Names of Third Parties have been Redacted

THE MATTER OF THE COLLEGE OF DENTAL SURGEONS OF BRITISH COLUMBIA

AND DR. BOBBY RISHIRAJ, A REGISTRANT

DECISION

Dr. Josephine Chung (Chair)
Dr. Michael Wainwright
Mr. Martin Gifford
} Panel

Hearing Date:	November 12–14, 2014 & January 26–27, 2015, Vancouver, B.C.
Counsel for the CDSBC:	Mr. Alastair Wade and Mr. Greg Cavouras
Counsel for Dr. Rishiraj:	Mr. Dennis Hori Q.C.
Counsel for the Discipline Panel:	Ms. Catharine Herb-Kelly Q.C.

INTRODUCTION

1. A Panel of the Discipline Committee of the College of Dental Surgeons of British Columbia (CDSBC) was appointed pursuant to section 38 of the *Health Professions Act (HPA)* to hear and determine allegations in an Amended Citation issued against Dr. Bobby Rishiraj, a registrant. The hearing took place in Vancouver from November 12–14, 2014 and January 26 -27, 2015. Dr. Rishiraj attended and was represented by counsel.

2. Dr. Rishiraj is fifty-two years old. He obtained his Doctor of Dental Surgery from Northwestern University in Chicago, Illinois, USA on August 1, 1992. He completed his general practice residency in 1995 and was registered to practice general dentistry by the CDSBC on July 12, 1995. He obtained a Masters of Dentistry, Oral and Maxillofacial Surgery at the University of Manitoba on May 26, 2004. He was

registered as a specialist in oral and maxillofacial surgery by the CDSBC on December 4, 2006. He is the on call oral and maxillofacial surgeon at Royal Inland Hospital in Kamloops, B.C.

3. The CDSBC authorized him to provide moderate sedation therapy using more than one parenteral agent in March 2005. He was not authorized at any relevant time to administer deep sedation therapy. Dr. Rishiraj operated a private clinic known as the Kamloops Oral Surgery and Implant Centre (Facility). This Facility was approved for the provision of moderate sedation only during the relevant time period.

4. On November 7, 2012, Ms. HZ [redacted] attended the Facility for wisdom teeth extraction. Dr. Rishiraj followed his usual procedure and administered triple sedation therapy consisting of doses of midazolam, fentanyl and propofol. While he was extracting the first tooth, Ms. HZ went into cardiac arrest. She was transferred to Royal Inland Hospital by ambulance where she was treated. She sustained a severe brain injury.

5. Following this event, Dr. Rishiraj filed a Critical Incident Report with the CDSBC which led to an investigation and the Amended Citation before the Panel. The Amended Citation is attached to this Decision as Appendix "A".

Admissions

6. Dr. Rishiraj admitted to some of the allegations in the section of the Amended Citation entitled "Further Particulars". With respect to section 1, he admitted that he provided deep sedation to the eleven patients named in subsections (iv), (vi), (vii), (ix), (xii), (xiii), (xiv), (xv), (xx), (xxi), and (xxii), and that the Facility was not being operated in compliance with sedation and general anesthetic standards of the CDSBC in those cases.

7. Counsel for the CDSBC acknowledged that the CDSBC had not proven that Dr. Rishiraj administered deep sedation to the five patients named in section 1, subsections (i), (ii), (x), (xvi) and (xvii) of the Further Particulars.

8. For the sake of clarity, this means that the Panel must decide whether the allegations in respect of the seven patients named in section 1, subsections (iii), (v), (viii), (xi), (xviii), (xix) and (xxiii) have been proven by the CDSBC.

9. Dr. Rishiraj admitted the allegation in section 2 of the Further Particulars, namely, that he provided deep sedation at the Facility when it was not approved as a deep sedation facility and he was not approved to provide deep sedation.

10. Dr. Rishiraj admitted the allegation in section 4 of the Further Particulars, namely, that he advertised on the Facility's website that it was an approved non-hospital and certified intravenous facility when it was not.

11. Dr. Rishiraj did not admit the allegations in sections 3, 5 and 6 of the Further Particulars.

12. In his closing submissions, counsel for Dr. Rishiraj admitted that his client failed to comply with the *HPA,* a regulation under the *HPA* or a bylaw; that he failed to comply with a standard, limit or condition imposed under the *HPA;* and that he committed professional misconduct or unprofessional conduct in respect of those offences which have been admitted.

13. The issues remaining for the Panel to determine are:

    (a) Did Dr. Rishiraj provide deep sedation to the remaining seven patients listed in section 1 of the Further Particulars when the Facility was not in compliance with the sedation standards;

    (b) Did Dr. Rishiraj fail to exercise the level of care, skill and knowledge of a competent practitioner in that he failed to recognize

Ms. HZ's cardiac arrest in a timely way and delayed resuscitative measures as a result;

(c) Did Dr. Rishiraj have the requisite training in concurrent use of propofol while providing dental treatment;

(d) Did Dr. Rishiraj fail to adequately monitor his sedated patients during surgery between October 4, 2012 and November 7, 2012;

(e) Depending upon the Panel's conclusions with respect to issues (a), (b) and (d), may Dr. Rishiraj's conduct be characterized as incompetence?

