Boards of nursing (BONs) across the United States successfully collaborate with alternative-to-discipline (ATD) programs to help nurses with substance use disorder (SUD). However, certified registered nurse anesthetists (CRNAs) with SUD are not treated as a distinct group of advanced practice nurses, despite their direct access to potent drugs and specialized knowledge of pharmacology. Recognizing the uniqueness of CRNAs in relation to SUD, this article presents recommendations and American Association of Nurse Anesthetists (AANA) guidelines for use in creating a consistent approach to the treatment and reentry of addicted CRNAs.

Literature Review
The literature on CRNAs with SUD is minimal. Data on anesthesiologists are more widely available and can be used for comparative purposes given the obvious similarities of their practice settings. Research findings indicate that anesthesiologists experience SUD at 2.5 times the rate of the other physicians (Talbott, Gallegos, Wilson, & Porter, 1987) and are 2.79 times more likely to die of drug-related causes than an internist (Alexander, Checkoway, Nagahama, & Domino, 2000). CRNAs likely mimic these ratios among nurses because they have the same risk factors. Most CRNAs with SUD are male (Bell, McDonough, Ellison, & Fitzhugh, 1999). Typically, they have 5 to 10 years in practice (Bell, 2006; Talbott et al., 1987; Wright et al., 2012).

Among CRNAs, the prevalence of diverting drugs for self-administration is 9.8% (Bell, 2006; Bell et al., 1999). The drugs most commonly diverted are fentanyl and propofol. Statistics on opioids such as fentanyl are more plentiful than statistics on propofol because the scope and significance of propofol abuse have been underreported (Welliver, Bertrand, Garza, & Baker, 2012). Propofol is not regulated as a controlled substance with abuse and dependence potential. Therefore, access to propofol is easier than to a controlled substance such as fentanyl.

Anecdotally, treatment programs report a recent substantial increase in propofol addiction, especially among anesthesia providers. The effects of propofol are described as euphoric, anxiolytic, and calming, and over a third of reported cases of abuse end in death (Welliver et al., 2012). Propofol detection is not part of a standard urine drug screen panel and would require a blood draw during or soon after use because of the drug’s short half-life.

Treatment and Reentry
For the most part, treatment for CRNAs with addiction is similar to other nurses or physicians with the same impairment. However, because of their access to more potent and life-threatening drugs, CRNAs with SUD must be immediately removed from their practice setting. For CRNAs suspected of or identified as being impaired, an appropriate action is for the nurse to remain employed by the organization but in a different setting away from access to drugs. By retaining their employment, CRNAs with SUD will be able to access insurance for treatment, and thereby be more likely to seek help.

The treatment program should be approved by the BON. Treatment programs that are designed specifically for health care professionals continue to be the ideal option (Bettinardi-Angres & Bologeorges, 2011). The length of time in a treatment program for professionals typically varies from 6 to 12 weeks. Because of this variance, it is imperative that the choice of a treatment program is endorsed and approved by the BON and has a successful history of treating professionals.

For CRNAs, attention to reentry is critical. Recovering anesthesia providers have the distinct challenge of returning to a practice in which they are continually exposed to their drugs.
of choice (Wright, McGuinness, Schumacher, Zweling, & Moneyham, 2014). Moreover, when a major opioid such as fentanyl is the drug of choice, the risk of relapse almost doubles (Domino et al., 2005; Menk, Baumgarten, Kingsley, Culling, & Middaugh, 1990). In those who return to anesthesia practice compared with those who do not, the risk of relapse is increased by 2.5% (Talbott et al., 1987).

Special consideration needs to be given to CRNAs with a history of propofol use and other nonopioid substances, since there are no medication-assisted therapies to improve success in recovery and return to work. In these cases, the CRNA may require longer time away from the operating room and extended supervision and monitoring when he or she returns.

Risk of relapse in CRNAs has not been studied in depth, but the success rates for long-term sobriety and compliance are greater when health care professionals are treated in programs specifically targeted at health care professionals and are subsequently monitored and supported by ATD programs (Angres, Bologeorges, & Chou, 2013; Angres, Talbott, & Bettinardi-Angres, 1998).

Some of the most difficult obstacles for the CRNA in recovery are finding employment and working with managers who are unwilling to adequately monitor and treating CRNA (Hamza & Monroe, 2011). In light of these obstacles, CRNAs with SUD should have the opportunity to take a medical leave of absence, with an option to return to work after successful treatment, rather than be terminated from their position. Administrators and heads of departments in which recovered CRNAs return to practice should be educated about SUD and the distinct challenges faced by CRNAs with SUD. A workplace monitor upon return to work may alleviate some of the obvious anxieties experienced by both the recovering CRNA and the workplace.

**Differing Approaches Among States**

A review of 14 states revealed that while some ATD programs operated more independently of the BON, about three-quarters of those states with ATD programs worked directly with BONs. (See Table 1.) For example, when a nurse is reported or self-reports to the BON, the recommendation is to enter the state ATD program. Professional discipline may be mitigated if full compliance is maintained. Failure to adhere to the requirements of the ATD program will likely result in licensure consequences for the nurse with SUD.

