raw preparation of the leaves or flowers from the plant genus Cannabis. This report uses "cannabis" as a shorthand that also includes cannabinoids.

Cannabinol (CBD). A major cannabinoid that indirectly antagonizes cannabinoid receptors, which may attenuate the psychoactive effects of tetrahydrocannabinol.

Cannabinoid. Any chemical compound that acts on cannabinoid receptors. These include endogenous and exogenous cannabinoids.

Cannabinol (CBN). A cannabinoid more commonly found in aged cannabis as a metabolite of other cannabinoids. It is nonpsychoactive.

Certiﬁ. The act of certifying that a patient has a qualifying condition. Many jurisdictions use alternative phrases such as "attest" or "authorize"; however, 13 of 29 jurisdictions use "certify" language in their statutes.

* In Australia, cannabis for medical use is federally legal, with states allowed to implement as they see fit. Although Bermuda has not legislated use of marijuana, their Supreme Court ruled that citizens could apply for personal licenses to possess cannabis for medical use. Cannabis for medical use is federally legal in all provinces of Canada. In New Zealand, physicians may prescribe CBD and cannabis-based products.

Clinical research. An activity that involves studies that experimentally assign randomized human participants to one or more drug interventions to evaluate the effects on health outcomes.

Designated caregiver. An individual who is selected by the Medical Marijuana Program qualifying patient and authorized by the Medical Marijuana Program to purchase and/or administer cannabis on the patient's behalf. Also sometimes referred to as an "alternate caregiver."

Dronabinol. The generic name for synthetic tetrahydrocannabinol. It is the active ingredient in the U.S. Food & Drug Administration-approved drug Marinol.

Endocannabinoid system. A system that consists of endocannabinoids, cannabinoid receptors, and the enzymes responsible for synthesis and degradation of endocannabinoids.

Marijuana. A cultivated cannabis plant, whether for recreational or medicinal use. The words "marijuana" and "cannabis" are often used interchangeably in various lay and scientific literature. These guidelines will primarily use the word "cannabis." When referring to a medical marijuana program, the guidelines will use the word "marijuana," as it is often used within program references.

Medical Marijuana Program (MMP). The official jurisdictional resource for the use of cannabis for medical purposes. Search the jurisdiction's website or Department of Health for "medical marijuana program" or "medical marijuana program."

Nabilone. The generic name for a synthetic cannabinoid similar to tetrahydrocannabinol. It is the active ingredient in the U.S. Food & Drug Administration-approved drug Cesamet.

Schedule I Controlled Substance. Defined in the federal Controlled Substances Act as those substances that have a high potential for abuse, no currently accepted medical use in treatment in the United States; and a lack of accepted safety for use of the substance under medical supervision.

Tetrahydrocannabinol (THC). One of many cannabinoids found in cannabis. THC is the primary substance responsible for most of the characteristic psychoactive effects of cannabis.
Recommendations

Essential Knowledge

1. The nurse shall have a working knowledge of the current state of legalization of medical and recreational cannabis use.
   - The Drug Enforcement Agency (DEA) classifies cannabis as a Schedule I Controlled Substance. This classification not only prohibits practitioners from prescribing cannabis, it also prohibits most research using cannabis.6
   - The process for obtaining cannabis for federally funded research purposes is cumbersome. Currently, the only legal source of cannabis for research purposes is grown in limited quantities at the University of Mississippi.7 The DEA sets an annual quota for cannabis grown for research purposes.6
   - Over 31 jurisdictions (including the District of Columbia), Guam, and Puerto Rico passed legislation legalizing cannabis for medical purposes. In these states, the jurisdiction has adopted exemptions legislating the use of cannabis for medical purposes. Although the use of marijuana pursuant to authorized MMPs conflicts with federal law and regulations, at present there is no controlling case law holding that Congress intended to preempt the field of regulation of cannabis use under its supremacy powers.8
   - An increasing proportion of jurisdictions have also decriminalized or legalized recreational cannabis use.
   - The federal government's position on prosecuting the use of cannabis that is legal under applicable jurisdiction law has been set out in U.S. Department of Justice position papers. In 2009, the U.S. Attorney General took a position that discourages federal prosecutors from prosecuting people who distribute or use cannabis for medical purposes in compliance with applicable jurisdiction law; further similar guidance was given in 2011, 2013, and 2014.9 In January 2018, the U.S. Office of the Attorney General rescinded the previous nationwide guidance specific to marijuana enforcement. The 2018 memorandum10 provides that federal prosecutors follow the well-established principles in deciding which cases to prosecute, namely, the prosecution is to weigh all relevant considerations, including priorities set by the attorney general, seriousness of the crime, deterrent effect of criminal prosecution, and cumulative impact of particular crimes on the community.