ONUS AND STANDARD OF PROOF

14. The CDSBC bears the onus of proof. The Panel has carefully considered all of the evidence and submissions in connection with those allegations in the Citation that have not been admitted. In reaching its conclusions, it has applied the civil standard of proof on a balance of probabilities: *F(H) v. McDougall,* 2008 SCC 53 (CanLii). In *McDougall,* the Supreme Court of Canada stated that *evidence must always be sufficiently clear, convincing and cogent to satisfy the balance of probabilities test* (para. 46). This approach is consistent with the standard applied by other Panels of the Discipline Committee: see for example, *Re Duvall*, August 21, 2013.

Dr. Rishiraj's Practice and Operation of the Facility

15. Dr. Roanne Preston was qualified and accepted as an expert in anesthesiology. She submitted a detailed resume. Among other things, she has been Head of the Department of Anesthesiology, Pharmacology and Therapeutics at the University of British Columbia since 2012 and is the academic lead for anesthesia in British Columbia. She has published numerous papers and chapters in books on her own or with others about various topics of anesthesia. She provided her opinion regarding various issues in connection with moderate and deep sedation, including the risks and effects of triple sedation therapy and management of sedation.

16. In this case, it is important to understand the difference between moderate and deep sedation. Dr. Preston explained the difference in her report:

> Moderate sedation is defined by the patient being able to maintain his/her airway, being responsive to verbal or tactile stimulation (non-painful) and hemodynamically stable. The definition of deep sedation is a patient who is not easily aroused, typically needs a painful stimulus to rouse, and exhibits signs of cardiorespiratory compromise such as hypoventilation, hypoxia and hypotension. (Ex. 6, p. 8)

17. Examples of painful stimuli include brushing a patient's eyelashes or tilting the jaw. Patients in deep sedation may require supplemental oxygen since their spontaneous ventilation may be inadequate.

18. The CDSBC has established guidelines for the provision of moderate and deep sedation services by registrants in non-hospital facilities, such as the Facility. For the purpose of this decision, some of the relevant guidelines for both categories of sedation are summarized or quoted from below.

19. In administering moderate sedation:

(a) A dentist must
> administer the sedation, monitor and support the vital organ systems during sedation, provide immediate post sedation management of the patient and resuscitation or emergency care if necessary. (Ex. 2, Vol. 2, Tab 30, p. 3-2.);

(b) In addition to clinical duties, the dentist should ensure that policies and procedures are in place for the safe administration of sedation and provide ongoing education, training and supervision of personnel, among other things;

(c) A dentist providing these services must have an operative assistant and an administrative assistant or receptionist in place;

(d) The operative assistant must hold a current CPR Level C certificate;

(e) Before providing sedation, the dentist must perform an evaluation including a medical history and physical examination. One aspect of this evaluation requires the dentist to classify patients according to the

American Society of Anesthesiologist's Physical Status Classification System (ASA);

(f) A sedation record must be kept and include, among other things, names and doses of all drugs administered, time of administration of all drugs, start and completion time of administration of moderate sedation and start and completion time of recovery period;

(g) With respect to administration of sedation, the guidelines specifically state that

> Children, the elderly, and the medically compromised (including patients who are taking prescribed medication with sedative properties) require appropriate adjustment of the dose of the oral sedative agent to ensure that the intended level of moderate sedation is not exceeded (Ex.2, Vol. 2, Tab 30, p.3-12);
> and

(h) The dentist/physician is responsible for the patient and must remain with the patient at all times throughout the course of the moderate sedation including the recovery period, unless the recovery area is constantly staffed by a person with training in post-sedation recovery…(Ex. 2, Vol. 2, Tab 30, p. 3-12).

20. The CDSBC guidelines for the provision of deep sedation in non-hospital facilities are similar with additional requirements:

(a) Where the operating dentist is providing deep sedation services simultaneously with other dental procedures, there must be a deep sedation team consisting of the operating dentist, a deep sedation assistant, an operative assistant, a recovery supervisor and an office assistant;

(b) A facility must have a backup supply of oxygen available and an oxygen source that can be used with a ventilation apparatus;

(c) The dentist or physician must be approved by the CDSBC before administering deep sedation;

(d) The deep sedation assistant must hold a current CPR Level C certificate and must be a nurse currently registered with the College of

Registered Nurses of B.C., a person who has successfully completed a respiratory therapy program, a registrant of the CDSBC or the College of Physicians and Surgeons of B.C. or a person who has successfully completed the OMAAP;

(e) The deep sedation assistant's role includes assessing and maintaining a patient airway, monitoring vital signs, recording findings, administering medications and assisting in emergency procedures;

(f) The operative assistant has a role that is independent of the deep sedation assistant and must hold a current CPR Level C certificate

(g) The dentist may not delegate the functions of a deep sedation assistant to a certified dental assistant;

(h) The deep sedation assistant and the operative assistant can not be the same person; and

(i) The times of administration, drug names and doses should be recorded.

21. In this case triple sedation therapy – doses of midazolam, fentanyl and propofol - was administered to each patient under review. It is useful to understand the purpose of each drug and how they interact with each other.

22. Dr. Braverman is a Certified Specialist in Oral and Maxillofacial Surgery. He is past chair and a member of the Anaesthesia Accreditation Committee of the CDSBC. He was qualified and accepted as an expert in the standard of practice of a specialist oral maxillofacial surgeon, including with regard to the delivery of intravenous sedation drugs during surgery, moderate and deep sedation, maintaining oxygen saturation, assessment of patient risk and monitoring patients during sedation.

