The Concept of Reentry in the Addicted Anesthesia Provider

Jorge A. Valdes, CRNA, DNP

Substance abuse among healthcare providers is a serious issue affecting patient care and patient outcomes. Substance abuse among anesthesia providers is of extreme concern because of the type of drugs and easy access providers are granted. Impaired anesthesia providers jeopardize not only their own safety but also the safety of their patients. Accidental death of either the healthcare provider or the patient is often the unfortunate first sign of addiction among anesthesia providers. Most states, in the United States offer treatment programs for anesthesia providers as an option to disciplinary action, and on completion of the program, the provider is allowed to reenter practice. Successful reentry is sometimes rare, and providers are plagued with the stigma of abuse, shame, and a high incidence of relapse. This article is an analysis of the concept of reentry into anesthesia practice, using Walker and Avant’s model of concept analysis. Tenets of successful reentry are discussed. Implications for further concept analysis, practice, and research are presented.

Keywords: Addiction, concept analysis, reentry, substance abuse in anesthesia.

Substance abuse is the primary occupational hazard of anesthesia practitioners. The incidence of addiction in the anesthesia profession is estimated to be 10% to 15% of the population, the same as in the general population. Given that there are approximately 80,000 anesthesia providers in the United States, a 10% to 15% incidence translates to 8,000 to 12,000 anesthesia providers who might be abusing the very drugs they are administering to their patients. The unique risk of addiction is due in part to the highly addictive medications that can be accessed, a stressful work environment, and time spent alone in the operating room. Other risk factors may include a tendency to have an excitement-seeking personality, intimate knowledge of medications, and enabling of colleagues. Patient safety issues arise because the safe and efficacious delivery of anesthesia requires constant alertness and rapid response to potential changes in a patient’s hemodynamic status. Any changes in the practitioner’s vigilance can result in catastrophic effects on patient outcomes. Viewed as a self-inflicted disease, addiction usually starts as a voluntary act of experimentation. Tetzlafl and Collins noted that the growing experience with the administration of anesthesia drugs by anesthesia practitioners creates the fallacy of control, which makes the transition from self-medication to chemical dependency almost inescapable. The perception of self-control, ideas of invulnerability, and self-sufficiency create a state of denial. Denial, the hallmark of addiction, often prevents the practitioner from accepting that abuse leads to addiction. Ironically, in addiction there is a loss of autonomy and self-control.

Most states in the United States offer an alternative to discipline of anesthesia providers who have chemical dependency; these providers can choose to voluntarily enter a monitored treatment program as opposed to disciplinary action. Diversion programs are voluntary, often nonpunitive alternatives to disciplinary action by the licensing board. Nurses who participate in diversion programs are required to refrain from clinical practice until safe practice can be determined, and disciplinary action is often contingent on successful completion of diversionary programs. Nursing boards are responsible for protecting the public from incompetent or impaired practitioners. Nursing state boards have developed nonpunitive diversion programs, which protect the public from impaired anesthesia providers by removing the practitioner from practice and placing the professional into substance abuse treatment while holding the provider accountable through monitoring and treatment in the hopes of retaining that person in the profession.

Diversion programs or state-operated impaired provider programs (IPPs) are granted responsibility for the diversion of an impaired practitioner. Currently, all 50 states have diversion programs for physicians, however; only 43 states have a formal diversion program for nurses. Higgins Roche cites the lack of support and judgmental attitude, which is more pervasive toward chemically dependent nurses as the contributory factor for lack of programs in the remaining states. Although some rehabilitation programs advocate not returning to anesthesia practice, the goal of most programs is for practitioners to reenter practice. Most insurance companies do not pay for diversion programs. The cost of random drug screening, treatment evaluations, and laboratory testing is often solely the affected practitioner’s responsibility.

Reentry into practice is a difficult and sometimes chal-
lenging task, plagued with myriad obstacles. Relapse in addiction is not dissimilar to relapse or exacerbations of symptoms in other chronic diseases. Anesthesiologists and Certified Registered Nurse Anesthetist (CRNAs) have a relapse rate of 25% to 56%, which is similar to other healthcare specialties. Recovering anesthesia providers historically have had a difficult time gaining employment after disclosing their treatment for chemical dependence.6 Potential employers are often hesitant to hire recovering providers because of safety or legal concerns.