2. The nurse shall have general knowledge of the principles of an MMP.
   - MMPs are defined and described within the statute and rules of the specific jurisdiction. The relevant statute or rules are most easily located through the jurisdiction's Department of Health and MMP.11 Laws and rules regarding MMPs are an evolving process. Always consult the most recent version.
   - A health care provider does not prescribe cannabis.
   - The MMP will specify the qualifying conditions and the certifying process as well as the type of health care provider who can certify a qualifying condition.12
   - The MMP will specify whether an advanced practice registered nurse can certify a qualifying condition and whether a specific course or training is required in order to participate in certifying an MMP qualifying condition.13
   - After the qualifying condition is certified, the patient registers with the MMP. Once registered, the patient can obtain cannabis from a jurisdiction-authorized cannabis dispensary.
   - Procurement and administration of cannabis for medical purposes are limited to the patient and/or the patient's designated caregiver. The MMPs will specify whether designated caregivers are permissible as well as the applicable process for registration as a designated caregiver.14
   - In some jurisdictions, the MMP allows an employee of a hospice provider or nursing, or medical facility, or a visiting nurse, personal care attendant, or home health aide to act as a designated caregiver for the administration of medical marijuana.15

3. The nurse shall have a general understanding of the endocannabinoid system, cannabinoid receptors, cannabinoids, and the interactions between them.
   - The endocannabinoid system consists of endocannabinoids, cannabinoid receptors, and the enzymes responsible for synthesis and degradation of endocannabinoids.16
   - Discovered in 1973, this system includes a series of cannabinoid receptors throughout the body embedded in cell membranes that, when stimulated by endocannabinoids, are thought to promote homeostasis.17
   - Endocannabinoids are naturally occurring substances within the body, while phytochemicals (plant substances that stimulate cannabinoid receptors) are found in cannabis.18
   - The best known of these cannabinoids is tetrahydrocannabinol (THC); however, cannabidiol (CBD) and cannabiol (CBN) are gaining interest in therapeutic use.19

4. The nurse shall have an understanding of cannabis pharmacology and the research associated with the medical use of cannabis.

Due to government restrictions on research involving cannabis, the surge of legislation has outpaced research, leaving nurses with few resources when caring for patients who use medical cannabis. Therefore, information regarding medicinal use of cannabis must be derived from moderate- to high-quality evidence using randomized placebo-controlled studies. These particular studies are the most likely to elucidate causality in treatments and are the only trusted source of evidence for cannabis as a clinical intervention. Research on cannabis is an evolving body of work. As with any scientific literature, it is important to rely on the most recent high-quality evidence.