23. Dr. Braverman explained that midazolam is a benzodiazepine used to sedate patients. When a patient is sedated, his/her response to breathe is reduced because the patient is more relaxed. Midazolam can cause respiratory depression in a patient. Fentanyl is a narcotic and can cause respiratory depression in a patient. When fentanyl is used in surgeries, a patient's oxygen saturation level drops because the narcotic has kicked in and depressed the respiratory system. When a patient's oxygen

saturation level drops as a result, the dentist should provide supplemental oxygen to the patient. He further explained that propofol is used to induce general anesthesia in a hospital setting but is also used in intravenous sedation at lower levels. He noted that propofol on its own can cause respiratory depression.

24. He said the combination of drugs Dr. Rishiraj regularly administered is powerful and the result of using them together produces a synergistic effect. This means that the level of sedation will be increased two or three times because of the combination of these drugs acting together.

25. In her report, Dr. Preston pointed out that fentanyl and midazolam have reversible agents available but propofol does not. Its effect decreases only over time so it is not as safe to use as the other two drugs.

26. The Facility had three working operatories. Each was equipped with a Welch Allyn Atlas monitor that monitored oxygen saturation levels, EKG and non-invasive blood pressure. These monitors had an alarm setting that would sound if a patient's oxygen saturation level dipped to a pre-set level. In the Facility, the alarm would sound when the saturation level dropped to eighty-five. The monitors were set to record the oxygen saturation level, blood pressure and EKG of the patient every five minutes.

27. At one time the operatories were equipped with nasal prongs for delivery of supplemental oxygen, but Dr. Rishiraj stopped using them about two and one half years before the period under review. In his interview at the CDSBC on May 27, 2013, he said that patients would find them irritating and pull them out, move their arm or scratch their noses. Therefore supplemental oxygen was not available to his patients when they were sedated during the period under review.

28. The Facility staff included one certified dental assistant (CDA) and two chair-side assistants. During surgery, including pre and post-operative periods, Dr. Rishiraj was assisted by only one of these employees. This employee would be present with the

patient most of the time and was responsible for filling the syringe used in the propofol pump.

29. The CDA, Ms. SC [redacted] said that she had CPR, but no first aid training. She had not been trained about what to do if a patient went into cardiac arrest. She learned to assist Dr. Rishiraj during surgery "after [she] was hands on trained" (Transcript, November 13, 2014, p.4). She learned about intravenous sedation from another CDA and Dr. Rishiraj. She was accredited by a program for dental anesthesia assisting, known as DAANCE.

30. Dr. Rishiraj followed a similar protocol in all of the cases under review. He typically left the patient in the operatory after he administered triple sedation therapy – midazolam, fentanyl and a bolus of propofol, followed by freezing (Lidocaine) - to discharge the previous patient. When he returned to perform the surgery, the propofol pump was started. He also typically left his patients after the procedure had concluded and while they were recovering from sedation. While the assistants were left to watch over these patients they did not interact with them. The CDA, Ms. SC said she would leave a patient during the recovery phase to clean her instruments returning to check the patient when this task was completed. This meant that a patient would be completely alone for a period of time.

31. Ms. SC understood the significance of the oxygen saturation readings and stated she knew that it was best if they stayed above ninety. She said that if the oxygen saturation alarm sounded she would generally turn it off because they could not hear the tone of the monitor if the alarm was sounding. She said that at times patients would snore under sedation and there were occasions when it was necessary to arouse them by telling them to breathe, pinching their shoulder, brushing their eyelashes, turning off the medication or adjusting their jaw. Dr. Preston explained that these are steps taken to arouse patients in deep sedation. Ms. SC testified that if she saw that the oxygen saturation level was declining during a procedure she would alert Dr. Rishiraj but she did not do this all the time.

32. The chair-side assistant, Ms. MR [redacted] said she had no formal training and learned on the job. She had no training in intravenous sedation, what to do in emergencies and no knowledge about the medications being administered. She did not understand what oxygen saturation levels are, their importance or the significance of setting the oxygen saturation alarm at eighty-five. She said that when the alarm sounded she would turn it off and observe the numbers on the monitor. When the numbers got low she would "count them back to Dr. Rishiraj." She could not recall counting these levels before the alarm sounded.

33. Ms. MR was asked what Dr. Rishiraj would do when the alarm had sounded and she was counting the patient's oxygen saturation reading to him. She said that he would usually continue with surgery, but if there was a huge decline, he would tilt the patient's chin, turn off the pump or the patient would take a breath.

34. A twenty milligram propofol bolus was administered to each patient. This bolus will generally increase the rapidity of attaining sedation and increases the likelihood of a patient becoming deeply sedated. Dr. Braverman uses on average between forty and sixty milligrams of propofol in his practice. He pointed out that Dr. Rishiraj was using well over one hundred milligrams in total because he started the propofol infusion at a higher dosage and gave the bolus.

35. Dr. Rishiraj typically gave the fentanyl, midazolam and propofol bolus in rapid succession without waiting for each medication to peak. Both experts were critical of this failure to titrate the medications as he administered them. A dental surgeon ought to start with a minimally appropriate dosage and titrate it to the desirable clinical effect by watching the patient's reaction. An adjustment should be made to allow for the onset of peak drug effect.

36. Both experts explained the risks associated with triple sedation therapy. In his report, Dr. Braverman stated:

> "With my experience it is my opinion that these doses alone generally produce a deeper type of sedation, which can lead to respiratory depression and possibly hypoxia if supplemental oxygen is not administered." (Ex. 4, p.3)

37. He elaborated on this point in his testimony:

> So there are certain drugs that we administer during sedation that will reduce the drive for a patient to breathe. They are at the point where they are so sedated that they don't breathe as much and if they are not taking in as much oxygen through their breathing then eventually the amount of oxygen in their bloodstream is going to drop". (Transcript, November 12, 2014, p.49)

38. According to Dr. Preston, when triple sedation therapy is administered, the surgeon is aiming for deep sedation.

39. Dr. Braverman noted two examples where Dr. Rishiraj did not properly classify a medically compromised patient according to the American Society of Anaesthesiology Physical Status Classification System (ASA). Dentists are required to classify patients on a scale of one to five indicating their risk of complication from anesthesia. The higher the rating, the higher the risk for that patient.

