**COURSE:** Pharmacology and Behaviour (for Social Service Workers)

**Unit topic:** Harmful/Toxic effects of alcohol

**Week/date/hours:** Week 8/Oct 26/2 hours

**Learning outcome**

Upon successful completion of this learning unit, the student will have demonstrated the ability to:

- describe the withdrawal effects of alcohol

- describe the effects of chronic long-term use of alcohol on the body

- describe common medical treatments for alcohol misuse

**Connection Activity:**

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| Description | Time required | Resources |
| **Tug of war/GABA demonstration**   1. I will ask for several volunteers in order to demonstrate why the body experiences withdrawal symptoms 2. At first, I will ask 8 class members to stand in groups of 4 at each end of a rope. I will tie a bandana in the middle of the rope and place a pylon in the centre of the room as if they will be having a tug of war. 3. I will ask the 8 people to try and pull the rope in such a way that the bandana will remain over the pylon. I will then place paper hats on the members, with the four on one side of the rope wearing ‘life stress’ hats and 4 members on the other side wearing ‘GABA’ hats. I will explain that under usual conditions, GABA works in our body to help regulate the body’s stress response (this has been covered previously) 4. I will then ask 3 more members to come to the front and join the ‘GABA’ team. I will then place ‘alcohol’ hats on these members and ask them to pull with the GABA team in a tug of war. The GABA/alcohol side should easily win. I will explain that alcohol works in a similar way to GABA, helping the body to relax/reduce stress.(this is also review) 5. I will then note that the body will notice the imbalance in the tug of war, and will respond by reducing the production of GABA in order to maintain balance. As such, I will ask 3 of the GABA members to leave, producing a ‘fair’ tug of war 6. I will then ask an ‘alcohol’ member to leave every 5 seconds, which should allow the ‘life stress’ side to slowly take over in the tug of war. I will explain that as the alcohol leaves the body, there is now no GABA to help reduce stress and there is an imbalance in the body. The result is a lack of stress reducing chemicals, leading to an extreme fight or flight response, which can produce a variety of symptoms which we will discuss today.   *[ I will be sure to stress that this demonstration refers to effects caused by* ***long-term, chronic*** *use of alcohol]* | **10**  **minutes** | Rope  Bandana  Pylon  paper hats |