• **Concept of Successful Reentry.** Exploration of successful reentry into anesthesia practice is important for a number of reasons. Identifying the components of successful reentry can aid employers and practitioners as to the timing of reentry, and can save patients’ and practitioners’ lives. Concepts are used to describe phenomena and are the basis of any theory.10 Identifying gaps in the literature and evaluating the existing knowledge base can provide an understanding of successful reentry into anesthesia practice and thus improve provider and patient outcomes. Theory generation, development, and testing can be derived from concept exploration and analysis of successful reentry into practice. Concept exploration is used when the concept is considerably unknown, to assess whether there is enough information from the literature to conduct a concept analysis.10 Concept clarification can be used to refine concepts and to explore differences, similarities, and relationships between concepts. Once concept analysis is complete, the concept can be refined and clarified.10 Exploration of the successful reentry concept can yield attributes and cues, which, in turn, can be used by potential employers to hire a recovering anesthetist.

Walker and Avant10 suggest 8 helpful steps when implementing a concept analysis. The steps of concept analysis include (1) select a concept; (2) determine the aims or purpose of the analysis; (3) identify all uses of the concept; (4) determine defining attributes; (5) construct a model case; (6) construct a borderline case, contrary case, invented, and illegitimate cases; (7) identify antecedents and consequences; and (8) define empirical referents.

The purpose of this concept analysis is to establish an understanding of successful reentry into anesthesia practice in the addicted provider (Figure).

**Literature Review**

• **Common Definitions.** The Merriam-Webster Online Dictionary lists 4 definitions for reentry.11 Two are of an astrological-physical nature. The third and forth definitions are of relevant concern: “a retaking possession” or new entry. In the most basic definition, the practitioners are, in essence, retaking possession of not only their profession or livelihood but also their life. A second or new entry is what both IPPs and anesthesia practitioners seek. The term reentry is used often in the nursing literature, but rarely is it defined. A solitary definition was found by Higgins Roche,6 who defined reentry as the return of a recovering practitioner to practice following treatment for substance abuse or chemical abuse.

• **Uses of the Concept.** The concept of reentry into practice of anesthesia is used by 2 disciplines: medicine and nursing. Coincidentally, anesthesia is performed by 2 separate disciplines, a medical and a nursing model. Little research on the concept of reentry has been conducted among CRNAs. Most of the research has been conducted on anesthesiologists and anesthesia residents. Currently, there is no known literature on addiction rates of anesthesia assistants; a plausible reason might be that there are only 1,550 practicing anesthesia assistants in the United States.12 The nursing literature and that of related disciplines was reviewed to encompass a comprehensive view of the concept of reentry in the addicted anesthesia provider; relevant literature was located using search engines such as MEDLINE, PubMed, Cumulative Index to Nursing & Allied Health Literature (CINAHL), and PsycLIT.

• **Nursing Literature.** Most of what is known about CRNA reentry to practice is generalized from research on anesthesiologists’ reentry to practice. Anesthesiologists tend to succumb to drug diversion during their anesthesia training and residency programs, whereas the highest incidence of drug diversion for CRNAs occurs after they have been in practice for more than 10 years.3,9 Wilson and Compton7 stated that anesthesia residents are usually in a learning position as opposed to CRNAs, who are often in a teaching or staff position. If treated for substance abuse, the anesthesia resident often has the opportunity to switch to a different specialty, whereas the experienced CRNA has fewer options. With fewer employment options available, successful reentry is paramount for CRNAs. Alongside appropriate follow-up and extended after-care, long-term recovery is quite possible. The authors point out that although similarities between the 2 specialties exist in the addiction process, there are marked differences considering the timing of initial drug diversions.