40. One example was a ninety-three year old patient who had hypertension, had suffered a mild heart attack one year before, and had unstable angina. Dr. Rishiraj classified her as level one, when she should have been classified as level two or three because of these risk factors. Further, Dr. Preston noted that triple sedation therapy should never be given to a patient of this age with these risks. Even though the doses had been decreased, she stated it was dangerous to administer this drug combination because elderly patients are very sensitive to the effects of sedation.

41. Both experts were critical of Dr. Rishiraj's failure to have nasal prongs available in the operatory. They described the importance of ensuring that patients receive adequate oxygen during sedation.

42. Dr. Preston stated that the minimum standard to give supplemental oxygen is if the saturation level drops below ninety for thirty seconds or there are repeated episodes of low saturation.

43. According to both experts the alarm setting at eighty-five was too low. Once a patient's oxygen saturation level has dropped to ninety, the amount of oxygen in that patient's blood will start to drop significantly and the risk of respiratory distress will increase swiftly. Dr. Braverman stated that his preference is to keep a patient's saturation level at ninety-five. Dr. Preston stated that setting the alarm at eighty-five exposed patients to significant risk of hypoxemia.

44. In her report, she analysed the records for the twenty-three patients and noted there were episodes of significant oxygen desaturation in seven patients, (saturation level dropped below ninety), severe desaturation in three patients, (saturation level dropped to fifty-eight, seventy-one and seventy-eight) and mild or shorter duration desaturation in seven patients. In three cases, the patients' levels dropped below ninety for more than ten minutes. In none of these cases was it possible to administer supplemental oxygen because of the absence of nasal prongs. Dr. Braverman stated that the patient whose saturation level had dropped to fifty-eight would have been severely hypoxic, not breathing and probably turning blue. He said it was alarming to see the oxygen saturation at this level.

45. Dr. Preston observed that in some cases Dr. Rishiraj did not modify the doses of drug based upon the age, weight and co-morbidities of his patients. For example, she referred to the cases of MB and JL. One patient was twice the weight of the other but the same dosages were administered.

46. She explained that a patient's age and weight are important factors in determining the dosages to be administered. She stated that if the same amount of drug is given to a small person, he/she will reach a much higher peak effect of the drug. Therefore the

amount of drug given should be varied according to a patient's weight. Another factor is age. As a person ages, he/she will have a lower circulation rate and may suffer from illnesses that affect response to medications. Young people tend to need more medication than older people because their heart and lungs are in good order and their cardiac output is higher.

47. Both experts commented on Dr. Rishiraj's practice of leaving the operatory to attend to other tasks leaving his patient with his staff when they had just received sedation or were recovering from it. Dr. Braverman pointed out that the guidelines for moderate sedation state that a dentist must be with his patient at all times including through recovery. He explained that assistants may not have training in anesthesia so it is necessary for the dentist to check vital signs. He further noted that CDAs are not trained in anesthesia recovery.

48. Dr. Preston noted that Dr. Rishiraj did not screen for sleep apnea in his patients which increases the risk of respiratory difficulties for those patients. She explained that if a person suffers from obstructive sleep apnea their airway is at risk of obstructing when they fall asleep so they are more sensitive to sedative medications and their airways are more difficult to manage.

49. After the event involving Ms. HZ occurred there were changes within the Facility and to Dr. Rishiraj's practice. These changes include the licensing of the Facility for deep sedation; the addition of appropriate personnel to assist in administration of sedation including a registered nurse and an anesthetist; the operatories are all equipped with ambu bags; the oxygen saturation alarm sounds at ninety instead of eighty-five, the EKG is printed more frequently and blood pressure readings are taken every three minutes instead of every five minutes.

<u>Did Dr. Rishiraj provide deep sedation to the remaining seven patients listed in section 1 of the Further Particulars when the Facility was not in compliance with the sedation standards?</u>

50. The Panel must decide whether Dr. Rishiraj provided deep sedation to the seven remaining patients listed in section 1 of the Further Particulars. These are the patients whose cases were not dealt with by the Admissions referred to in paragraph eight of this Decision.

51. In her report, Dr. Preston concluded it was possible the patients listed in section 1, subsections (iii), (v), (viii), (xi) and (xviii) were deeply sedated. With respect to the remaining two patients listed in subsections (xix) and (xxiii), her conclusion was "unknown". Patient (xxiii) is Ms. HZ.

52. Counsel for the CDSBC submitted that despite Dr. Preston's opinion, the Panel should conclude that all of these patients were put into deep sedation. He argued the Panel could reach this conclusion because of the expert evidence that the combination of drugs administered to them was intended to put them into deep sedation, the synergistic effect of these drugs, the observations of the assistants generally about signs of deep sedation they saw in patients and the steps taken to arouse them.