**Steps or sections of the learning unit**

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| **Step / section** | **Content Activity** | **Time & Resources** | **Practice Activity** | **Time & Resources** |
| 1. Withdrawal syndrome for alcohol | **Mini-Lecture**  I will give a brief lecture [7 slides- see attached] outlining the symptoms at each stage of withdrawal. The role of GABA discussed in the connection activity will be referred to throughout. | **15 min**  [see attached powerpoint slides] | **Case studies**   1. Students will be provided with a print handout with 4 ‘case studies’. Each case will be presented as a brief, one paragraph ‘triage’ report of a client entering a hospital setting. 2. Students will be asked to try and identify what stage of withdrawal each client is in. They will be given 5 minutes to do so 3. Students will then be given 5 minutes to compare and contrast their answers with a partner. 4. Final answers will then be discussed as a class. I will provide the final ‘correct’ answer after each discussion with the rationale (related to the previous mini-lecture) for each response | **15 min** |
| Step / section | **Content Activity** | **Time & Resources** | **Practice Activity** | **Time & Resources** |
| 1. Effects of long-term chronic use of alcohol | **Jigsaw Learning – Expert groups**   1. I will first count off the class into groups of 6. These will be referred to as the ‘home groups’ 2. Within each home group, I will ask each member to join an ‘expert group’ based on the number between 1 & 6 which they were assigned when they were placed into groups. 3. Each ‘expert’ group will be given a body organ or system which they will be the ‘expert’ for with regards to the effect of long-term chronic alcohol use on that system or organ. Page references from the course text will be provided to each expert group. The areas of expertise will be as follows:    1. Brain (p. 218, 219)    2. Liver (p. 219)    3. Heart (p. 220)    4. Common associated cancers (p. 220)    5. Immune System (p. 220, 221)    6. The unborn fetus/FAS (p. 221, 222) 4. Each expert group will be given 10 minutes to help each other become ‘experts’ on their assigned topic. They will be expected to describe the topic to their home group for the practice activity | **20 min**  [5 min to describe and divide; 15 minutes to become experts]  *-photocopies of the required pages from the textbook will be created for each group in case no member of the ‘expert group’ has a textbook in class* | **Jigsaw Learning**  **Home Groups**   1. After each of the 6 expert groups have completed their task, they will be asked to re-join their ‘home-groups’ 2. Within the ‘home group’, each expert will then present on their topic of expertise. Other group members can take notes or simply listen, depending on what will help them to learn best. 3. After the task has been completed, I will note that the information covered by each expert group will be added to the posted PowerPoint presentation on WebCT (but will not be covered by me in class) | **20 min** |
| Step / section | **Content Activity** | **Time & Resources** | **Practice Activity** | **Time & Resources** |
| 1. Medical treatments | **Video –‘Seeking Help’**   1. Students will be shown the 6 minute video ‘Seeking Help’, which discusses a variety of treatments currently utilized for alcohol related issues.   [**http://searchcenter.intelecomonline.net/playClipEmbed.aspx?id=A0BBC7BE5ED4F9DF015DE7852CEDE0725E71A1CA980D566FEF64C21A8F3913AEB6CDB4D1572DE19D7CDCDAB1B902F0B1EF1BACA41DC5A59C&v=l**](http://searchcenter.intelecomonline.net/playClipEmbed.aspx?id=A0BBC7BE5ED4F9DF015DE7852CEDE0725E71A1CA980D566FEF64C21A8F3913AEB6CDB4D1572DE19D7CDCDAB1B902F0B1EF1BACA41DC5A59C&v=l)   1. While watching the video, students will be asked to keep track of any treatments, medical or otherwise, for alcohol related issues, which are discussed in the video. Students will be informed that the required information will be used for an activity following the video. | 1. **Min**   [Note: The video was obtained from the streaming video service ‘In-Tele-Com’ provided by the Durham College library. It will be embedded in the PowerPoint for the class] | **Alcohol Treatments ‘Quiz’**   1. The students will be given a ‘timed’ quiz (not worth any marks), in which they will be asked to ‘fill in the blank(s) for each presented PowerPoint slide. (A common word bank will be provided at the bottom of each slide. ). Each slide will be presented for 20 seconds. 2. Each slide will contain a definition/description of a treatment discussed in the previous video. Students will be asked to simply write down the missing word for each definition/description 3. Answers will be checked at the end. I will post the completed definitions/descriptions in the Powerpoint posted following the lecture | **15 min** |

**Summary Activity:**

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| Description | Time required | Resources |
| **Will This Be on the Test…?**   1. Students will be placed in groups of 3 to 4. 2. Each group will be asked to create three (3) multiple choice questions (including possible m/c responses) based on the material covered in today’s class. Each group must create one question about withdrawal, one question about chronic, long-term effects of alcohol, and one question about medical treatments. 3. The students will be told that I will post these student generated questions, with correct responses, as a document on WebCT for students to use as a study aid for this unit prior to the next test. 4. To increase incentive, I will note that at least one of the questions generated in class today will be used on their next test/exam. | **10 min** | Text book, powerpoints |

**Rationale**

**Context of Unit**

The lesson plan provided is for a course entitled ‘Pharmacology and Behaviour’. It is for first year students in the Social Service Worker program at Durham College and it is a mandatory course. It is a standard course (not web or hybrid) comprised of 28, 2-hour lectures within one semester. It is important to note that while the course text and much of the content are rather scientific/pharmacological, I try to bear in mind that the students taking this course are studying to be social workers, not pharmacologists or physicians. As such, I try to use the course as a platform for contextualizing, and perhaps even normalizing, some of the behaviours which students may observe or hear about in their future clients. I also endeavor to use the course material to help the students to develop a sense of empathy for their future clients with regards to the symptoms they may endure as well as the immense challenges inherent in attempting to modify addictive behaviours.