a. Current scientific evidence exists for the use of cannabis for the following qualifying conditions
   - Moderate- to high-quality evidence exists for:
     - nausea
     - chemotherapy-induced nausea and vomiting
     - pain (resulting from cancer or rhematoid arthritis)
     - chronic pain (resulting from fibromyalgia)
     - neuropathies (resulting from HIV/AIDS, Multiple Sclerosis (MS), or diabetes)
b. Adverse effects of cannabis use are influenced by the patient’s condition and current medications
   • The patient’s propensity for the following may be exacerbated by cannabis: increased heart rate, increased appetite, sleepiness, dizziness, decreased blood pressure, dry mouth, blurry eyes, decreased urination, hallucination, paranoia, anxiety, impaired attention, memory, and psychomotor performance.21
   • Cannabis may exacerbate symptoms associated with asthma, bronchitis, and emphysema; cardiac disease; and alcohol or other drug dependence.22
   • Cognitive impairment by cannabis may be dose- and age-dependent.23
   • It is highly likely that cannabis will exacerbate symptoms of poor balance and posture in patients with dyshkinetic disorders. Similarly, cannabis may worsen mental faculties in conditions that cause cognitive deficits. Patients who suffer from diseases with neurologic symptomology may show greater cognitive impairment.24
   • Some participants report fatigue, suicidal ideation, nausea, asthenia, and vertigo as adverse effects of cannabis.25
   • Cannabinoid receptors are effectively absent in the brainstem cardiorespiratory centers. This is believed to preclude the possibility of a fatal overdose from cannabinoid intake.26
   • Cannabis can be a drug of abuse. Cannabis use disorder is defined as a problematic pattern of cannabis use leading to clinically significant impairment or distress; the clinical indications are included in the DSM-5.27
   • Cannabis withdrawal syndrome has been identified as a syndrome seen in some patients whose cannabis use has been heavy and prolonged (i.e., usually daily or almost daily use over a period of at least a few months). The withdrawal syndrome has varying symptomatology, including insomnia, loss of appetite, physical symptoms, and restlessness initially, then irritability, anger, vivid and unpleasant dreams after a week.28

c. Variable effects of cannabis are dependent on type of product and route of administration
   • Since medical cannabis is not an FDA drug, there is no recommended dosage. Instead medical cannabis is titrated by the patient, with the principle of “start low, go slow.”29
   • Continuous patient assessment of perceived efficacy and adverse effects is recommended. Useful strategies include tracking dose, symptoms, relief, and adverse effects in a journal for review with the authorizing practitioner.
   • FDA-approved THC drugs (dronabinol and nabilone) are administered orally or by an oral mucosal route with a specific dosage.

d. Risks to particular groups of patients
   • Adolescents. Many studies show a correlation between cannabis use and poor grades, high dropout rates, lower income, lower percentage of college degree completion, greater need for economic assistance, unemployment, and use of other drugs. Although these trends are related to recreational rather than medicinal cannabis use, the trends cannot be ignored but should be balanced with the benefits of cannabis for medical use.30
   • Perinatal. Two clinical studies indicate that interference with embryonic development might increase the risk of occurrence of纠纷 disorders; and cannabinoids are capable of dysregulating hormones, which in turn can affect teratogenesis.31
   • Neonates. Presently there are no reliable data for neurodevelopmental outcomes with early exposure to cannabis in neonatal life, or through either breastfeeding or secondhand inhalation.32,33
   • Cannabis can be a drug of abuse and precautions should be taken to minimize the risk of misuse and abuse.
   • Cannabis use may exacerbate existing psychoses in those with a risk of suicide or history of suicide attempt, schizophrenia, bipolar disorder, or other psychotic conditions.34

5. The nurse shall be aware of the facility or agency policies regarding administration of medical marijuana.
   Always check with the facility and local Department of Health or MMP for more information on the facility policy when caring for a patient using cannabis medically.35

Clinical Encounter Considerations

1. As part of the clinical encounter for a patient using cannabis for medical use, the nurse shall conduct an assessment related to the following:
   • Signs and symptoms of cannabis adverse effects
     - Increased heart rate, increased appetite, sleepiness, dizziness, decreased blood pressure, dry mouth, blurry eyes, decreased urination, hallucination, paranoia, anxiety, impaired attention, memory, psychomotor performance, as well as symptoms associated with asthma, bronchitis, and emphysema or exacerbation of poor balance and posture in patients with dyshkinetic disorders.
     - Less frequently: fatigue, suicidal ideation, nausea, asthenia, and vertigo.
   • Hypersensitivity syndrome caused by overconsumption of edible cannabis product that can cause higher than normal blood concentrations of cannabinoids.
   • Variable effects of cannabis are dependent on type of product and route of administration
     • As medical cannabis dosage is titrated by the patient, with the principle of “start low, go slow,” continuous patient assessment of perceived efficacy and adverse effects is recommended.
     • Useful strategies include tracking dose, symptoms, relief, and adverse effects in a journal.

2. The nurse shall communicate the findings of the clinical encounter to other health care providers and note such communication in documentation.
   Clear, complete, and accurate documentation in a health record ensures that all those involved in a patient’s care have access to information upon which to plan and evaluate their interventions.