53. The Panel is not prepared to second-guess Dr. Preston's opinion with respect to all of these patients except Ms. HZ.

54. As previously stated the evidence must be clear, convincing and cogent. Both experts in their testimony explained that patients react differently to drug therapy. Many variables affect a patient's reaction to sedation. Therefore, the most that can be said is that these patients may have been put into deep sedation. If Dr. Preston is not able to conclude that a patient was in deep sedation in the face of the known synergistic effect of the drug combination, the Panel ought not to do so. Reliance upon general observations of the assistants as described above taken together with the known synergistic effect of the drug combination does not meet the test of "clear, convincing and cogent evidence" with respect to these six patients.

55. The situation with respect to Ms. HZ is different. Dr. Preston was unable to provide an opinion in part because there was no printout from the oxygen saturation monitor in her case. However, the sedation record indicates that she was given the triple sedation therapy at doses that could produce deep sedation. In his interview conducted February 20, 2013, Dr. Rishiraj was asked about Ms. HZ's level of sedation. He stated:

> She was getting into the deeper zone of it. There was no doubt about it. (Ex. 9, Tab 2, p.11)

56. Having regard to Dr. Rishiraj's evidence on this point and the totality of the evidence regarding the powerful and synergistic effect of the triple sedation therapy, the Panel has concluded that the evidence is clear, convincing and cogent that he administered deep sedation to Ms. HZ when neither he nor the Facility were authorized to do so and without complying with the guidelines in place for deep sedation.

Did Dr. Rishiraj fail to exercise the level of care, skill and knowledge of a competent practitioner in that he failed to recognize Ms. HZ's cardiac arrest in a timely way and delayed resuscitative measures as a result?

57. The Panel has concluded that Dr. Rishiraj failed to exercise the level of care, skill and knowledge of a competent practitioner in that he failed to recognize Ms. HZ's cardiac arrest in a timely way and delayed resuscitative measures as a result.

58. Ms. HZ attended the Facility to have wisdom teeth removed. Dr. Rishiraj and Ms. SC followed their usual procedure. She was administered triple sedation therapy. A pre-anesthesia ECG strip showed her oxygen saturation level was ninety-nine and her heart rate was ninety. There was no respiratory rate. Dr. Rishiraj left the operatory for a few minutes after he gave local anesthetic. After he returned, the procedure began. Near the end of removal of tooth 3-8, Dr. Rishiraj noted a change in the sound of the monitor and loss of a P wave on the monitor but he completed extraction of the tooth. Ms. SC said she heard a rhythm change, but did not know what it meant.

59. After the tooth was extracted Dr. Rishiraj began to address the situation. He first checked to see if the pulse oximeter had fallen off Ms. HZ's finger. Then he checked her pulse and noted none was present. Ms. SC placed a gauze pack where the tooth had been extracted. Ms. SC asked Dr Rishiraj whether she should start CPR – he told her to do so. He asked one assistant to call 911 and the other to bring the ambu bag. She had trouble finding it because the crash cart had been moved. Dr. Rishiraj attempted to ventilate Ms. HZ using the ambu bag. It did not fit properly. He did not hook it up to an oxygen source. The ambulance arrived a few minutes later and the attendants began resuscitative measures including administration of epinephrine, intubation and using an Automated External Defibrillator (AED). Ms. HZ was taken to the hospital.

60. During the incident, Dr. Rishiraj did not administer epinephrine nor did he use the AED. This drug and the ability to defibrillate were available to him in the Facility.

61. Dr. Rishiraj in his interview and Ms. SC in her testimony both thought that Ms. HZ's oxygen saturation level was in the high nineties around the same time as the loss of the P wave was noted. No printout is available for this particular event. Ms. SC stated this was because the machine was turned off. She assumes she turned it off by mistake.

62. Notwithstanding their recollections about a high oxygen saturation level at that time, according to Dr. Preston, the loss of a P wave standing on its own, especially in a young person is a critical event that required Dr. Rishiraj's immediate attention. She explained that the loss of a P wave is an abnormal occurrence and is usually indicative of a very significant bradycardia or fallen heart rate.

63. She testified that when this occurs, the procedure should be stopped immediately, and the problem addressed and corrected. In her opinion, Dr. Rishiraj should not have

continued to extract the tooth but should have addressed the missing P wave. In her report, Dr. Preston wrote:

> The fact that the EKG change was not acted on did result in a delay in appreciating the imminent arrest by 2 – 3 minutes, with a further delay of 1-3 minutes before CPR was initiated. Given that physiologic compromise was undoubtedly already occurring prior to the change in EKG rhythm, not responding immediately to the EKG change should be considered a delay in recognizing the catastrophic event that was about to occur. (Ex.6, p.13)

64. In her testimony Dr. Preston explained:

> When you've got physiologic monitors on a patient, you should be able to very quickly assess - even if there's an ECG still ticking through because that's pulse electrical activity – there is no pulse, she's not breathing. It should take no time at all, and you start CPR immediately. What saves lives is effective CPR. (Transcript, November 14, 2014, p.84).

65. Dr. Braverman's opinion was that Dr. Rishiraj recognized the cardiac event but failed to administer appropriate care consistent with his training and role as an oral surgeon. He said that oral surgeons are trained to recognize and manage such a crisis by administering epinephrine and using the AED, both of which were available in the Facility.

66. The Committee accepts Dr. Preston's opinion that Dr. Rishiraj failed to recognize that Ms. HZ was in cardiac arrest in a timely fashion and consequently did not take resuscitative steps soon enough. Dr. Preston's opinion is consistent with the events that occurred. Notably, if Dr. Rishiraj had recognized the significance of the missing P wave right away, as he should have, he would not have lost time by continuing to extract the tooth. Although his rationale for continuing surgery was that the tooth was bleeding, this was the lesser of the two situations he had to address. The loss of a P wave is a significant indicator of a cardiac event and the implications of delaying resuscitative measures are far graver than stopping the dental procedure. Since he and his staff took steps to call 911, administer CPR and the ambu bag, Dr. Rishiraj

eventually recognized that a cardiac event had occurred, although the resuscitative measures he initiated were inadequate.