The first half of the course is spent covering fundamental concepts in pharmacology and addiction. This particular unit is part of the second half of the course, which applies the concepts covered in the first half of the course to each of the major drug classes. This unit is the first unit in the second half of the course and its focus is ‘alcohol’. Prior to this lesson, we covered the basic pharmacological profile of alcohol and the effects of alcohol on the body and behaviour while it is present in high concentrations in the bloodstream. Many of these effects can be framed or experienced as ‘positive’ for the consumer of alcohol. The current lesson focuses on the toxic or harmful effects of long-term alcohol use, all of which are negative and provide a ‘sobering’ juxtaposition to the more ephemeral effects discussed in the previous lesson.

**Use of Universal Design for Learning Principles**

*Principal I: Provide Multiple Means of Representation*

This lesson plan addresses the ‘Multiple Means of Representation’ UDL principle in that a variety formats and media are utilized in delivering information to the students. In the beginning of the lesson, I attempted to create an ‘embodied representation’ of the withdrawal process in order to provide a relatively concrete demonstration of a process that it usually only described in written or verbal form. In the powerpoint presentations (some of which will only be utilized after the actual lesson), I attempt to balance text with numerous images/diagrams whenever possible when explaining key concepts in order appeal to different learning modalities. Finally, I have also included video as part of my lesson, again to engage those who may learn better from ‘real-life’, narrative-style to explain concepts rather than focusing on theory. I am also sure to provide ample text-based notes in PowerPoint presentations which can be accessed through WebCT following the lecture. These post-lecture Powerpoints are much longer and more text-heavy than those used in class.

*Principle II: Provide Multiple Means of Action and Expression*

This lesson plan addresses the ‘Multiple Means of Action and Expression’ UDL principle by providing a wide variety of learning activities for the students over the course of the lesson. Many of these involve physical movement, such as the ‘Connection’ activity and the ‘Jigsaw Learning’ activity, which will be appealing to more kinesthetic learners. The connection activity in particular, will likely be very effective for that type of learner. As well, there are multiple opportunities for social learning in the lesson, which will be appealing for the type of student who ‘learns when I speak’. The jigsaw activity will allow for students to apply their particular learning preference, as some will chose to present their information orally to their home group, while others may provide ‘notes’ or ‘handouts’. The ability to create test questions and to use ‘online quizes’ comprised of their peers’ questions will appeal to the ‘Assimilators’ in the class. There are also a number of opportunities for problem solving embedded in the lesson, which will appeal to learners who prefer active application of concepts rather than passive absorption of information.

*Principle III: Provide Multiple Means of Engagement*

This lesson plan addresses the ‘Multiple Means of Engagement’ UDL principle by using a variety of formats for exploring information. The connection activity in particular should be quite engaging to students and will hopefully make an otherwise daunting concept fun and accessible. I have also attempted to incorporate ‘real-life’ examples as much as possible, with the use of ‘case studies’ and the first –person narratives included in the video activity. This will hopefully make the topic feel relevant to the students for their future work, which should make the material more appealing. I have also attempted to incorporate several social learning experiences [the connection activity, jigsaw learning] in order to create a social atmosphere in the classroom, which is very engaging for many students. As well, I have provided opportunities to ‘test one’s knowledge’ and to ‘problem solve’ at different points in the lesson, which will also be appealing to many learners. Finally, while it is not captured in the lesson plan as outlined, I do attempt to present material in a manner that challenges the students to remain mindful that all of the ‘symptoms’ we are exploring are being experienced by *actual human beings*. I challenge the students to imagine what it is like to experience some of these symptoms and encourage them to develop a professional empathy for the actual human beings who experience these symptoms and who struggle with alcohol misuse. I also incorporate anecdotes from my professional work as an addictions therapist in order to ‘breathe life’ into some of the concepts covered. I believe that both of these teaching ‘habits’ , while not captured in my lesson plans, are constant across lessons and topics in this course and are a vital means of engaging students.