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3. The nurse shall be able to identify the safety considerations for patient use of cannabis.
   - Administration of cannabis for medical use can only be carried out by the certified patient or designated caregivers registered to care for the patient.
   - Cannabis storage considerations include:
     - Storing all cannabis products in a locked area
     - Keeping cannabis in the original child-resistant packaging
     - Storing unused cannabis in a cool, dry place
     - Following labeling guidelines for storage and expiration dates
   - Disposal of unused cannabis products should be completed according to the DEA's Disposal Act. Generally, one can locate a collection receptacle via the DEA Registration Call Center (800-882-9539).

Medical Marijuana Administration Considerations

1. A nurse shall not administer cannabis to a patient unless specifically authorized by jurisdiction law.
2. Instances in which the nurse may administer cannabis or synthetic THC to a patient.
   - Administration of FDA-approved synthetic THC drugs (dronabinol and nabilone) as per facility formulary and policy
   - As a registered MMP-designated caregiver
     - The majority of jurisdictions allow a designated caregiver to assist a patient with the medical use of cannabis.
     - These caregivers must meet specific qualifications and be registered with the MMP and must not practice outside of the limits of the caregiving statute.
   - Some jurisdictions allow an employee of a hospice provider or nursing or medical facility, or a visiting nurse, to assist in the administration of medical marijuana.
   - Check the most current MMP statute or rules.
   - Check facility policy regarding medical marijuana administration.

Ethical Considerations

In addition to ethical responsibilities under the nurse's jurisdictional law, the nurse shall approach the patient without judgment regarding the patient's choice of treatment or preferences in managing pain and other distressing symptoms.

Awareness of one's own beliefs and attitudes about any therapeutic intervention is vital, as nurses are expected to provide patient care without personal judgment of patients.

References


Ibid.

Ibid.
Medical Marijuana Education in Pre-Licensure Nursing Programs

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These recommendations for curriculum content provide nurses with principles of safe and knowledgeable practice to promote patient safety when caring for patients using medical marijuana.

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Recommendations

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   - The Drug Enforcement Agency (DEA) classifies cannabis as a Schedule I Controlled Substance. This classification not only prohibits practitioners from prescribing cannabis, it also prohibits most research using cannabis.\(^4\)
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   - An increasing proportion of jurisdictions have also decriminalized or legalized recreational cannabis use.\(^8\)
   - The federal government’s position on prosecuting the use of cannabis that is legal under applicable jurisdiction laws has been set out in U.S. Department of Justice’s position papers. In 2009, the U.S. Attorney General took a position that discouraged federal prosecutors from prosecuting people who distribute or use cannabis for medical purposes in compliance with applicable jurisdiction laws; further similar guidance was given in 2011, 2013, and 2014.\(^9\) In January 2018, the U.S. Office of the Attorney General rescinded the previous nationwide guidance specific to marijuana enforcement. The 2018 memorandum\(^10\) provides that federal prosecutors follow the well-established principles in deciding which cases to prosecute, namely, the prosecution is to weigh all relevant considerations, including priorities set by the attorneys general, seriousness of the crime, deterrent effect of criminal prosecution, and cumulative impact of particular crimes on the community.