67. The Panel has considered the criticisms of Dr. Preston's evidence by counsel for Dr. Rishiraj. However, under cross-examination her opinions were not weakened. In particular her evidence about the significance of the loss of a P wave is un-contradicted. She and Dr. Braverman are in agreement about the most significant issues before the Panel including the risks and effect of the triple sedation therapy, how to properly manage patients who have been deeply sedated, the problem with the oxygen saturation monitor alarm setting at eighty-five, the failure to titrate, the failure to use supplemental oxygen, allowing an untrained person to load the propofol pump, the absence of Dr. Rishiraj after sedation therapy had been administered, and the use of untrained and insufficient personnel.

68. Mr. Hori suggested that Dr. Preston applied too rigorous a standard to Dr. Rishiraj's practice. With one exception described below, the Panel accepts her evidence that she applied the standards of practice in place for oral and maxillofacial surgeons in formulating her conclusions.

69. However, the Panel accepts Mr. Hori's submission regarding Dr. Preston's criticism of Dr. Rishiraj for failing to consistently monitor respiration by using the end-tidal carbon dioxide monitoring system. Since this is not currently a requirement of the CDSBC, the Panel has not considered this failure in reaching its conclusions.

<u>Did Dr. Rishiraj have the requisite training in concurrent use of propofol while providing dental treatment?</u>

70. The CDSBC argued that Dr. Rishiraj did not have the proper training to administer triple sedation therapy. Counsel based this argument on the evidence that while he was exposed to anesthesia during his residency, he did not receive training in the drug combination at issue here.

71. The Panel is unable to accept this submission. The Panel has reviewed the evidence of Dr. C [redacted] from the University of Manitoba about Dr. Rishiraj's training including with respect to anesthesia generally and propofol in particular. Dr. Braverman's view was that Dr. Rishiraj had the requisite training in the use of the drug with other agents. The CDSBC does not have any explicit requirements for oral surgeons like Dr. Rishiraj to receive additional training in administration of the kind of sedation therapy at issue here. There isn't any evidential basis upon which the Panel may infer that Dr. Rishiraj failed to educate himself on his own, or that his training was in fact inadequate. Accordingly, this allegation is dismissed.

Did Dr. Rishiraj fail to adequately monitor his sedated patients during surgery between October 4, 2012 and November 7, 2012?

72. The Panel has concluded that Dr. Rishiraj failed to adequately monitor his patients while they were under sedation. Both experts reached this conclusion. There are many ways in which this failure manifested itself. Some of the more notable examples are set out below.

73. Dr. Rishiraj left the operatory while the freezing and triple sedation therapy took effect. He left again while a patient was recovering after surgery had been completed. When patients were recovering from the effect of sedation, they were left with Facility employees who had no training in anesthesia recovery. Further there were periods after the surgery had concluded when a patient was left completely alone.

74. Dr. Rishiraj did not have a deep sedation therapy team in place in accordance with the guidelines. To the extent that the assistants were performing the duties of a deep sedation assistant, neither was properly trained. A deep sedation assistant must be either a member of the College of Registered Nurses of BC., the CDSBC, the College of Physicians and Surgeons of BC, a person trained in respiratory therapy or who has completed the OOAMP. None of the Facility's employees met these criteria. This absence of a team of appropriately trained personnel for patients undergoing deep

sedation means they were not properly monitored. As noted in this decision, there are significant risks associated with deep sedation therapy, and it is important for the assistants to be able to recognize troublesome signs and manage or help manage them.

75. Dr. Rishiraj was careless in his analysis of a patient's ASA level in two of the cases. He was inconsistent in adjusting the doses of medication to account for patients' age, weight and co-morbidities. Many patients with different characteristics were given the same doses. Further, he did not titrate the doses – he administered them in quick succession and then left the operatory to attend to other patients. He should have taken more care by administering an amount of each drug at a lower level and then waiting to see what effect it had. Adequately assessing patients, calculating appropriate dosages based on the assessment and titrating the doses are all forms of monitoring that ought to have been applied in every case.

76. Both experts agreed the oxygen saturation monitor alarm was set too low – at eighty-five. The evidence was that it should be set at ninety-two unless supplemental oxygen is available in which case a setting of ninety is acceptable. This alarm is set to act as a warning of respiratory compromise. If it is not set at the right level, patients are not being properly monitored so that intervention can occur in a timely manner.

77. Counsel for Dr. Rishiraj argued that in fact his client was monitoring because the evidence was that he would take steps to raise the saturation levels when they dropped too low. The Panel is unable to accept this submission. It is inconsistent with the opinions of both experts and the testimony of the assistants who said they did not consistently advise him what the saturation levels were when they dropped. It is further inconsistent with the practice to turn off the alarm when it sounded or Ms. MR's evidence that Dr. Rishiraj continued with surgery even after the alarm sounded.