Hughes et al9 conducted a population survey (N = 364) of recovering nurses in Florida to evaluate Florida’s Intervention Project for Nurses. The researchers found that more than 80% of impaired nurses had reentered nursing, with less than 25% having relapsed. Hughes and colleagues9 discovered that 75% of the nurses had a back-to-work contract, which most commonly included random drug testing (96%), regular attendance at support group meetings (91%), and no handling of narcotics (84%). Factors of successful reentry were identified as support from coworkers and supervisors as well as access to a structured diversion program.5,9 Hughes and colleagues concluded that the education of administrators of healthcare facilities, hospitals, and staff about the nature and effective treatment of chemical and substance dependency, policies, and programs are needed to dem-
onstrate understanding and compassion for the nurse. In turn, this attitude of caring for the caregiver is needed to foster successful reentry.

Hudson\textsuperscript{13} conducted a case report of a CRNA’s successful reentry into practice after being addicted to sufentanil, a drug 100 times more potent than morphine. As part of an extensive recovery program, naltrexone was administered and the recovery was supported by an inpatient IPP, followed by a rigorous aftercare recovery program. The CRNA was required to attend weekly Alcoholics Anonymous/Narcotics Anonymous (AA/NA) meetings and weekly support group therapy, to reduce the workload, and submit to random drug screening.\textsuperscript{13} The hospital, anesthesia group, and colleagues supported the CRNA in the Hudson case report throughout the recovery period; there was no relapse, and a successful reentry into practice was reported.

When Clark and Farnsworth\textsuperscript{14} examined Idaho’s Board of Nursing program for recovering nurses, they found that nurses who were monitored for longer periods reported higher success rates. The researchers’ findings support the need to extend drug monitoring periods from 3 to 5 years for nurses who reenter the workforce after treatment of drug addiction.\textsuperscript{14}

- \textbf{Medical Literature.} Bryson and Levine\textsuperscript{15} studied 5 anesthesia residents, who were identified as being addicted to a controlled substance. The residents were removed from their residency and offered a treatment program. Before returning to residency training, they were required to complete a posttreatment program involving no less than 12 months of work using an anesthesia simulator, followed by a gradual reintroduction into the clinical setting. The researchers found that 3 of the 5 residents successfully completed their residency program and entered the anesthesia workforce as an attending anesthesiologist. Bryson and Levine\textsuperscript{15} concluded that the treatment of addicted physicians can be successful, and return of these individuals to work is a realistic goal. The researchers recommend a gradual reentry process, participation in IPPs, and use of anesthesia simulators for 12 months before reentry. Wilson and Compton\textsuperscript{5} recommend that a similar study be conducted using CRNAs to compare outcomes.

Hedberg\textsuperscript{16} attempted to quantify the process by defining criteria that predict success and failure with reentry. The researchers divided anesthesia providers in rehabilitation into 3 categories based on specific criteria. Category 1 is a practitioner who is ready for reentry, an individual who has accepted the disease, attends support groups, and is confident in returning to practice. Category 2 represents a need for delayed reentry and reevaluation after 1 to 2 years, and category 3 is an individual who should never practice anesthesia again. These categories were based on those of Angres et al.\textsuperscript{17} Tetzlaff and Collins\textsuperscript{7} agree with the recommendations of Hedberg\textsuperscript{16}, stating that any practitioner in the high-risk category should be precluded from practice.

Pelton and Ikeda\textsuperscript{18} analyzed 255 physicians who completed California’s Physicians Diversion Program over a 10-year period (1980-1990). The overall success

\begin{figure}
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\includegraphics[width=\textwidth]{ConceptMap.png}
\caption{Concept Map of Reentry}
\label{fig:concept_map}
\end{figure}

Abbreviations: AA, Alcoholics Anonymous; IPP, impaired provider program.
rate was 73% for this sample of physicians, 19% (N = 35) of whom were anesthesiologists. Over this 10-year period, 16 anesthesiologists failed the program, yielding an overall success rate of 69%. Among the 35 recovering anesthesiologists, 33 returned to anesthesia practice, for a 96% success rate.\textsuperscript{18}

\textbf{Multidisciplinary Literature.} One of the first multidisciplinary approaches to reentry to anesthesia practice was in 1962 in Rochester, Minnesota, by John S. Lundy and Florence McQuillen,\textsuperscript{19} who recognized chemical dependence as an occupational hazard in CRNAs. Lundy and McQuillen recognized the need to help those who may not be able to help themselves. Most of the multidisciplinary literature comes from anesthesiologists and CRNAs collaborating to produce a common knowledge base of the impaired provider.