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   - The MMP will specify whether an APRN can certify a qualifying condition and whether a specific course or training is required in order to participate in certifying an MMP qualifying condition.\(^13\)
   - After the qualifying condition is certified, the patient registers with the MMP. Once registered, the patient can obtain cannabis from a jurisdiction-authorized cannabis dispensary.
   - Procurement and administration of cannabis for medical purposes are limited to the patient and/or the patient’s designated caregiver. The MMPs will specify whether designated caregivers are permissible as well as the applicable process for registration as a designated caregiver.\(^14\)
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   - moderate to high quality evidence exists for
     - nausea
     - chemotherapy-induced nausea and vomiting
     - pain (resulting from cancer or rheumatoid arthritis)
     - chronic pain (resulting from fibromyalgia)
     - neuropathies (resulting from HIV/AIDS, multiple sclerosis (MS), or diabetes)
     - spasticity (from MS or spinal cord injury).\(^20\)
b. Adverse effects of cannabis use are influenced by the patient's condition and current medications
  ○ The patient's propensity for the following may be exacerbated by cannabis: increased heart rate, increased appetite, sleepiness, dizziness, decreased bone density, dry mouth, itchy eyes, decreased urine, hallucinations, paranoia, anxiety, impaired attention, memory, and psychomotor performance.21
  ○ Cannabis may exacerbate symptoms associated with asthma, bronchitis, and emphysema; cardiac disease; and alcohol or other drug dependence.22
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c. Variable effects of cannabis are dependent on type of product and route of administration
  ○ The medical cannabis is not an FDA drug, there is no recommended dosage. Instead, medical cannabis dosage is titrated by the patient, with the principle of "start low, go slow."29
  ○ Continual patient assessment of perceived efficacy and adverse effects is recommended. Useful strategies include tracking dose, symptoms, relief, and adverse effects in a journal for review with the authorizing practitioner.
  ○ FDA-approved synthetic THC drugs (dronabinol and nabilone) are administered orally or by an intranasal route with a specific dosage.

d. Risks to particular groups of patients
  ○ Adolescence. Many studies show a correlation between cannabis use and poor grades, high dropout rates, lower income, lower percentage of college degree completion, greater need for economic assistance, unemployment, and use of other drugs. Although these trends are related to recreationally rather than medicinally use, the trends cannot be ignored but should be balanced with the benefits of cannabis for medical use.30
  ○ Fertility. Two preclinical studies indicate that interference with endogenous cannabinoid might increase chances of failed ovulation evacuation and cannabinoids are capable of dysregulating hormones, which in turn can affect permenopause.31
  ○ Cannabis can be a drug of abuse and precautions should be taken to minimize the risk of misuse and abuse.
  ○ Neonates. Presently there are no reliable data for pre- and postnatal outcomes with exposure to cannabis in neonatal life, or through either breastfeeding or secondhand inhalation.32
  ○ Cannabis use may exacerbate existing psychoses in those with a risk of suicide or history of suicide attempt, schizophrenia, bipolar disorder, or other psychotic conditions.33

5. The nursing student shall be able to identify the safety considerations for patient use of cannabis.
   • Administration of cannabis for medical use can only be carried out by the certified patient or designated caregivers registered to use for the patient.
   • Cannabis storage considerations include:
     ○ Keeping cannabis out of the reach of children, minors, and non-registered individuals
     ○ Storing all cannabis products in a locked area
     ○ Keeping cannabis in the original child-resistant packaging
     ○ Storing raw cannabis in a cool, dry, place
     ○ Following labeling guidelines for storage and expiration dates
   • Disposal of unused cannabis products should be completed according to the DEA's Disposal Act.34 Generally, one can locate a collection receptacle via the DEA Registration Call Center (800-882-9539).

6. The nursing student shall approach the patient without judgment regarding the patient’s choice of treatment or preferences in managing pain and other distressing symptoms.
   • Awareness of one’s own beliefs and attitudes about any therapeutic intervention is vital as nurses are expected to provide patient care without personal judgment of patients.

7. The nursing student shall be aware of medical marijuana administration considerations.
   • A nurse shall not administer cannabis to a patient unless specifically authorized by jurisdiction law.35
   • Instances in which the nurse may administer cannabis or synthetic THC to a patient.
     ○ Administration of FDA-approved synthetic THC drugs (dronabinol and nabilone) per facility formulary and policy
     ○ As a registered MMP designated caregiver
       • The majority of jurisdictions allow a designated caregiver to assist a patient with the medical use of cannabis.
       • These caregivers must meet specific qualifications and be registered with the MMP and must not practice outside of the limits of the caregiving statute.36
Some jurisdictions allow an employee of a hospice provider or nursing or medical facility, or a sitting nurse, to assist in the administration of medical marijuana.  

Check the most current MAID statute or rules.  

Check facility policy regarding medical marijuana administration.

References


11. Ibid.

12. Ibid.

13. Ibid.

14. Ibid.

15. Ibid.


17. Ibid.

18. Ibid.


38 Ibid.

39 Ibid.

40 Ibid.