78. As Dr. Preston said, if Dr. Rishiraj had been properly monitoring and managing his patients, she would not have seen so many examples of patients with levels that had dropped below eighty-five. Dr. Braverman made the same point. He stated in his report that:

> "I did note from many of the charts reviewed, that the oxygen saturation during surgery was often in a very low range. Some were in the 70's, some were in the 80's and many were in the low 90's for a prolonged period of time." (Ex.4, p.2)

79. Further, as noted elsewhere, there were three examples where the oxygen levels dropped to below ninety for more than ten minutes. Even if Dr. Rishiraj did take steps to raise the saturation level when the alarm sounded, the alarm should have sounded before it reached this level so that intervention could occur earlier. Both Dr. Braverman and Dr. Preston explained that once the level has dropped to ninety a patient's saturation levels drop quickly and the risk of respiratory distress rises rapidly.

80. As Dr. Braverman pointed out, if Dr. Rishiraj was properly monitoring his patients, he would not have let their oxygen saturations drop during the procedures.

<u>Characterization of the Offences – was Dr. Rishiraj incompetent?</u>

81. Given the Panel's conclusions it is necessary to consider how to characterize his conduct.

82. The *HPA* sets out a variety of offences in section 39(1). In some cases the same conduct may be characterized by reference to more than one subsection.

83. Mr. Hori argued Dr. Rishiraj's conduct can not be characterized as incompetence (section 39(1)(d)), but is only a breach of the legislation and professional misconduct (section 39(1)(a) and (c)). He suggested that since the Facility's assistants and Dr.

Rishiraj were monitoring patients and taking steps to raise their oxygen saturation levels when they dropped, it is not open to the Panel to conclude that he was incompetent in his practice.

84. The Panel is unable to accept this submission. While it is true that Dr. Rishiraj breached many guidelines and was practicing deep sedation when he should not have been, both of which may be characterized as breaches of section 39(1)(a) and (c), the manner in which he ran his practice as outlined above is also consistent with the definition of incompetence set out in *Mason v. Registered Nurses' Association of British Columbia* 1979 CanLii 419:

> Incompetence....connotes want of ability suitable to the task, either as regards natural qualities or experience, or deficiency of disposition to use one's abilities and experience properly. (Panel's underlining)

85. Dr. Rishiraj is the on call oral and maxillofacial surgeon at Royal Inland Hospital. The Panel reviewed a letter from three members of the Kamloops and District Dental Society describing his professionalism and expertise as an oral and maxillofacial surgeon. The Panel also reviewed a televised interview of two of his patients who had received serious facial injuries and had been successfully treated by Dr. Rishiraj.

86. Exhibit 2 contained pages from the website advertising the Facility and Dr. Rishiraj at the relevant time. (Vol. 2, Tab 29.) The website is several pages in length, but some of its content is included here.

87. In the "Welcome" section, the webpage states the Facility:

> is staffed with a highly trained, experienced and compassionate team of caring professionals. Patients undergoing surgical procedures in the suite are constantly monitored by qualified, certified medical specialists in anaesthesia to ensure optimal care and safety. (Panel's underlining)

88. On the webpage entitled "Extractions" it is stated:

> All outpatient surgery is performed under proper anesthesia. Dr. Rishiraj has the training, license and experience to provide various types of anesthesia to make procedures more comfortable. These services are provided in an environment of optimum safety, utilizing modern monitoring equipment and staff experienced in anesthesia techniques. (Panel's underlining)

89. The webpage entitled "Anaesthesia" states:

> We, as most oral and maxillofacial surgeons, follow the guidelines and protocols set forth by our provincial medical and dental regulatory body. (Panel's underlining.)

90. The statements on the website about Dr. Rishiraj's licence, the trained staff, constant monitoring and references to the guidelines and protocols of the CDSBC, as well as the esteem in which he is held by some of his colleagues demonstrate that Dr. Rishiraj knew what to do to manage his practice and the Facility, but did not do it. He knew that he was regularly putting his patients into deep sedation because he confirmed this in his interview on May 27, 2013. Clearly, based on the evidence he did not follow the guidelines with respect to administration of deep sedation therapy.

91. Dr. Rishiraj admitted during the same interview that he failed to take appropriate steps to manage Ms. HZ's cardiac arrest by administering epinephrine and using the AED. As Dr. Braverman stated, Dr. Rishiraj was trained to manage a cardiac crisis, but in the case of Ms. HZ he did not apply his knowledge and experience to the circumstances he faced when he saw that the P wave was missing and that she lost her pulse.

92. Dr. Rishiraj told the CDSBC in his interview on February 20, 2013 that he would perform five or six surgeries in a morning. He was a busy practitioner. He ran the Facility and conducted his practice in a very efficient manner by doing such things as leaving one patient who had just received sedation in order to go discharge another. He administered the three drugs in rapid succession without waiting to observe their impact on a patient and making any necessary adjustments. As noted earlier in this

Decision, in his interview on May 27, 2013 he told the CDSBC he stopped using nasal prongs. Even his CDA cut corners in that she left a patient who was coming out of sedation to wash her instruments, presumably to prepare for the next surgery. While he may have saved time and been able to manage more patients by running the Facility in this manner, these efficiencies meant that he was not practicing appropriately or in accordance with the CDSBC guidelines.

93. Dr. Rishiraj was inconsistent. For example, sometimes he adjusted the dosages of medication to account for a patient's weight or age, and sometimes he did not. Even his record keeping practices were inconsistent – for example, sometimes he noted the stop and start times for sedation on a patient's chart and at other times he did not. These examples are further evidence that he knew how to practice properly, but did not do so.

94. Overall, it is apparent that Dr. Rishiraj knew what he should have been doing to run the Facility and his practice in accordance with the guidelines and generally accepted standards of oral and maxillofacial surgery. However, by running such an efficient practice he did not apply his knowledge and experience to his patients' circumstances. This is consistent with the definition quoted from *Mason* above. Accordingly, the Panel has decided that Dr. Rishiraj's failure to monitor his patients and his management of Ms. HZ's cardiac arrest may be characterized as incompetence.