A textbook titled \textit{Substance Abuse Policies for Anesthesia} by Higgins Roche\textsuperscript{6} was a collaboration by anesthesiologists and nurse anesthetists. The author devotes a chapter in the book to reentry into practice. The author delineates that support from administrators and colleagues is the most important factor for successful reentry, followed by involvement with an IPP, attendance at peer and mutual help groups, support of friends and family, and participation in a 12 Step program. Higgins Roche stresses the need for anesthesiologists and CRNAs to extend the same quality of care and compassion to a recovering colleague as they offer to patients in their practice.

\textbf{Defining Attributes.} The first step in concept analysis is recognizing trends and antecedents.\textsuperscript{10} Recurrent themes from the literature for a successful reentry include the following: (1) successful completion of an IPP; (2) support from colleagues; (3) participation in support groups; (4) a reentry contract inclusive of other attributes and a reduced workload to accommodate attendance at meetings\textsuperscript{4,6,9,15,16,20}; and (5) a monitoring program with random drug testing.

Practitioners who successfully reenter anesthesia practice can only do so once they have acquired the previously mentioned defining attributes. The practitioners adapt to their level of readiness for reentry into practice through this adaptation and a new self-image and self-identity can be reached.

\textbf{Antecedents and Consequences.} Antecedents are the events that must occur before the occurrence of reentry.\textsuperscript{10} Before practitioners can reenter anesthesia practice, they must have experimented with narcotics or other controlled substances. Second, this experimentation must have led to a loss of control in which the experimentation became an addiction marked by a loss of autonomy. The last antecedent for reentry is having had an intervention, after which the impaired practitioner seeks rehabilitation. The process of entering rehabilitation is marked by feelings of shame and failure, which have an impact on one’s perception of self-image.

Consequences of successful reentry into anesthesia practice following adaptation are as follows: the practitioner will gain autonomy, will be able to return to work, and will have tools in place to deal with relapse. The tools needed to prevent relapse are primarily attained through maintaining a strong support system. Unfortunately, the alternative to successful reentry is often relapse, suicide, or accidental death.\textsuperscript{5}

\textbf{Empirical Referents.} Empirical referents allow one to measure the existence of the concept.\textsuperscript{10} The most obvious measure of successful reentry is years of sobriety and low relapse rates. Relapse measures only one part of the story. For adequate measurement of successful reentry into the workforce, job satisfaction must be calculated. Job satisfaction is quantified by employing a number of job satisfaction surveys. This scale could be formulated to measure job satisfaction in professionals with stressful careers. The scale can give the employer and practitioner a score for job satisfaction and alert employers and practitioners of potential relapse due to the level of stress or burnout.

\textbf{Case Studies}

Walker and Avant\textsuperscript{10} suggest the construction of case studies to aid in the development of the concept and illustrate the experience. Three case studies will be presented to expand the concept of successful reentry. The model case will contain all the antecedents, defining criteria and a consequence. The borderline case will contain most, but not all the defining criteria of the concept. Last, the contrary case will represent factors that are not indicative of successful reentry.

All characters in this publication are entirely fictitious, and any resemblance to real persons, living or dead, is purely coincidental.

\textbf{Model Case.} The following case is taken from the case report by Sandra Hudson.\textsuperscript{13} A CRNA was caught diverting sufentanil, and on closer scrutiny, it was discovered that the practitioner had been diverting narcotics for several months. An intervention was employed, and an anesthesiologist and nurse anesthetist accompanied the CRNA to an inpatient treatment facility for nurses. While the CRNA was at the treatment facility, the chairman of the anesthesia department prepared a reentry contract. The CRNA was put on a regimen of naltrexone and was allowed reentry to anesthesia practice after 2 months. The CRNA had to attend AA/NA meetings, submit to random drug screenings, and have a reduced workload for an indefinite time.