However, in other states, when nurses self-report to ATD programs, the BON is not made aware of their enrollment. If those nurses remain compliant with the ATD program’s terms, the BON is never notified and there is no public record of those events. The majority of BONs do not publish nurses’ names in the public record, and the few that do remove them when treatment is finished.

Not only does reporting vary among states but so does the approach to addressing SUD in nurses. Some states use an independent contractor to monitor nurses and treatment is not required. In fact, approximately half of the states reviewed did not require treatment for SUD at all. Many of these states only require a diagnosis of SUD and those nurses are then enrolled into a monitoring program, not to be confused with treatment. Treatment is a period of time spent in a drug and alcohol rehabilitation program, preferably one specifically designed for health care professionals, followed by monitoring in an ATD program. Basic monitoring consists of self-reported attendance at Alcoholics Anonymous meetings and random drug screens. The majority of information obtained from monitoring is subjective and dependent on the honor of the addicted/recovering health care professional. Treatment and monitoring are separate but linked in the optimal treatment course for an addicted CRNA.

In the review of 14 states, the average contract length for treatment in an ATD program is 3 years, even though the average contract length for physicians and pharmacists is 5 years. The diagnosis and treatment plan most often is determined by the treatment center or a provider chosen by the nurse. Half of the states handle CRNAs differently. For example, if a CRNA in North Carolina is reported to the BON, he or she will automatically be removed from work as a CRNA for 2 years. In Texas, the recovering CRNA must work as an RN for 1 year before he or she can resume practice as a CRNA. In Kentucky, the CRNA must take 1 year off practice from the role of CRNAs.

For reentry, abstinence from all mood-altering addictive substances other than those prescribed for a medical condition (measured by clean urine drug screens), evaluation by an addictionologist, 12-Step participation, weekly aftercare for 1 to 2 years at a Caduceus or similar group, and participation in an ATD program were almost always required by BONs for reentry for all nurses recovering from SUD. A variable among states was the amount of time the returning nurse was barred from administering opioids in the workplace, which typically varied from 3 months to 2 years and was solely dependent on the recommendation of the treatment provider.

According to the review, the average time between when a CRNA is reported to the BON and when the CRNA is investigated is 6 to 12 months. During that time, the addicted CRNA can continue to practice and pose a potential danger to self and the public. Some states immediately place an alert on the license of the CRNA suspected of having SUD. This safeguard not only protects the privacy of the CRNA but also safeguards the public.

**AANA Guidelines**

The current AANA (2015) guidelines for reentry include successful completion of treatment, a comprehensive evaluation by an American Society of Addiction Medicine board-certified addictionologist, and compliance with all recommendations for
continuing care after discharge. The guidelines also recommend “…a minimum of one year out of clinical anesthesia practice for individuals with an IV drug addiction or major opioid addiction” (AANA, 2015).

Within the AANA guidelines, successful reentry also depends on supportive loved ones, treatment of comorbidities, 12-Step meetings with a sponsor, participation in an ATD program, and a workplace mentor, which is a peer who is aware of the CRNA’s recovery, and supports and monitors him or her at the workplace. Lastly, the AANA takes a definitive stand against the use of opioid replacement therapy (i.e., buprenorphine) but supports the use of naltrexone (AANA, 2015).

### TABLE 1

<table>
<thead>
<tr>
<th>State</th>
<th>Is there an ATD program?</th>
<th>Are RNs and CRNAs handled differently?</th>
<th>Is BON aware of the nurse’s participation in the ATD program?</th>
<th>Is employer notified of participation in the ATD program?</th>
<th>Is the nurse’s name published in the public record?</th>
<th>Years of ATD program participation required?</th>
<th>Who determines the terms of the ATD program contract?</th>
<th>Is addiction treatment required by BON?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>Yes</td>
<td>Yes, RNs may complete program in less time.</td>
<td>BON knows specialty of participants, not names.</td>
<td>Yes</td>
<td>No</td>
<td>5</td>
<td>VDAP coordinator</td>
<td>Yes</td>
</tr>
<tr>
<td>California</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>2 to 4</td>
<td>Diversion evaluation committee from BON</td>
<td>No</td>
</tr>
<tr>
<td>Georgia</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>5</td>
<td>BON</td>
<td>Yes</td>
</tr>
<tr>
<td>Indiana</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>1 to 3</td>
<td>ISNAP</td>
<td>No</td>
</tr>
<tr>
<td>Kentucky</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes, Removed at completion of program.</td>
<td>5</td>
<td>BON</td>
<td>Yes</td>
</tr>
<tr>
<td>Nevada</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>3</td>
<td>BON compliance coordinator</td>
<td>Yes</td>
</tr>
<tr>
<td>New York</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>2</td>
<td>PAP</td>
<td>No</td>
</tr>
<tr>
<td>North Carolina</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes, Removed at completion of program.</td>
<td>3</td>
<td>BON compliance coordinator</td>
<td>Yes</td>
</tr>
<tr>
<td>Tennessee</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>3 to 5</td>
<td>TnPAP</td>
<td>No</td>
</tr>
<tr>
<td>Texas</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes, unless SUD was self-reported or third-party reported.</td>
<td>5</td>
<td>TPAPN or BON</td>
<td>Yes</td>
</tr>
<tr>
<td>Utah</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>5</td>
<td>BON and investigative committee</td>
<td>No</td>
</tr>
<tr>
<td>Virginia</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>3 to 5</td>
<td>HPMP</td>
<td>Yes</td>
</tr>
<tr>
<td>West Virginia</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>5</td>
<td>IPN</td>
<td>No</td>
</tr>
<tr>
<td>Wyoming</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>3</td>
<td>BON</td>
<td>No</td>
</tr>
</tbody>
</table>