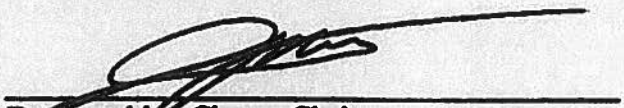
By the Discipline Committee

_____

Dr. Josephine Chung, Chair

Dated: _____

By the Discipline Committee



Dr. Josephine Chung, Chair

Dated: June 22, 2015

Dr. Michael Wainwright

Dated: June 22, 2015

Mr. Martin Gifford

Dated: _____

Dr. Michael Wainwright

Dated: _____

M D Gifford

Mr. Martin Gifford

Dated: June 22, 2015

APPENDIX "A"

IN THE MATTER OF

The *Health Professions Act* RSBC 1996 c. 183

Between:

THE COLLEGE OF DENTAL SURGEONS OF BRITISH COLUMBIA

And:

DR. BOBBY RISHIRAJ

AMENDED CITATION

TO: The Respondent
Dr. Bobby (" Bob") Rishiraj
REDACTED
(the 'Respondent")

TAKE NOTICE that a Panel of the Discipline Committee (the "Panel") of the College of Dental Surgeons of British Columbia (the "College") will conduct a hearing under s.38 of the *Health Professions Act* RSBC 1996 c. 183 (the "*Act*").

The purpose of the hearing is to inquire into your conduct and competence as a dentist. The College is conducting this inquiry to determine whether you:

a) have not complied with the *Act*, a regulation or a bylaw,

b) have not complied with a standard, limit or condition imposed under the *Act*,
c) have committed professional misconduct or unprofessional conduct,
d) have incompetently practised dentistry, and/or

e) suffer from a physical or mental ailment, an emotional disturbance or an addiction to alcohol or drugs that impairs your ability to practise dentistry.

The hearing will be held from November 12, 2014 to November 14, 2014 and from January 26, 2015 to January 30, 2015, at the Sutton Place Hotel, 845 Burrard Street, Vancouver, BC. The hearing will commence each day at **9:30 a.m.**

You are entitled to attend the hearing and may be represented by legal counsel. If you do not attend the hearing, the Panel is entitled to proceed with the hearing in your absence and, without further notice to you, the Panel may take any actions that it is authorized to take under the *Act*.

Further particulars of the allegations against you are:

1. Contrary to Bylaw 13.01 (2) of the College bylaws you provided deep sedation or general anaesthetic services in a dental office or other facility that was not being operated in compliance with the sedation and general anaesthetic standards to the following patients on the following dates:

    (i) AP on October 4, 2012;

(ii) MA on October 4, 2012;

(iii) NG on October 4, 2012;

(iv) LR on October 9, 2012;

(v) MB on October 9, 2012;

(vi) PV on October 10, 2012;

(vii) GK on October 17, 2012;

(viii) ER on October 23, 2012;

(ix) AH on October 23, 2012;

(x) NM on October 25, 2012;

(xi) JL on October 30, 2012;

(xii) AH on October 31, 2012;

(xiii) HT on October 31, 2012;

(xiv) KM on November 1, 2012;

(xv) TM on November 1, 2012;

(xvi) DH on November 5, 2012;

(xvii) SR on November 5, 2012;

(xviii) MG on November 6, 2012;

(xix) RR on November 6, 2012;

(xx) RB on November 6, 2012;

(xxi) CR on November 7, 2012;

(xxii) DH on November 7, 2012; and

(xxiii) HZ on November 7, 2012.

2. During the period from October 4, 2012 to November 7, 2012, you provided deep sedation at your facility, the Kamloops Oral Surgery and

Implant Center, when the facility was not approved as a deep sedation facility and you were not approved to provide deep sedation.

3. On or about November 7, 2012, in your treatment of HZ you failed to exercise the level of care, skill and knowledge expected of a competent practitioner in that you failed to recognize HZ's cardiac arrest in a timely way and as a result resuscitative measures were delayed.

4. You advertised on your clinic website, www.kamloopsoralsurgery.com that the Kamloops Oral Surgery and Implant Center was an approved non-hospital and certified IV facility when such was not true.

5. During the period from October 4, 2012 to November 7, 2012, you administered propofol to patients when you did not have the requisite training in concurrent use of propofol while providing dental treatment to patients.

6. During the period from October 4, 2012 to November 7, 2012, you failed to monitor adequately your sedated patients during surgery.

FURTHER TAKE NOTICE that after completion of the hearing under s. 38 of the *Act* the Panel, under s. 39 of the *Act*, may dismiss the matter or determine that you:

a) have not complied with the *Act*, a regulation or a bylaw,

b) have not complied with a standard, limit or condition imposed under the *Act*,

c) have committed professional misconduct or unprofessional conduct,

d) have incompetently practiced dentistry, and/or

e) suffer from a physical or mental ailment, an emotional disturbance or an addiction to alcohol or drugs that impairs your ability to practise dentistry.

This Citation is issued at the direction of the Inquiry Committee of the College under section 37 of the *Act*.

Enclosed with this Citation is Part III of the *Act*, Bylaw 10, Bylaw 13.01, Schedules G and H of the bylaws and the Code of Ethics of the College.

THE COLLEGE OF DENTAL SURGEONS OF BRITISH COLUMBIA:

Jerome Marburg, Registrar
October 21, 2014