After 2 years, the treatment team decided to discontinue naltrexone treatment and continue drug screening for 2 additional years. The CRNA has been in remission for more than 12 years and now holds a support group to inspire other anesthesia providers in reentry.

\textbf{Analysis.} All the antecedents of reentry are present. The CRNA was found using sufentanil and admitted ad-
diction to narcotics. The CRNA was then admitted to an inpatient IPP. On release from the rehabilitation center, the practitioner had support from colleagues and hospital administrators who helped draft a reentry contract. The years of sobriety and continuous employment are evidence of successful reentry. This successful reentry scenario illustrates the importance of having all defining attributes present.

• **Borderline Case.** Dr Gray, an anesthesiologist specializing in open heart surgery, was discovered at work with a fentanyl drip attached to his leg. An intervention was performed, and Dr Gray was escorted out of the hospital. After telling his spouse, Dr Gray checked into an IPP center and was placed on a regimen of naltrexone. Dr Gray successfully finished the IPP and found employment at a neighboring hospital. He continued to attend AA/NA meetings and joined a local support group. Dr Gray did not disclose his condition to his new employer for fear of termination. The hospital, located in a rural setting, failed to perform a substantial background check and never required Dr Gray to have random drug screening or sign a reentry contract. Dr Gray works mainly 10-hour shifts and is on call every fifth night.

• **Analysis.** All the antecedents are present in Dr Gray's story; however, not all the defining attributes are present. The lack of support from colleagues and hospital administration has compelled a lack of honesty on the part of Dr Gray. This lack of disclosure on the part of the anesthesiologist negates having a reentry contract nor random drug screening. Dr Gray is also working off shifts when the chance of being unsupervised is greatest. Although reentry to practice is possible, maintenance of successful reentry may not be possible.

• **Contrary Case.** David, a CRNA, was found by a colleague with a narcotic “drip” in the call room, and he confessed to having a problem with narcotics. They collectively decided not to tell the anesthesia group, and David took a few days off from work. He attended a weekend detoxification program and reentered practice. On his return, he told his colleague everything was fine and assured his coworker that the weekend program was an eye-opening experience. His colleague noticed that David was back to himself, helping everyone, and asking his colleague if he wanted to give up his call. David is the most requested CRNA for long vascular cases, always comes to work early, volunteers for extra shifts, and is always willing to take call in the hospital. His colleague is relieved that David's career was not affected by a small miscalculation.

• **Analysis.** David does not fit the criteria for reentry; he should have been admitted to a proper substance abuse program. David cannot be identified as a successful reentry story because the potential for a negative outcome exists and should be avoided. David will most likely continue to divert narcotics; his willingness to work extra shifts and take his colleague's call puts him at even higher risk of a deleterious event. In this case, David's life is at risk. An intervention should be performed, and David should seek help.

**Conclusion**

Addiction is a chronic disease that can be marked by remissions and exacerbations. The treatment modality that the impaired practitioner chooses has a great impact on successful reentry. Full disclosure, support from colleagues, and participation in IPPs are the tenets of a successful reentry scenario. The Figure illustrates a concept map of successful reentry in the addicted anesthesia provider. The gaps in the literature concerning length of treatment, length of reentry contracts, and workloads are apparent in both cohorts of anesthesiologists and CRNAs. Discipline-specific studies should be conducted, so that treatment and reentry can be individualized for anesthesiologists and CRNAs. The issues affecting substance abuse reentry and treatment for CRNAs are different from those affecting anesthesiologists. Recognition of unique treatments, methods of prevention, and awareness in both anesthesiologists and nurse anesthetists will not only save an affected practitioner's life but the lives of his or her patients as well.

**REFERENCES**

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AUTHOR
Jorge A. Valdes, CRNA, DNP, is an assistant professor of clinical nursing at the University of Miami School of Nursing and Health Studies in Coral Gables, Florida. Email: jvaldes@miami.edu.