Note. VDAP = Voluntary Disciplinary Alternative Program; ISNAP = Indiana State Nurse Assistance Program; PAP = Professional Assistance Program; TnPAP = Tennessee Professional Assistance Program; SUD = substance use disorder; TPAPN = Texas Peer Assistance Program for Nurses; HPMP = Health Practitioners’ Monitoring Program; IPN = Intervention Project for Nurses.
**Recommendations for a Consistent Approach**

Promoting a culture of safety is recommended when addressing CRNAs with SUD. To facilitate this culture, all states must agree on mandatory requirements for addicted CRNAs. These requirements must consider finances, which is a prohibitive factor for most who do not comply. Recommendations for a consistent approach toward CRNAs diagnosed with SUD are as follows:

- State BONs should recognize and agree that CRNAs with SUD are a unique group of nurses who require distinct treatment.
- Comprehensive assessment and treatment at a program specifically designed for health care professionals, including CRNAs, should be the entry point for a suspected SUD, with immediate removal from practice.
- ATD programs for CRNAs and monitoring for a minimum of 5 years should be mandated. Nurses in ATD programs have recovery success rates of 47% to 95% (Monroe, Pearson, & Kenaga, 2008). The reasons for the vast differences in success rates have not yet been studied.
- Treatment should be offered as an option for all nurses, including CRNAs, before termination so they have insurance to access treatment (Wright et al., 2014).
- The addiction treatment specialist should determine a mandatory period of time away from the practice of anesthesia. Time away from contact with anesthesia drugs was cited as a tool in maintaining sobriety (Wright et al., 2014). The AANA recommends 1 year away based on the literature (Bryson & Silverstein, 2008). Ninety-eight percent of relapses occur in the first 2 years of recovery, and the first 2 months are the most critical (Hudson, 1998).
- Medication aids for opioid addiction, preferably injectable naloxone, should be required for no less than first year of the return to anesthesia practice (Angres, 2001; Berry et al., 2003; Farley & Arnold, 1991; Higgins Roche, 2007).
- Upon reentry, the recovering CRNA should secure a work-site monitor, typically a colleague in the same area of nursing. This task tends to be the most difficult directive for the returning CRNA. Optimally, the worksite monitor would have appropriate education in SUD and the ability to support the recovering CRNA. This individual would also act as a liaison between the recovering CRNA and administration, if necessary.
- Organizations should educate personnel in workplaces that employ anesthesia providers. This is essential and is typically the responsibility of administration. Unfortunately, barriers to a successful reentry include prejudice and lack of knowledge in nursing administration (Hughes, Smith, & Howard, 1998; Taylor, 2003).
- Ideally, the recovering CRNA should not work overtime for the first year of reentry (Angres et al., 1998).
- Recovering CRNAs should be required to attend 2 years of weekly aftercare, such as Caduceus or other peer-group meetings, unless location prohibits attendance. In that case, participation in an online support group must be considered (e.g., Anesthetists in Recovery).
- The recovering CRNA must commit to maintaining his or her well-being, ideally to include using exercise, meditation, nutrition, leisure time, and an increased social network (Scherbaum & Speck, 2008).
- Regular attendance at 12-Step meetings with a sponsor must be mandatory (Wright et al., 2014).

CRNAs must actively attend to comorbid conditions, including psychiatric and medical conditions and chronic pain states, while in recovery (Angres et al, 1998).
- The use of buprenorphine should be contraindicated because cognitive and psychomotor impairment, dependence, and withdrawal are associated with the drug (Messinis et al., 2009; Higgins Roche, 2007).

**Conclusion**

Until more evidence-based research is available, the recommendations and guidelines presented in this article offer the optimal course of action for CRNAs in recovery from SUD. With a consistent, national approach to the treatment and reentry of CRNAs with SUD, BONs can enhance collaboration with ATD programs, professional organizations, and employers, and increase the likelihood of successful treatment and return to practice for recovering CRNAs.

**References**


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